TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

Chennai – 600 127

BACHELOR OF PHYSICAL EDUCATION AND SPORTS (B.P.E.S)

(Three Years-UG Programme)

Choice Based Credit System

Regulations and Syllabus

(for students admitted from 2023 – 2024 & Onwards)

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY Chennai- 600 127

Bachelor of Physical Education and Sports (B.P.E.S)
Under Graduate Degree Course
(Three Years)
Choice Based Credit System
REGULATIONS AND SYLLABUS
(for students admitted from 2023 -2024 & Onwards)

1. Eligibility for Admission to the Course

a. Applicants should have passed the +2 examination in 10 + 2 pattern of the Government of Tamil Nadu or any other equivalent examination recognized by the Government of Tamil Nadu or approved by the Tamil Nadu Physical Education and Sports University.

b. . School representation in any game or sport is mandatory for the applicants.

c. The candidates should not have completed 21 years of age as on 1st July, However, relaxation of three years (3 years) shall be given for SC/ST candidates.

d. He/ she must be medically fit and free from any deformities students will undergo medical examination at the time of admission.

(Physical Disabled, Intellectually Challenged, Visually impaired, Hearing Impaired, Stammering, Postural Deformities, any other Major Deformities candidates with any other deformities are not eligible to undergo this programme)

e. Pregnant women are not permitted either for admission or to undergo the course. If violated, they will not be permitted to continue the course.

f. Admission shall be made on the basis of ranking for a total of 150 marks as detailed below.

1.	Qualifying Examination	20 marks
2.	Participation in Games & Sports	25 marks
3.	Games Skill test	50 marks
4.	Track and Field Skill test a) 100 m – 20 Marks b) Shot-put – 15 Marks c) Long Jump – 15 Marks	50 marks
5.	Bonus Marks for students studied Physical Education as one of the compulsory paper in Higher Secondary (Not optional Paper)	5 marks
	Total	150 Marks

Note:

1. **Qualifying Examination-20 marks**

Marks obtained in Qualifying Examination shall be converted to a maximum of 20 marks. For example if a candidate secured 800 marks out of 1200. His / Her marks for qualifying examinations is [800 / 1200] x 20 = **13.33 marks.**

2. **Games and Sports Participation: (Maximum marks: 25)**

The norms for award of marks for the sports and games participation are furnished hereunder.

Any one which is applicable / advantageous.

1.	Representation for the country / National Placing (I,II,III,IV)	25
2.	State Representation (Form –II / IV in Games / Sports)	20
3.	Inter-Division Participation (RDS / BDS) Inter-District (Participation)/ CBSC Cluster	15
4.	Pongal / District (BDS / RDS)	10
5.	Inter-School Participation	05
	(Supporting certificates should be produced)	

3.Games and Sports Skill Test: Maximum Marks: 50

The candidate should choose any one of the games included in the School Games Federation of India / SAI / SDAT / IOA/TNOA approved competitions.

Skill test will be conducted by three judges .

4.Track and Field: Maximum Marks: 50

Candidates will be tested in the following Track and Field events:-

a) 100 Mts. - 20 Marks

b) Shot-Put - 15 Marks

c) Long Jump - 15 Marks

5.Bonus Mark 5 for Students studied Physical Education in plus two (Higher Secondary)

Note

The games skill test and Track and Field events will be conducted by three judges.

1. Degree

The candidates shall have subsequently undergone the prescribed programme of study in a University Departments and College affiliated to this University for not less than three academic years comprising 6 semesters, passed the examinations prescribed and fulfilled such conditions as have been prescribed thereof.

2. Duration

The duration of all UG programmes is three years Each year shall consist of two semesters, viz. Odd and Even semesters. Odd semester shall be from June/July to October/November and Even semester shall be from November/December to April/May. There shall be not less than 90 working days which shall comprise 450 teaching clock hours for each semester (exclusive of the days for the conduct of university end-semester examinations).

3. Span of Period

a) Time = N+2 years for the completion of programme. Where 'N' stands for the normal or minimum duration prescribed for completion of the programme.

b) In exceptional circumstance, a further extension of one more year may be granted. The exceptional circumstances are spelt out clearly by the relevant statutory body concerned of the University.

c) During the extended period the student shall be considered as a private candidate and also not be eligible for ranking.

The above conditions are applicable to the Redo/Transfer/Readmission Candidates.

4. The CBCS-LOCF System

All Programmes (named after the Core subjects) mentioned earlier shall be conducted through Choice Based Credit System (CBCS) and Learning Outcomes Based Curriculum Framework (LOCF). It is an instructional package developed to suit the needs of students to keeppace with the developments in higher education and the quality assurance expected of it in the light of liberalization and globalization in higher education.

5. Project

Each candidate shall be required to take up a Project Work and submit it at the end ofthe final year. The Head of the Department shall assign the Guide who, in turn, will suggest the Project Work to the student in the beginning of the final year. A copy of the Project Report will be submitted to the University through the Head of the Department on or before the date fixed bythe University. The Project will be evaluated by an internal and an external examiner nominated by the University. The candidate concerned will have to defend his/her Project through a Viva-voce.

6. Semesters

In each semester, Courses are offered in 15 teaching weeks and the remaining 5 weeks are to be utilized for conduct of examinations and evaluation purposes. Each week shall have 30working hours spread over 5/6 days a week.

7. Credits

The term "Credit" refers to the weightage given to a course, usually in relation to the instructional hours assigned to it. For instance, a six-hour Course is assigned three to six credits,

four/five-hour Course is assigned three to five credits. However, in no instance the credits of a Course can be greater than the hours allotted to it.

The total minimum credits required for awarding B.P.E.S Candidates are 140,

Credits	
UG Programme B.P.ES	140 credits
BPEd	133 Credits
MPEd	132 Credits

8. Course

Each Course is designed with lectures/tutorials/laboratory or field work/seminar/ Project/practical training/assignments/term paper or report writing etc., to meet effective teaching and learning requirements.

9. Examinations

i. There shall be examinations at the end of each semester, for odd semesters in the month of October/November; for even semesters in April/May.

ii. A candidate who does not pass the examination in any course(s) may be permitted to appear in such failed course(s) in the subsequent examinations to be held in October/November or April/May. However, candidates who have arrears in Practicals shall be permitted to appear for their arrears in Practical examination only along with Regular Practical examination in the respective semester.

iii. Viva-voce: Each candidate shall be required to appear for Viva-voce Examination in defence of the Project only.

iv. The results of all the examinations will be published through the College where the student underwent the Course as well as through University Website. In the case of private candidates, the results will be published through the Centres in which they appeared for the examinations as well as through University Website.

10. ATTENDANCE REQUIREMENTS:

I. Students must have 75% of attendance in each semester to appear for the End Semester Examinations.

II. Students who have attendance between 70% and 74% shall apply for condonation in the prescribed form with the prescribed fee.

III. Students who have attendance between 65% and 69% shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

IV. Students who have attendance between 60% and 64% shall carry over the End Semester Examinations in the ensuing Semester.

V. Students who have attendance below 60% are not eligible to appear for the End Semester Examinations. They shall re-do the semester(s) and therefore, they shall not move to the ensuing semester.

VI. A student can avail condonation only once during the course of study.

VII. Hall tickets will be issued to the eligible candidates only if they produce 'No Dues Certificate' from the Department, the Registrar's Office, the Library and the Hostel Warden at the time of issue of "Hall Ticket" for the End Semester Examinations.

11. Question Paper Pattern

External marks 75 marks **UG** programmes **40% Pass** **PG** programmes **50%** Pass		No of Questions	Mark per question	Marks
	Part A	MCQ 10	1	10
	Part B	Short notes 5	2	10
	Part C	Explain briefly 5	5	25
	Part D	Elaborate 3	10	30
	Total marks			75

Section A: For 20 Marks

i. : 10 Questions (MCQ) x 1 Marks = 10 Marks.

ii. : 5 questions x 2 Marks = 10 Marks.
(Descriptive type/one question from one Unit)

Section B: For 25 Marks

5 Questions x 5 Marks = 25 Marks
(Answer any three out of 5 out of 8 questions)

Section C: For 30 Marks

3 Questions x 10 Marks = 30 Marks
(Answer any three out of 5 questions and one question from each unit)

12. Evaluation

The performance of a student in each Course is evaluated in terms of percentage of marks with a provision for conversion to grade points. Evaluation for each Course shall be done by a continuous internal assessment (CIA) by the Course teacher concerned as well as by an end semester examination and will be consolidated at the end of the semester. The components for continuous internal assessment are:

	Exam/Test	Marks
Internal marks 25 marks for all programmes	First Internal Exam (after 30th working day)	5
	Second Internal Exam (after 60th working day)	5
	Model Exam (after 90th working day)	10
	Assignment	3
	Seminar	2
	Total marks	**25**

External marks 75 marks **UG** programmes **40% Pass** **PG** programmes **50%** Pass		No of Questions	Mark per question	Marks
	Part A	MCQ 10	1	10
	Part B	Short notes 5	2	10
	Part C	Explain briefly 5	5	25
	Part D	Elaborate 3	10	30
	Total marks			75

Attendance need not be taken as a component for continuous assessment, although the students should secure a minimum of 75% attendance in each semester. In addition to continuous evaluation component, the end semester examination, which will be a written-type examination of at least 3 hours duration, would also form an integral component of the evaluation. The ratio of marks allotted to continuous internal assessment and to end semester examination is 25:75. The evaluation of laboratory component, wherever applicable, will also be based on continuous internal assessment and on an end-semester practical examination with 40:60 ratio.

Passing Minimum

Name of the Programme	**Internal**	**External**	**Total**
UG	Minimum 10 marks	40%	40%
PG	Minimum 12 marks	50%	50%

13. Conferment of the Master's Degree

A candidate shall be eligible for the conferment of the Degree only after he/ she has earned the minimum required credits for the Programme prescribed therefore

Credits	
UG Programme B.P.ES	140 credits
BPEd	133 Credits
MPEd	132 Credits

14. Ranking: University Rank Examination

1. The University Rank Examination shall be conducted for the toppers (First Rankers) of all the colleges (having passed their examinations in the first appearance within the prescribed duration of the programme) including autonomous / non-autonomous streams and they are required to write two examinations. Absence from an examination shall not be taken as an attempt.
2. The question papers of the examinations comprise objective type questions covering the core courses in each of the Programmes generally followed by both autonomous / non- autonomous streams.
3. The top scorers in this University Rank Examination would be declared as University Rank Holders, irrespective of their grades in their respective University end semester examinations.
4. Rank Certificate will be issued for a Programme as follows :

    a) Only THREE Ranks if the student's strength is below 20
    b) Only FIVE Ranks if the student's strength is above 20 but below 50.
    c) Only TEN Ranks where the student's strength exceeds 50 but is less than 100
    d) Only 20 Ranks if the student's strength is 100 and above
    e) The student's strength of the course concerned will be indicated in the Rank Certificates.

15. Un Aided Stream

The above regulations shall be applicable for the candidates undergoing the programmes in Un Aided Stream also.

16. Grievance Redressal Committee

The College shall form a Grievance Redressal Committee for each Course in each Department with the Course Teacher and the HOD as the members. This Committee shall solve all grievances relating to the students Continuous Internal Assessment marks.

17. Revision of Regulations and Curriculum:

The University may from time to time revise, amend and change the regulations and thecurriculum, if found necessary.

18. Grading System

1. Grading

Once the marks of the CIA and the end-semester examination for each of the courses are available, they will be added. The marks thus obtained, will then be graded as per the schemeprovided in Table 1.

From the second semester onwards the total performance within a semester and the continuous performance starting from the first semester are indicated by **Semester Grade Point Average (GPA)** and **Cumulative Grade Point Average (CGPA),** respectively. These two are calculated by the following formulae:

$$\text{GPA} = \frac{\sum_{i=1}^{n} C_i G_i}{\sum_{i=1}^{n} C_i G_i},$$

$$\text{WAM (Weighted Average Marks)} = n \frac{\sum_{i=1}^{N} C_i M_i}{\sum_{i=1}^{} C_i},$$

where 'C_i' is the Credit earned for the Course i; 'G_i' is the Grade Point obtained by the student for the Course i . 'M' is the Marks obtained for the course i and 'n' is the number of Courses **passed** in that semester.

CGPA= Average GPA of all the Courses starting from the first semester to the current semester.

2. Classification of Final Results

i. The classification of final results shall be based on the CGPA, as indicated in Table 2.

ii. For the purpose of Classification of Final Results, the candidates who earn the CGPA 9.00 and above shall be declared to have qualified for the Degree as "Outstanding". Similarly, thecandidates who earn the CGPA between 8.00 and 8.99, 7.00 and 7.99, 6.00 and 6.99, and
5.00 and 5.99 shall be declared to have qualified for their Degree in the respective programmes as "Excellent", "Very Good", "Good", and "Above Average" respectively.

iii. Absence from an examination shall not be taken as an attempt.

Table 1
Grading of the Courses

Marks Range	Grade Point	Corresponding Grade
90 and above	10	O
80 and above but below 90	9	A+
70 and above but below 80	8	A
60 and above but below 70	7	B+
50 and above but below 60	6	B
Below 50	N.A.	R.A.

Table 2
Final Result

CGPA	Corresponding Grade	Classification of Final Results
9.00 and above	O	Out standing
8.00 to 8.99	A+	Excellent
7.00 to 7.99	A	Very Good
6.00 to 6.99	B+	Good
5.00 to 5.99	B	Above Average
below 5.00	R.A.	Re-Appearance

Credit based weighted Mark System is to be adopted for individual semesters and cumulative semesters in the column 'Marks Secured' (for 100).

(For U.G Programmes Separate Formula for Grading Prescriped by the Controller of Examination Section)

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19.Courses

Each Course is designed with lectures/tutorials/laboratory or field work/seminar/ Project/practical training/assignments/term paper or report writing etc., to meet effective teaching and learning requirements.

Ability Enhancement Courses/Skill Enhancement Courses:(Part IV)

To successfully complete the BPES course the students must under go the Ability Enhancement Courses under the sub headings of Ability Enhancement Compulsory Courses (AECC) Skill Enhancement Courses and Co-Curricular course)

Generic Elective

To successfully complete the BPEd,BPES, MPEd course the students must undergo and complete anyone of the generic elective (Open Elective) in the third Semester.

20.Internship/ Teaching Practice/ Community engagements

1. In internship a student (teacher trainee) is undergoing supervised practical training. Internship/ Teaching practice includes Teaching & observation in the Department/ College. Intensive Teaching Practice in the neighbouring Schools,

2. Schools for intensive teaching shall be decided by the Staff-in-charge of Teaching Practice and Head of the Department / Principal of the College.

3. A minimum of 30 lessons, Students shall complete 15 General and 15 Particular lessons/ Coaching Lessons in 15 working days under the supervision of the assigned Department /College and physical education staff in the schools.

4. Community engagements (Village Placement Programme). The programme includes teaching indigenous activities, basic skills in sports and games giving exposure to teachers in the teaching-learning process.

I. For the Community engagements (Village Placement programme) the students shall visit the neighbouring village for a minimum period of five days and organise the programmes such as

Physical Education/ Physical Exercise related programmes

Awareness Programmes related to health and fitness

Cleaning, creation of place for physical activities, sports and games.
Survey related to health and fitness of the public.

The Community engagements (Village Placement programme) record with details of programmes organised and photo graphs shall be submitted at the time of the University practical examinations for the evaluation of external examiners.

Note

i. For the practice teaching examination conducted by the University, there shall be one External and one Internal Examiner.

II. For Coaching Practice, each student shall maintain a Coaching Practice Record book, which shall contain records of 10 teaching, 10 coaching general and 10 officiating plans.

JJ. A candidate who fails in Coaching Practice Examination may present himself/herself in the subsequent University Coaching practice Examination.

Requirement for Passing

No candidate shall be eligible for the award of the B.P.E.S degree unless he/she has passed the written examinations (Part I), (Part II), Part-III, Part-IV and Part-V.

21.Medium of Instructions

Medium of instructions ENGLISH ONLY, Students has to appear for the Examination only in English.

22.Inter University Sports Participation and Special Permission for University Examination

A student representing the University / State / Nation in a game or sport and misses the University Semester Examination will appear for a special supplementary University Examination as stipulated by the University. Special permission may be granted by the controller of examination as per the rules and regulations of the university examinations provided the request must be submitted through proper channel well in advance. The Special Examinations will be conducted in the University Main Campus , Chennai 600127 only.

23.Internal Test and Assignment – Special Permission

In case, a student unable to appear for an internal test due to participation in inter collegiate/ university sports competition / any such programme of the University with prior permission from the concerned head of the faculty / department/ Principal, he / she may be permitted to appear for a special test / tests before the pre-semester examination.

Such a student appearing for a special supplementary University Examination shall not be considered as an arrear / arrears in a paper / papers and shall not be deprived of ***RANK in the University***.

A student who fails in any one or more papers in the semester examination will be permitted to rewrite the paper or papers in the subsequent semester examination.

To qualify for the degree, supplementary candidates are required to pass all the papers prescribed for the course within a period of three years after he/she complete the course. Beyond this period, the candidate shall follow the current syllabi for the examination if applicable. Examination fee will be collected normally according to the rules and regulations of the university. A Separate examination fee will be collected in this case.

Students who fail in a paper/papers are permitted to apply for recounting or re valuation in examination section of the University within the prescribed period with specified fee.

Appeal against the results of the semester examination shall be made to the controller of examinations by the student concerned through the Head of the Department/ Principal of the affiliated college within 15 days of the publication of results by paying re-totaling /revaluation fee.

24. Instant Examination for Outgoing Students

Instant Examinations will be conducted only in the University Main Campus, Chennai 600127 for the outgoing students who failed in **any two papers from theory and/or practical papers** are eligible to apply for Instant Examination by paying prescribed examination fee**.** The date of instant examination will be intimated by Controller of Examinations of Tamil Nadu Physical Education and Sports University.

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SYLLABUS

PART I – Language: Tamil

Part II - English

Part III – Core Theory and Practical / Discipline Specific Elective / Allied Papers

Part IV – Ability Enhancement Programmes and Skill Enhancement Courses / NME-Non Major Elective or Generic Centric Elective Papers)

Part V - Co-curricular Activities: Village Placement Programme / NSS / NCC / YRC / Officiating Examinations

LEARNING OUTCOMES-BASED CURRICULUM FRAMEWORK GUIDELINES BASED REGULATIONS FOR UNDER GRADUATE PROGRAMME	
Programme:	**B.P.E.S. Bachelor of Physical Education and Sports (Three Years)**
Programme Code:	23UA1 (2023 Regulations)
Duration:	**3 Years (UG)**
Programme Outcomes:	**PO1: Disciplinary knowledge:** Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study **PO2: Communication Skills:** Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups. **PO3: Critical thinking:** Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development. **PO4: Problem solving: Capacity** to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations. **PO5: Analytical reasoning**: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints. **PO6: Research-related skills**: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation **PO7: Cooperation/Team work:** Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team **PO8: Scientific reasoning**: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective. **PO9: Reflective thinking**: Critical sensibility to lived experiences, with self awareness and reflexivity of both self and society. **PO10 Information/digital literacy:** Capability to use ICT in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources; and use appropriate software for analysis of data. **PO 11 Self-directed learning**: Ability to work independently, identify appropriate resources required for a project, and manage a project through to completion. **PO 12 Multicultural competence:** Possess knowledge of the values and beliefs of multiple cultures and a global perspective; and capability to effectively engage in a multicultural society and interact respectfully with diverse groups. **PO 13: Moral and ethical awareness/reasoning**: Ability toembrace moral/ethical values in

	conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. Capable of demonstratingthe ability to identify ethical issues related to one‟s work, avoid unethical behaviour such as fabrication, falsification or misrepresentation of data or committing plagiarism, not adhering to intellectual property rights; appreciating environmental and sustainability issues; and adopting objective, unbiased and truthful actions in all aspects of work. **PO 14: Leadership readiness/qualities:** Capability for mapping out the tasks of a team or an organization, and setting direction, formulating an inspiring vision, building a team who can help achieve the vision, motivating and inspiring team members to engage with that vision, and using management skills to guide people to the right destination, in a smooth and efficient way. **PO 15: Lifelong learning:** Ability to acquire knowledge and skills, including „learning how to learn‟, that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development/reskilling.
Programme Specific Outcomes:	On successful completion of Bachelor of Physical Education and Sports programme, the student should be able to: **PSO1: Disciplinary Knowledge:** Understand the fundamental principles, concepts, and theories related to physical Education and Sports . Also, exhibit proficiency in performing research and experiments in the play fields and scientific laboratories . **PSO2: Critical Thinking:** Analyse complex problems, evaluate information, synthesize information, apply theoretical concepts to practical situations, identify assumptions and biases, make informed decisions and communicate effectively **PSO3: Problem Solving:** Employ theoretical concepts and critical reasoning ability with technical and tactical skills to solve problems, acquire data, analyze their physical significance and explore new design possibilities. **PSO4: Analytical & Scientific Reasoning:** Apply scientific methods, collect and analyse data, test hypotheses, evaluate evidence, apply statistical techniques and to infer new results.

PO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
PO1	✓					
PO2		✓				
PO3			✓			
PO4				✓		
PO5					✓	
PO6						✓

2. Highlights of the Revamped Curriculum:

- Student-centric, meeting the demands of industry & society, incorporating industrial components, hands-on training, skill enhancement modules, industrial project, project with viva-voce, exposure to entrepreneurial skills, training for competitive examinations, sustaining the quality of the core components and incorporating application oriented content wherever required.
- The Core subjects include latest developments in the education and scientific front, advanced programming packages allied with the discipline topics, practical training, devising statistical models and algorithms for providing solutions to industry / real life situations. The curriculum also facilitates peer learning with advanced statistical topics in the final semester, catering to the needs of stakeholders with research aptitude.
- The General Studies and Statistics based problem solving skills are included as mandatory components in the 'Training for Competitive Examinations' course at the final semester, a first of its kind.
- The curriculum is designed so as to strengthen the Industry-Academia interface and provide more job opportunities for the students.
- The Statistical Quality Control course is included to expose the students to real life problems and train the students on designing a mathematical model to provide solutions to the industrial problems.
- The Internship during the second year vacation will help the students gain valuable work experience, that connects classroom knowledge to real world experience and to narrow down and focus on the career path.
- Project with viva-voce component in the fifth semester enables the student, application of conceptual knowledge to practical situations. The state of art technologies in conducting a Explain in a scientific and systematic way and arriving at a precise solution is ensured. Such innovative provisions of the industrial training, project and internships will give students an edge over the counterparts in the job market.
- State-of Art techniques from the streams of multi-disciplinary, cross disciplinary and inter disciplinary nature are incorporated as Elective courses, covering conventional topics to the latest DBMS and Computer software for Analytics.

Choice Based Credit System (CBCS), Learning Outcomes Based Curriculum Framework (LOCF) Guideline Based Credit and Hours Distribution System for all UG courses including Lab Hours

Consolidated Semester wise and Component wise Credit distribution

Parts	Sem I	Sem II	Sem III	Sem IV	Sem V	Sem VI	Total Credits
Part I	3	3	3	3	-	-	12
Part II	3	3	3	3	-	-	12
Part III	15	15	14	17	22	17	100
Part IV	2	2	2	2	4	2	14
Part V	-	-	-	-	-	2	2
Total	23	23	22	25	26	21	**140**

***Part I. II, and Part III components will be separately taken into account for CGPA calculation and classification for the under graduate programme and the other components. IV, V have to be completed during the duration of the programme as per the norms, to be eligible for obtaining the UG degree.**

Objectives of the Programme:

1. To develop the physical, mental, social and spiritual qualities of the students through physical education and sports.
2. To learn the organization and administration of intramurals and extramurals in various sports and games.
3. To acquire the knowledge of the anatomy and sports physiology of the human body.
4. To study the sports science subjects and its application for the enhancement of sports performance.
5. To learn the teaching methods by means of internship training in nearby schools, fitness centres, etc.,
6. To develop desirable health habits and socially integrated sports persons in the nation.
7. To understand the rules & regulations and officiating mechanism of various sports.

Methods of Evaluation – As per common pattern prescribed by the TNPESU		
Internal Evaluation	Internal exam-5, Second Internal Exam-5	25 Marks
	Model Exam -10, Seminar – 2	
	Assignment – 3	
External Evaluation	MCQ- 20 Marks, Short Questions-25, Big Questions-30	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or Overview	
Application (K3)	Suggest idea/concept with examples, Suggest formulae, Solve problems, Observe, Explain	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate	
	between various ideas, Map knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or offbeat situations, Discussion, Debating or Presentations	

B.P.E.S (Bachelor of Physical Education and Sports)
PHYSICALEDUCATION
Programme Structure
(2023-2024 Regulations)

Sem.	Part	Course Code	Title of the Paper	T/P	Cr.	Hrs./ Week	Max.Marks		
							Int.	Ext.	Total
I	I	T/OL	Language--- Tamil (23UA1TL101)	T	3	6	25	75	100
	II	E	English – (23UA1EL101)	T	3	6	25	75	100
	III	CC	Foundation of Physical Education and Sports (23UA1CT101)	T	5	5	25	75	100
		CC	Anatomy and Physiology (23UA1CT102)	T	5	5	25	75	100
		AL –IA	Theories of Track and Field – 1 , (23UA1CT103)	T	3	4	25	75	100
		AL –IA	Practical- Theories of Track and Field – 1 and Marching, Calisthenics, Minor Games, Drills ((23UA1CP101)	P	2	2	50	-	50
	IV	AECC-1	Value Education (23UA1SE101)	T	2	2	50	-	50
	V		Extension Activities	-	-	-	-	-	-
			Total		**23**	**30**	**225**	**375**	**600**
II	I	T/OL	Language Tamil (23UA1TL201)	T	3	6	25	75	100
	II	E	English (23UA1EL201)	T	3	6	25	75	100
	III	CC	Theories of Major Games – I (23UA1CT201)	T	4	4	25	75	100
		CC	Practical-I:Theories of Major Games- I and Dands, Baiteks, Lezium, Light Apparatus (23UA1CP201)	P	2	2	100	-	100
		CC	Sports Psychology and Sociology (23UA1CT202)	T	4	4	25	75	100
		AL –IB	Yoga Education (23UA1CT203)	T	3	4	25	75	100
		AL –IB	Yoga Education (23UA1CP202)	P	2	2	50	-	50
	IV	AECC-2	Environmental Studies (23UA1SE202)	T	2	2	50	-	50
			Extension Activities /	-	-	-	-	-	-
			Total		**23**	**30**	325	375	**700**

III	I	T/OL	Language Tamil (23UA1TL301)	T	3	6	25	75	100
	II	E	English (23UA1EL301)	T	3	4	25	75	100
	III	CC	Organization Administration and Methods in Physical Education (23UA1CT301)	T	4	5	25	75	100
		CC	Theories of Track & Field-II (23UA1CT302)	T	4	5	25	75	100
		CC	Test and Measurement & Evaluation (23UA1CT303)	T	3	4	25	75	100
		CC	Practical – Test and Measurement & Evaluation in Physical Education (23UA1CP301)	P	1	1	50	-	50
		CC	Practical–Theories of Track & Field-II and Martial Arts (23UA1CP302)	P	1	2	50	-	50
	IV	SEC-I	Sports Entrepreneurship (23UA1SE301)	T	2	2	50	-	50
		NME-1 / Generic Elective	Sports Nutrition (or) Adapted Physical Education (23UA1NME301) Other Dept Paper	T	1	1	50	-	50
	V		Extension Activities :	-	-	-	-	-	-
			Total		**22**	**30**	**325**	**375**	**700**
IV	I	T/OL	Language Tamil (23UA1TL401)	T	3	6	25	75	100
	II	E	English (23UA1EL401)	T	3	6	25	75	100
	III	CC	Exercise Physiology (23UA1CT401)	T	5	5	25	75	100
		CC	Theories of Track and Field –III (23UA1CT402)	T	5	5	25	75	100
		CC	Theories of Track and Field – I, II, III (23UA1CP401)	P	3	3	50	50	100
		AL –IIB	Scientific Principles of Sports Training and Sports Talent Identification (23UA1CT403)	T	2	2	25	75	100
		AL –IIB	Practical– Sports Training and Sports Talent Identification (23UA1CP402)	P	2	2	50	-	50
	IV	NME-2 (Generic Elective Centric)	1.Adipadai Tamil (Non-Tamil Students) 2.AdvanceTamil 3. Small Business Management /MOOC'S Physical Education Papers 1. Physical Education for Healthy Life and Weight Mangement 2. Fitness and Wellness (23UA1NME401)	T	2	1	50	-	50
			Total		**25**	**30**	**275**	**425**	**700**

V	III	CC	Sports Biomechanics And Kinesiology (23UA1CT501)	T	4	5	25	75	100
		CC	Sports Medicine And Physiotherapy (23UA1CT502)	T	4	5	25	75	100
		CC	Practical – Teaching Practice (23UA1CP501)	P	3	4	50	-	50
		CC	Research and Elementary Statistics (23UA1CT503)	T	4	4	25	75	100
		CC	Theories of Games – II (23UA1CT504)	T	3	4	25	75	100
		CC	Practical : Theories of Games – II and Gymnastics and Traditional Sports (23UA1CP502)	P	1	1	50	-	50
		DSE	Care and Prevention of Athletic Injuries (Or) Computer Application in Physical Education (23UA1DE501)	T	3	4	25	75	100
	IV	SEC	Organizing Project Sports Meet , Tournaments and Officiating (23UA1IN501)		2	2	100	-	100
	IV	AECC	Intensive Internship for Schools (23UA1IN502)		2	1	100	-	100
			Total		**26**	**30**	**425**	**375**	**800**
VI									
	III	**CC**	Health Education and First Aid (23UA1CT601)	T	4	5	25	75	100
		DSE	Sports Management (Or) Educational Technology in Physical Education (23UA1CT602)	T	4	5	25	75	100
		CC	Theories Major of Games- III (23UA1CT603)	T	3	5	25	75	100
		CC	Practical : Theories of Major Games- III (Specialization Game) (23UA1CP601)	P	2	3	50	50	100
		CC	Project (23UA1D601)	D	4	6	100	-	100
	V		Extension Activities - Village Placement Programmes (23UA1IN601)		2	3	50	-	50
	IV		Library/Yoga / Qualified for any one officiating Examination / Field Trip etc ((23UA1IN602)		2	3	50	-	50
					21	**30**	**325**	**275**	**600**
			Grand Total		**140**	**--**	**--**	**--**	**4100**

- Language Tamil
- English
- CC-Core course –Core competency, critical thinking, analytical reasoning, research skill & team work
- Allied / GEC -Exposure beyond the discipline
- AECC- -Ability Enhancement Compulsory Course (Professional English & Environmental Studies) - Additional academic knowledge, psychology and problem solving etc.,

- SEC-Skill Enhancement Course - Exposure beyond the discipline (Value Education, Entrepreneurship Course, Computer application for Science, etc.,
- NME -Non Major Elective – Exposure beyond the discipline
- DSE – Discipline specific elective –Additional academic knowledge, critical thinking, and analytical reasoning-Student choice - either Internship or Theory papers or Project + 2 theory paper.
    - If internship – Marks = Internal- 150 (75+75) two midterm evaluation through Viva voce + Report- 150+ External Viva voce- 100 = 400.
    - If Project – Marks = Internal- 50 +Thesis- 100 + Viva voce- 50 = 200 + 2 theory paper- 200 = 400
- Extension activity & MOOCs – Voluntary basis

SEMESTER	Credits	Marks
I	23	600
II	23	700
III	22	700
IV	25	700
V	26	800
VI	21	600
TOTAL	140	4100

Semester – I				
	CORE COURSE – I	**T/P**	**Credits**	**Hours**
	FOUNDATION OF PHYSICAL EDUCATION AND SPORTS	**T**	**5**	**5**
Unit-I	Meaning and Definition of Education and Physical Education – Need, Nature and Scope of Physical Education – Physical Training and Physical Culture.			
Unit-II	Aim and Objectives of Physical Education – Development of Physical , Cognitive, Neuro-muscular, Affective, Social, Emotional, Spiritual and Recreational – Theories of Learning – Laws of Learning.			
Unit-III	Scientific basis of Physical Education – Contribution of Allied Sciences – Anatomy, Physiology, Biomechanics, Kinesiology, Sports Medicine, Psychology, Sociology and Computer Science.			
Unit-IV	History of Physical Education in Sparta and Athens – Olympic Games: Ancient, Modern – Origin – Organisation and conduct of the game – Olympic Flag, Torch, Oath, Emblem and Motto.			
Unit –V	Recent development in India: SAI, NSNIS, SNIPES,LNIPE, Sports Academics – Award and Scholarships: Arjuna Award, Dhronochariya Award, Rajiv Gandhi Khela Ratna Award – International and National Competitions: Asian Games, SAF, SGF, RDS and BDS.			

Books for References:

Bucher Charles A., *Foundations of Physical Education*, St. Louis the C.V. Mosby Company, 1983.

Kamlesh M.L., Physical Education : *Facts and Foundation*, New Delhi, P.B. Publications, 1988.

Thirunarayanan, C. and Hariharan, S., *Analytical History of Physical Education*, Karaikudi, C.T. & S.H., Publications, 1990.

Sharma, O.P., *History of Physical Education*, New Delhi, Khel Shitya Kendra, 1998.

Wakharkar D.G., *Manual of Physical Education in India*, Pearl Publicatons Pvt. Ltd., Bombay, 1967.

Wuest, Deborah, A. and Charles A. Bucher, *Foundations of Physical Education and Sport*, New Delhi : BL. Publication Pvt., Ltd.

Wellman and Cowell, *Philosophy and Principles of Physical Education*, A marvati: Suyog Prakasan.

Jackson Sharman/ *Modern Principles of Physical Education*, New York: A.A.Barnes & Co.

Khan, Eraj Ahmed, *History of Physical Education*, Patna Scientific Book Co.

Semester – I				
	Core Course – II	**T/P**	**Credits**	**Hours**
	ANATOMY AND PHYSIOLOGY	**T**	**5**	**5**
Unit-I	Meaning of Anatomy and Physiology – Need and Scope of Anatomy and Physiology in Physical Education – Cell – Structure and Functions – Tisuues – Types and Function-Muscular System – Types of Muscles: Skeletal Muscle, Cardiac Muscle, and smooth muscle.			
Unit-II	Skeleton : Meaning and Functions – Bones: Classification and Functions – General Features of Various Bones: Vertebral Column, Pelvic Bone, Radius and Ulna, Sacbula, Femer and Bones of Skill – Joints: Definition and Classification of Joints			
Unit-III	Nervous System : Neuron – Central Nervous System(CNS): Brain and Spinal Cord – Peripheral Nervous System (PNS): cranial Nerves and Spinal Nerves – Digestive System : Structure & Functions – Digestive Process – Liver, Pancreas – Functions			
Unit-IV	Respiratory System – Respiration – Respiratory Track – Alveoli – Lungs: Structure & Functions – Gas Exchange – Vital Capacity. Circulatory System – Heart: Structure & Functions – Cardiac Cycle, Cardiac Output, Stroke Volume.			
Unit -V	Endocrine Glands – Functions of Endocrine Glands: Pituitary, Thyroid,Para-Thyroid, Thymus, Pancreas, Adrenal & Sex – their role, in growth, development and regulations of body functions.			

Books for References:

Guyton A.C., 1969, *Functions of the Human Body*, London, W.B. Saunders Company,

Dr. V. Selvam *"Anatomy and Physiology"* Bodinayakanur.

Dr. N.M. MUTHAYYA *"Physiology"* J.J. Publications, Madurai.

SEELEY et. all *Anatomy and Physiology* Mc Graw Hill.

Srivastava et. 1976, All, Text Book of Practical Physiology, Calcutta Scientific Book Agency,

Semester – I				
	Core Course – III (AL-1A)	**T/P**	**Credits**	**Hours**
	THEORIES OF TRACK AND FIELD – I	**T**	**3**	**4**
(Track Events: Sprint, Middle Distance, Hurdles, Walking, Relay Races)				
Unit-I	Origin, History and Development of the Track Events – International, National and StateLevel Organization.			
Unit-II	Layout of Playfield – Rules and their Interpretation			
Unit-III	Fundamental Techniques – Lead – Up Games, Various Stages of Teaching the fundamental Techniques – Selection of athletes.			
Unit-IV	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
Unit -V	List of Officials, Duties of Officials , Officiating Procedures,			

Books for References:

Conling David, Athletics, London, Robert Hale, 1980

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pct. Ltd., 1995

Dr.P.Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Volleyball, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson Ganagon, Play Better Soccer in all colour, W.B.Saubders Company, 1972.

DHanaraj V.Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester-I				
	Practical – THEORIES OF TRACK AND FIELD EVENTS –I (Track Events: Sprint, Middle Distance and Hurdles, Walking, Relay Races) and Marching, Calisthenics, Minor Games, Drills	**T/P**	**Credits**	**Hours**
		P	**2**	**2**

Testing on:

1. Fundamental Techniques
2. Rules and Regulations
3. Playing Ability/Performance
4. Training Programmes
5. Officiating Techniques
6. Marching, Calisthenics, Minor Games, Drills

Scheme of Assessment:

7. Fundamental Techniques & Teaching,Coaching - 10
8. Playing ability/Performance (Execution of the Techniques)- 10
9. Officiating Technique - 10
10. Recordnote and VivaVoce - 10
11. Marching, Calisthenics, Minor Games, Drills - 10

TOTAL - 50

BooksforReference:

Dr.P.Mariayyah,Football,SportsPublications,RajaStreet,Coimbatore.

Dr.P.Mariayyah,volleyball,SportsPublication,RajaStreet,Coimbatore.

ThompsonWilliam,TeachingSoccer,Delhi,SurjeetPublications1996.

CartingGanagon,PlayBetterSoccerinAllColour,W.B.SaubdersCompany,1972.DhanarajV.H ubert,Volleyball–AModernApproach,Patiala,Sainsoris,1991.

Semester-I				
	Value Education – Skill Enhancement Course	**T/P**	**Credits**	**Hours**
		P	**2**	**2**

Semester-II				
	Core Course–IV	**T/P**	**Credits**	**Hours**
	THEORIES OF MAJOR GAMES–I	**T**	**4**	**4**
(Major Games: Football, Basketball &Volleyball)				
Unit-I	Origin, History and Development of the Game–International, National and State Level Organization.			
Unit-II	FundamentalSkills–Lead–UpGames,VariousSymptomsofPlay–SelectionofPlayers.			
Unit-III	Training:Warm–upTechnicalTraining–TacticalTraining–CoachingProgramme			
Unit-IV	Layout of Playfield with all measurements, facilities & equipment and its specifications.			
Unit-V	Rules and its interpretations – Score sheet - System of Officiating - Duties of Officials.			

Books for References:

Dr.P.Mariayyah,Football,SportsPublications,RajaStreet,Coimbatore.

Dr.P.Mariayyah,Volleyball,SportsPublications,RajaStreet,Coimbatore.

Thompson Ganagon, Play Better Soccerinallcolour, W.B.Saubders Company,

1972.DHanarajV.Hubert,Volleyball–AModernApproach,Patiala,Sainsoris,1991.

Semester-II				
	Practical – THEORIES OF MAJOR GAMES–I (Football, Basketball &Volleyball) Dands, Baiteks, Lezium, Light Apparatus	**T/P** **p**	**Credits** **2**	**Hours** **2**

Testing on:

1. Fundamental Techniques
2. Rules and Regulations
3. Playing Ability/Performance
4. Training Programmes
5. Officiating Techniques
6. Dands, Baiteks, Lezium, Light Apparatus

Scheme of Assessment:

7. Fundamental Techniques & Teaching, Coaching - 10
8. Playing ability/Performance (Execution of the Techniques)- 10
9. Officiating Technique - 10
10. Record note and Viva Voce - 10
11. Dands, Baiteks, Lezium, Light Apparatus - 10

TOTAL - 50

BooksforReference:

Dr.P.Mariayyah,Football,SportsPublications,RajaStreet,Coimbatore.

Dr.P.Mariayyah,volleyball,SportsPublication,RajaStreet,Coimbatore.

ThompsonWilliam,TeachingSoccer,Delhi,SurjeetPublications1996.

CartingGanagon,PlayBetterSoccerinAllColour,W.B.SaubdersCompany,1972.DhanarajV.H

ubert,Volleyball–AModernApproach,Patiala,Sainsoris,1991.

Semester – II				
	Core Course – V	**T/P**	**Credits**	**Hours**
	SPORTS PSYCHOLOGY & SOCIOLOGY	**T**	**4**	**4**
Unit-I	Meaning and Definition of Psychology and sports Psychology – Development of sports Psychology in India – Need and importance of sports Psychology in the field Physical Education and sports.			
Unit-II	Definition Motor Learning – Physical and Motor considerations – Body Build, Height and Weight, Strength, Muscular, Endurance, Flexibility, Balance Co-Ordination, Reaction time, Movement time and Reflex time Cognitive – Affeative – Psychomotor			
Unit-III	Definition of Perception – Theory of Perception Gestult Theory , Palror Theory and witkin's Theory emotional effects tension, anxiety and stress – its role in Physical education and sports.			
Unit-IV	Personality traits of sports person – composition of personality – Aggression – theories of Aggression – Psycho- regulative procedures. Autogenic training, yoga and Music's.			
Unit -V	Meaning , Nature and Scope of Sociology in Physical education and sports – social factors in sports – Leadership in sports spectators and fans group cohension social Integration.			

Book for References:

Alderman A.B. Psychology Behavior in sports W.B. Saundar company Saundar 1974.

Puni A.T. Sports Psychology Chanduga NIS.

Alderman Psychology Behavior

Cratty B.J. Psychology and Physical acivity.

Singer R.N. Coaching, Athletics and Physiology.

Semester – II				
	Core Course – VI- AL-II	**T/P**	**Credits**	**Hours**
	YOGA EDUCATION	**T**	**3**	**4**
Unit-I	Yoga: Meaning, Definition – Concept of Yoga – Aim and Objectives of Yoga – History of Yoga – Systems of yoga : Bhakthi yoga – Jnana yoga – Hatha yoga – Karma yoga – Kundalini yoga – mantra yoga – Raja yoga – Ashtanga yoga : Yama – Niyama – Asana – Pranayama – Pratyahara – Dharana – Dhayana – Samathi.			
Unit-II	Asanas: Meaning and Definition – Classification of asanas: Meditative, Relaxative, Cultural – Guidelines for practicing asanas – Various types of asanas and their benefits – Difference between physical exercise and yogic asanas.			
Unit-III	Pranayama: Meaning and Definition – Concept of Pranayama – Nadis – Ida nadi – Pingala Nadi – Sushumna nadi – Controlling of breath: Puraka – Kumbhaka – Rechaka – Guidelines for practicing Pranayama – Benefits of Pranayama – Types of Pranayama: Nadi Suddhi – Nadi Shodhana – Surya Bhedana – Kapalabhati – Bhastrika – Sitkari – Sitali – Bhramari – Ujjayi. Bandhas: Meaning and Definition – Types: Jallandra – Uddiyana – Mula.			
Unit-IV	Kriyas – Types of Kriyas – Procedures and Benefits of: Kapalabhati – Tratakka – Neti (Jala neti, Sutra neti) – Dhauti; Vamana Dhauti – Vastra Dhauti – Nauli – Bhasti. Mudra: Meaning – Types : Chin Mudra – Chinmaya Mudra – Yoga Mudra – Brahma Mudra – Appana Mudra.			
Unit -V	Meditation: Meaning and Definition – Concept of meditation – Types of meditation – Physiological benefits of meditation – yoga and competition – Principles of yogic Diet – Integration of Yoga with modern education – yoga institutions in India and Abroad – General Yogic Schedule.			

Books for References:

Iyengar B.K.S. (1989), Light on Yoga. London: Unwin Publishers New Delhi.

Chandrasekaran K.(1999) Sound Health through Yoga, Sedapatti: Prem Kalyan Publicaions.

Moorthy, A.M. and S. Alagesan(2004), Yoga Therapy, Coimbatore

Swami Sivananda (1983), Practical Lessons I Yoga, Shivananda Nagar : The Devine Life Society.

Semester-II				
	CC **PRACTICAL – Yoga Education**	**T/P** **P**	**Credits** **2**	**Hours** **2**

YOGA : Testing the Listed

1. Asanas,
2. Pranayama,
3. Meditation
4. Mudra, and
5. Kriyas in the Theory Paper.

Books for Reference:

SWAMI KUVALAYANANDA, Asanas, Kaivalyadhama, Lonavala, Pune.
B.K.S. IYANKAR, Light on Yoga Harper Collins Publications, Delhi.
Dr. P. MARIAYYAH, Asanas, Sports Publishers, Raja Street, Coimbatore-1
Dr.P.MARIAYYAH, Suriyanamaskar Jaya Publishing House, Perunthurai, Erode.

Semester-II				
	Environmental Studies – Ability Enhancement Compulsory Course	**T/P** **P**	**Credits** **2**	**Hours** **2**

Semester – III				
	Core Course – VII **ORGANIZATION ADMINSTRATION AND METHODS IN PHYSCIAL EDUCATION**	**T/P** **T**	**Credits** **4**	**Hours** **5**
Unit-I	Meaning and Importance of Organization and administration – Scheme of Physical Education in: Schools, Colleges, Universities, Districts State and National Level.			
Unit-II	Facilities – Track, Play Grounds, Gymnasium, Swimming Pole – Layout of Play fields (Basketball, Kabbadi, Hockey, Volleyball, Cricket) Care and Maintenance of Play fields.			
Unit-III	Method in Physical Education – meaning – Factors influencing Method Presentation Technique – Teaching Aids – Principles of Class Management. Teaching of activities: Marching, Calisthenics, light apparatus(Wands, Hooks, Poles) Lezium, Folk dance – Minor Games – Lead up activities.			
Unit-IV	Teaching activities of minor games, major games track and field, Yogic Practice, Suryanamaskar, Calisthenics, Light apparatus, Rhythmic activities, Commands, Marching.			
Unit -V	Tournaments – Types of Tournament, Knock out, League, Combination Tournament, Methods of drawing Fixtures.			

Books for References:

Kamlesh M.L. Scientific "Art of Teaching Physical Education" New Delhi Metropolitan 1994.

Thiru. Narayanan C and Harishara Sharma "Methods in Physical Education" Karailkudi CJ and S.H. 1989

Joseph. P.M. "Organization of Physical Education".

Semester – III				
	Core Course – VIII - (AL-1B)	**T/P**	**Credits**	**Hours**
	THEORIES OF TRACK AND FIELD EVENTS-II	**T**	**3**	**4**
(FIELD Events: Throw events- Shotput, Discus, Hammer, Javelin, Jump Events- Long Jump, High Jump, Triple Jump and Pole Vault)				
Unit-I	Origin, History and Development of the Track Events – International, National and StateLevel Organization.			
Unit-II	Layout of Playfield – Rules and their Interpretation			
Unit-III	Fundamental Techniques – Lead – Up Games, Various Stages of Teaching the fundamental Techniques – Selection of athletes.			
Unit-IV	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
Unit –V	List of Officials, Duties of Officials , Officiating Procedures,			

Books for References:

Conling David, Athletics, London, Robert Hale, 1980

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pct. Ltd., 1995

Dr.P.Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Volleyball, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson Ganagon, Play Better Soccer in all colour, W.B.Saubders Company, 1972.

DHanaraj V.Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester – III				
	Core Course – IX **TEST AND MEASUREMENT & EVALUATION**	**T/P**	**Credits**	**Hours**
		T	**3**	**4**
Unit-I	Meaning of Test, Measurement and Evaluation – Brief History of Test, Measurement and Evaluation – Need and Importance of measurement and Evaluation in Physical.			
Unit-II	Classification of Test – Standardized and Teacher Made test - Object and subject Tests – construction of Knowledge's test and skill Test – Administration of Test– Duties during testing – Duties after Testing.			
Unit-III	Criteria of test selection – Validity, reliability, Objectivity, Norms, Administrative feasibility – Strength test – Bend Knee sit ups test. Flexibility test – Sit and reach test – Speed test – 50 mts run – Cardio respiratory Endurance – Cooper 2 minute Run / Walk test. Explosive strength test – Standing Broad Jump.			
Unit-IV	AAHPERD Youth Fitness test. JCP test Barrow motor ability test Harward step test Magaia – Kalamen power test			
Unit -V	Test of Specific sport skills Badminton : French Short Serve Test Basketball : Johnson Basketball Ability test Hockey : Hendry Friedal Field Hockey test. Soccer : Mc Donald Volleying Soccer test. Tennis Boer : Miller Tennis test Volleyball : Helmen Volleyball test			

Books for References:

Safrit Margarat J Measurement in Physical Education and Exercises Science, St Louis Times Morror Mos by college publishing.

Bosco James Measurement and Evaluation in Physical Education and Sports New Jersy Prenstice Hall in 1983.

Barry L. Johnson, Jack K. Nelson and Measurement for Evaluation in Physical education the Surjeet Publications.

A.K.Gupta Tests&Measurement in Physical Education sports publication New Delhi – 52

A Practical applied to measurement in Physical Education – Horold M. Borrow.

Semester-III				
	Practical – Test, Measurement and Evaluation in Physical Education	**T/P**	**Credits**	**Hours**
		p	**1**	**1**

Testing on:

1. Arrangements
2. Test Administration
3. Training Programmes
4. Testing Procedures

Scheme of Assessment:

5.	Test Administration and Testing Procedures		10
6.	Execution of the Skill-		20
7.	Record note		-10
8.	Viva-Voce	-	10
	TOTAL	-	50

BooksforReference:

Dr.P.Mariayyah,Football,SportsPublications,RajaStreet,Coimbatore.

Dr.P.Mariayyah,volleyball,SportsPublication,RajaStreet,Coimbatore.

ThompsonWilliam,TeachingSoccer,Delhi,SurjeetPublications1996.

CartingGanagon,PlayBetterSoccerinAllColour,W.B.SaubdersCompany,1972.DhanarajV.H ubert,Volleyball–AModernApproach,Patiala,Sainsoris,1991.

Semester-III-CC				
	Practical – (FIELD Events: Throw events-Shotput, Discus, Hammer, Javelin, Jump Events- Long Jump, High Jump, Triple Jump and Pole Vault) and Martial Arts	**T/P**	**Credits**	**Hours**
		p	**2**	**3**

Testing on:

1. Fundamental Techniques
2. Rules and Regulations
3. Playing Ability/Performance
4. Training Programmes
5. Officiating Techniques
6. Martial Arts

Scheme of Assessment:

7. Fundamental Techniques & Teaching, Coaching - 10
8. Playing ability/Performance (Execution of the Techniques)- 10
9. Officiating Technique - 10
10. Record note and Viva Voce - 10
11. Martial Arts - 10

TOTAL - 50

BooksforReference:

Dr.P.Mariayyah,Football,SportsPublications,RajaStreet,Coimbatore.

Dr.P.Mariayyah,volleyball,SportsPublication,RajaStreet,Coimbatore.

ThompsonWilliam,TeachingSoccer,Delhi,SurjeetPublications1996.

CartingGanagon,PlayBetterSoccerinAllColour,W.B.SaubdersCompany,1972.DhanarajV.H ubert,Volleyball–AModernApproach,Patiala,Sainsoris,1991.

Semester-III			
	T/P	**Credits**	**Hours**
Sports Entrepreneurship – Skill Enhancement Course	**P**	**2**	**2**

Semester – III				
	Non-Major Elective	**T/P**	**Credits**	**Hours**
	Adapted Physical Education	**T**	**4**	**4**
Unit-I	Meaning of Adaptive Physical Education, Aims and Objectives of Adapted Physical Education, Basis for Adapted Physical Education, Functions of Adapted Physical Education			
Unit-II	Adapted Programme in Action Scope of Adapted Programme, Adapted programme for elementary schools, High/Secondary School, Colleges and Universities			
Unit-III	Personal Preparation Guiding Principles of Adapted Physical Education Policied of Adapted Physical Edcuation			
UNIT-IV	**Evaluation and Measurements** **Selection and Evaluation procedures, Classification of Handicapped and Disabled individual** **Determination of special disabilities**			
Unit -V	Social and Psychological Adjustment Role of Physical Education in preventing maladjustment and in the promotion of adjustment Recreation for the Handicapped			

Books for References:

William D.Mcarole. Frank.I Katch Victor.
Development of Adapted Physical Education Lea & Febiger Philade Richard W.Bowers and

Edward L. Fox – Sports Physiology Third Edition wm c Brown Publishers

Laurence E Morehouse Augustus T.Miller, JR Seventh Edition Physiology of Exercise The c.v. Mostly Company.

David H.Clarke Prevention and Corrective Physical Education , Inc: Englewood Cliffs,

new jersey.Larry G.Shaver Essentials of exercise Physiology surjeet publications.

Semester – III				
	Non-Major Elective	**T/P**	**Credits**	**Hours**
	SPORTS NUTRITION	**T**	**4**	**4**
Unit-I	**INTRODUCTION TO NUTRITION** Definition – Meaning – Need of sports Nutrition – Essential nutrition – Energy nutrients minerals and vitamins – Water –basic four food plan - balanced diet – daily recommended allowances.			
Unit-II	**CARBHOHYDRATES:** The nature of CHO – Kinds and sources of CHO – recommended intake of CHO – Role of carbohydrates in the body – energy sources – protein sparing – metabolic primer Fuel for the central nervous system – CHO balance in exercise – Intense exercise – moderate and prolonged exercise – effect of diet on muscle glycogen – administration of oral glucose.			
Unit-III	**FAT** Nature of fat – kinds and sources of fat – Recommended intake of fat – Role of fat in the body – energy sources and reserve – protection and insulation – vitamin carrier and Hunger depressor – Fat Balance in Exercise – Role of fat in Glycogen Sparing – Fat rich foods. **PROTEIN** The nature of protein – kinds and sources of protein – recommended intake of protein Role of protein in the body – Protein balance in exercise – dynamics of protein metabolism – protein rich foods. **VITAMINS** The nature of vitamins – kinds of vitamins – Role of vitamins in the body – vitamins and exercise performance – Dietary sources – RDA – Vitamins and functions – vitamins deficiency diseases – vitamin rich foods.			
UNIT-IV	**MINERALS** The nature of minerals – kinds and sources of minerals – role of minerals in the body – Minerals and exercise performance – Recommended daily allowances – functions – deficiency – diseases – Dietary sources. **WATER:** Water in the body – water balance intake versus output – functions of body-water – water requirement in exercise – Dehydration – Rehydration – Fluid facts forthirsty Athletes – Liquid meal.			

Unit -V	**DIET PLANNING FOR SPORTS PERSON:** Diet planning – factors determining diet planning – The Athlete's diet – Nutrition before exercise – pre game meal carbo-loading for endurance exercise – Nutrition after exercise – electrolytes and its function – sodium – Potassium Chlorine – Sodium Chloride(Salt) – Electrolyte replacement.

Books for References:

William D.Mcarole. Frank.I Katch Victor.
Exercise Physiology Energy, Nutrition and Human performance Lea & Febiger Philade

Richard W.Bowers and Edward L. Fox – Sports Physiology Third Edition wm c Brown Publishers

Laurence E Morehouse Augustus T.Miller, JR Seventh Edition Physiology of Exercise The c.v. Mostly Company.

David H.Clarke Exercise Physiology prenties Hall, Inc: Englewood Cliffs, new jersey.

Larry G.Shaver Essentials of exercise Physiology surjeet publications.

Dr.Amrit Kumar R.Moses introduction to exercise physiology poompugar pathipagam.

Donald Health. David Reid Williams.
Man at high altitude second edition, Churchill livi gstone.

Semester – IV				
	Core Course – X	**T/P**	**Credits**	**Hours**
	EXERCISE PHYSIOLOGY	**T**	**4**	**4**
Unit-I	Metabolism and Energy Transfer :- Metabolism – Energy – Unit of measuring energy – Sources of energy – Adenosine Triphospate – Phosphagen system – Anacroble metabolism – Aerobic metabolism – Fat metabolism – protin metabolism – energy metabolism during rest, exercise and recovery – oxygen debt – oxygen deficit.			
Unit-II	**MORPHOLOGICAL FEATURE OF SKELETAL MUSCLE AND FUNCTION.** Structure of the skeletal muscle – Chemical composition – Sliding filament theory of muscular contraction – muscle fiber types – fiber distribution and performance – All or none principle – muscle tone – Types of muscular contraction – Staircase Phenomenon or treppe – Heat production in the muscle – Residual muscle soreness – Effect of Training on muscular system.			
Unit-III	**RESPIRATORY SYSTEM AND EXERCISE:** Mechanism of breathing – Pulmonary ventilation / minute ventilation during rest and exercise – control of ventilation – Lung volumes and capacities - Effect of exercise on Respiratory system.			
UNIT-IV	**CARDIOVASCULAR SYSTEM AND EXERCISE:** Structure properties of the heart and cardiac cycle, cardiac output during rest and exercise Stroke volume and heart rate – control of heart rate – Heart rate response to exercise on stroke volume– Blood pressure – factors affecting blood pressure and heart rate – Regulation of blood flow – effect of exercise on circulatory system.			
Unit -V	**EXERCISE AND ENVIRONMENT:** Exercise and temperature regulations – Hot humid climate – Exercise and temperature regulations in cold climates – Effect of High altitude on Physical performance – Physiological adaptations to altitude – Physiological changes in under water conditions.			

Books for References:

William D.Mcarole. Frank.I Katch Victor.
Exercise Physiology Energy, Nutrition and Human performance Lea & Febiger Philade

Richard W.Bowers and Edward L. Fox – Sports Physiology Third Edition wm c Brown Publishers

Laurence E Morehouse Augustus T.Miller, JR Seventh Edition Physiology of Exercise The c.v. Mostly Company.

David H.Clarke Exercise Physiology prenties Hall, Inc: Englewood Cliffs, new jersey.

Larry G.Shaver Essentials of exercise Physiology surjeet publications.

Dr.Amrit Kumar R.Moses introduction to exercise physiology poompugar pathipagam.

Donald Health. David Reid Williams.
Man at high altitude second edition, Churchill livi gstone.

Semester-IV				
	Core Course–XI	**T/P**	**Credits**	**Hours**
	THEORIES OF TRACK AND FIELD–III	**T**	**4**	**4**
(Combined Events and Long Distance Races)				
Unit-I	Origin, History and Development of the Game– International, National and State Level Organization.			
Unit-II	Fundamental Techniques – Lead – Up Games, Various Stages of Teaching the fundamental Techniques – Selection of athletes.			
Unit-III	Training:Warm–upTechnicalTraining–TacticalTraining–CoachingProgramme			
Unit-IV	Layout of Playfield with all measurements, facilities & equipment and its specifications.			
Unit-V	Rules and its interpretations – Score sheet - System of Officiating - Duties of Officials.			

BooksforReferences:

Dr.P.Mariayyah,Football,SportsPublications,RajaStreet,Coimbatore.

Dr.P.Mariayyah,Volleyball,SportsPublications,RajaStreet,Coimbatore.

Thompson Ganagon, Play Better Soccerinallcolour, W.B.Saubders Company,

1972.DHanarajV.Hubert,Volleyball–AModernApproach,Patiala,Sainsoris,1991.

Semester-IV				
	Practical – (Theories of Track and Field –I,II &III)	**T/P**	**Credits**	**Hours**
		p	**3**	**3**

Testing on: **Internal -50 & External - 50**

1. Fundamental Techniques
2. Rules and Regulations
3. Playing Ability/Performance
4. Training Programmes
5. Officiating Techniques

Scheme of Assessment:

6.	Fundamental Techniques & Teaching, Coaching	-	20
7.	Playing ability/Performance (Execution of the Techniques)	-	10
8.	Officiating Technique	-	10
9.	Record note and Viva Voce	-	10
	TOTAL	-	50

BooksforReference:

Dr.P.Mariayyah,Football,SportsPublications,RajaStreet,Coimbatore.

Dr.P.Mariayyah,volleyball,SportsPublication,RajaStreet,Coimbatore.

ThompsonWilliam,TeachingSoccer,Delhi,SurjeetPublications1996.

CartingGanagon,PlayBetterSoccerinAllColour,W.B.SaubdersCompany,1972.DhanarajV.H ubert,Volleyball–AModernApproach,Patiala,Sainsoris,1991.

Semester – IV				
	Core Course – XII	**T/P**	**Credits**	**Hours**
	SCENTIFIC PRINCIPLES OF SPORTS TRAINING AND SPORTS TALENT IDENTIFICATION	**T**	**3**	**3**
Unit-I	Introduction, Meaning , Definition of Sports Training, Principles of Sports Training - Training Load and Recovery – Factors of Load – Load intensity, Load Volume - – judgment of Load – Relationship between Load and Adaptation Over Load.			
Unit-II	Training of Motor qualities: Strength : Forms – Means and Methods to improve strength Speed : Forms – Means and Methods to improve speed Endurance : Forms – Means and Methods to improve Endurance Flexibility : Forms – Means and Methods to improve flexibility. Coordination : Forms – Means and Methods to Improve Coordination.			
Unit-III	Training plan – Periodisation – stages of periodisation – Types of Periodisation – Preparatory period – Competition period – Transitional period – long term and shortterm plans – Cyclic process of training.			
Unit-IV	Techniques preparation – Aims to techniques in sports – Fundamentals and methods for development of techniques in sports – stages of techniques development. Aims of Tactics – Methods of tactical development.			
Unit -V	Sports Talent Identification – Meaning and Definition – Importance and Characteristics of Sports Talent Identification - Procedures of Sports Talent Identification			

Books for References:

Hardayal Singh(1991) Science of sports Training, New Delhi: DVS Publications.

John Bunn, Scientific Principles of Coaching.

Miler, Fundamental of Track and Field Coaching.

Semester – IV				
	Core Course	**T/P**	**Credits**	**Hours**
	PRACTICAL – Sports Training and Sports Talent Identification **(Methods of Improvement of Speed, Strength, Endurance, Flexibility and Coordination)**	**P**	**2**	**2**

Testing on:

1. Methods of Improvement of Speed
2. Methods of Improvement of Strength
3. Methods of Improvement of Endurance
4. Methods of Improvement of Flexibility
5. Methods of Improvement of Coordination
6. Sports Talent Identification – Methods and Procedures

Scheme of Assessment:

5.	Performance	-	20
6.	Execution Procedure	-	15
7.	Record note and Viva voce	-	15
	TOTAL	-	50

Books for Reference:

Conling David, Athletics, London, Robert Hale, 1980.

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pvt. Ltd., 1995.

Dr. P. Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, volleyball, Sports Publication, Raja Street, Coimbatore.

Dr. P. Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson William, Teaching Soccer, Delhi, Surjeet Publications 1996.

Carting Ganagon, Play Better Soccer in All Colour, W.B. Saubders Company,1972.

Dhanaraj V. Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

NME – Non-Major Elective
Generic Elective Centric
(For other Department Students who choose our department elective papers)
A. Fitness for Healthy Life and Weight Management
B. Personal Fitness Training

Semester – IV				
	Generic Elective Centric	**T/P**	**Credits**	**Hours**
	A. FITNESS FOR HEALTHY LIFE AND WEIGHT MANGEMENT		**2**	**1**
Unit-I	Physical Fitness: Meaning and Definition, Concepts, Techniques and Principles. Types and Components of Fitness			
Unit-II	Health Related Fitness-Motor and Skill Related Fitness - Current trends in fitness and conditioning, components of total health fitness and the relationship between physical activity and lifelong wellness-			
Unit-III	Meaning and Definition of Wellness –Components of wellness., Factors Influencing Wellness.			
Unit-IV	Weight Management: Meaning, Concept of Weight Management in the Modern Era – Factors affecting Weight Management and Values of Weight Management			
Unit –V	Aerobic Exercise and Anaerobic Exercises - Maintaining a Healthy Life Style - Body Mass Index (BMI)			

Books for References:

Conling David, Athletics, London, Robert Hale, 1980

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pct. Ltd., 1995

Dr.P.Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Volleyball, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson Ganagon, Play Better Soccer in all colour, W.B.Saubders Company, 1972.

DHanaraj V.Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester – IV				
	Generic Elective Centric	**T/P**	**Credits**	**Hours**
	Personal Fitness Training		**2**	**1**
Unit-I	Warming Up Exercises, Fitness, Warm Down Exercises, Stretching Exercises, Strength Training , Weight Training			
Unit-II	Fitness Components , Principles of Sports Training, Endurance Training, Continuous Training, Slow Continuous and Fast Continuous , Repetition Methods, Interval Training, Fartlek Training.			
Unit-III	Speed Training , Plyometric Training, Swiss Ball Training, Aerobics Exercises			
Unit-IV	Upper Body Fitness – Abdominal Conditioning, Lower and Upper Abdominal, Shoulder Fitness, Back Strengthening Exercises,			
Unit –V	Lower Body Fitness, Thigh Muscle stretching, Calf Muscle Stretching , Ankle Strengthening and Knee Strengthening			

Books for References:

Conling David, Strength Training , London, Robert Hale, 1980

Prabhakar Eric, The way to Personal Fitness, Madras East – West press Pct. Ltd., 1995

Dr.P.Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Volleyball, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson Ganagon, Play Better Soccer in all colour, W.B.Saubders Company, 1972.

DHanaraj V.Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester – V				
	Core Course – XIII	**T/P**	**Credits**	**Hours**
	SPORTS BIOMECHANICS & KINESIOLOGY	**T**	**4**	**5**
Unit-I	Meaning and Definition – aim, Need and Importance of Bio-Mechanics in the field of Physical education and sports – Types of motion-linear and angular motion – Function – air and Water resistance.			
Unit-II	Linear Kinematics – Distance and Displacement, Speed, Velocity and Acceleration and Projectile – Angular Kinematics – Angular distance and Displacement, Angular speed, Velocity and acceleration.			
Unit-III	Center of Gravity Equilibrium – Stages of equilibrium – Factors affecting – equilibrium. Centrifugal and Centripetal, Force-Direction-angle, Point of application – Lever – Principles and its types-Mechanical Advantage – Application of Levers in Physical Education & Sports.			
Unit-IV	Inertia-Mass and Weight – Force-Factors affecting force-Types of force – Work, Power and Energy-Impact and Elasticity – Newton's Law of motion.			
Unit -V	Use of the above scientific principles in: Track & Field events – Running, throwing, Jumping – Basketball, football, Volleyball.			

Book for References:

Greire millor, Paul & smith, Techniques for the analysis of Human movement lapse books London 1975.

Bunn John W "Scientific Principles of coaching".

Charles "Fundamental of Sports Bio-Mechanics Techniques.

Hay, James G "The Biomechanics of Sports".

T. Mc Clurg Anderson Bio Mechanics of Human Motion.

Semester – V				
	Core Course –XIV **SPORTS MEDICINE AND PHYSIOTHERAPY**	**T/P**	**Credits**	**Hours**
		T	**4**	**5**
Unit-I	Common Athletic injuries and their treatment, Sprain, Strain. Types of fracture and their treatment			
Unit-II	Dislocation, Muscle cramp, Bleeding, Wound and its types, Contusion, Abrasion and Puncture wounds			
Unit-III	Meaning, Nature, Need and importance of Physiotherapy Short wave Diathermy, Microwave Diathermy, Diapulse Diathermy, Ultra Sound Waves, Infra red rays, Ultra violet rays.			
Unit-IV	Brief History of Message Classification of the Manipulations used in message the techniques and uses indication of all manipulation			
Unit -V	Rhumatic Conditions 1. Classification – Rhumatoid Arthritis 2. Spondylytis 3. A cute respiratory conditions 4. Chronic respiratory conditions 5. Conditions of the Nervous System. Introduction, Sign and Symptoms of neurological dis-orders like Paralegia, Hemiplegia, Cerebral Palsy.			

Book for References:

Thorndike, Athletic injuries.

I.B. Clayton, Text Book of Electro therapy and Action therapy.

Edwin M. Prasnet, Manual of message and Movements.

R. Foracks, Exercise Therapy.

M. V. Locs, Manual of Message.

Adish Luchwald, Physical Rehabilitation for Daily Living.

Semester – V				
	Core Course –XV **RESEARCH AND ELEMENTARY STATISTICS**	**T/P**	**Credits**	**Hours**
		T	**4**	**4**
Unit-I	**INTRODUCTION** Definition for Research – Need, importance and scope of research in Physical Education – Basic research – Applied research.			
Unit-II	**FORMULATION AND DEVELOPMENT OF RESEARCH PROBLEM** Location of research problem – Criteria in selecting the research problem – Hypothesis – Research proposal.			
Unit-III	**HISTORICAL RESEARCH** Definition of Historical research – Steps in historical research – Sources of Historical data-primary and secondary sources of data – Historical criticism and internal.			
Unit-IV	Definition and meaning of variables, constants, population, sample and parameter – Scales of Measurement - Nominal, Ordinal, Internal and Ratio – Definition and meaning of range, quartile deviation, mean deviation and standard Deviation – Computation of standard deviation and quartile deviation from ungrounded and grouped data- Characteristics and uses of measures of variability.			
Unit -V	Meaning and importance of percentiles – Computation of percentiles from ungrouped data and grouped and grouped data – Construction of percentiles scales – Computing percentiles in deciles and quartiles.			

References:

Clarke, David Hand Clarke H.Harrison Research process. In physical education (2nd edition) Engle wood cliff, new jersey, prentice hall, Inc. 1984

Best John W.Research in Education, Englewood clifts, New jersey, prentice hall, Inc.1971

Semester – V				
	Core Course – XVI	**T/P**	**Credits**	**Hours**
	THEORIES OF GAMES - II	**T**	**3**	**4**
(Games: Kho-kho, Kabaddi, Hockey)				
Unit-I	Origin, History and Development of the Track Events – International, National and StateLevel Organization.			
Unit-II	Layout of Playfield – Rules and their Interpretation			
Unit-III	Fundamental Skills – Lead – Up Games, Various Symptoms of Play – Selection of Players.			
Unit-IV	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
Unit -V	List of Officials, Duties of Officials , Officiating Procedures,			

Books for References:

Conling David, Athletics, London, Robert Hale, 1980

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pct. Ltd., 1995

Dr.P.Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Volleyball, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson Ganagon, Play Better Soccer in all colour, W.B.Saubders Company, 1972.

DHanaraj V.Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester – V - Discipline Specific Elective – DE Paper – A or B

1. Care and Prevention of Athletic Injuries
2. Computer Application in Physical Education

Semester – V				
	CC-XVII – DSE-A	**T/P**	**Credits**	**Hours**
	CARE AND PREVENTION OF ATHLETIC INJURIES	**T**	**4**	**4**
Unit-I	(i) Types of Movements, Concentric, exocentric (Isotonic), Static (Isometric) and Isokinetic exercises. (ii) Posture and body mechanics – Standards of Standing posture, values of good posture, drawback and causes of poor posture.			
Unit-II	(i) Posture Tests – Examination of the spine. New York State posture Rating Chart Test, Organization of special classes for postural correction. (ii) Some common deviation in posture – normal curvature of the spine and its utility, kyphosis, lordosis, kypholordosis, flat back, scolosis (C and S curve, functional and structural round shoulders). Knock knees, bow legs, flat foot, causes for these deviations and treatment including exercise.			
Unit-III	(i) A brief history of massage and remedial exercise (ii) Muscle relaxation as an aid to massage (iii) Points to be considered in giving massage (iv) Physiological effects of massage (v) Classification of the manipulations used in massage and their specific uses on the Human body a stroking manipulation. (vi) Effleurage, Stroking, Kneading, Friction, Hacking, Clapping, Beating and Pounding.			
Unit-IV	(i) Common athletic injuries and their treatment (ii) Sprains (iii) Strains (iv) Contusions (v) Abrasions (vi) Type of fractures and their management			
Unit -V	Principles of applying heat/cold, ultra-violet rays, infra-red rays, contrast bath ultrasonic			

Book for References:

Corrective Physical Education, Rathborne J.I.W.B. Saunders and co., London 1995.

Manual of massage and movement, Prof E.M. Naro Faber and Faber Ltd.

Therapeutic Exercise for body Alignment and Education, by William mareuam and Catherine Worthingham, WB. Saunders and Co., 1965

Massage and Medical Gymnastics, M.V. Lace J. & A. Churchill Ltd., 1951.

Preventive and Corrective Physical Education Stafford and Kelly, New York. The Ronald Press, 1968.

Semester – V				
	CC-XVII – DSE-B	**T/P**	**Credits**	**Hours**
	COMPUTER APPLICATIONS IN PHYSICAL EDUCATION	**T**	**4**	**4**
Unit-I	Introduction to Computer – History of Computers – Block diagram of a Computer – Input Devices, Keyboard and Monitor, Visual Display Terminal, Function Keys, Numeric Key pad, Light Pen and Mouse, Bar Codes – Out put Devices, Video Display unit – Dot Matrix Printers, Line Printers.			
Unit-II	Memory, Function of Memory, Read only Memory (ROM), Random Access Memory (RAM), Floppy Disk, Magnetic tape, Hard Disk – Central Processing Unit – Important characteristics of a computer.			
Unit-III	Software and Hardware, Machine Language, Assembly Language, High Level Language, Advantages of High Level Languages, Interpreters, Operating Systems, Basic Knowledge about different Software packages(Dbase, Spread Sheet, Word Processors)			
Unit-IV	Applications in windows – Application and document files, M.S.Dos. Clock and Calendar, Calculator, Paint, WordPad – Working with multiple applications.			
Unit -V	Practical – Windows ’98 Word PowerPoint and Excels – 100 Marks			

Book for References:

Corrective Physical Education, Rathborne J.I.W.B. Saunders and co., London 1995.

Manual of massage and movement, Prof E.M. Naro Faber and Faber Ltd.

Therapeutic Exercise for body Alignment and Education, by William mareuam and Catherine Worthingham, WB. Saunders and Co., 1965

Massage and Medical Gymnastics, M.V. Lace J. & A. Churchill Ltd., 1951.

Preventive and Corrective Physical Education Stafford and Kelly, New York. The Ronald Press, 1968.

Semester – V				
	Core Course	**T/P**	**Credits**	**Hours**
	TEACHING PRACTICE - (GENERAL LESSON PLAN AND PARTICULAR LESSON PLAN)	**P**	**3**	**4**

Testing on:

1. General Lesson Plan (All Activities)
2. Particular Lesson Plan (Games and Athletics)
3. Teaching Methods
4. Commands

Scheme of Assessment:

1.	Teaching of General Lesson Plan	-	20
2.	Teaching of Particular Lesson Plan	-	20
3.	Record note with school signature	-	10
	TOTAL	-	50

Books for Reference:

Conling David, Teaching Practice , London, Robert Hale, 1980.

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pvt. Ltd., 1995.

Dr. P. Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, volleyball, Sports Publication, Raja Street, Coimbatore.

Dr. P. Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson William, Teaching Soccer, Delhi, Surjeet Publications 1996.

Carting Ganagon, Play Better Soccer in All Colour, W.B. Saubders Company,1972.

Dhanaraj V. Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester – V				
IV	**Organising Project Sports Meet , Tournaments and Officiating**	**T/P**	**Credits**	**Hours**
		P	**2**	**1**

Organizing Project Sports Meet / Tournaments

4.	Organizing Project Sports Meet	-	20
5.	Organising Tournaments	-	20
6.	Officiating Exam	-	10
	TOTAL	-	50

Books for Reference:

Conling David, Teaching Practice , London, Robert Hale, 1980.

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pvt. Ltd., 1995.

Dr. P. Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, volleyball, Sports Publication, Raja Street, Coimbatore.

Dr. P. Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson William, Teaching Soccer, Delhi, Surjeet Publications 1996.

Carting Ganagon, Play Better Soccer in All Colour, W.B. Saubders Company,1972.

Dhanaraj V. Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester – V				
IV	**Intensive Internship for School**	**T/P**	**Credits**	**Hours**
		P	**2**	**1**

Internship/ Teaching Practice

a) In internship a student (teacher trainee) is undergoing supervised practical training. Internship/ Teaching practice includes Teaching & observation in the Department/ College. Intensive Teaching Practice in the neighboring Schools,

b) Schools for intensive teaching shall be decided by the Staff-in-charge of Teaching Practice and Head of the Department / Principal of the College.

c) A minimum of 30 lessons, Students shall complete 15 General and 15 Particular lessons/ Coaching Lessons in 15 working days under the supervision of the assigned Department /College and physical education staff in the schools.

7. Teaching of General Lesson Plan	-	40
8. Teaching of Particular Lesson Plan	-	40
9. Record note with school signature	-	20
TOTAL	-	100

Books for Reference:

Conling David, Teaching Practice , London, Robert Hale, 1980.

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pvt. Ltd., 1995.

Dr. P. Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, volleyball, Sports Publication, Raja Street, Coimbatore.

Dr. P. Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson William, Teaching Soccer, Delhi, Surjeet Publications 1996.

Carting Ganagon, Play Better Soccer in All Colour, W.B. Saubders Company,1972.

Dhanaraj V. Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester – V				
	Core Course	**T/P**	**Credits**	**Hours**
	THEORIES OF MAJOR GAMES- II (Major Games : Kho-kho, Kabaddi and Hockey) and Gymnastics and Traditional Sports	**P**	**1**	**1**

Testing on:

Fundamental Skills

5. Finer Skills
6. Playing Ability / Performance
7. Officiating Techniques
8. Gymnastics
9. Traditional Sports

Scheme of Assessment:

1.	Fundamental Skill & Defensive and Offensive Skill	-	10
2.	Gymnastics		- 10
3.	Traditional Sports		- 10
4.	Playing ability / Performance	-	10
5.	Officiating Technique	-	5
6.	Record note	-	5
	TOTAL	-	50

Books for Reference:

Conling David, Athletics, London, Robert Hale, 1980.

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pvt. Ltd., 1995.

Dr. P. Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P. Mariayyah, volleyball, Sports Publication, Raja Street, Coimbatore.

Dr. P. Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson William, Teaching Soccer, Delhi, Surjeet Publications 1996.

Carting Ganagon, Play Better Soccer in All Colour, W.B. Saubders Company,1972.

Dhanaraj V. Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester – VI				
	Core Course-XVIII	**T/P**	**Credits**	**Hours**
	THEORIES OF GAMES-III	**T**	**3**	**4**
(Cricket, Handball and Badminton)				
Unit-I	Origin, History and Development of the Track Events – International, National and StateLevel Organization.			
Unit-II	Layout of Playfield – Rules and their Interpretation			
Unit-III	Fundamental Skills – Lead – Up Games, Various Symptoms of Play – Selection of Players.			
Unit-IV	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
Unit -V	List of Officials, Duties of Officials , Officiating Procedures,			

Books for References:

Conling David, Athletics, London, Robert Hale, 1980

Prabhakar Eric, The way to Athletic Gold, Madras East – West press Pct. Ltd., 1995

Dr.P.Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Volleyball, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.

Thompson Ganagon, Play Better Soccer in all colour, W.B.Saubders Company, 1972.

DHanaraj V.Hubert, Volleyball – A Modern Approach, Patiala, Sainsoris, 1991.

Semester – VI				
	CC-XIX	**T/P**	**Credits**	**Hours**
	HEALTH EDUCATION AND FIRST AID	**T**	**4**	**5**
Unit-I	Meaning, Nature, Need and Scope of health Education. Factors influencing Health. State, National and International health organization. Meaning of wellness and Health – components of Health-Physical and Mental Health. Community health, Environment health, Occupational health. Personal hygiene School health programme.			
Unit-II	Communicable diseases – agent, causative organism, Incubation period-Mode of spread, sign and symptoms and preventive measure of typhoid, Cholera, Pulmonary Tuberculosis, Amoeniasus, Malaria, Tetanus, Poliomyneens, Non-Communicable diseases – Symptoms and Prevention of Peptic aulser, Maligrency, Cancer, Hyper tension, Diabetic mellius.			
Unit-III	Definition – Characterstics – Principles of Safety Education – Need for Safety Education in Physical Education. Factors affecting safety – Need and Importance of safety for preventing injuries.			
Unit-IV	Definition and importance of first aid – first aid for Athletic injuries – sprain, strain – dislocation – cramp – fracture and its types.			
Unit -V	Sign, Symptoms and first aid for Poisoning, Drowning, Dog Bit and Burns. Types of Bleeding – Wound and its type – Contusion – Abrasion – Puncher wound – Laceration. Artificial respiration.			

Book for References:

Mangal SK and Chandra, P.C. (1979) Health and Physical Education, Ludhiana Tandon Brothers Publication.

Neiniah (1978) School Health Education, New York: Harper and Brothers

Royappa, Daisy Joseph and Govindarajulu, JK. (1972) Safety Education

First Aid to the Injured, New Delhi: St. John Ambulance Association

School Safety Policies, Washington: America Association for Health, Physical Education and Recreation.

Florio, A.E and Stafford, G.T., (1969) Safety Education, New York: Mc Graw Hill Book Company.

William, Evans, A, (1952) Everyday Safety, Lyons and Carnahan

Miller, David. E, (1976) Occupational Safety, Health and Fire Index, New York: Marcel Dekker Inc.

Discipline Specific Elective – DE – A or B

A. Sports Management

B. Educational Technology in Physical Education

Semester – VI				
	Core Course – XX DSE-A **Discipline Specific Elective** **SPORTS MANAGEMENT**	**T/P** **T**	**Credits** **4**	**Hours** **5**
Unit-I	Meaning and Definition of Sports management – Scope of sports management – Basic principles of sports management – Functions of sports management.			
Unit-II	Personal management: Objectives – Personal policies – Personal Recruitment – Role of Personal manager. Programme management: Importance of programme development – Factors influencing programme development – Competitive sports programs.			
Unit-III	Sports marketing: Meaning – Factors involved in the marketing of sports – Market awareness – Developing a target market strategy – Quality and price of sports products.			
Unit-IV	Supplies of sports Equipment: Guidelines for selection and supply of equipments – Equipment room, Equipment and supply manager – Guidelines for checking, storing and issuing – Care and Maintenance of equipments.			
Unit -V	Accounting and Budgeting – Definition and role of accounting in sport and fitness enterprise Raising of funds – Types of Budget – Budget record maintenance – The accounting system.			

Book for References:

Bucher A. Charles (1993) Management of Physical Education and sports (10th ed.,) St. Louis: Mobsy Publishing Company.

Chellaldurai. P(1999) Human Resource Management in sport and Recreation, Human kinetics.

Chakraborthy, Samiram (1988), Sports Management, Sports publications, New Delhi.

Lazer. W and Cultey. J Marketing Management. Boston Houghton Miffing Co.

Ruben Acosta Hernandez, Managing sport organizations, Human kinetics.

Semester – VI				
	Core Course – XX DSE-B **Discipline Specific Elective** **EDUCATIONAL TECHNOLOGY** **IN PHYSICAL EDUCATION**	**T/P** **T**	**Credits** **4**	**Hours** **5**
Unit-I	Introduction: Education and Education Technology- Meaning and Definitions. Types of Education- Formal, Informal and Non- Formal Education. Educative Process Importance of Devices and Methods of Teaching.			
Unit-II	Teaching Technique: Teaching Technique – Lecture method, Command method, Demonstration method, Imitation method, Project method. Micro Teaching – Meaning,.			
Unit-III	Types and steps of micro teaching. Simulation Teaching - Meaning, Types and steps of simulation teaching			
Unit-IV	Teaching Aids : Teaching Aids – Meaning, Importance and its criteria for selecting teaching aids. Teaching aids – Audio aids, Visual aids, Audio – Visual aids, Verbal, Chalk board, Charts, Model, Slide projector, Motion picture. Team Teaching – Meaning, Principles and advantage of team teaching. Difference between Teaching Methods and Teaching Aid.			
Unit -V	Introduction to Computer and MS Word: Meaning, Need and Importance of Information and Communication Teaching (ICT) .Application of Computers in Physical Education. MS Word: Introduction to MS Word – Creating, Saving and Opening a Document – Formatting,			

Book for References:

Bucher A. Charles (1993) Educational Technology in Physical Education and sports (10th ed.,) St. Louis:Mobsy Publishing Company.

Chellaldurai. P(1999) Human Resource Management in sport and Recreation, Human kinetics.

Chakraborthy, Samiram (1988), Sports Management, Sports publications, New Delhi.

Lazer. W and Cultey. J Marketing Management. Boston Houghton Miffing Co.

Ruben Acosta Hernandez, Managing sport organizations, Human kinetics.

	Project	T/P	Credits	Hours
		CC	4	6

DISSERTATION

1. The student shall have dissertation for B.P.E.S. in VI Semester. The title and proposal shall be approved by the Guide and Head of Department/ Principal of the College.

2. The dissertation must be submitted before issuing the hall tickets, the last theory examination of the VI Semester duly signed by Guide and Head of Department / Principal of the College.

3. The format Prescribed by the University shall be followed.

4. Only Internal Evaluation only. Concern Principal / Head of the Department and Research Supervisor will evaluate their performance ,

5. Candidates has to present his research work in a ppt presentation compulsory before issuing the hall tickets.

Semester – VI				
	DSE	**T/P**	**Credits**	**Hours**
	PRACTICAL OF MAJOR GAMES I, II, III **(Major Games: Football, Khokho, Kabaddi, Volleyball, Badminton, Basket ball, Cricket, Hockey and Handball)**	**T**	**2**	**3**

GAME – Internal – 50 and
External - 50

General and specific conditioning exercise

Fundamental Skills

Drills for developing the skills

Team Tactics and Strategy

System of Play

Standardized skill test

Scouting of Performance

Rules

Officiating techniques

	Library / Yoga / Qualified for any one Officiating Examination / Field Trip	T/P	Credits	Hours
		V	2	3

Students are instructed to complete any one of the following

1. Field Trip
2. Qualify for any one Officating Examination
3. Complete one week yoga internship during week end.
4. Complete Library Hours for One week.

PART-V	**Semester-VI – EXTENTION ACTIVITIES – Village Placement Programmes**	**T/P**	**Credits**	**Hours**
		V	**2**	**3**

In the Sixth semester of the B.P.E.S course for the Village Placement programme the students required to visit of neighbouring village at least for a minimum period of five days and to organise the programmes such as

1. Physical Education/ Physical Exercise related programmes
2. Awareness Programmes related to health and fitness
3. Cleaning, creation of place for physical activities, sports and games.
4. Survey of related health and fitness

The Village Placement programme record with details of programmes organised and photo graphs should be submitted at the time of the Vi Semester B.P.E .S University practical examinations for evaluation.

Ability Enhancement Compulsory Courses
Semester-I
Value Education

Course Objectives

1. To promote the knowledge of the value education
2. Create health awareness among youth , various health problems, and its impacts
3. Able to understand the importance of culture.

Unit-1
Values of Life and Education, Meaning , Definitions , types and concept of values, Meaning of value Education, Need, Importance and Objectives.
Unit-II
Moral Values: Need and Theories of Values. Value Systems: Meaning and Definition, Personal and Communal values, Corporate values
Unit-III
International Commission on value system, Teaching and Value. Role of Authorities , Guidelines, Classification of Values , Values: Traditional, Functional, Moral and Professional.
Unit-IV
Value Lessons, Teaching and some natural values. Enriched Heritage : An Asset
Unit-V
Meaning and Interpretation of Culture, Concept of Culture, Culture: a foundational need of values, values of culture, Culture of sports and values of Olympic games.

Learning Outcome

1. Explain the role of values, concepts, and functions across the globe and in society.
2. Able to explain Value Education.
3 Apply the values of lessons, natural values
4.understand the Concept of Cultures and Culture and Sports.

References

Dhananjay Joshi (2010) Value Education in Global Prespective. New Delhi : Lotus Press .

Kannan.K (2009) Soft Skills, Madurai: Yadava College Publication

MohitChakrabarti (2008): Value Education: Changing Perspective, New Delhi : Kanishka Publication.

Padmanabhan. A &Perumal .A (2009), Science and Art of Living, Madurai: Pakavathi Publication

Shiv Khera (2002), You Can Win, NewDelhi: Macmillan India Limited.

Venkataiah. N (2009)Value Education. - New Delhi: APH Publishing Corporation.

Semester-II
Environmental Studies

Learning Objectives

1. To gain the knowledge , Scope and Importance of environmental studies.
2. To understand the importance of environmental studies and public awareness.
3. To acquire the knowledge of historical background of environmental studies.
4. To acquire the knowledge of different types of ecosystem. Different types of disaster management.
5. To understand the knowledge of human pollution, population, human health and fire environment.

Unit-I

Introduction : Meaning , Concept of Environmental Education, Definition, scope and importance of environmental studies. Needs of environmental education for public awareness.

Unit-II

Ecosystem: Meaning , Concept , Structure and functions of an ecosystem, Food Chain, Food web and ecological pyramids, Producers, consumers and decomposers,

Unit-III

Inroduction , types, characteristics, features, structure and functions of forest ecosystem, grass land ecosystem, desert ecosystem, aquatic ecosystem.

Unit-IV

Environmental Pollution : Definitions, Effects and Control Measures of Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution, Nuclear Hazards, Human pollution and Environment, Role of Disaster Management : floods, earthquake, cyclone and land slides.

Unit-V

Social Issues and the environment : Water conservation, Rain water harvesting, water shed management – Global warming, acid rain, ozone layer depletion, Production / Conservation Acts : Environment, air, water wild life, air, forest

Learning Outcomes :

1. Able to explain Environmental Studies , Ecosystem and its types.
2. Apply the environmental studies procedures, issues like water conservation, global warming and pollution and its effect of environment.

References :

Agarval K.C. Environmental Biology(Bikaner Nidhi Pubication Ltd) 2001.
Jadhav H. And Bhosale , V.M , Environmental Production System and solution (Webenhanced Ed.) 1996.
Mc .Kinney , M.L. and Schoel,R.M. Environment Science System and solution (Web Enhanced Ed)., 2015.

Semester-III
SPORTS ENTREPRENEURSHIP

Course Objectives After successfully completing this course, students will fulfill the following Learning Objectives (L.O.):

1. Define and analyze the entrepreneurial experience and the entrepreneurial mind
2. Identify the characteristics of the individual sport entrepreneur
3. Examine new online technological portals to access current issues in Sports Entrepreneurship
4. Demonstrate creativity and the business idea in sport entrepreneurs
5. Identify legal issues for the sport entrepreneur and the different types of corporations.
6. Analyze the sport entrepreneurial strategy, analyze strategies for growth and managing the implications of growth, and examine the sources of a capital and venture capital
7. Discuss the advantages and disadvantages of franchising and acquisitions.
8. Develop a business plan, marketing plan, organizational plan, financial plan, and analyze and access resources for growth from external sources and describe the advantages and disadvantages of going public

Unit-1
Nature and importance of entrepreneurship and mind set, Intentions of corporate entrepreneurship
Unit-II
Generating and exploiting new entries, and Creativity and the Business Idea
Unit-III
Domestic and international opportunities, and Legal issues, Sources of capital, and informal risk capital, venture capital and going public
Unit-IV
Business plan, and Marketing Plan, Organizational plan, Financial plan
Unit-V
Strategies for Growth And Accessing resources for growth from external sources
Succession planning and strategies for harvesting and ending the venture

Course Outcome

1. Identify the characteristics of the individual sport entrepreneur
2. Examine new online technological portals to access current issues in Sports Entrepreneurship
3. Demonstrate creativity and the business idea in sport entrepreneurs

References :

Hisrich, R. & Peters, M.. Entrepreneurship. (8thedition). Boston: Irwin-McGraw-Hill. ISBN: 978-0-07-353032-1 (Recommended):
American Psychological Association Publication Manual. (6th edition). Washington, D.C: American Psychological Association.

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSTY

Melakottaiyur ,Chennai-600127

General Tamil Syllabus-2023

B.p.e.s,B.sc.,B.b.a

4 Semester

தமிழ்நாடு உடற்கல்வியியல் மற்றும் விளையாட்டுப் பல்கலைக் கழகம்

இளம் அறிவியல்

பொதுத் தமிழ் பாடத்திட்டம்

முதலாம்ஆண்டு

முதற்பருவம்

Learning Objectives

- முதலாம் ஆண்டு பட்ட வகுப்பு மாணவர்களுக்குத் தமிழ் மொழி இலக்கியங்களை அறிமுகம் செய்தல்.
- தற்கால இலக்கியப் போக்குகளையும் இலக்கணங்களையும் அறியுமாறுசெய்து அவர்களின் படைப்பாற்றலைத் தூண்டுதல்.
- தமிழ் இலக்கியம் சார்ந்த போட்டித் தேர்வுகளுக்கு ஏற்ப கற்பித்தல் நடை முறைகளை மேற்கொள்ளுதல்

Course Outcomes

- பாரதியார் காலந்தொட்டு தற்காலப் புதுக் கவிதைகள் வரை கவிதை இலக்கியம் அறிமுகப்படுத்துவதால் படைப்பாற்றல் திறன் பெறுதல்
- புதுக்கவித வரலாற்றினை அறிந்துகொள்ளுதல்.
- இக்கால இலக்கியி வகையினைக் கற்பிப்பதன் மூலம் படைப்பாக்கத் திறனைப் பெறுவர்.
- மொழியறிவோடு சிந்தனைத்திறனை அதிகரித்தல்.
- தமிழ்மொழியைப் பிழையின்றி எழுதவும், புதிய கலைச் சொற்களை உருவாக்கவும் அறிந்துகொள்ளுதல்.

அலகு-1 மரபுக் கவிதை

1. பெ. சுந்தரனார்- தமிழ்த் தெய்வ வணக்கம்
2. பாரதிதாசன் -சிறுத்தையே வெளியில் வா
3. கவிமணி – புத்தரும் சிறுவனும்
4. முடியரசன் - மொழி உணர்ச்சி
5. சுரதா- துறைமுகம் கவிதைத் தொகுப்பிலிருந்து ஏதேனும் ஒரு கவிதை

அலகு -2 புதுக்கவிதை

1. அபதுல் ரகுமான் -வீட்டுக்கு ஒரு மரம் வளர்ப்போம்
2. ஈரோடு தமிழன்பன்-சென்ரியூ கவிதைகள்
3. வைரமுத்து – பிற்சேர்க்கை
4. அறிவுமதி – வள்ளுவம் பத்து
5. இளம்பிறை – நீ எழுத மறுக்கும் எனது அழகு

அலகு-3 சிறுகதைகள்

1. ஜெயகாந்தன்- வாய்ச்சொற்கள்
2. புதுமைப்பித்தன்- கடிதம்
3. உமா மகேஸ்வரி- கரு

4. தி. ஜானகிராமன்- முள்முடி
5. சு. சமுத்திரம் - காகித உறவு

அலகு-4 இலக்கிய வரலாறு

1. மரபுக் கவிதை வரலாறு
2. புதுக் கவிதை வரலாறு
3. ஹைக்கூ வரலாறு
4. லிமரைக்கூ வரலாறு
5. ,சிறுகதை வரலாறு

அலகு- 5 மொழித்திறன்

1. ஓர் எழுத்து ஒரு மொழி
2. வேற்றுமை உருபுகள்
3. திணை, பால்,
4. எண், இடம்
5. கலைச்சொல்லாக்கம்

பார்வை நூல்க.ள் :

1.சிற்பி பால சுப்ரமணியன், தமிழ் இலக்கிய வரலாறு, நறுமலர் பதிப்பகம்,சென்னை,2010

2. இரா. வல்லிக்கண்ணன், புதக்கவிதை தோற்றம் வளர்ச்சி வரலாறு,ழெத்து பிச்சாரம், சென்னை,1971

3. கா.சிவத்தம்பி ,சிறுகதை தோற்றம் வளர்ச்சி வரலாறு, தமிழ்ப் புத்தகாலயம், சென்னை-2010

பொதுத் தமிழ்
இரண்டாம் பருவம்

Learning Objectives

- சமய இலக்கியங்களையும் சிற்றிலக்கியங்களையும் மாணவர்களுக்கு அறிமுகப்படுத்துதல்.
- மொழித் திறனையும் மரபு இலக்கிய வடிவத்தையும் மாணவர்களுக்கு அறிமுகபடுத்துதல்.

Course Outcomes

- பக்தி இலக்கியங்களைக் கற்பதன் மூலம் பக்தி நெறியினையும் ,சமயநல்லினக்கத்தையும் தொடர்ந்து பின்பற்றுவர்.
- சிற்றிலக்கியங்களின் வழி இலக்கியச் சுவையினையும் பண்பாட்டு அறிவினையும் பெறுவர்
- பட்டப் படிப்பினைப் படிக்கும்பொழுது பெரும்பாண்மையான தமிழ் இலக்கியங்கள் குறித்த அறிவினைப் பெறுவர்
- தமிழ்ச் சமூக வரலாற்றினை அறிவர்
- போட்டித் தேர்வுகளில் வெற்றி பெறுவதற்குத் தமிழ்ப் பாடத்தினைப் பயன்கொள்ளும் வகையில் ஏற்றப் பயிற்சி பெறுவர்

அலகு-1 பக்திஇலக்கியம்

1. திருநாவுக்கரசர் தேவாரம் - நாமார்க்கும் குடியல்லோம் (10 பாடல்கள்)
2. ஆண்டாள் திருப்பாவை –(10 பாடல்கள்)

அலகு-2 கிறித்துவ , இஸ்லாமிய இலக்கியம்

1. வள்ளலார்- அருள் விளக்க மாலை (10 பாடல்கள்)
2. எச். ஏ கிருட்டிணப்பிள்ளை- இரட்சண்யமனோகரம்- பால்ய பிரார்த்தனை
3. .குணங்குடி மஸ்தான் சாகிபு – பராபரக் கண்ணி (முதல் 10கண்ணி)

அலகு-3 சிற்றிலக்கியங்கள்

1. தமிழ்விடு தூது (முதல் 20 கண்ணி)
2. திருக் குற்றாலக் குறவஞ்சி - மலை வளம் கூறுதல்
3. மூக்கூடற்பள்ளு – நாட்டுவளம்

அலகு-4 இலக்கிய வரலாறு

1. பல்லவர், கால இலக்கியங்கள்
2. நாயக்கர் கால இலக்கியங்கள்
3. சமய வரலாறு
4. நுன் கலைகள்
5. கட்டடக் கலை

அலகு -5 மொழித் திறன் , போட்டித் தேர்வுகள்

தொடர் வகைகள், மரபுத் தொடர், பழமொழிகள், பிறமொழிச் சொற்கள் களைதல், வழுச் சொற்கள் நீக்குதல், இலக்கணக் குறிப்பு அறிதல்.

பார்வை நூல்கள் :

1. ச.வே. சுப்ரமணியன், பன்னிரு திருமுறை தொகுப்பு நூல்கள், மணிவாசகர் பதிப்பகம்,சென்னை,2000
2. மு.வரதராசனார், தமிழ் இலக்கிய வரலாறு,சாகிதிய அகாதமி வெளியீடு,சென்னை,2010
3. இரா மன்னர் மன்னன்,பல்லவர்கால இலக்கிய வரலாறு, சென்னை-2015

பொதுத் தமிழ்
இரண்டாம் ஆண்டு
மூன்றாம் பருவம்

Learning Objectives

- காப்பிய இலக்கியங்களின் சிறப்பினை உணர்தல்.
- காலந்தோறும் எழுந்த காப்பியங்களின் போக்கையும்,புதினத்தின் இலக்கிய வடிவத்தையும் யாப்பு,அணி போன்ற இலக்கிய வகைமையும் மொழி பெயர்ப்புத் திறனையும் மாணவர்கள் உணருமாறு செய்தல்.
- தமிழ் இலக்கயம் சார்ந்த போட்டித் தேர்வுகளுக்கு ஏற்ப கற்பித்தல் நடைமுறைகளை மேற்கெள்ளுதல்

Course Outcomes

- தமிழ்காப்யங்களின்வழி வாழ்வியல் சிந்தனையைப் பெறுவர்
- காப்பியங்களை அறிதுகப்படுத்துவதால் தமிழ் மொழியின் உயர்வையும் சிறப்பையும் உணர்தல் தமிழ் புதினங்களின் வழி சமகாலப் படைப்புகளின் வாழ்வியலை அறிந்து கொள்வர்.
- நாவல் இலக்கியம் அறிமுகப்படுத்துவதால் சிந்தனை ஆற்றல், படைப்பாற்றல், கற்பனைத் திறன் வளர்த்தல்
- யாப்பு, அணி இலக்கணங்கள்,மொழிபெயர்ப்புத்திறன் ஆகியவற்றைக் கற்பதன் மூலம் போட்டித் தேர்வுகளை எதிர்கொள்ளுதல்.

அலகு-1 பெருங்காப்பியங்கள்

1. சிலப்பத்காரம்- வழக்குரைக்காதை
2. மணிமேகலை- ஆதிரை பிச்சையிட்டக் காதை
3. சீவகசிந்தாமணி- பூமகள் இலம்பகம்
4. வளையாபதி – 10 பாடல்கள்

அலகு-2 சமயக் காப்பியங்கள்

1. பெரிய புராணம்- பூசலார் நாயானார் புராணம்
2. கம்பராமாயணம் - மந்தரை சூழ்ச்சிப் படலம்
3. வில்லிபாரதம்- மற்போர் சருக்கம்
4. சீறாப் புராணம்- புலி வசனித்த படலம்

அலகு- 3 புதினம்

1. வஞ்சிமாநகரம்- வரலாற்றுப் புதினம்
2. கதை மாந்தர்
3. கதைப்பின்னல்
4. கதை வளர்ச்சி உச்சம் வீழ்ச்சி

அலகு-4 இலக்கிய வரலாறு

காப்பிய இலக்கிய வரலாறு

1. ஐம்பெருங்காப்பியங்கள்
2. ஐஞ்சிறு காப்பியங்கள்
3. சுமண சமய காப்பியங்கள்

அலகு- 5 மொழித்திறன்

1. நூல் மதிப்புரை
2. திறனாய்வு செய்தல்
3. கடிதம் வரைதல்
4. விணணப்பம் எழுதுதல்

பார்வை நூல்கள் :

1. ஔவை துரைசாமிப் பிள்ளை,காப்பிய இலக்கிய வரலாறு, சாரதா பதிப்பகம்,சென்னை-2010
2. மு. மு இஸ்மாயில், இஸ்லாமியத் தமிழ் இலக்கிய வரலாறு,வானதி பதிப்பகம்,சென்னை-2018
3. நூ. பார்த்த சாரதி ,வஞ்சி மா நகரம், கவிதா வெளியீடு,சென்னை-2015

பொதுத் தமிழ்

நான்காம் பருவம்

Learning Objectives

- இலக்கியங்கஞளின் சிறப்பை உணர்தல்.
- சங்க இலக்கியத்தின் சிறப்பையும்,நாடகம் எனும்இலக்கிய வகையின் தன்மையும் அகத்திணை,புறத்திணை இலக்கிய வகையினையும மாணவர்களுக்கு அறிமுகப் படுத்துகிறது.
- தமிழ் இலக்கியம் சார்ந்த போட்டித் தேர்வுகளுக்கு ஏற்ப கற்பித்தல் நடை முறைகளை மேற்கொள்ளுதல்

Course Outcomes

- சங்க இலக்கியத்தில் காணப்படும் வாழ்வியல் நெறி முறைகளை அறிந்துகொள்வர்
- தமிழின் தொன்மையும்,செம்மொழித் தகுதிகளையும் அறிந்துகொள்ளுதல்
- நாடக இலக்கியம் மூலம் நடிப்பாற்றலையும் படைப்பாற்றலையும் வளர்த்தல்
- தமிழிலிருந்து அலுவலகக் கடிதத்தினை மொழி பெயர்த்தல்.
- மொழி அறிவோடு வேலை வாய்ப்பினைப் பெறுதல்.

அலகு-1 சங்க இலக்கியம்

1. நற்றிணை - 10,14,16 பாடல்கள்
2. குநற்தொகை - 16,17,19,20,25,29,38,40
3. கலித்தொகை - 38,51
4. அகநானூறு - 15,33,55
5. புறநானுறு - 37,86,112
6. புரிபாடல் - 55

அலகு-2 பத்துப்பாட்டு

1. நெடுநல்வாடை
   - குளிர் கால நிலை
   - பாசறை நிலை
   - கட்டடக் கலை
   - வழிபாடு, நற்சொல் கேட்டல்

அலகு-3 நாடகம்

1. சபாபதி- பம்மல் சம்பந்த முதலியார்
2. நாடகத் தோற்றம்
3. கதைப் பின்னல்
4. நாடக மாந்தர்

அலகு-4

1. சங்க காலக் கேபட்பாடு
2. அகத்திணைக் கோட்பாடுகள்
3. ,புறத்திணைக் கோட்பாடுகள்
4. நாடக இலக்கிய வரலாறு

அலகு-5 மொழித்திறன்

1. மொழிபெயர்ப்பு
2. ஆங்கிலத்திலிருந்து தமிழுக்கு மொழிபெயர்த்தல்
3. அலுவல் கடிதம் - தமிழில் மொழி பெயர்த்தல்

பார்வை நூல்கள் :

1. அ.அ. மணவாளண், சங்க இலக்கிய வரலாறு, நயு செஞ்சரிபுக் கவுஸ்,சென்னை-2009
2. ஆறு. ஆழகப்பன்,தமிழ்நாடக் தோற்றமும் வளர்ச்சியும், அண்ணாமலைப் பல்கழைக் கழக் வெளியீடு,2000
3. சம்பந்த முதலியார்.சபாபதி,அருட்பெருஞ்ஜோதி பதிப்பகம்,சென்னை-1971

பிற மொழி மாணவர்களுக்கு தமிழ் மொழிப் பயிற்றுவித்தல்

பருவம் -1

அடிப்படைத் தமிழ்

கற்றலின் நோககம்

- பிற மொழி மாணவர்களுக்கு தமிழ் மொழியைப் பயிற்றுவித்தல்
- தமிழ் எழுத்துக்களின் வரிவடிவங்களை அறிவதோடு உச்சிக்கவும் எழுதவும் பயிற்றுவித்தல்.
- கற்றுக்கொண்ட சொற்களோடு தொடர்களை அமைத்துப் பேசக் கற்றுக்கொள்ளச் செய்தல்
- மொழி வளத்தைப் பெறச் செய்தல்

கற்றலின் பயன்

- தமிழின் வரி வடிவங்களை அறிதல்
- உயிர்,மெய், துணை வரி வடிவங்களை அறிதல்
- எழுத்துக்களின் ஒலி ஒளி வடிவங்களை அறிதல்
- அடிப்படை இலக்கணங்களை அறிதல்

அலகு-1 உயிர் எழுத்துக்கள் மெய் எழுத்துக்கள் உயிர் மெய் எழுத்துக்கள்

1. உயிர், மெய், உயிர்மெய் துணைக் குறியீடு, குறில் -நெடில், வல்லினம் மெல்லினம் இடையினம் , எழுத்துக்களின் ஒலிப்பு மற்றும் எழுதும் முறையை அறிதல்.

அலகு-2 ஓரெழுத்து ஒரு மொழியும் இன்றியமையாத பெயர்சொற்களுக்கம்

ஓரெழுத்துச் சொற்கள்- பல எழுத்துச் சொற்கள்-சொற்பெருள் அறிதல்- நாள்- மாதம் -எண் பெயர் அறிதல்.

அலகு-3 சொல் வகைகளும் சொற்பயன்பாடும்

எண் அடை, பெயரடை வினையடை, இடைச்சொற்கள் இணைப்பு,வேற்றுமை உருபு போன்ற விதிகளை அறிதல்

அலகு-4 பிழையின்றிப் பேசுதலும் எழுதுதலும்

திணை –பால்- எண்- இடம்-காலம்ஆகியவற்றை அறிதல். இவற்றில் ஏற்புடும் பிழகைனை உணர்த்தி சரி செய்தல்.

அலகு-5 மொழிப் பயன்பாட்டுப் பயிற்சி

கதைகூறுதல் மற்றும் படித்தல்- சூழ்நிலைக்கு ஏற்ப உரையாடல் அமைத்தல்

பார்வை நூல்கள்

1.நுகுமான்,அடிப்படைத் தமிழ் இலக்கணம்,வாசகர் சங்கம் வெளியீடு,சென்னை-2000

பத்தாம் வகுப்புவரை தமிழை மொழிப்பாடமாகப் படித்தவர்களுக்கு மட்டும்

சிறப்புத் தமிழ்
பருவம்-1

கற்றலின் நோக்கம்

- இக்கால இலக்கியங்ககளில் இன்றியமையாத சில வகைமைகளை மாணவர்கள அறியச் செய்தல்.
- அழியும் நிலையில் உள்ள நாட்டுப்புறப் பாடல்கள் குறித்தவிழிப்புணர்வை ஏற்படுத்துதல்
- உரைநடையில் உள்ள நாடகக் கூறுகளை அறியச் செய்தல்
- நடப்பு இலக்கியங்கள் வழி சமூகத்திற்கு படைத்தளிக்கத்தூண்டல்

கற்றலின் நோக்கம்

- தான் வாழும் கால இலக்கியங்கின் நோக்கும் போக்கும் குறித்து மாணவர்கள் அறிதல்
- நாட்டுப்புற மக்களின் வாழ்வியல்,அறிவாற்றல் வேளாண்மையின் இன்றைய நிலைமை ஆகியவை குறித்துச் சிந்தித்தல்
- கற்பனை வளத்தைப் பெறுதல்

அலகு-1நாட்டுப்புறப் பாடல்

1. பஞ்சம்
2. மானம் விடிவதெப்போ

அலகு-2 கட்டைவிரல் சி. என் அண்ணாதுரை

அலகு-3

1. ஆடிக்காற்றே – சிற்பி
2. கடமையைச் செய்- மீரா
3. இழந்தவர்கள்- அப்துல் ரகுமான்

அலகு-4 கலைச் சொல்லாக்கம்

அலகு-5 பொருந்திய சொல் தருதல் ,பிழை நீக்கி எழுதுதல்

பார்வை நூல்கள்

1.சிற்பி பால சுப்ரமணியன், தமிழ் இலக்கிய வரலாறு, நறுமலர் பதிப்பகம்,சென்னை,2010

2. இரா. வல்லிக்கண்ணன், புதக்கவிதை தோற்றம் வளர்ச்சி வரலாறு,ழெத்து பிச்சாரம், சென்னை,1971

சிறப்புத் தமிழ்
பருவம்-2

கற்றலின் நோக்கம்

- ஊரைநடை இலக்கியத்துள், கட்டுரை இலக்கியம் குறித்து மாணவர்களுக்கு அறிமுகம் செய்தல்.
- பண்டைத் தமிழ் இலக்கியத்தில் உள்ள சிறப்பையும் பொருண்மையும் அறிதல்
- காய்பியம் மற்றும் பக்தி இலக்கியங்களில் உள்ள அறத்தினை அறியச் செய்தல்
- உரைநடை இவக்கியத்திற்கான தோற்றத்தினை அறிதல்

கற்றலின் பயன்

- உரைநடையயை அன்றாட வாழ்வியலில் பயன்படுத்துதல்
- இலக்கியங்கள்காட்டும் சமூக பணாட்டு வாழ்வியல் முறைகளை அறிதல்
- காப்பியங்களுடன் திரைப்படம் மற்றும் புதினம் ஆகியவற்றுடன் ஒப்பிட்டுக்காணும் அறிவைப் பெறுதல்
- செய்யுள் மற்றும் கவிதை புனையும் ஆற்றல் பெறுதல்

அலகு-1கட்டுரை

1. பெண்ணின் பெருமை- திரு. வி. க

அலகு-2 செய்யுள்

1. புறநானுறு –கெடுக சிந்தை- ஒக்கூர் மாசத்தியார்
2. ஈன்று புறந்தருதல்- பொன்முடியபர்
3. யாதும் ஊரே- கனியன் பூங்குன்றன்

அலகு-3 காப்பியம்

1. சீறாப்புராணம்-வானவர்க்கும்
2. பாரதியார்-நல்லதோர் வீணை

அலகு-4 இலக்கிய வரலாறு

1. புறத்திணைக் கோட்பாடுகள்

அலகு-5 மொழிபெயர்ப்பு

ஆங்கககிலத்திலிருந்து தமிழில் மொழிபெயர்த்தல்

பார்வை நூல்கள் :

4. ஔவை துரைசாமிப் பிள்ளை,காப்பிய இலக்கிய வரலாறு, சாரதா பதிப்பகம்,சென்னை-2010
5. அ.அ. மணவாளண், சங்க இலக்கிய வரலாறு, நயு செஞ்சரிபுக் கவுஸ்,சென்னை-2009

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

PART-II

GENERAL ENGLISH

Under Graduate Programme

Programme Outcomes:

PO1: Disciplinary Knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.

PO2: Critical Thinking: Capability to apply analytic thought to a body of knowledge; analyze and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

PO3: Problem Solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's earning to real life situations.

PO4: Analytical Reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples and addressing opposing viewpoints.

PO5: Scientific Reasoning: Ability to analyze, interpret and draw conclusions from quantitative / qualitative data; and critically evaluate ideas, evidence, and experiences from an open minded and reasoned perspective.

PO6: Self-directed & Lifelong Learning: Ability to work independently, identify and manage a project. Ability to acquire knowledge and skills, including "learning how to learn", through self-placed and self-directed learning aimed at personal development, meeting economic, social and cultural objectives.

PO7: Reflective Thing: Critical sensibility to lived experiences, with self awareness and reflexivity of both self and society

PO8: Reading & Projects: Document their reading and interpretive practices in assignments, translation works, and independent projects.

PO9: Confidence & Effectiveness: Confidently and effectively articulate their literary and textual experiences.

PO10: **Social Skills & Empathetic Approach**: Reorganize a professional and reflective approach to leadership, responsibility, personal integrity, empathy, care and respect for others, accountability and self regulation.

PAPER II –GENERAL ENGLISH

Programme Specific Outcomes:

PSO1: Acquire good knowledge and understanding, to solve specific theoretical & applied problems in different area of mathematics & statistics.

PSO2: Understand, formulate, develop mathematical arguments, logically and use quantitative models to address issues arising in social sciences, business and other context /fields.

PSO3: To prepare the students who will demonstrate respectful engagement with other's ideas, behaviors, beliefs and apply diverse frames of references to decisions and actions. To create effective entrepreneurs by enhancing their critical thinking, problem solving, decision making and leadership skill that will facilitate startups and high potential organizations.

PSO4: Developing a research framework and presenting their independent ideas effectively.

PSO5: Equipping their employability skills to excel in professions like teaching and exposing them to various activities to empower them through communication skills.

PSO6: Enabling a holistic perspective towards the socio-political inequalities and environmental issues

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)can be carried out accordingly, assigning the appropriate level in the grids:

	POs							PSOs		
	1	2	3	4	5	6	…	1	2	…
CLO1										
CLO2										
CLO3										
CLO4										
CLO5										

FIRST YEAR - SEMESTER I

PAPER II –GENERAL ENGLISH

Subject Code	Category	L	T	P	S	Credits	Inst. Hours	Marks		
								CIA	External	Total
	Part II	Y	Y	-	-	3	6	25	75	100

Learning Objectives		
LO1	To enable learners to acquire the linguistic competence necessarily required in various life situations.	
LO2	To help them understand the written text and able to use skimming, scanning skills	
LO3	To assist them in creative thinking abilities	
LO4	To enable them become better readers and writers	
LO5	To assist them in developing correct reading habits, silently, extensively and intensively	
Unit No.	**Unit Title & Text**	**No. of Periods for the Unit**
I	**Poetry** 1.1 A Patch of Land - Subramania Bharati 1.2 The Sparrow - Paul Laurence Dunbar 1.3 A Nation's Strength – Ralph Waldo Emerson 1.4 Love Cycle - Chinua Achebe	20
II	**Prose** 2.1 JRD - Harish Bhat 2.2 Us and Them - David Sedaris From Dress Your Family in Corduroy and Denim 2.3 Uncle Podger Hangs a Picture - Jerome K Jerome	20
III	**Short Stories** 3.1 The Faltering Pendulum- Bhabani Bhattacharya 3.2 How I Taught my Grandmother to Read- Sudha Murthy 3.3 The Gold Frame- R.K. Laxman	20
IV	**Language Competency** 4.1 Vocabulary : Synonyms, Antonyms, Word Formation 4.2 Appropriate use of Articles and Parts of Speech 4.3 Error correction	15

V	**English for Workplace** 5.1 Self - introduction, Greetings 5.2 Introducing others 5.3 Listening for General and Specific Information 5.4 Listening to and Giving Instructions / Directions	15

Course Outcomes

Course Outcomes	On completion of this course,students will;	
CO1	Develop and integrate the use of the four language skills i.e. Reading, Listening, Speaking and Writing	PO1
CO2	Understand the total content and underlying meaning in the context.	PO1,PO2
CO3	Form the habit of reading for pleasure and for information	PO4,PO6
CO4	Comprehend material other than the prescribed text	PO4,PO5,PO6
CO5	Develop the linguistic competence that enables them, in the future, to present the culture and civilization of their nation.	PO3,PO8

	Text books (Latest Editions)
1	Steel Hawk and other stories by Bhattacharya, Bhabani, New Delhi: Sahitya Akademi, 1967
2	How I taught my Grandmother to Read and other Stories, Murthy, Sudha,Penguin Books, India, 2004

WebResources	
1	A patch of land by Subramania Bharati translated by Usha Rajagoplan : https://books.google.co.in/books?id=iSHvOmXuvLMC&printsec=frontcover&dq=subramania+bharati+poems&hl=en&newbks=1&newbks_redir=0&source=gb_mobile_search&sa=X&redir_esc=y#v=onepage&q=subramania%20bharati%20poems&f=false
2	The Sparrow by Paul Laurence Dunbar https://poets.org/poem/sparrow-0
3	A Nation's Strength by Emerson https://poets.org/poem/nations-strength

4	Love cycle by Chinua Achebe : https://www.best-poems.net/chinua-achebe/love-cycle.html
5	JRD by Harish Bhat https://www.tata.com/newsroom/heritage/coffee-tea-jrd-tata-stories
6	Us and Them by David Sedaris From Dress Your Family in Corduroy and Denim https://legacy.npr.org/programs/morning/features/2004/jun/sedaris/usandthem.html
7	Uncle Podger Hangs a Picture: http://rosyhunt.blogspot.com/2013/01/uncle-podger-hangs-picture.html
8	The Gold Frame: https://fybaenglish.blogspot.com/2018/12/the-gold-frame-r-k-laxman.html

Reference Books
(Latest Editions, and the style given must be strictly adhered to)

1.	English in use - A textbook for College Students (English ,Paper back, - T.Vijay Kumar, K Durga Bhavani, YL Srinivas
2	Practical English Usage - 4th Edition By Michael Swan
3.	**The Art of Civilized Conversation: A Guide to Expressing Yourself with Style and Grace** -Margaret Shepherd, Penny Carter, (Illustrator), Sharon Hogan, 2005.

Mapping with Programme Outcomes:

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
CO1	3	3	3	3	3	3	3	2	3	2
CO2	2	3	3	3	2	3	3	2	2	2
CO3	3	3	3	2	3	3	3	2	3	2
CO4	3	3	3	3	3	3	3	2	2	2
CO5	3	2	3	3	3	3	3	2	2	3

Mapping with Programme Specific Outcomes:

CO /PO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	3	3	3
CO2	3	3	3	3	3
CO3	3	3	3	3	3
CO4	3	3	3	3	3
CO5	3	3	3	3	3
Weightage	15	15	15	15	15
Weighted percentage of Course Contribution to Pos	3.0	3.0	3.0	3.0	3.0

3 – Strong, 2 – Medium, 1 - Low

FIRST YEAR - SEMESTER II

PAPER II –GENERAL ENGLISH

Subject Code	Category	L	T	P	S	Credits	Inst. Hours	Marks		
								CIA	External	Total
	Part II	Y	Y	-	-	3	6	25	75	100

Learning Objectives	
LO1	To introduce learners to the essential skills of communication in English
LO2	To enable them use these skills effectively in academic and non-academic contexts
LO3	To help them identify and eliminate common mistakes in writing and speaking
LO4	To enable them use various business communication strategies and to use advanced vocabulary
LO5	To familiarize them in writing descriptive essays and respond to arguments orally and in writing

Unit No.	Unit Title & Text	No. of Periods for the Unit
I	**Poetry** 1.1Very Indian Poem in Indian English - Nissim Ezekiel 1.2 Still I Rise - Maya Angelou 1.3 The Flower -Tennyson 1.4 On Killing a Tree - Gieve Patel	20
II	**Prose** 2.1 If You Are Wrong Admit it- Dale Carnegie 2.2 Kindly Adjust Please - Shashi Tharoor 2.3 The Spoon-fed Age- W.R. Inge	20
III	**Fiction** Alchemist - Paulo Coelho	20
IV	**Language Competency** 4.1 Homonyms, Homophones, Homographs Portmanteau words 4.2 Verbs and Tenses, Subject Verb Agreement 4.3 Error correction	15

V	**English in the Workplace** 5.1 Reading for General and Specific information [charts, tables, schedules, graphs etc] 5.2 Reading news and weather reports 5.3 Writing paragraphs 5.4 Taking and making notes	15

Course Outcomes		
Course Outcomes	On completion of this course, students will;	
CO1	Learn to introduce themselves and talk about everyday activities confidently	PO1
CO2	Be able to write short paragraphs on people, places and events	PO1, PO2
CO3	Identify the purpose of using various tenses and effectively employ them in speaking and writing	PO4, PO6
CO4	Gain knowledge to write subjective and objective descriptions	PO4, PO5,PO6
CO5	Identify and use their skills effectively in formal contexts.	PO3,PO8

TextBooks(LatestEditions)	
1	The Alchemist - Paulo Coelho Harper - 2005
ReferencesBooks **(Latest editions,and the style as given below must be strictly adhered to)**	
1	Advanced English Grammar. Martin Hewings. Cambridge University Press, 2000
2	Descriptive English. SP Bakshi, Richa Sharma · 2019, Arihant Publications (India) Ltd.
3	The Reading Book: A Complete Guide to Teaching Reading. Sheena Cameron, Louise Dempsey, S & L. Publishing, 2019.
4	Skimming and Scanning Techniques, Barbara Sherman, Liberty University Press, 2014
5	Brilliant Speed Reading: Whatever you need to read, however ...Phil Chambers,

	Pearson, 2013.
6.	The Archer, Paulo Coelho. Penguin Viking, 2020.
WebResources	
1	Very Indian poem by Nissim Ezekiel http://econtent.in/pacc.in/admin/contents/40_%20_2020103001102714.pdf
2	Still I Rise by Maya Angelou https://www.poetryfoundation.org/poems/46446/still-i-rise
3	The Flower by Tennyson: https://www.poemhunter.com/poem/the-flower-2/
4	On Killing a tree by Gieve Patel: https://www.poemhunter.com/poem/on-killing-a-tree/
5	If you are wrong, admit it: https://www.tbr.fun/if-youre-wrong-admit-it/
6	Kindly Adjust please - Shashi Tharoor https://www.theweek.in/columns/shashi-tharoor/2018/05/25/kindly-adjust-to-our-english.html?fbclid=IwAR3IhtdXgvuV4ySECn9S7SA6HmCEYISyd1QHd3BlwKgiNKKwdkeSg3qWp-U/
7	The Spoon Fed Age: https://www.nrkacademy.com/2016/04/spoon-feeding-by-wringe.html
8	The Alchemist: https://www.youtube.com/watch?v=lxBYpmxjeDU

Mapping with Programme Outcomes:

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
CO1	3	3	3	3	3	3	3	2	3	2
CO2	2	3	3	3	2	3	3	2	2	2
CO3	3	3	3	2	3	3	3	2	3	2
CO4	3	3	3	3	3	3	3	2	2	2
CO5	3	2	3	3	3	3	3	2	2	3

3 – Strong, 2 – Medium , 1 - Low

Mapping with Programme Specific Outcomes:

CO /PO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	3	3	3
CO2	3	3	3	3	3
CO3	3	3	3	3	3
CO4	3	3	3	3	3
CO5	3	3	3	3	3
Weightage	15	15	15	15	15
Weighted percentage of Course Contribution to Pos	3.0	3.0	3.0	3.0	3.0

SECOND YEAR - SEMESTER III

PAPER II –GENERAL ENGLISH

Subject Code	Category	L	T	P	S	Credits	Inst. Hours	Marks		
								CIA	External	Total
	Part II	Y	Y	-	-	3	6	25	75	100

Learning Objectives	
LO1	To enhance the level of literary and aesthetic experience of students and to help them respond creatively.
LO2	To sensitize them to the major issues in the society and the world.
LO3	To provide them with an ability to build and enrich their communication skills
LO4	To equip them to utilize the digital knowledge resources effectively for their chosen fields of study
LO5	To help them think and write imaginatively and critically.

Unit No.	Unit Title & Text	No. of Periods for the Unit
I	**Poetry:** 1.1 The Voice of the Mountains - Mamang Dai 1.2 Sita - Toru Dutt 1.3 A Song of Hope - Oodgeroo Noonuccal 1.4 In an Artist's Studio - Christina Rossetti	20
II	**Scenes From Shakespeare:** 2.1 Romeo & Juliet -The Balcony Scene 2.2 Macbeth-Banquet Scene 2.3 Julius Caesar - Murder Scene	20

III	**Speeches of Famous personalities** 3.1 Tryst with Destiny- Jawaharlal Nehru 3.2 Yes, We Can-Barack Obama 3.3 You've Got to Find What You Love-Steve Jobs	20
IV	**Language Competency** 4.1 Writing letters and emails 4.2 Writing and messaging in social media platforms [blogs, twitter, instagram.facebook] 4.3 Learning netiquette, email etiquette	15
V	**English for Workplace** 5.1 Data Interpretation and Reporting 5.2 Data Presentation and analysis 5.3 Meeting Etiquettes - language, dress code, voice modulation. Online Meetings - Terms and expressions used 5.4 Conducting and participating in a meeting	15

Course Outcomes		
Course Outcomes	On completion of this course, students will;	
CO1	Broaden their outlook and sensibility and be acquainted with cultural diversity and divergence in perspectives.	PO1
CO2	Be updated with basic informatics skills and attitudes relevant to the emerging knowledge society	PO1,PO2
CO3	Produce grammatically and idiomatically correct language.	PO4,PO6
CO4	Gain knowledge in writing techniques to meet academic and professional needs.	PO4,PO5, PO6
CO5	Be equipped with sufficient practice in Vocabulary, Grammar, Comprehension and Remedial English from the perspective of career oriented tests.	PO3,PO8

Text Books (Latest Editions)	
1	**Arden Shakespeare Complete works by Shakespeare (Author), William (Author), Bloomsbury, 2011)**

References Books (Latest Editions,and the style as given below must be strictly adhered to)	
1	The Shakespeare Book: Big Ideas Simply Explained, Stanley Wells et al. DK Publishing, 2015
3	Famous Speeches by Mahatma Gandhi, Createspace Independent Publishing Platform, 2016
4	How to Build a Professional Digital Profile Kindle Edition by Jeanne Kelly Bernish, Bernish Communications Associates, LLC; 1st edition (May 29, 2012)
5	Keys to Teaching Grammar to English Language Learners, Second Ed.: A Practical Handbook by Keith S Folse, Michigan Teacher Training, 2016.
6	Role Play-Theory and Practice.Krysia M Yardley-Matwiejczuk, SAGE publications ltd, 1997

Web Resources	
1	The Voice of the Mountains by Mamang Dai: https://www.scribd.com/document/558838656/The-Voice-of-the-Mountain-By-Mamang-Dai-Adivasi-Resurgence
2	A song of Hope by Kath Walker: http://www.wordslikethis.com.au/a-song-of-hope/
3	In an artist's studio by Christina Rossetti: https://www.poetryfoundation.org/poems/146804/in-an-artist39s-studio
4	Sita by Toru Dutt: https://www.poetrynook.com/poem/s%E2%94%9C%C2%ABta
5	Tryst with Destiny: https://www.cam.ac.uk/files/a-tryst-with-destiny/index.html#:~:text=Jawaharlal%20Nehru%2C%20delivering%20his%20Tryst%20with%20Destiny%20speech.&text=%22Long%20years%20ago%20we%20made,awake%20to%20life%20and%20freedom.
6	Yes, We Can: https://www.englishspeecheschannel.com/english-speeches/barack-

	obama-speech/
7	You've got to find what you love: https://www.businessbusinessbusiness.com.au/steve-jobs-youve-got-to-find-what-you-love/#:~:text=Steve%20Jobs%2C%20in%20his%20commencement,emphasizes%20on%20believing%20in%20oneself.

Mapping with Programme Outcomes:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	3	3	3	3	3	2	3	2
CO2	2	3	3	3	2	3	3	2	2	2
CO3	3	3	3	2	3	3	3	2	3	2
CO4	3	3	3	3	3	3	3	2	2	2
CO5	3	2	3	3	3	3	3	2	2	3

3 – Strong, 2 – Medium , 1 - Low

Mapping with Programme Specific Outcomes:

CO /PO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	3	3	3
CO2	3	3	3	3	3
CO3	3	3	3	3	3
CO4	3	3	3	3	3
CO5	3	3	3	3	3
Weightage	15	15	15	15	15

Weighted percentage of Course Contribution to Pos	3.0	3.0	3.0	3.0	3.0

SECOND YEAR - SEMESTER IV

PAPER II –GENERAL ENGLISH

Subject Code	Category	L	T	P	S	Credits	Inst. Hours	Marks		
								CIA	External	Total
	Part II	Y	Y	-	-	3	6	25	75	100

Learning Objectives	
LO1	To help learners imbibe the rules of language unconsciously and tune to deduce language structure and usage.
LO2	To enable them use receptive skills through reading and listening to acquire good exposure to language and literature.
LO3	To help them develop style in speech and writing and manipulate the tools of language for effective communication.
LO4	To provide exposure to plays, autobiographies and expose them to value based ideas.
LO5	To enhance their language skills especially in the areas of grammar and pronunciation.

Unit No.	Unit Title & Text	No. of Periods for the Unit
I	**Life Writing** 1.1 I am Malala-Malala Yousafzai - Chapter 1 1.2 My Inventions - Nikola Tesla - Chapter 2	20
II	**One Act Plays** 2.1The Zoo Story- Edward Albee 2.2 The Proposal- Anton Chekhov	20
III	**Interviews** 3.1 Nelson Mandela's Interview with Larry King. 3.2 Rakesh Sharma's Interview with Indira Gandhi from Space 3.3 Lionel Messi with Sid Lowe (Print)	20
IV	**Language Competency** 4.1 Refuting, Arguing & Debating 4.2 Making Suggestions & Responding to Suggestions, Asking for and Giving Advice or Help 4.3 Interviews (face to face, telephone and video conferencing)	15

V	**English for Workplace** 5.1 Job Applications: Covering letters, CV and Resume 5.2 Creating a digital profile - Linkedin 5.3 Filling Forms (Online & Manual): creation of account, railway reservation, ATM, Credit/debit card 5.4 Body Language -Practical Skills for Interviews	15

Course Outcomes		
Course Outcomes	On completion of this course, students will;	
CO1	Learn to communicate effectively and appropriately in real life situation.	PO1
CO2	Use English effectively for study purpose across the curriculum	PO1,PO2
CO3	Develop interest in and appreciation of Literature	PO4,PO6
CO4	Develop and integrate the use of the four language skills	PO4,PO5,PO6
CO5	Enhance their language skills especially in the areas of grammar and pronunciation.	PO3,PO8

TextBooks(LatestEditions)	
1	I Am Malala The Girl Who Stood Up for Education and Was Shot by the Taliban by Malala Yousafzai, Christina Lamb , Little Brown, 2013.
2	My Inventions by Nikola Tesla Ingram Short title, 2011 Edition
ReferencesBooks **(Latest editions,and the style as given below must be strictly adhered to)**	
1	Writing Your Life: A Guide to Writing Autobiographies, Mary Borg, Taylor &

	Francis, 2021
2	One-act Plays for Acting Students: An Anthology of Short Norman A. Bert · 1987 ·
3	The One-Act Play Companion: A Guide to plays, playwrights ... Colin Dolley, Rex Walford · 2015
4	How to Build a Professional Digital Profile Kindle Edition by Jeanne Kelly Bernish, Bernish Communications Associates, LLC; 1st edition (May 29, 2012)
5	Role Play-Theory and Practice.Krysia M Yardley-Matwiejczuk, SAGE publications ltd, 1997

Web Resources	
1	For Readers' Theatre: https://www.youtube.com/watch?v=JaLQJt8orSw&t=469s(the link to the performance; refer scripts by Aaron Sheperd)
2	http://BBC learn English.com
3	http://onestopenglish.com
4	http://hearn-english-today.com
5	http://talkenglish.com
6	The Zoo Story: http://www.lem.seed.pr.gov.br/arquivos/File/livrosliteraturaingles/zoostory.pdf
7	The Proposal: https://www.one-act-plays.com/comedies/proposal.html
8	Nelson Mandela with Larry King Interviews: http://edition.cnn.com/TRANSCRIPTS/0005/16/lkl.00.html
9	Rakesh Sharma with Indira Gandhi Interview : https://www.ndtv.com/offbeat/what-first-indian-astronaut-rakesh-sharma-told-indira-gandhi-about-india-from-space-2204839
10	Lionel Messi with Sid Lowe Interview:https://www.worldsoccer.com/world-soccer-latest/lionel-messi-interview-part-one-338553

Mapping with Programme Outcomes:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	3	3	3	3	3	2	3	2
CO2	2	3	3	3	2	3	3	2	2	2
CO3	3	3	3	2	3	3	3	2	3	2
CO4	3	3	3	3	3	3	3	2	2	2
CO5	3	2	3	3	3	3	3	2	2	3

3 – Strong, 2 – Medium , 1 - Low

Mapping with Programme Specific Outcomes:

CO /PO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	3	3	3

CO2	3	3	3	3	3
CO3	3	3	3	3	3
CO4	3	3	3	3	3
CO5	3	3	3	3	3
Weightage	15	15	15	15	15
Weighted percentage of Course Contribution to Pos	3.0	3.0	3.0	3.0	3.0

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

Chennai – 600 127

BACHELOR OF PHYSICAL EDUCATION (B.P.Ed) DEGREE COURSE

(Two Years)

Choice Based Credit System

Regulations

(for students admitted from 2023 – 2024 & Onwards)

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY Chennai- 600 127

Bachelor of Physical Education (B.P.Ed) Degree Course
(Two Years)
Choice Based Credit System

REGULATIONS AND SYLLABUS

(for students admitted from 2023 -2024 & Onwards)

1. Eligibility for Admission to the Course

a) (i) Bachelor's degree in any discipline with 50% marks and having at least participation in the Inter-College / Inter – Zonal / District / School competition in sports and as recognized by the AIU/IOA/SGFI/ Govt. of India.

or

(ii) Bachelor's degree in Physical Education with 45%

marks. or

(iii) Bachelor's degree in any discipline with 45% marks and studied physical education as compulsory / elective subject.

or

(iv) Bachelor's degree with 45% marks and having participated in National / Inter University/ State competition or secured 1st, 2nd or 3rd position in Inter College/ Inter – Zonal / District / School competition in sports and games as recognized by the AIU/IOA/SGFI/ Govt. of India.

or

(v) Bachelor's degree with participation in International competitions or secured 1st, 2nd or 3rd position in National / Inter -University competition in sports and games as recognized by respective federations/ AIU/IOA/SGFI/ Govt. of India.

or

(vi) Graduation with 45% marks and at least three years of teaching experience (for deputed in – service candidates i.e. trained physical education teachers / coaches).

Note: A candidate shall be eligible for admission to the Bachelor of Physical Education degree course (B.P.Ed) if he/she has received a degree in 10+2+3 / 10+2+4 / 10+2+5 pattern from a University recognized by Tamil Nadu Physical Education and Sports University.

A minimum inter school level participation in sports and games is compulsory.

b) The candidates should not have completed 30 years of age as on 1st July. However, relaxation of 3 years shall be given for SC/ST candidates.

(ii) Ex-Servicemen / Experienced Physical Education Teachers shall be given relaxation of 6 years of age. Working in Government Regular Post / Government Aided Regular Post only Eligible and Three years of service mandatory to apply for this age relaxation in regular post only.

(iii) The candidate should be medically fit and free from any deformity. (Physical Disabled, Intellectually Challenged, Visually impaired, Hearing Impaired, Stammering, Postural Deformities, any other Major Deformities candidates with any other deformities are not eligible to undergo this programme)

(iv) Pregnant women are not permitted either for admission or to undergo the course. If violated, they will not be permitted to continue the course.

g. Admission shall be made on the basis of ranking for a total of 150 marks as detailed below:-

1	Qualifying Examination	20 marks
2	Participation in Games & Sports	25 marks
3	Games and Sports Skill test	50 marks
4	Track and Field Skill test	50 marks
	Bonus marks for possession of basic degree in Physical Education (B.Sc Physical Education, Health Education and Sports or Bachelor of Physical Education (B.P.E) or Bachelor of Physical Education and Sports (B.P.E.S) or Diploma in Physical Education (D.P.Ed)	05 marks
	Total	**150 marks**

Qualifying Examination-20

Marks obtained in qualifying Degree shall be converted

to a maximum of 20 marks. For example if a candidate secured 1800 marks out of

2400. His / Her marks for qualifying examinations is [1800 / 2400] x 20 = **15 marks.**

Games and Sports Participation: (Maximum marks: 25)

The norms for award of marks for the sports and games participation are furnished hereunder.

Any one which is applicable / advantageous.

1.	Representing the Country	25
2.	Securing first two places in National / All India / Inter – University	20
3.	Representing State / University	15
4.	Representing District / Division	10
5.	Representing Colleges / School	05

(Supporting certificates should be produced)

Games and Sports Skill Test: Maximum Marks: 50

The candidate should choose any one of the games included in the All India Inter University (AIU) competitions.

Note

The games skill test and Track and Field events will be conducted by three judges.

Track and Field: Maximum Marks: 50

Candidates will be tested in the following Track and Field events:-

a)	100 Mts.	- 20 Marks
b)	Shot-Put	- 15 Marks
c)	Long Jump	- 15 Marks

2. Course of Study

a. Duration of the Course - The duration of the course of study is two (02) academic years, consisting of four semesters. The total working days shall not be less than 200 days in an Academic year. Each semester consists of not less than 100 working days excluding examination.

b. Each working day shall consist of four hours of Practical Work (Morning and Evening – 2 hours for each session) and three hours of theory in between.

c. Undergoing Internship, Intensive Practice Teaching in neighboring schools and attending the annual leadership training camp and village placement programme shall be compulsory for all the students.

d. The Course of study shall consist of three parts Viz Part I, Part II, Part III and Part IV as follows.

e. **Part I-Theory** (Core, Discipline Specific Elective and Generic Elective)

Part II - **Practicum**

Part III - **Internship**

Part IV - **Ability and Skill Enhancement Courses** (Ability Enhancement Compulsory Course Skill Enhancement Courses and Co- Curricular Courses)

3). SCHEME OF INSTRUCTION AND EXAMINATION

First Semester

Part	Subject Code	Name of Paper/Component	Hours of Instruction/ week		Scheme of Examination				
			Theory	Practical	Duration of Exam	CIA	CE	Total	Credit
		Core Course– Theory							
I	23UA2CT101	History, Principles and Foundation of Physical Education	4	-	3	25	75	100	4
	23UA2CT102	Anatomy and Physiology and Health Education	4	-	3	25	75	100	4
	23UA2CT103	Yoga Education	4	-	3	25	75	100	4
	23UA2DE101	**Discipline Specific Elective Course**							
		Any one paper from the basket of Choices for Odd Semester	4	-	3	25	75	100	4
II		**Core Course – Practicum**							
	23UA2CP101	Marching, Indigenous Activities and Yogic Practices	-	4	-	50	-	50	2
	23UA2CP102	Calisthenics. Light Apparatus and Rhythmic Activities		4	-	100	-	100	2
	23UA2CP103	**Games and Sports – I :** Basketball, Football, Handball, and Volleyball. **Minor Games:** Relay Games, Circle Games, Tag Games, Goal/ Point Scoring Games and Miscellaneous Games.	-	6	-	100	-	100	3
	23UA2CP104	**Track and Field Events Part I :** Sprint, Middle and Long Distance Running, Long Jump, Shot Put, Discus Throw, Javelin Throw and Relay Races.	-	6	-	100	-	100	3
		Internship							
III	23UA2IN101	Care and Maintenance of Play Fields- Part I, Participating Intramural and Extramural Tournaments	-	6	-	50	-	50	3
			16	**26**	**-**	**500**	**300**	**800**	**29**
			42 hrs						

Part	Semester	Ability Enhancement Compulsory Courses (AECC)				
IV	1		Communication skill	2	Remarks	2
	23UA2AE101					

Second Semester

Part	Subject Code	Name of Paper/Component	Hours of Instruction/ Week		Scheme of Examination				
			Theory	Practical	Duration of Exam	CIA	CE	Total	Credit
		Core Course – Theory							
I	23UA2CT201	Sports Training	4	-	3	25	75	100	4
	23UA2CT202	Organization ,Administration and Methods in Physical Education	4	-	3	25	75	100	4
	23UA2CT203	Theories of Sports and Games, Coaching and Officiating- Part I	4		3	25	75	100	4
		Discipline Specific Elective Course							
	23UA2DE201	Any one paper from the basket of Choices for Even Semester	4	-	3	25	75	100	4
II		**Core Course – Practicum**							
	23UA2CP201	**Gymnastics**: Tumbling and Pyramids. **Games and Sports – II :** Cricket and Hockey	-	6	3	50	-	50	3
III		**Internship**							
	23UA2IN201	Teaching Practice (General Lesson)	-	6	3	50	50	100	3
	23UA2IN202	Teaching Practice (Particular Lesson)	-	6	3	50	50	100	3
	23UA2IN203	School Internship/ Teaching Practice General & Particular Lessons		4	3	100	-	100	2
	23UA2IN204	Care and Maintenance of Play Fields- Part II, Participating Intramural and Extramural Tournaments		4	3	50		50	2
			16	**26**		**400**	**400**	**800**	**29**
			42 hrs						

Part	Semester	Ability Enhancement Compulsory Courses (AECC)				
IV	23UA2AE201 2		Environmental Studies	2	Remarks	2
			Soft skill	2	Remarks	2
		Co -Curricular course				
			Community Engagements - Village Placement programme	2	Remarks	2

Sports Entrepreneur Skill Development Training Or Swachcha Bharat Abhiyan during first year summer vacation for 15 days***

Third Semester

Part	Subject Code	Name of Paper/Component	Hours of Instruction/week		Scheme of Examination				
			Theory	Practical	Duration of Exam	CIA	CE	Total	Credit
I		**Core Course – Theory**							
	23UA2CT301	Measurement and Evaluation in Physical Education	4	-	3	25	75	100	4
	23UA2CT302	Research and Statistics in Physical Education	4	-	3	25	75	100	4
	23UA2CT303	Sports Management and Recreation and Camping	4	-	3	25	75	100	4
		Discipline Specific Elective Course							
	23UA2DE301	Any one paper from the basket of Choices for Odd Semester	4	-	3	25	75	100	4
	A,B,C,D	**Generic Elective** Any one paper from the basket of choices for Generic Electives	4	-	3	25	75	100	4
II		**Core Course – Practicum**							
	23UA2CP301	**Track and Field Events Part II:** Triple Jump, Pole Vault, High Jump, Hammer Throw, Hurdles, Combined Events.	-	6	3	100	-	100	3
	23UA2CP302	**Games and Sports – III:** Badminton, Ball Badminton, Kabaddi, Kho-Kho, Netball, Softball, Swimming, Lawn Tennis, Table Tennis, Tennikoit, Throwball, and Weight Lifting	-	6	3	50	-	50	3
	23UA2CP303	**Combative Sports & Martial Arts**: Boxing, Fencing, Stick Fencing (Silambam), Kalari, Judo, Karate, Taekwondo and Kung-Fu.	-	4	3	50	-	50	2
	23UA2CP304	**Fitness Training:** Conditioning Exercises: General and Specific. Training Methods : Weight Training (Free Weights and Machine Weights)- Circuit Training – Interval Training- Fartlek Training - Plyometric, Swiss ball Training – Medicine Ball Training – Core Board Training- Cross Training.	-	4	3	50	-	50	2
		Internship							
III	23UA2IN301	Care and Maintenance of Play Fields- Part III, Participating Intramural and Extramural Tournaments Educational Tour, Stadium Visit, Organizing Project Sports Meet,	-	4	3	50	-	50	2
	23UA2IN302	**Sports Entrepreneur Skill Development Training Or Swachcha Bharat Abhiyan.**	-	-	-	100	-	100	2
			16+4	**24**		**525**	**375**	**900**	**34**
			44 hrs						

Part	Semester	**Skill Enhancement Course**				
IV	23UA2SE301		**Obesity and Weight Management (or) Sports First Aid**	2	Remarks	2
	3	**Co -Curricular course**				
	23UA2SE302		Annual Leadership Training Camp/ Picnic/ Hiking/ Trekking	2	Remarks	2

Fourth Semester

Part	Subject Code	Name of Paper/Component	Hours of Instruction/week		Scheme of Examination				
			Theory	Practical	Duration of Exam	CIA	CE	Total	Credit
I		**Core Course – Theory**							
	23UA2CT401	Theories of Sports and Games, Coaching and Officiating- Part II	4	-	3	25	75	100	4
	23UA2CT4102	Kinesiology and Biomechanics	4	-	3	25	75	100	4
	23UA2CT403	Sports Psychology and Sociology	4	-	3	25	75	100	4
		Discipline Specific Elective Course							
	23UA2DE401 A,B,C,D	Any one paper from the basket of Choices for Even Semester	4	-	3	25	75	100	4
II		**Core Course – Practicum**							
	23UA2CP401	Game of Specialization (Any one of the Major Games)		6	3	50	50	100	3
	23UA2CP402	Track and Field Specialization (Any one Track and Field Events)		6	3	50	50	100	3
		Internship							
III	23UA2IN401	School Internship/ Intensive Teaching Practice- Coaching Lesson (Track and Field and Team Games)		6	3	100	-	100	3
	23UA2IN402	**First Aid and Management of Athletic Injuries in the Play Fields :** Prevention and Management of Injuries, Physiotherapy Treatments, Rehabilitative processes and Massage. Care and Maintenance of Play Fields- Participating Intramural and Extramural Tournaments		4	3	50	-	50	2
	23UA2IN403	Internship in Fitness Centres / Gym/ Sports Clubs /Yoga Centres		4	3	50	-	50	2
			16	**24**		400	400	800	**29**
		Total	**42 hrs**						

Note

Minimum marks required for Pass is 50% in each activity.

Part IV Ability and Skill Enhancement Courses

Sem	Subject code	Course/Components	Hours of Instruction week/course	Remarks	Total credits
Part IV					
	Ability Enhancement Compulsory Courses (AECC)				
1		Communication skills	2	Remarks	2
2		Environmental Studies	2	Remarks	2
2		Soft skills	2	Remarks	2
3	**Skill Enhancement Courses**		20 hrs	Remarks*	2
	Co-Curricular course				
2		Community Engagements - Village Placement programme	5 Days	Remarks*	2
3		Annual Leadership Training Camp/Picnic/Hiking/ Trekking	5 Days	Remarks*	2
				Total Credits (Part IV)	**12**

*** Excellent /Good/ Satisfactory/Unsatisfactory**

Total Minimum Credits to earn the degree	
Components	**Credits**
Part I, II, II Sem 1- 4 **(29+29+34+29)**	**121**
Part IV (1-3)	**12**
Total Minimum Credits	**133**

Other Courses offered by the Department

Generic Elective Course

1. **Construction and Maintenance of Play fields**
2. **Tourism Management in India**

Skill Enhancement Courses

1. **Obesity and Weight Management**
2. **Sports First Aid**

CREDIT AND MARKS ABSTRACT

SEMESTER	CREDITS	TOTAL MARKS
I	**31**	**800**
II	**35**	**800**
III	**38**	**900**
IV	**29**	**800**
Grand Total	**133**	**3300**

CREDIT ABSTRACT

Part	Semester – Credits Subject	I	II	III	IV	Total Credit
I	Core –Theory	12	12	12	12	**48**
	DSE	4	4	4	4	**16**
	Generic Elective	0	0	4	0	**4**
II	Core – Practical	10	3	10	6	**29**
III	Internship	3	10	4	7	**24**
IV	**Ability and Skill Enhancement Courses**	0	0	0	0	0
	Ability Enhancement Compulsory Courses (AECC)	2	4	0	0	6
	Skill Enhancement Courses	0	0	2	0	2
	Co-Curricular course	0	2	2	0	4
	Grand Total	31	35	38	29	133

MARKS ABSTRACT

Part	Semester – Credits Subject	I	II	III	IV	Total Marks
I	Core –Theory	300	300	300	300	1200
	DSE	100	100	100	100	400
	Generic Elective			100		100
II	Core – Practical	350	50	250	200	850
III	Internship	50	350	150	200	750
IV	Ability and Skill Enhancement Courses					
	Ability Enhancement Compulsory Courses (AECC)	Remarks (2 Credits)	Remarks (4 Credits)			Remarks (6 Credits)
	Skill Enhancement Courses			Remarks (2 Credits)		Remarks (2 Credits)
	Co-Curricular course		Remarks (2 Credits)	Remarks (2 Credits)		Remarks (4 Credits)
	Grand Total	**800**	**800**	**900**	**800**	**3300**

Requirement for Passing

No candidate shall be eligible for the award of the B.P.Ed degree unless he/she has passed the written examinations Part I, Part II, Part III and Part IV.

Scheme of Teaching Practice Examination

Examination	Lesson		Credits	Marks
University External Practice Teaching Examination (II Semester)	General lesson	Internal	2	50
		External	2	50
		Total	**4**	**100**
	Particular Lesson	Internal	2	50
		External	2	50
		Total	**4**	**100**
Intensive Teaching Practice (During School Visit) (II Semester)	General lesson & Particular Lesson	Internal	**4**	**100**
		External	–	-
		Total	**4**	**100**
University External Coaching Lesson (IV Semester)	Track and Field	Internal	2	50
		External	2	50
		Total	**4**	**100**
	Game of Specialization	Internal	2	50
		External	2	50
		Total	**4**	**100**
Coaching Lesson School Internship/ Intensive Teaching Practice- (During School Visit) (IV Semester)	Coaching Lesson (Track and Field and Team Games)	Internal	2	100
		External	-	-
		Total	**4**	**100**

1. Degree

The candidates shall have subsequently undergone the prescribed programme of study in a College affiliated to this University for not less than two academic years comprising 4 semesters, passed the examinations prescribed and fulfilled such conditions as have been prescribed thereof.

2. Duration

The duration of all PG programmes is two years including B.P.Ed and M.P.Ed. Each year shall consist of two semesters, viz. Odd and Even semesters. Odd semester shall be from June/July to October/November and Even semester shall be from November/December to April/May. There shall be not less than 100 working days which shall comprise 450 teaching clock hours for each semester (exclusive of the days for the conduct of university end-semester examinations).

3. Span of Period

a) Time = N+2 years for the completion of programme. Where 'N' stands for the normal or minimum duration prescribed for completion of the programme.

b) In exceptional circumstance, a further extension of one more year may be granted. The exceptional circumstances are spelt out clearly by the relevant statutory body concerned of the University.

c) During the extended period the student shall be considered as a private candidate and also not be eligible for ranking.

The above conditions are applicable to the Redo/Transfer/Readmission Candidates.

4. The CBCS-LOCF System

All Programmes (named after the Core subjects) mentioned earlier shall be conducted through Choice Based Credit System (CBCS) and Learning Outcomes Based Curriculum Framework (LOCF). It is an instructional package developed to suit the needs of students to keep pace with the developments in higher education and the quality assurance expected of it in the light of liberalization and globalization in higher education.

5. Project

Each candidate shall be required to take up a Project Work and submit it at the end ofthe final year. The Head of the Department shall assign the Guide who, in turn, will suggest the Project Work to the student in the beginning of the final year. A copy of the Project Report will be submitted to the University through the Head of the Department on or before the date fixed bythe University. The Project will be evaluated by an internal and an external examiner nominated by the University. The candidate concerned will have to defend his/her Project through a Viva-voce.

6. Semesters

In each semester, Courses are offered in 15 teaching weeks and the remaining 5 weeks are to be utilized for conduct of examinations and evaluation purposes. Each week shall have 30working hours spread over 5/6 days a week.

7. Credits

The term "Credit" refers to the weightage given to a course, usually in relation to the instructional hours assigned to it. For instance, a six-hour Course is assigned three to six credits,

four/five-hour Course is assigned three to five credits. However, in no instance the credits of a Course can be greater than the hours allotted to it.

The total minimum credits required for awarding B.P.Ed Candidates are 133,

Credits	
UG Programme B.P.ES	140 credits
BPEd	133 Credits
MPEd	132 Credits

8. Course

Each Course is designed with lectures/tutorials/laboratory or field work/seminar/ Project/practical training/assignments/term paper or report writing etc., to meet effective teaching and learning requirements.

9. Examinations

i. There shall be examinations at the end of each semester, for odd semesters in the month of October/November; for even semesters in April/May.

ii. A candidate who does not pass the examination in any course(s) may be permitted to appear in such failed course(s) in the subsequent examinations to be held in October/November or April/May. However, candidates who have arrears in Practicals shall be permitted to appear for their arrears in Practical examination only along with Regular Practical examination in the respective semester.

iii. Viva-voce: Each candidate shall be required to appear for Viva-voce Examination in defence of the Project only.

iv. The results of all the examinations will be published through the College where the student underwent the Course as well as through University Website. In the case of private candidates, the results will be published through the Centres in which they appeared for the examinations as well as through University Website.

10. ATTENDANCE REQUIREMENTS:

I. Students must have 75% of attendance in each semester to appear for the End Semester Examinations.

II. Students who have attendance between 70% and 74% shall apply for condonation in the prescribed form with the prescribed fee.

III. Students who have attendance between 65% and 69% shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

IV. Students who have attendance between 60% and 64% shall carry over the End Semester Examinations in the ensuing Semester.

V. Students who have attendance below 60% are not eligible to appear for the End Semester Examinations. They shall re-do the semester(s) and therefore, they shall not move to the ensuing semester.

VI. A student can avail condonation only once during the course of study.

VII. Hall tickets will be issued to the eligible candidates only if they produce 'No Dues Certificate' from the Department, the Registrar's Office, the Library and the Hostel Warden at the time of issue of "Hall Ticket" for the End Semester Examinations.

11. Question Paper Pattern

External marks 75 marks **UG** programmes **40% Pass** **PG** programmes **50%** Pass		No of Questions	Mark per question	Marks
	Part A	MCQ 10	1	10
	Part B	Short notes 5	2	10
	Part C	Explain briefly 5	5	25
	Part D	Elaborate 3	10	30
	Total marks			75

Section A: For 20 Marks

i. : 10 Questions (MCQ) x 1 Marks = 10 Marks.

ii. : 5 questions x 2 Marks = 10 Marks.

(Descriptive type/one question from one Unit)

Section B: For 25 Marks

5 Questions x 5 Marks = 25 Marks

(Answer any three out of 5 out of 8 questions)

Section C: For 30 Marks

3 Questions x 10 Marks = 30 Marks

(Answer any three out of 5 questions and one question from each unit)

12. Evaluation

The performance of a student in each Course is evaluated in terms of percentage of marks with a provision for conversion to grade points. Evaluation for each Course shall be done by a continuous internal assessment (CIA) by the Course teacher concerned as well as by an end semester examination and will be consolidated at the end of the semester. The components for continuous internal assessment are:

	Exam/Test	Marks
Internal marks 25 marks for all programmes	First Internal Exam (after 30th working day)	5
	Second Internal Exam (after 60th working day)	5
	Model Exam (after 90th working day)	10
	Assignment	3
	Seminar	2
	Total marks	**25**

External marks 75 marks **UG** programmes **40% Pass** **PG** programmes **50%** Pass		No of Questions	Mark per question	Marks
	Part A	MCQ 10	1	10
	Part B	Short notes 5	2	10
	Part C	Explain briefly 5	5	25
	Part D	Elaborate 3	10	30
	Total marks			75

Attendance need not be taken as a component for continuous assessment, although the students should secure a minimum of 75% attendance in each semester. In addition to continuous evaluation component, the end semester examination, which will be a written-type examination of at least 3 hours duration, would also form an integral component of the evaluation. The ratio of marks allotted to continuous internal assessment and to end semester examination is 25:75. The evaluation of laboratory component, wherever applicable, will also be based on continuous internal assessment and on an end-semester practical examination with 40:60 ratio.

Passing Minimum

Name of the Programme	**Internal**	**External**	**Total**
UG	Minimum 10 marks	40%	40%
PG	Minimum 12 marks	50%	50%

13. Conferment of the Master's Degree

A candidate shall be eligible for the conferment of the Degree only after he/ she has earned the minimum required credits for the Programme prescribed therefore

Credits	
UG Programme B.P.ES	140 credits
BPEd	133 Credits
MPEd	132 Credits

14. Ranking: University Rank Examination

1. The University Rank Examination shall be conducted for the toppers (First Rankers) of all the colleges (having passed their examinations in the first appearance within the prescribed duration of the programme) including autonomous / non-autonomous streams and they are required to write two examinations. Absence from an examination shall not be taken as an attempt.
2. The question papers of the examinations comprise objective type questions covering the core courses in each of the Programmes generally followed by both autonomous / non- autonomous streams.
3. The top scorers in this University Rank Examination would be declared as University Rank Holders, irrespective of their grades in their respective University end semester examinations.
4. Rank Certificate will be issued for a Programme as follows :

    a) Only THREE Ranks if the student's strength is below 20
    b) Only FIVE Ranks if the student's strength is above 20 but below 50.
    c) Only TEN Ranks where the student's strength exceeds 50 but is less than 100
    d) Only 20 Ranks if the student's strength is 100 and above
    e) The student's strength of the course concerned will be indicated in the Rank Certificates.

15. Un Aided Stream

The above regulations shall be applicable for the candidates undergoing the programmes in Un Aided Stream also.

16. Grievance Redressal Committee

The College shall form a Grievance Redressal Committee for each Course in each Department with the Course Teacher and the HOD as the members. This Committee shall solve all grievances relating to the students Continuous Internal Assessment marks.

17. Revision of Regulations and Curriculum:

The University may from time to time revise, amend and change the regulations and thecurriculum, if found necessary.

18. Grading System

1. Grading

Once the marks of the CIA and the end-semester examination for each of the courses are available, they will be added. The marks thus obtained, will then be graded as per the schemeprovided in Table 1.

From the second semester onwards the total performance within a semester and the continuous performance starting from the first semester are indicated by **Semester Grade Point Average (GPA)** and **Cumulative Grade Point Average (CGPA),** respectively. These two are calculated by the following formulae:

$$GPA = \frac{\sum_{i=1}^{n} C_i G_i}{\sum_{i=1}^{n} C_i G_i}, \qquad \text{WAM (Weighted Average Marks)} = \frac{\sum_{i=1}^{n} C_i M_i}{\sum_{i=1}^{n} C_i},$$

where 'C_i' is the Credit earned for the Course i; 'G_i' is the Grade Point obtained by the student for the Course i . 'M' is the Marks obtained for the course i and 'n' is the number of Courses **passed** in that semester.

CGPA= Average GPA of all the Courses starting from the first semester to the current semester.

2. Classification of Final Results

i. The classification of final results shall be based on the CGPA, as indicated in Table 2.

ii. For the purpose of Classification of Final Results, the candidates who earn the CGPA 9.00 and above shall be declared to have qualified for the Degree as "Outstanding". Similarly, thecandidates who earn the CGPA between 8.00 and 8.99, 7.00 and 7.99, 6.00 and 6.99, and
5.00 and 5.99 shall be declared to have qualified for their Degree in the respective programmes as "Excellent", "Very Good", "Good", and "Above Average" respectively.

iii. Absence from an examination shall not be taken as an attempt.

Table 1
Grading of the Courses

Marks Range	Grade Point	Corresponding Grade
90 and above	10	O
80 and above but below 90	9	A+
70 and above but below 80	8	A
60 and above but below 70	7	B+
50 and above but below 60	6	B
Below 50	N.A.	R.A.

Table 2
Final Result

CGPA	Corresponding Grade	Classification of Final Results
9.00 and above	O	Out standing
8.00 to 8.99	A+	Excellent
7.00 to 7.99	A	Very Good
6.00 to 6.99	B+	Good
5.00 to 5.99	B	Above Average
below 5.00	R.A.	Re-Appearance

Credit based weighted Mark System is to be adopted for individual semesters and cumulative semesters in the column 'Marks Secured' (for 100).

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19.Courses

Each Course is designed with lectures/tutorials/laboratory or field work/seminar/ Project/practical training/assignments/term paper or report writing etc., to meet effective teaching and learning requirements.

Ability Enhancement Courses/Skill Enhancement Courses :(Part IV)

To successfully complete the BPEd course the students must under go the Ability Enhancement Courses under the sub headings of Ability Enhancement Compulsory Courses (AECC) Skill Enhancement Courses and Co-Curricular course)

Generic Elective

To successfully complete the BPEd course the students must undergo and complete anyone of the generic elective (Open Elective) in the third Semester.

Peer Group Teaching and Discussion Concept

BPEd is a Teacher Trainer Course in Physical Education, to inculcate the teaching and discussion habits on the subject matter Peer Group Teaching and Discussion Concept(PGTDC) is included in the syllabus. Teachers of the concerned subjects are asked to encourage the students in this activity

20. Internship/ Teaching Practice/ Community engagements

In internship a student (teacher trainee) is undergoing supervised practical training. Internship/ Teaching practice includes Teaching & observation in the Department/ College. Intensive Teaching Practice in the neighbouring Schools,

Schools for intensive teaching shall be decided by the Staff-in-charge of Teaching Practice and Head of the Department / Principal of the College.

a. A minimum of 30 lessons, Students shall complete 15 General and 15 Particular lessons/ Coaching Lessons in 15 working days under the supervision of the assigned Department /College and physical education staff in the schools.

b. Community engagements (Village Placement Programme). The programme includes teaching indigenous activities, basic skills in sports and games giving exposure to teachers in the teaching-learning process.

I. For the Community engagements (Village Placement programme) the students shall visit the neighbouring village for a minimum period of five days and organise the programmes such as

Physical Education/ Physical Exercise related programmes
Awareness Programmes related to health and fitness
Cleaning, creation of place for physical activities, sports and games.
Survey related to health and fitness of the public.

The Community engagements (Village Placement programme) record with details of programmes organised and photo graphs shall be submitted at the time of the University practical examinations for the evaluation of external examiners.

Note

i. For the practice teaching examination conducted by the University, there shall be one External and one Internal Examiner.

II. For Coaching Practice, each student shall maintain a Coaching Practice Record book, which shall contain records of 10 teaching, 10 coaching general and 10 officiating plans.

JJ. A candidate who fails in Coaching Practice Examination may present himself/herself in the subsequent University Coaching practice Examination.

Requirement for Passing

No candidate shall be eligible for the award of the B.P.Ed degree unless he/she has passed the written examinations (Part I), Practicum (Part II), Internship/ Teaching Practice (Part III) and Part IV.

21. Medium of Instructions

Medium of instructions ENGLISH ONLY, Students has to write the examinations in English only.

22.Inter University Sports Participation and Special Permission for University Examination

A student representing the University / State / Nation in a game or sport and misses the University Semester Examination will appear for a special supplementary University Examination as stipulated by the University. Special permission may be granted by the controller of examination as per the rules and regulations of the university examinations provided the request must be submitted through proper channel well in advance. The Special Examinations will be conducted in the University Main Campus , Chennai 600127 only.

23.Internal Test and Assignment – Special Permission

In case, a student unable to appear for an internal test due to participation in inter collegiate/ university sports competition / any such programme of the University with prior permission from the concerned head of the faculty / department/ Principal, he / she may be permitted to appear for a special test / tests before the pre-semester examination.

Such a student appearing for a special supplementary University Examination shall not be considered as an arrear / arrears in a paper / papers and shall not be deprived of ***RANK in the University***.

A student who fails in any one or more papers in the semester examination will be permitted to rewrite the paper or papers in the subsequent semester examination.

To qualify for the degree, supplementary candidates are required to pass all the papers prescribed for the course within a period of three years after he/she complete the course. Beyond this period, the candidate shall follow the current syllabi for the examination if applicable. Examination fee will be collected normally according to the rules and regulations of the university. A Separate examination fee will be collected in this case.

Students who fail in a paper/papers are permitted to apply for recounting or re valuation in examination section of the University within the prescribed period with specified fee.

Appeal against the results of the semester examination shall be made to the controller of examinations by the student concerned through the Head of the Department/ Principal of the affiliated college within 15 days of the publication of results by paying re-totaling /revaluation fee.

24. Instant Examination for Outgoing Students

Instant Examinations will be conducted only in the University Main Campus, Chennai 600127 for the outgoing students who failed in **any two papers from theory and/or practical papers** are eligible to apply for Instant Examination by paying prescribed examination fee**.** The date of instant examination will be intimated by Controller of Examinations of Tamil Nadu Physical Education and Sports University.

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CORE PAPER – I

HISTORY, PRINCIPLES AND FOUNDATIONS OF PHYSICAL EDUCATION

Learning Objectives

1. To know the origin and development of Physical Education
2. Understand the basic concepts of physical education.
3. Know the historical development of physical education in India.
4. Understand the foundation of physical education.
5. Know the principles of physical education.
6. Know the psychological and sociological principles

UNIT I

Introduction: Meaning and Definition of Education, Physical Education, Aims and Objectives of Physical Education. Role of Physical Education in General Education. Development of Teacher Education in Physical Education. Professional Courses in Physical Education and Sports.

UNIT II

Historical development of Physical Education in India

Physical Education in India: Pre Independence period :Vedic age, Epic age, Muslim period, Ancient Greece (Sparta – Athens). British period (before 1947) -Physical Education in India (after 1947) -Contributions of YMCA -National Sports Day.

UNIT III

Policies, Schemes, Awards: NCC – NSO - NSS - Scouts and Guides - Sports Authority of India - Sports Development Authority of Tamil Nadu - School Games Federation of India - Association of Indian Universities – Central and State Sports Universities-Indian Olympic Association. RDG-BDG-RDS. Awards: Arjuna award - Dronacharya award - Major Dhyan Chand Khel Ratna Award- Fit India-Khelo India

UNIT IV

Biological foundations of Physical Education - Growth and Development at various Levels of Childhood: Pre - Adolescence –Adolescence – Adulthood. Differences in boys and girls. Types of Age:Chronological Age-Physiological Age and Mental Age. Classification of body types: Sheldon – Krestchmer. Philosophical Foundation of Physical Education: Idealism, pragmatism, naturalism, realism, humanism, Existentialism Sociological Foundations of Physical Education: Society, culture and Socialization Process-Traditions in sport- Social Integration

UNITV

Psychological foundations: Learning: Meaning and Definition – Theories of Learning :Trial and Error theory, Conditioned Response theory, Insightful Learning. Laws of Learning: Law of readiness, Law of Exercise , Law of effect, Law of Primacy, Law of Intensity. Law of Recency, Types of Learning : Primary, Associate, Concomitant; Transfer of Learning – Learning Curve - Theories of Play

Learning Course Outcome

1. Know the origin and development of Physical Education
2. Apply the knowledge of Olympism in organizing various sport activities.

3. Distinguish the functional operations on National and International Olympic Federations.
4. Analyze the concepts and issues pertaining to Physical Education.
5. Formulate the principles, philosophy and concepts about Physical Education

Peer Group Teaching and Discussion Concept

Teaching and Discussion on comparison of Theories of Play- Classification of Body types based on classroom samples- Discussion on Practical Applicability of Theories of Learning- Group Discussion on: Physical Education during Pre and Post Independence.

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Vidya Bhusan., & Sachdeva. (1995). An Introduction to Sociology. New Delhi: Kitah Mahal. ****

CORE PAPER – II

ANATOMY, PHYSIOLOGY AND HEALTH EDUCATION

Learning Objectives

1. Understand basic knowledge of Anatomy, Physiology of Human body and Human Health.
2. Implement the knowledge in the field of physical Education**.**
3. Demonstrate practical knowledge of basic scientific facts and principles underlying normal body structure and function

UNIT I

: Introduction, Skeletal and Muscular System Meaning and Definition of Anatomy and Physiology – Structural Organization of Human Body – Structure and Function of Cell – Types of tissues – Organ Systems – Homeostasis – Integumentary system: Organs and functions.

Skeletal System: Structure and functions of Skeletal System – Types of Bones – Structure of Long Bone - Axial and Appendicular Skelton - Joints: Definition and Classification of Joints.

Muscular System: Structure and functions of Muscular System – Types of Muscles – Structure of Skeletal Muscle – Properties of Muscle - Types of Muscle Contraction.

UNIT II

Cardiovascular and Respiratory System Cardiovascular System: Structure and Functions of Heart – Blood Vessels: Artery, Vein and Capillaries – Types of Blood Circulation – Cardiac cycle – Blood Pressure – Pulse - Cardiac output – Heart Sounds – Structure and function of Lymphatic system. Blood : Functions of Blood - Composition of Blood - Blood groups - Blood clotting.

Respiratory System: Types of Respiration - Respiratory Tract - Structure and functions of Lungs - Exchange of Gases - Mechanism of respiration – Respiratory rate – Lung Volumes and Capacities..

UNIT III

Digestive, Excretory and Endocrine System: Digestive System: Digestive Tract - Structure and functions of Oral Cavity, Oesophagus, Stomach, Small and Large Intestine and Anus – Role of salivary glands, Liver, Gall-bladder and pancreas in digestion – Digestive Process : Mechanical and Chemical.

Excretory system: Urinary tract - Structure and function of kidney, ureter and urinary bladder -Structure of Nephron– Concept of Urine Formation.

Skin: Structure and functions of Skin.

Endocrine system: Functions of Endocrine System – Hormones – Hypothalamus – Function of Endocrine Glands: Pituitary, Pineal, Thyroid, Parathyroid, Thymus, Adrenal, Pancreas and Sex glands.

UNIT-IV

Nervous System, Reproductive and Special Senses : Nervous System: Neuron: Structure, types and functions – Function of Nervous system - Classification of Nervous system : Central, Peripheral and Autonomic Nervous system – CNS : Structure and functions of brain and Spinal cord -Reflex action – PNS: Cranial and Spinal Nerves – ANS: Sympathetic and Parasympathetic Nervous System.

Reproductive System – Structure and function of male and female reproductive system.

UNIT V

Health Education

Health Education: Meaning and Definition – Factors influencing Health: Heredity and Environment. Infection, Immunity and Immunization – Public health measures: Personal Hygiene, School health Programme - Common Communicable Diseases: Definition, Causes, Symptoms, Mode of Transmission and Prevention of Malaria, Typhoid, Cholera, Tuberculosis, Chicken Pox, and AIDS. Common Non-communicable Diseases: Definition, Causes, Symptoms and Prevention of Obesity – Hypertension – Stroke – Coronary artery disease – Cancer.

Learning Outcomes

1. Understand the basic principles of Anatomy, Physiology and Health Education
2. Apply the knowledge in the field of physical education and movement activity.
3. Analyze the practical knowledge during the practical situation.
4. Remember and recall the definition of anatomy and physiology and co-relate the principles of physiology.
5. Appraise the effects of health condition during the training and practical sessions

Peer Group Teaching and Discussion Concept

Teaching and Discussion through Cell Structure with models prepared by the student Role Play: Practical Applicability of Assessing Vital Signs - Kidney Structure with models prepared by the student – Discussion on Local Health Issues. Awareness campaign on Communicable Discussion.

REFERENCE

Authors Guide, (2013) Standards for Assessing, Measuring and Monitoring Vital Signs in Infants, Children and Young People , London: Royal College of Nursing Publication

Babsky. E., & Khodorov, B. (1970). Human Physiology. Moacow: MIR Publications.

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CORE PAPER – III

YOGA EDUCATION

Learning Objectives

1. To understand and apply the underlying concepts of Yoga
2. To promote knowledge and awareness of skeletal alignment and body mechanics, emphasizing a safe and intelligent use of the body
3. To cultivate breath control, relaxation techniques and kinesthetic awareness

UNIT I

Yoga: Meaning and Definition. Origin and History – Yoga Sutra – Hatha yoga texts. Systems of Yoga: Karma yoga - Jnana yoga - Bhakthi yoga - Raja yoga. Eight limbs of yoga: Yama – Niyama – Asana – Pranayama – Pratyahara – Dharana – Dhyana – Samadhi. Aims and objectives of yoga, Need and importance of yoga in physical education and sports – Yogic Diet.

UNIT II

Schools of yoga - Effect of yoga on various systems of the body: Muscular system – Circulatory system – Endocrine system – Respiratory system – Nervous system – Digestive system – Yoga for Physical Fitness, Yoga for Health and Wellness. Yoga for Diseases. Yoga for child with special needs.

UNIT III

Loosening the joints - Suryanamaskar (Bihar school of yoga). Meaning of Asana – Classification – Guidelines for practicing asanas, Do's and Don'ts - differences between asanas and physical exercises - Techniques and benefits. Standing Asana: Vrkshasana – Trikonasana – Padhahastasana. Seated Asanas: Siddhasana - Padmasana – Paschimottanasana. Inverted asanas: Sarvangasana – Halasana. Prone position: Mayurasana – Sirsasanana. Back bend asanas: Bujangasana, Salabhasana, Dhanurasana, Ushtrasana. Supine position: Navasana, Suptavajrasana, Twisting: Vakrasana, Ardhamatsyendrasana, Kukutasana. Influence of relative, meditative posture on various system of the body.

UNIT IV

Pranayama: Definition, Types and Benefits: Nadi Shodhana, Surya Bhedana, Chandra bhedana, Kapalabhati, Bhastrika, Sitakari, Sitali, Bhramari – Ujjai. Nadi: Ida, Pingala, Sushumna. Five Khoshas: Annamaya, pranyama, manomaya, anandamaya, viynanamaya khoshas.

UNIT V

Techniques and Benefits of Shat kriyas: Neti (Jala, Sutra) Dhauti (Vamana, vastra) Bhasti, Nauli, Trataka, Kapalabhati, Yoga Nidra. Meditation: Meaning and benefits. Bandhas and Mudras : Meaning and benefits.

Learning Outcomes

1. Understand the basic Concepts of Yoga
2. Apply the principles of Yoga to live healthy and active life style.
3. Promote the awareness of health through yoga
4. Analyze the techniques and of body posture to bring out healthy change.
5. Able to execute loosening exercise , Asanas, Pranayama and Shatkriyas.

Peer Group Teaching and Discussion Concept

Group Discussion and Preparation for Yoga Day Celebration – Yoga Awareness Programme- Importance of Yogic Diet. Teaching Yogic Postures with simplified models developed by the students.

REFERENCE

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CORE PAPER – V

SPORTS TRAINING

Learning Objectives

1. Understand the fundamental concepts of sports training.
2. Fix and adopt the training load
3. Prepare the sports person for the competition

UNIT I

Introduction to Sports Training: Sports Training: Meaning, Definition, Aim of Sports Training -Scientific Principles of Sports Training ,Warming Up: Definition – Types – Importance of Warming Up- Cooling down. Principles of intensity and volume of stimulus – over load principles.

UNIT II

Components of load : Intensity, density, duration, frequency - Training Load-Definition and Types of Training Load - Over load :Causes, symptoms and remedies of over load : Types Training: Weight Training (Free Weight and Machine Weights) – Circuit Training – Interval Training – Plyometric Training - Fartlek Training , resistant band training , core board training.

UNIT III

Strength - Definition of strength - Types of Strength: Maximum strength, explosive strength, strength endurance, Training method for strength improvement - Endurance: Definition – Types – Importance – Training Methods for improving-Endurance .

UNIT IV

Speed - Definition of speed - Forms of speed, reaction speed, movement speed, acceleration ability, loco-motor ability. Speed endurance - Training method for strength improvement, Coordinative Abilities: Definition – Types and Training Methods for Improving: Coordinative Abilities – Flexibility : Definition – Types - Methods for Improving Flexibility

UNIT V

Periodization : Meaning -types of Periodization –Single,Double,Triple - Aims and Content of Various Periods – Preparatory,Competition and Transitional –Planning : Meaning- Types of Planning -Short term and Long term- Technical : Meaning and importance Technical – Tactical- Meaning and importance Tactical strategy- Meaning and importance strategy

Learning Outcomes

1. Understand training as performance based science
2. Explain different means and methods of various training
3. Prepare training schedule for various sports and games
4. Appraise types of periodization for performance development
5. Create various training facilities and plans for novice to advance performers

Peer Group Teaching and Discussion Concept

Group Discussion on Training Load of Elite Athletes - Preparation of Training Schedules for Game of their Choice. Preparation of Exercise for Demonstration with Training Gadgets.

REFERENCE

Anand, R.L (1987) Play Field Manual, Patiala : NIS Publication.

Arnheim, D., & William, E Prentice. (1991). Principles of Athletic Training. St.Louis: Mosby Year Book.

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CORE PAPER – VI
ORGANIZATION, ADMINISTRATION AND METHODS IN PHYSICAL EDUCATION

Learning Objectives

1. Innovative approach to leadership preparation with special consideration to ethical and social responsible teachers
2. Advanced understanding and demonstration of teacher professionalism and ethical behaviors in sport pedagogy
3. Understanding of schools as learning organization and increased working relationship with physical education teachers

UNIT I

Meaning of organization and administration. Importance of organization, administration, Guiding principles of organization. Organisation scheme and physical education in schools, Colleges, Universities, Districts, States. Teaching-load and teacher pupil ratio. Types and preparation of time table: Types of physical education periods, Types of records, registers and reports to be maintained in Physical Education.

UNIT II

Finance and budget: Sources of Income- Approved items of expenditure. Rules for the utilization of games fund or physical education fund. Preparation and administration of budget and accounting. Method: Meaning – Factors influencing method, Presentation techniques: Planning - Presentation – Steps in the way of presentation. Teaching aids – Need and importance of teaching aid Class management – General – Specific – Principles to be adopted for good class management. Age Characteristics of pupils and selection of activities.

UNIT III

- Lesson plan: Values. Parts of lesson plan,Types: General, Particular lesson plan and Coaching Lesson Plan. Command : Response Command – Rhythmic Command. Methods of Teaching Physical Activities: Command, Oral, Demonstration, Imitation, Dramatization, At-will, Set-drill, Part, Whole, Whole-Part-Whole methods.

UNIT IV

Tournaments – Meaning-Types. Method of drawing fixtures for knock out/ elimination - league/ Round Robin. Combination Tournament : Knock out – cum – knock out, knock out – cum – league, league – cum – league, league – cum – knock out . Challenge Tournament. Intramural – Extramural; Sports Meet: Standard sports meet – Non-standard sports meet . Play day - Games tour. Pre-meet work,during meet work,post meet work. Professional tournaments,IPL,ISL, Pro -kabaddi. Meaning , importance and organization ofintramural-extramural

UNIT V

Qualities and Qualifications of Physical Education Personnel. Guiding principles of supervision: Qualities and qualification of a supervisor – Concept of techniques of Supervision. Techniques of Supervision: Visitation – Periodical – Surprise – Request- Social, Visitation procedure – Report on the visit – Individual and Group Meeting – Role of primary school teachers towards physical education programme. Functions of DIET / SCERT / NCERT / NCTE / Nehru Yuva Kendra.

Learning Outcomes

1. Understand the principles and process of Administration and Management
2. Administer physical education and sports programs in schools.
3. Develop appropriate physical education curriculum, tools and budget to manage school programs
4. Appraise and manage physical education facilities and personnel in school
5. Design tournament fixtures and structures to organize competitions

Peer Group Teaching and Discussion Concept

Preparation of Physical Education Time Table based on availability of Staff Strength, Student Strength and Facilities available. Role Play on Administration of physical education and sports programme in educational institutions. Teaching and Drawing fixtures for competitions.

REFERENCE

Authors Guide (1986) Organization, Administration and Recreation in Physical Education. Ludhiana :Parkash Brothers Educational Publishers.

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CORE PAPER VII

THEORIES OF SPORTS AND GAMES, COACHING AND OFFICIATING- PART I

Learning Objectives

1. To Understand the concept of Track and Field Marking and Officiating
2. To understand and apply various skills.
3. To promote knowledge and awareness of rules and regulation.
4. To know about the various games in detail

UNIT I

History of Athletics: World and India. Marking and Measurements of Non Standard Track (200m). Marking and Measurements of Field Events

UNIT II

Marking and Measurements of Standard Track (400m), Cross Country, Road Running, Ultra Running and Mountain Running

UNIT III

Rules and Interpretation of Track and Field Events – Duties of Officials in Track and Field Events. Methods of arranging Seeding and Heats in Track and Field Events - Score Sheets for Track and Field Events, Combined Events (Triathlon – Pentathlon – Heptathlon - Decathlon) – Tie-Breaking rules in Field Events : Horizontal and vertical Distance Events.

UNIT IV

World and Indian History, Rules and Interpretation, Marking and Measurements of Play Fields and Standard Equipments for the following games: Basketball, Football, Handball, Volleyball , Cricket and Hockey

UNIT V

Coaching: Meaning and Definition. Teaching, Training and Coaching – Philosophy of Coaching – Qualification and Qualities of a Coach

Learning Outcomes

1. Able to mark Track and Field and Officiate
2. Able to understand the rules of the games and sports
3. Able to give seeding and Heats in Track and Field. Combined Events .
4. Design and practice the new methods of technique of officiating.

Peer Group Teaching and Discussion Concept

Preparation for practical implication of track and field marking. Role Play on as Officials for the Track and Field and other Games. Preparing Models for teaching the Measurement and Markings. Discussion on Tie Breaking with suitable examples.

REFERENCE

Anand, R.L (1987) Play Field Manual, Patiala : NIS Publication.

Arnheim, D., & William, E Prentice. (1991). Principles of athletic training. St. Louis: Mosby Year Book.

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CORE PAPER – IX

MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Learning Objectives

1. Administer a variety of tests as they apply to physical education, health and fitness.
2. Analyze and evaluate various fitness movements
3. Create interest in research through test and measurement

UNIT I

Introduction to test, measurement and Evaluation : Classification of test

Meaning and Definition of Test, Measurement and Evaluation. Need and Importance of Test and Measurement in Physical Education- Type and classification of test – standardized test and teacher made test- objective test and subjective test.

UNIT II

Criteria for administration of test : Criteria and Administration Of test: Criteria of Test: Scientific Authenticity – Reliability, Objectivity, Validity, Availability of Norms, Administrative Feasibility and Education Application. Administration of Test :Duties of Advance Preparation – Duties during testing – Duties after testing

UNIT III

Physical Fitness Test : AAPHERD Health Related Fitness Battery (Revised in 1984) **Cardio Vascular Test**: Harvard Step Test, 12 Minutes,Run /Walk Test, Multi Stage Fitness Test (Beep Test). JCR Test. SDAT World Beaters Battery Test for High School Boys and Girls.

UNIT IV

Sports Skill Test: Badminton: Miller Wall Volley Test – French Short Service Test, Basketball: Johnson Basketball Test – Leilich Basketball Test, Hockey: Firedal Field Hockey Test, Schimithal French Field Hockey Test.

UNIT V

Sports Skill Test: Football: Johnson Soccer Test – McDonald Soccer Test. Tennis: Dyer Tennis Test, Volleyball: Brady Volleyball Test – Rusel Lange Volleyball Test.

Learning Outcomes

1.Understand the basics of Test, Measurement and Evaluation in physical education, Health and Fitness.

2. Know about the different types of test for different sports and games.

3. Apply the tests in minor research areas.

4. Analyze the performance and movements in the field of sports.

5. Evaluate the battery test and others tests prescribed by the government efficiently.

Peer Group Teaching and Discussion Concept

Group Discussion on Duties of Test Administration. Role Play as Tester and Subjects. Teaching the above tests in the practical setting with peer students under the supervision of Teacher.

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Barrow, H.M.. and McGee, R.,A (1964.) Practical Approach to Measurement in Physical Education, Lea and Febiger, Philadelphia.

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CORE PAPER X

RESEARCH AND STATISTICS IN PHYSICAL EDUCATION

Learning Objectives

1. Gain knowledge about research and statistics
2. To testing the existing theories/trainings and modifying
3. To develop systematic and scientific approach and ability to interpret the data.

UNIT I

Meaning and Definition of Research - Need, Nature and Scope of research in Physical Education. Classification of Research: Basic Research, Applied Research, Action Research. Location of Research Problem - Criteria for selection of a problem. Qualities of a good researcher.

UNIT II

Meaning and Definition of Hypothesis. Formulation of Hypothesis. Experimental Methods of Research: Meaning of variable - Types of Variables - Meaning and Nature of experimental Research. Types of Experimental Design: Single Group Design, Reverse Group Design, Repeated Measure Design, Static Group Comparison Design, Equated Group Design, Factorial Design.

UNIT III

Report Writing: Front Materials, Body of Thesis – Back Materials. Method of Writing Research Proposal, Thesis / Dissertation: Method of Writing Abstract, Mechanics of Writing Research Report, Bibliography Writing.

Unit IV – Basic Statistics, Measures of Central tendency and Variability

Meaning and definition of Statistics, Type of Variable , Data – Type of Data , Population , sample, Parameter , Statistic , Frequency distribution , Construction of frequency distribution. Meaning, Types of Central tendency – Mean, Median, Mode – Calculation. Measures of Variability – Range, Mean deviation, Quartile deviation and Standard deviation – Calculation

Unit V– Graphs and Correlation

Graphical representation in Statistics Line diagram, Bar diagram, Histogram, Frequency curve, Frequency Polygon, Pie diagram. Advantages of graphs. Meaning of Correlation , Pearson product moment correlation , Rank order correlation

Learning Outcomes

1. Identify the research problem in the field of physical Education and sports
2. Know to Summarize the various research literature
3. Understand and apply the basics of statistics in research.
4. Organize the samples and sampling techniques which is relevant to the study.

Peer Group Teaching and Discussion Concept

Group Discussion on Qualities of Good Researcher and Criteria for Selecting Good Research. Discussion with Research Problem: Selection of Variables, Tools, Data Analysis and Report Writing. Working out Statistical Problems.

REFERENCE

Best, J.W. (1971) Research in Education, Englewood Cliffs,: Prentice Hall.

Clark, D.H. (1999) Research Problem in Physical Education 2nd edition, Eaglewood Cliffs:Prentice Hall, Inc.

Clarke David.H & Clarke H, Harrison (1984) Research processes in Physical Education. New Jersey : Prentice Hall Inc.

Craig Williams and Chris Wragg (2006) Data Analysis and Research for Sport and Exercise Science. London: Routledge Press.

Jerry R Thomas & Jack K Nelson(2000) Research Methods in Physical Activities, Illinois : Human Kinetics.

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Moses, A.K..(1995) Thesis Writing Format. Chennai : Poompugar Pathippagam.

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Thirumalaisamy (1998), Statistics in Physical Education. Karaikudi: Senthilkumar

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CORE PAPER XI

SPORTS MANAGEMENT, RECREATION AND CAMPING

Learning Objectives

1. To identify the basic principles of Sports Management.
2. To know about organizational management and leadership.
3. To identify important issues and future trends in the field of sports management

UNIT I

` Meaning and Definition of Sports Management – Scope of Sports Management – Progressive Concept of Sports Management – Essential Skills of Sports Management – Qualities and Competencies required for the Sports Manager - Event Management in Physical Education and Sports.

UNIT II

Meaning and Definition of Leadership, Methods, Style, Elements – Forms of Leadership – Autocratic, Laissez – Faire, Democratic. Administrative Leader: Preparation and Qualities of Leadership and Organizational Performance – Professional Ethics. Benevolent-dictor.

UNIT III

Sports Management – Planning of School, College and University Sports Programme – Factors affecting Planning – Directing and Controlling of School College and University Sports Programme – Developing Performance Standard – Establishing a Reporting System - The Reward and Punishment System. Financial Management in physical education and sports in schools, colleges, universities-budget-importance, criteria of good budget-steps of budget marketing – principles of budgeting.

UNIT IV

Recreation: Meaning, Definition, Aim, Objectives, Scope and Significance of Recreation. Agencies offering Recreation: Home, Governmental, Voluntary, Private, Commercial - Recreation in Rural, Urban, Community and Industrial – Areas, Facilities, Equipment and their Maintenance.

UNIT V

Camping - Definition and Meaning – Scope and significance of Camping – Types of Camps – Selection and layout of campsites – organization and administration of camps – camp progrmmes and activities – Evaluation of camp work.

Learning Outcome

1. Know sports management and employ principles of strategic planning, and financial and human resource management.
2. Assess marketing needs and formulate short term and long term solutions.
3. Develop critical thinking in analysing sport management issues and in managerial planning and decision making.
4. Able to organize recreational camp and activities.

Peer Group Teaching and Discussion Concept

Preparation and Discussion on Sports Event Management. Discussion on Budget for annual programme and special programmes. Teaching and Discussion on organizing recreational camp and activities.

REFERENCE

Authors Guide (1986) Organization, Adminsitration and Recreation in Physical Education, Parkash brothers, Educational Publishers, Ludhiana.

Ashton, D. (1968).Administration of Physical education for Women. New York: The Ronal Press Cl.

Bonnie, L. (1991). The Management of Sports. St.Louis: Mosby Publishing Company, Park House.

Bucher A. Charles,(1993) Management of Physical Education and Sports (10th ed.,) St. Louis: Mobsy Publishing Company.

Chakraborthy & Samiran. (1998). Sports Management., New Delhi: Sports Publication.

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Williams, J.F. (2003). Principles of Physical Education. Meerut: College Book House. Yadvnider Singh. Sports Management, New Delhi: Lakshay Publication.

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CORE PAPER XIII

THEORIES OF SPORTS AND GAMES, COACHING AND OFFICIATING- PART II

Learning Objectives

1. To understand and apply various skills.
2. To promote knowledge and awareness of rules and regulation.
3. To know about the various games in detail

UNIT I

Origin and development of the game - Recent status of the game in India, Layout of Playfields – Marking and Measurements of Play Fields and Standard Equipment for the following games: Badminton, Ball Badminton, Lawn Tennis and Table Tennis. Eligibility Rules for Inter University and Inter Collegiate Tournaments

UNIT II

Origin and development of the game - Recent status of the game in India, Layout of Playfields

– Marking and Measurements of Play Fields and Standard Equipment for the following games: Kabaddi, Kho-Kho, Netball, Softball, Swimming. Eligibility rules for Inter-School Tournaments: RDG, BDG, RDS and SGFI Tournaments

UNIT III

Rules and Interpretations: Duties of Officials, Methods of Breaking Ties, Mechanism and System of Officiating, Official Signals of the Following Games and Sports: Team Tactics and strategies involved in the game/sport -Different systems of playrelated to attack and defense - Training methods to develop team tactics. Coaching plan - preparation of Training schedules. : Badminton, Ball Badminton, Lawn Tennis and Table Tennis.

UNIT IV

Rules and Interpretations: Duties of Officials, Methods of Breaking Ties, Mechanism and System of Officiating, Team Tactics and strategies involved in the game/sport - Different systems of playrelated to attack and defense - Training methods to develop team tactics. Coaching plan - preparation of Training schedules. : Kabaddi, Kho-Kho, netball, softball and swimming.

UNIT V

Rules and Interpretations: Duties of Officials, Methods of Breaking Ties, Mechanism and System of Officiating, Official signals of the following games and sports: Netball, Softball, Swimming. Relationship of officials and coaches with management, players and spectators.

Learning Outcomes

1.Know the fundamental of all the games and sports

2. Understand the rules of all the games and sports

3.Preparing the students for the competition

4. Classify the students accordingly for various games and sports.

5. Design and practice the new methods of technique and training.

Peer Group Teaching and Discussion Concept

Preparation for practical implication of play field marking. Role Play on as Officials for the competitors in specific situations . Preparing Models for teaching the Measurement and Markings. Discussion on Tie Breaking with suitable examples.

REFERENCE

Anand, R.L (1987) Play Field Manual, Patiala : NIS Publication.

Arnheim, D., & William, E Prentice. (1991). Principles of athletic training. St. Louis: Mosby Year Book.

Arnheim D., & William E Prentice. (1978). Athletic Training. St. Louis: Mosby Year Book.

Authors Guide (2014) IAAF Competition Rules 2014-2015, Monaco Cedex: IAAF Publishing .

Authors Guide (2002) Rules of Games and Sports, New Delhi : YMCA Publishing House.

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Bunn, J. W (1951) The Art of Officiating Sports, Englewood Cliff.: Prentice Hall,

Cart E. Klafs., & D, Arnheim. (2000), Modern Principles of Athletic Training. St.Louis: C. V. Mosphy Company.

Chelliah, S.N (1990), Vilayattu Vithi Muraihal, Chennai: Raj Mohan Pathipagam.

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George Immanuel. (1997). Track and Field Event layout and Marking. Chennai: Krishnamurthy and Co.

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Josse, P, Moprtensen., & John, M,Copper. (1998). Track and Field for Coach and Athlete. St.Louis: C.V.Mosphy Company.

Krishna Murthy, J. (2007). Training of Physical Education Students. New Delhi: Verma Publication.

Ronald, P. Peffifer., & Brent C. Mangur. (1998). Concept of Athletic Training. London: Jones and Bartlett publications.

Thomas, J.P. (1982). Let us Coach Soccer. New Delhi: The YMCA Publishing House.

Yograj Thani. (2003). Sports Training. New Delhi: Sports Publication.

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CORE PAPER XIV
KINESIOLOGY AND BIOMECHANICS

Learning Objectives

1. Know the scientific principles of body movements
2. Know the mechanical analysis of sports
3. Know the importance of kinesiology and biomechanics to Physical Education teacher, athletes and coaches.

UNIT I

Introduction of Biomechanics and Kinesiology

Introduction, Meaning and scope of Biomechanics and Kinesiology – Importance of Biomechanics and Kinesiology for Physical Education students and coaches - - Historical development of Sports Biomechanics and kinesiology - Meaning and types of Axis and Planes: sagittal, frontal, transverse and vertical - Fundamental Terminology of Human Movements: Flexion, Extension, Adduction, Abduction, Rotation and Circumduction.

UNIT II

Fundamental **of Kinesiology I -** Classification of Joints – Types of Synovial Joints : Uniaxial, Biaxial and Polyaxial joints – Muscle : Contraction of skeletal muscle – Types of muscle contraction. Origin, Insertion, Nerve supply and Action of the following muscles : Upper Limb: Trapezius, Deltoid, LatismusDorsi, Pectoralis Major, Rotator Cuff muscles, Biceps, Triceps, Brachialis..

UNIT III

Fundamentals of Kinesiology II

Lower Limb muscles: Ilio Psoas, Gluteus muscle group, Sartorius, Quadriceps Femoris, Hamstring muscle, Calf Muscle. Abdominal Muscles: Rectus Abdominis, Transverse Abdominis, Internal oblique and ExteralObliques – Spinal Extensor muscles. Posture : Definition and types of posture – Postural analysis – Types of Poor Posture – Posture correction.

UNIT IV

Kinematics **Fundamentals of Biomechanics I** Meaning and definition of the following terminologies : Static and Dynamics – Kinematics and Kinetics - Vectors and Scalars - distance, displacement, speed, velocity and acceleration - work, power, energy, kinetic energy and potential energy. Motion - Types of Motion: Linear motion, angular motion, uniform and non-uniform motion, Projectile motion. Principles of Newton law of Motion -Law of Inertia, Law of acceleration and Law of action and reaction.

UNIT-V

Fundamentals of Biomechanics II

Force : Meaning and definition of force, Sources of force,Force components, Centripetal force, Centrifugal force, Buoyancy – Friction : static friction, kinetic friction. Gravity: Definition, centre of gravity and location of centre of gravity, influence of gravity, location of human body centre of gravity - Levers; types of levers, anatomical and mechanical levers- Equilibrium : types of equilibrium, stability and balance. Biomechanical Analysis of Gait (Walking and Running), Jumping, Throwing and Catching.

Learning Outcomes

1. Analyze and explain the mechanisms underlying biomechanical, physiological, and psychological changes that occur during after acute and chronic exercise.
2. Understand mechanical principles can be applied to the analysis of human movement to assess and improve performance and reduce risk of injury.
3. Know effectiveness of human movement using mechanical principles.

Peer Group Teaching and Discussion Concept

Preparation of Models fro teaching origin, insertion and actions of Muscle. Discussion on Biomechanical Principles involved in fundamental movements and Game Skill Variables.

REFERENCE

Bunn, J. W. (1972).*Scientific principles of coaching.* Englewood Cliffs, N.J.: Prentice Hall Inc.

Hay, J. G. & Reid, J. G.(1982).*The anatomical and mechanical basis of human motion.*Englewood Cliffs, N.J.: Prentice Hall Inc.

Hay, J. G. & Reid, J. G.(1988).*Anatomy, mechanics and human motion.* Englewood Cliffs,N.J.: prentice Hall Inc.

Hay, J. G. (1970).*The biomechanics of sports techniques*. Englewood Cliffs, N.J.: Prentice Hall, Inc.

Simonian, C.(1911).*Fundamentalsof sport biomechanics.* Englewood Cliffs, N.J.: Prentice Hall Inc.

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CORE PAPER XV

SPORTS PSYCHOLOGY AND SOCIOLOGY

Learning Objectives

1. To know and to understand the sportsperson behavior.
2. To know the various psychological factors affecting sport performance.
3. To know the relationship of the sports person with society in various sports settings.

UNIT I

Meaning, Definition, Need and Importance of Sports Psychology. Motor Learning: Basic Considerations in Motor Learning – Motor Perception - Factors Affecting Perception – Perceptual Mechanism. Intelligent Quotient.

UNIT II

Personality: Meaning, Definition, Structure, Types, Effects of Personality on Sports Performance. Motivation: Meaning and Definition, Types of Motivation: Intrinsic, Extrinsic. Achievement Motivation. Theories and Dynamic of Motivation in sports.

UNIT III

Anxiety: Meaning and Definition, Nature, Causes, Competitive Anxiety and Sports Performance. Stress: Meaning and Definition, Causes. Stress and Sports Performance. Aggression: Meaning and Definition, Aggression and Sports Performance. Self Concept: Meaning and Definition

UNIT IV

Sports Sociology: Meaning and Definition – Sports and Socialization of Individual, Sports as Social Institution. National Integration through Sports. Fans and Spectators: Meaning and definition, Advantages and disadvantages of Sports Performance. Leadership: Meaning, Definition, types. Leadership and Sports Performance.

UNIT V

Group: Meaning and Definition, Group Size, Groups on Composition, Group Cohesion, Group Interaction, Group Dynamics. Current Problems in Sports and Future Directions – Sports Social Crisis Management - Women in Sports: Sports Women in our Society, Participation pattern among Women, Gender inequalities in Sports.

Learning Outcomes

1.Explain group mechanisms and group psychology in a sports context

2.Reflect upon motivational psychology as applied to sports activities

3.Formulate relevant constructs of exercise psychology

4.Demonstrate the ability to discuss sociological theories, concepts, and ideas in large and small groups and to express empirically as well as theoretically-based opinions.

5. To apply core sociological theories to specific social problems in order to analyze social problems.

Peer Group Teaching and Discussion Concept

Group Discussion on Role of Sports Psychology. Role Play as Player, Coach, and Psychologist. Group Discussion on: Current Problems in Sports and Future Directions – Sports Social Crisis Management -Gender inequalities in Sports.

REFERENCE

Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.

Jay Coakley. (2001). Sports in Society - Issues and Controversies in International Education, Mc-Craw Seventh Ed.

John D Lauther (2000) Psychology of Coaching. Ner Jersy: Prenticce Hall Inc.

Jain. (2002), Sports Sociology, Heal Sahety Kendre Publishers.

John D.Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.

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Richard, J. Crisp. (2000). Essential Social Psychology. Sage Publications.

Robert N. Singer(2001). Motor Learning and Human Performance. New York: The Macmillan Co.

Robert N. Singer. (1989) The Psychology Domain Movement Behaviour. Philadelphia: Lea and Febiger.

Thelma Horn. (2002). Advances in Sports Psychology. Human Kinetic.

Whiting, K, Karman.,. Hendry L.B & Jones M.G..(1999) Personality and Performance in Physical Education and Sports. London: Hendry Kimpton Publishers.

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LIST OF DISCIPLINE SPECIFIC ELECTIVE

ODD SEMESTER

A. Olympic Movement

B .Gender Studies

C. Disability and Inclusive Education

D. Contemporary Issues in Physical Education, Fitness and Wellness

EVEN SEMESTER

A. Educational Technology and Computer Application in Physical Education

B. Sports Nutrition and Weight Management

C. Sports Medicine, Physiotherapy and Rehabilitation.

D. Research Project (IV Semester Only)

DISCIPLINE SPECIFIC ELECTIVE

OLYMPIC MOVEMENT

Learning Objectives

1. To know the origin and development of Olympic movement
2. To understand the Olympic symbols, ideals, objectives and values.
3. Provides the knowledge of different Olympic games

UNIT I

Origin of Olympic Movement: The early history of the Olympic Movement, Philosophy of Olympic Movement, Goals of the Olympic movement, Educational and cultural values of Olympic movement. Ancient Olympic Games: Significance of ancient Olympics – Awards – Decline and Termination of the ancient Olympics. Modern Olympics: The significant stages in the development of the modern Olympic movement. Difference and similarities in the ancient and modern Olympics.

UNIT II

Olympic Ideals: Significance of Olympic Ideals, Elements of opening and closing ceremony - Olympic Symbol – Olympic Flag – Olympic Motto – Olympic Anthem – Olympic Emblem – Olympic flame and torches – Olympic Designations - Olympic protocol for member countries - Olympic Charter - Olympic code of Ethics - Olympism in action - Sports for All.

UNIT III

Different Olympic Games: The Organizational Structure, Aim, Objectives and Functions of Para Olympic Games, Summer Olympics, Winter Olympics, Youth Olympic Games. Election of host city – Location, sites and venues –Olympic Village – Olympic salute – Olympic stadium -E Protocol (Use of Flag and Flame, Opening and Closing Ceremony – Victory, Medal, and Diploma ceremonies and Roll of Honour) – Disputes.

UNIT IV

Committees of Olympic Games: Governing Body: International Olympic Committee - Structure and Functions, National Olympic committees and their role in Olympic movement, Olympic commission and their functions, Rights and Eligibility for Competitors. Doping – WADA in Olympics

UNIT V

Achievements of India in Olympics: Pre Independence Period- After Independence. Achievement of India in Team Games and Individual Sports- Achievements of India in Sports. Olympic Medal winners of India. Indian Women in Olympics.

Learning Outcomes

1. Understand the Educational and cultural values of Olympic movement.
2. Analyze the Modern Olympic Games and Rules of Eligibility for Competition.
3. Know about The organizational structure and functions of Para Olympic Games
4. Analyze the Achievement of India in Team Games and Individual Sports.

Peer Group Teaching and Discussion Concept

Group Discussion on Indian Performance in Olympics and Road Map for Next Olympics. Preparing and Teaching the Biography of Olympians with Power Point Presentation. Discussion on Chronological Development in Modern Olympics.

REFERENCE

Osborne, M. P. (2004). Magictree House Fact Tracker: Ancient Greece and the Olympics: A Nonfiction Companion To Magic Tree House: Hour of the Olympics. New york: random house books for young readers.

Burbank, J. M., Andranovich, G. D. &Heying Boulder, C. H. (2001). Olympic dreams: the impact of mega-events on local politics: Lynne Rienner

Ajmeer Sing, Jagdish Bans, Jagtar Sing Gill , Rachpal Singh Brar and Nirmaljit Kaur Rathee (2004) Essentials of Physical Education, New Delhi: Kalyani Publisheres.

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DISCIPLINE SPECIFIC ELECTIVE

GENDER STUDIES

Learning Objectives

1. Able to understand the concepts of gender studies
2. Able to identify the gender issues and problems

UNIT I

Social Construction of Gender: Gender vs. Biology, Equality vs. Difference, Women in the family: socialization, Nature vs. Gender, gender roles, private–public dichotomy, sexual division of labour.

UNIT II

Patriarchy as ideology and practice. Transgender: The Science Behind Transgender- Characteristics and Problems of Transgender- Role of Family and Society on Transgender. The Psychology of Sex Differences.

UNIT III

Emergence of Feminist Thought: Socio-historical perspective, Mapping various women's movements, Emergence of women's studies Gender based Division of Labour/Work Production vs. Reproduction.

UNIT IV

Household work, invisible work Women's work and technology Development policies, liberalisation and globalisation and their impact on women.

UNIT V

Alternative conceptions of gender–caste and gender; class and gender. Gender Issues and problems in Sports.

Learning Outcome

1. Able to explain and understand the concepts of gender studies
2. Able to interpret and identify the gender issues and problems

Peer Group Teaching and Discussion Concept

Group Discussion on Feminist Thought - Influence of Westerners concepts in Feminist Thought - Challenges in Women Sports Participation

REFERENCE

Chodrow, Nancy. 1978. The Reproduction of Mothering. Berkeley: University of California Press.

Desai, Neera and M. Krishnaraj. 1987. Women and Society in India. Delhi: Ajanta.

Maccoby, Eleaner and Carol Jacklin. 1975. The Psychology of Sex Differences. Stanford: Stanford University Press.

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DISCIPLINE SPECIFIC ELECTIVE
SPORTS MEDICINE, PHYSIOTHERAPY AND REHABILITATION

UNIT I

Sports Medicine: Meaning, Definition, Aims, Objectives, Modern Concepts and Importance. Athletic Care and Rehabilitation: Contribution of Physical Education Teachers and Coaches, Sports Injuries: Meaning, Importance, Prevention of Injuries in Sports

UNIT II

Physiotherapy: Definition – Guiding Principles of Physiotherapy, Importance of Physiotherapy, Introduction and Demonstration of Treatments – Electrotherapy – Infrared Radiation Therapy– Ultraviolet Radiation Therapy – Short Wave Diathermy –Ultrasound Therapy.

UNIT III

Hydrotherapy: Introduction and demonstration of treatments of Cryotherapy, Thermotherapy, Contrast Bath, Whirlpool Bath – Steam Bath – Sauna Bath – Hot Water Fomentation – Massage – Classification of Manipulation (Sweedish System) Physiological Effect of Massage.

UNIT IV

Therapeutic Exercise: Definition and Scope – Principles of Therapeutic Exercise – Classification, Effects and Uses of Therapeutic Exercise – Passive Movements (Relaxed, Forced and Passive Stretching) – Active Movements: Assisted, Free Exercise, Assisted – Resisted, Resisted. Application of the Therapeutic Exercise: Free Mobility Exercise – Shoulder, Elbow, Wrist and Finger Joints – Hips, Knee, Ankle and Foot Joints – Trunk, Head and Neck.

UNIT V

Posture, First Aid and Sports Injuries Posture :Definition, Types, Postural Deformities: Kyposis, Lordosis and Scoliosis. s. First Aid –General Rules – First Aid Treatment – Shock, Sun Stroke –, Fainting, Dog Bite, Snake Bite, Poisoning, Drowning, Bleeding. Common Sports Injuries – Diagnosis – First Aid Treatment: Abrasion - Laceration – Blisters – Contusion – Strain – Sprain – Fracture – Dislocation and Cramps. Bandages – Kinds of Bandages and Dressings – Strapping and Supports

REFERENCE

Christine, M. D., (1999). Physiology of sports and exercise.USA: Human Kinetics.

Conley, M. (2000). Bioenergetics of exercise training. In T.R. Baechle, & R.W. Earle, (Eds.),

Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.

David, R. M. (2005).Drugs in sports, (4th Ed). Routledge Taylor and Francis Group.

Hunter, M. D. (1979). A dictionary for physical educators. In H. M. Borrow & R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74).Philadelphia: Lea &Febiger.

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DISCIPLINE SPECIFIC ELECTIVE

EDUCATIONAL TECHNOLOGY AND COMPUTER APPLICATION IN PHYSICAL EDUCATION

Learning Objectives

1. To know the necessity of computers in Physical Education and Sports
2. Helps to improves the computer assisted works in Physical Education and Sports
3. Able use the applications of computer in Teaching Physical Education and Sports

UNIT I

Introduction: Education and Education Technology- Meaning and Definitions. Types of Education- Formal, Informal and Non- Formal Education. Need and Importance of Education Technology.

UNIT II

4.

Teaching Technique and Teaching Aids: Lecture method, Command method, Demonstration method, Imitation method, Project method. Micro Teaching – Meaning, Types and steps of micro teaching. Teaching Aids : Teaching Aids – Meaning, Importance and its criteria for selecting teaching aids. Teaching aids – Audio aids, Visual aids, Audio – Visual aids, Verbal, Chalk board, Charts, Model, Slide projector, Motion picture.

5.

UNIT III

Basic online Future – Google Application tools: Google Forms-Google Drive, You Tube: Channel Creating and Uploading, Virtual Flat form : Google Meet- Zoom, Google Class Room: Assignment-Quiz-question-Materials

UNIT IV

Introduction to Computer and MS Word: Meaning, Need and Importance of Information and Communication Teaching (ICT) .. MS Word: Introduction to MS Word – Creating, Saving and Opening a Document – Formatting, Editing Features – Mail Merge -Drawing Table – Page Setup, Paragraph Alignment – Spelling and Grammar Check – Printing Option. Inserting: Page Number, Graph, Footnote and End Notes.

UNIT V

Introduction to MS Excel and Power Point: MS Excel and Power Point : Introduction to MS Excel, Creating, saving and opening spreadsheet, Creating formulas. Format and editing features adjusting columns width and row height understanding charts. MS Power Point: Introduction to MS Power Point, Creating, saving and opening a ppt. file, format and editing features slide show , design , inserting slide number, picture ,graph ,table, Preparation of Power point presentations.

Learning Outcome

1. Perform and report on the exploratory analysis of data collected using sports technology
2. Analyze sporting data of various types via astute use of statistical packages.
3. Practice mathematics, statistics, information technology in sport technology related problems.
4. Support a conclusion based upon quantitative prediction, performance and analysis of a sporting team, code, or gaming environment.
5. Offer Hands on Knowledge in sports Technology

Peer Group Teaching and Discussion Concept

Teaching the selected area of subject using the ICT gadgets – Discussion on Merits and Demerits of various methods of Teaching. Encouraged to Prepare Teaching Aids from Waste Products. Hand on experience in the ICT lab.

REFERENCE

Irtegov, D. (2004). Operating System Fundamentals. Firewall Media.

Marilyn, M.& Roberta, B.(n.d.).Computers in your Future. 2nd Edition, India: Prentice Hall.

Milke, M.(2007). Absolute Beginner's Guide to Computer Basics. Pearson Education Asia.

Sinha, P. K. & Sinha, P..Computer Fundamentals. 4th edition, BPB Publication.

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DISCIPLINE SPECIFIC ELECTIVE

DISABILITY AND INCLUSIVE EDUCATION

Learning Objectives

1. Benefits of Physical Education for persons with Disabilities
2. Know about classifications of Disability
3. Analyse adaptation of motor activities

UNIT I

Definition of Disabling Conditions - Benefits of Physical Education for persons with Disabilities - Recreational Sports Opportunities, Competition Opportunities - Special Olympics, Paralympics and Deaflympics.

UNIT II

Classification of Disability: Visual, Auditory, Neuromuscular, Orthopedic - Cardiovascular, Respiratory, Mental, Emotional. Adapted Physical Education Activities - Specific Guidelines for: Visual Impairment, Hearing Impairment, intellectually challenged, Orthopedically Handicapped.

UNIT III

Adaptation of Motor Activities – Principles for Adaptation of Motor Activities – Facilities and Equipment for different disabilities. Orientation on Facilities - Types of Equipment- Minimum equipment, Additional Equipment, Evaluation of Equipment. Leisure, Recreation and Sports Facilities for persons with disabilities.

UNIT IV

Adapted Games for Persons with Disability: Rules of Adapted games and Class Management – Adapted Games for the blind: Adapted Volleyball, Kabaddi, Tennis, Table Tennis and Adapted minor games and Track and Field events. Teaching methods to be adapted by the Special Educator in Sports, Recreation and Games. Kinesthetic – one on one teaching , group teaching, circular method of teaching. Unified Sports.

UNIT V

Inclusive Education : Meaning, Definition , Aim and Objectives. Strategies for including students. Steps for modifying and adaptation of the physical education curriculum. Methods of playing Inclusive games: Hula Contortion, Lasso, Pumkin Fun, Snickers & Hoots, What Do You Like To Eat, Mr. & Mrs. Owl?, Toy soldier, Clean-up Your Own Back Yard, Parachute Activities, Freeze Tag Not!, Peace Release, Top Gun High Five's and Rock, Paper, Scissors, Dynamite.

Course Outcome

- Understand about classification of Disabilities.
- Understand adopted games for disability persons.
- Known the benefits of exercise for disability persons.

Peer Group Teaching and Discussion Concept

Discussion on types of Disabilities Role Play as Disabled Person and Facilitator.

Teaching Recreational and Inclusive Games among the peers.

REFERENCE

Auxter, D. (1993). Principles and Methods of Adapted Physical Education. Mosby Publications.

Chapman, F. M. (1960). Recreation Activities for the Handicapped. New York: The Ronald Press Company.

Daniel, R. C. (1982). Games Sports and Exercises for the Physically Handicapped. Philadelphia Jaimitra.S (1990) Physical Education for the Blind Chennai: Grace Printer,

Jain, A. (2003). Adapted Physical Education. Delhi: Sports Publication.

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Lau, D. S. (2001). Physical Education for the Physically Handicapped. Delhi: Khel Sahitya Kendra.

Mary E. Samples (2012) Camarillo, CA 93012, www.venturacountyselpa.com

Schiffer, M. (1971). The Therapeutic Play Group. London: George Allen and Unwin ltd.

Sharma, D. (2006), Adapted Physical Education. New Delhi: Friends Publication.

Sullivan, G. M. (1982), Teaching Physical Activities to Impaired Youth: An Approach to Mainstreming. USA: Jhon Wilkey and Sons.

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DISCIPLINE SPECIFIC ELECTIVE

SPORTS NUTRITION AND WEIGHT MANAGEMENT

Learning Objectives

1. Identify dietary carbohydrate and protein sources, Identify proper hydration principles and discuss the importance of hydration for physical performance
2. Demonstrate knowledge of a healthy diet for physical performance and demonstrate an ability to utilize this knowledge to complete a self-diet critique.
3. Demonstrate an understanding of obesity, over weight and its ill-effects and to develop determination and values of desirable body weight.

UNIT I

Introduction to Sports Nutrition – Nutrition, Sports Nutrition : Meaning and Definition – Basic Nutritional Guidelines – Role of Nutrition in Sports – Factors to be considered for developing Nutritional Plan.

UNIT II

Nutrients: Ingestion to Energy Metabolism: Carbohydrates, Protein, Fat – Meaning, Classification and its Functions. Role of Carbohydrates, Fat and Protein during Exercise. Vitamins, Minerals, Water : Meaning, Classification and its Function. Role of Hydration during Exercise, Water Balance.

UNIT III

Weight Management: Meaning, Concept of Weight Management in the Modern Era – Factors affecting Weight Management and Values of Weight Management - Maintaining a Healthy Life Style - Body Mass Index (BMI)

UNIT IV

Planning of Weight Management: Determination of Desirable Body Weight – Daily Caloric Intake and Expenditure – Balanced Diet for Indian School Children – Weight Management Programme for Sporty Children – Role of Diet and Exercise in Weight Management – Diet Plan and Exercise Schedule for Weight Gain and Loss.

UNIT V

Obesity: Meaning – Definition – Types – Causes and Solution for overcoming Obesity. Myths of Spot Reduction and Weight Loss – Dieting and Exercise for Weight Control

Learning Outcomes

1. Restate the role of nutrients and caloric requirements
2. Sketch the basic classification, functions and utilization of nutrients.
3. Point out diet for various competitions and nutrient supplements for performance.
4. Evaluate the factors affects weight management and solutions for obesity.
5. Design caloric requirements for various sports and age groups.

Peer Group Teaching and Discussion Concept

Group Discussion on Role of Nutrition in Sports. Role Play as Obsessed Person and Nutrition in Assessment. Designing and Discussing Weight Reduction plan and Diet Plan. Assessing BMI and Energy Requirement for the peer student under the supervision of Teacher.

REFERENCE

Bessesen, D. H. (2008). Update on obesity. J ClinEndocrinolMetab.93(6), 2027-2034.

Butryn, M.L., Phelan, S., &Hill, J. O.(2007). Consistent self-monitoring of weight: a key component of successful weight loss maintenance.Obesity(Silver Spring). 15(12), 3091- 3096.

Chu, S.Y. & Kim, L. J. (2007). Maternal obesity and risk of stillbirth: a metaanalysis . Am J ObstetGynecol, 197(3), 223-228.

DeMaria, E. J. (2007). Bariatric surgery for morbid obesity. N Engl J Med,356(21), 2176-2183.

Dixon, J.B., O'Brien, P.E., Playfair, J. (n.d.). Adjustable gastric banding and conventional therapy for type 2 diabetes: a randomized controlled trial. JAMA. 299

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DISCIPLINE SPECIFIC ELECTIVE

CONTEMPORARY ISSUES IN PHYSICAL EDUCATION, FITNESS AND WELLNESS

Learning Objectives

1. Understand physical education as more diversified and systematized process
2. Develop competencies, skills and knowledge required for the fitness management
3. To understand the relationship between fitness and wellness

UNIT I

Concept of Physical Education and Fitness : Definition, Aims and Objectives of Physical Education, fitness and Wellness. Importance and Scope of fitness and wellness. . Modern concept of Physical fitness and Wellness. Physical Education and its Relevance in Inter Disciplinary Context. Issues in curriculum - Issue in teaching learning (Approaches in teaching games, Formaland informal model of assessment in Physical Education)

UNIT II

Fitness, Wellness and Lifestyle ; Fitness – Types of Fitness and Components of Fitness. Understanding of Wellness. Modern Lifestyle and Hypo kinetic Diseases – Prevention and Management. Physical Activity and Health Benefits - Promotion of fitness and wellness

UNIT III

Principles of Exercise Programme: Means of Fitness development – aerobic and anaerobic exercises. Exercises and Heart rate Zones for various aerobic exercise intensities. Concept of free weight Vs Machine, Sets and Repetition . Concept of designing different fitness training programme for different age group. Concept of designing different fitness training program for different age group and sports ,Games

UNIT IV

Safety Education and Fitness Promotion: Health and Safety in Daily Life. First Aid and Emergency Care. Common Injuries and their Management. Modern Life Style and Hypo-kinetic Disease –Prevention and Management. Health and safety in daily life issues related to body image (stress management, mental health and wellness throughout life healthy aging.

UNIT V

Sports Nutrition**:** Diet for sports competition- supplementation to the daily diet. Vitamins, Minerals, Fluids. Electrolyte replacement, Carbohydrate loading, Protein loading, Calcium and iron supplement. Pre-event meal. Time for pre-event meal, Alternate eating pattern, Foods to avoid. Exercise and weight control, Crash dieting, Weight Control. Dietary guideline of good health status.

Learning Outcome

1. Discuss research from a multidisciplinary perspective relative to current issues in physical activity and health.
2. Apply qualitative research methods to explore and critically examine a variety of curricular topics.
3. Demonstrate application of relevant research and theory to a contemporary issue in physical activity and exercise science.
4. Explain the contemporary issues and to pertaining to the physical activity and health field.

Peer Group Teaching and Discussion Concept

Group Discussion on . Modern concept of Physical fitness and Wellness. Physical Education and its Relevance in Inter Disciplinary Context. Role Play as Trainer and Client to calculate Exercise Intensity. Discussion on Diet for sports competition, eating pattern, Foods to avoid.

REFERENCE:

Difiore, J.(1998). Complete guide to postnatal fitness. London: A & C Black,.

Giam, C.K & The, K.C. (1994). Sport medicine exercise and fitness. Singapore: P.G. Medical Book.

Mcglynn, G., (1993). Dynamics of fitness. Madison: W.C.B Brown.

Sharkey, B. J.(1990). Physiology of fitness, Human Kinetics Book.

William, D. Mc Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams Company.

Williams, S. & Rod, W. (2001) Nutrition and Diet, Therapy 2nd Edition, London :W.B. Saunder College Publishing.

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ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)

COMMUNICATION SKILLS

Learning Objectives

1. Promote the basic abilities need for better communication
2. Create awareness among youth the need and importance of communication skills.

UNIT I

Recap of Language Skills – Speech, Grammar, Vocabulary, Phrase, clause, sentence, Punctuation. Fluency building: What is fluency – Why is fluency important – Types of fluency – Oral fluency – Reading fluency – Writing fluency – Barriers of fluency – How to develop fluency.

UNIT II

Principles of communication: LSRW in communication. What is meant by LSRW Skills – Why it is important – How it is useful – How to develop the skills?. Oral – Speaking words, articulation, speaking clearly.

UNIT III

Written communication – Generating ideas/ gathering data organizing ideas, Setting goals, Note taking, Outlining, Drafting, Revising, Editing and Proof reading.

Non verbal communication – Body language, Signs and symbols, Territory/Zone,
Object language.

UNIT IV

Speaking Skills: Formal and Informal Conversation – Conversation in the work place – Interviews – Public. Speech – Lectures. Listening Skill: Comprehending – Retaining – Responding – Tactics – Barries to Listening – Overcoming. listening barriers – Misconception about listening.

UNIT V

Reading Skill: Acquiring reading – Reading Development – methods teaching – Reading difficulties. Writing skill: Note-making – CV's – Report writing, copy writing, Agenda – Minutes – Circular – Essaywriting on any current issues – paragraph – Essay writing, Writing Research papers – Dissertation.

Learning Outcomes

1. Able to communicate better
2. Understands the need and importance of communication skills.

REFERENCE

Book for South Asian Students. Reprint 2003. Cambridge University Press. New Delhi.

Hall and Shepherd. The Anti-Grammar Book: Discovery Activities for Grammar Teaching

Hewing, Martin. 1999. Advanced English Grammar: A Self-study Reference and practice

John, Seely The Oxford guide to writing and speaking. Oxford U P, 1998, Delhi. Lewis, Norman. 1991. Word Power Made Easy. Pocket Books.

Minippally, Methukutty. M. 2001. Business Communication Strategies. 11th Reprint. TataMcGraw – Hill. New Delhi.

SasiKumar. V and P.V. Dharmija. 1993. Spoken English: A Self-Learning Guide Conversation Practice. 34th reprint. Tata McGraw – Hill. New Delhi.

Swets, Paul. W. 1983. The Art of Talking So That People Will Listen: Getting Through to Family, Friends and Business Associates. Prentice Hall Press. New York.

The Process of Writing: Planning and Research, Writing, Drafting and Revising.

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ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)

ENVIRONMENTAL STUDIES

Learning Objectives

1. Promote the knowledge of our environment
2. Create awareness among youth, various health problems due to environmental pollution
3. Able understand the importance of environment and to create good environment.

UNIT I

Environmental Science : Definition, Scope, Need and Importance of environmental studies. Concept of environmental education, Historical background of environmental education, Celebration of various days in relation with environment.

UNIT II

Plastic recycling & probation of plastic bag / cover. Role of school in environmental conservation and sustainable development.

UNIT III

Natural Resources and related environmental issues: Water resources, food resources and Land resources.

UNIT IV

Definition, effects and control measures of Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution. Management of environment and Govt. policies , Role of pollution control board.

UNIT V

People and Environment: People and environment interactions, Sources of pollution, Pollutants and their impact on human life, exploitation of natural and energy resources, Natural hazards and mitigation.

Course Outcome

1. Able to promote good practice to promote and preserve environment
2. Able to create awareness on health problems due to environmental pollution
3. Able to explain importance of environment and to create good environment.
4. Able to explain and understand the concepts of gender studies
5. Able to interpret and identify the gender issues and problems

Peer Group Teaching and Discussion Concept

Group Discussion on Waste Management . Preparation for Wealth out of Waste (WoW) Initiatives. Awareness Camping on Pollution control, Say No to Plastic and similar concepts.

REFERENCE

Agrawal, K.C. (2001). *Environmental biology*.Bikaner: Nidhi publishers Ltd.

Frank, H. &Walter, H., (1976). *Turners school health education*. Saint Louis: The C.V. Mosby Company.

Nemir, A. (n.d.). The school health education. New York:Harber and Brothers.

Odum, E.P. (1971). *Fundamental of ecology*. U.S.A.: W.B. Saunders Co.

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ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)

SOFT SKILLS

Learning Objectives

1. Promote the basic abilities need for better Soft skills
2. Create awareness on skills required for attending interview and presentation skills.
3. Understand the qualities required for an individual development

UNIT I

Soft Skills – Meaning**,** Definition, need and importance. Interview Skills – Preparing for an interview .Presentation Skills: Body Language - Speaking , Pronunciation , structuring of presentation, Group discussion :Skills in listening and expressing effectively.

UNIT II

Importance of Attitude: Meaning and Definition. Attitude and Success – Factors Determining Attitude . Benefits of Positive Attitude . Steps in Building Positive attitude. Comparison of Winners and Looses.

UNIT III

Success **:** Meaning and Definition. Qualities to make a person successful- Obstacles of Success- Methods to overcome Obstacles. Meaning and Definition- Values and Vision: Meaning and Definition –Judging value system – Change in value system- Character-Priceless-Life worth saving.

UNIT IV

Motivation: Meaning and Definition. Comparison of Inspiration and Motivation. Internal and External Motivation. Self Esteem: Meaning and Definition. Advantages of High Self Esteem. Causes of low self esteem. Building Confidence.

UNIT V

Inter- Personal Skills: Meaning and Definition. Life of Boomerang. Trust-Difference between ego and Pride. Steps in building Positive personality. Subconscious Mind and Habits: Meaning and Definition. Good Habits -Formation of Habits- Conditioning – Forming Positive habits. .

Learning Outcomes

1. Developing the abilities need for better Soft skills
2. Developing the skills required for attending interview and presentation skills.
3. Understand and develops the qualities required for an individual development

REFERENCE

Authors Guide (2014)‘ Soft Skills’ University of Madras, Chennai

Authors Guide (2014) ‘ Communication Skills,” University of Madras, Chennai

Mangal .S.K. (2002) , Advanced Educational Psychology, Prentice Hall of India, New Delhi.

Shiv Khera (2006), You Can Win, Macmillan: New Delhi.

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SKILL ENHANCEMENT COURSE

OBESITY AND WEIGHT MANAGEMENT

Learning Objectives

1. To Understand the basics of Obesity and its types .
2. To Understand the various methods of Obesity assessment.
3. To Understand methods of weight management

UNIT I

Obesity – Introduction – Definition – Epidemiology – Prevalence – Incidence – fax variance- Etiology of obesity – Psychological correlation – Genesis influence. Types of Obesity – Android Obesity – Gyneoid obesity, Pathophysiology of obesity-Compilations of obesity

UNIT II

Assessment of obesity – Health related Quality of life assessment -Body composition Assessment – Laboratory methods, fields method - Clinical evaluation of obesity. Basics of Body composition: Definition, Meaning and Need. Methods of measurements- skin fold measurements – Circumference measurements – Body composition Assessment and Report. Skin fold measurement techniques: Sites of measurement . Calculation of Body percent Fat.

UNIT III

Weight Management: Meaning, Concept of Weight Management in the Modern Era – Factors affecting Weight Management and Values of Weight Management - Maintaining a Healthy Life Style - Body Mass Index (BMI)

UNIT IV

Planning of Weight Management: Determination of Desirable Body Weight – Daily Caloric Intake and Expenditure – Balanced Diet for Indian School Children – Weight Management Programme for Sporty Children – Role of Diet and Exercise in Weight Management – Diet Plan and Exercise Schedule for Weight Gain and Loss.

UNIT V

Establish Desirable body weight. Best way to loose weight – unhealthy approaches to loose weight. Causes and Solution for overcoming Obesity. Myths of Spot Reduction and Weight Loss – Dieting and Exercise for Weight Control

Learning Objectives

1. Able to Understand the basics of Obesity and its types .
2. Able to Understand the various methods of Obesity assessment.
3. Able to Understand methods of weight management

Peer Group Teaching and Discussion Concept

Group Discussion on teaching Types of Obesity. Discussion on Assessment of Obesity among the peer students under the supervision of Teacher. Discussion on healthy and unhealthy approaches to loose weight.

REFERENCE

Allsen, P.E. J.M.Harrison and B.Vance(1989). Fitness for life: An individualized Approach. Dubuque,IA:Wm.C.Brown,

Edward T. Howley B. Don Franks (2003) Health Fitness Instructors Hand book, Human Kinetics, Canda.

Hawley. E.T. and Franks B.D. (1977) Health Fitness Instructor's handbook. Third Edition. Human Kinetics, Champaign Illinois

Rick Frey (Ed) (1995) Practical Body Composition Guide, Human Kinetics, Canada.

Werner W.K. Hoeger and Sharon A. Hoeger (1990) Fitness and Wellness, Morton Publishing Company, Canada.

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SKILL ENHANCEMENT COURSE

SPORTS FIRST AID

Learning Objectives

1. Apply various concepts of First Aid.
2. Understand the concepts of bandages and wounds
3. Recognize possibilities of sports Injuries and its management

UNIT I

Principles and practice of first aid for sports injuries – PRICE - aims of first aid - the responsibility of the first aider - action at emergency. Cardiopulmonary resuscitation - CPR for adults - CPR for children's – rules of fist aid.

UNIT II

First aid techniques; dressing - types of dressing, application of dressing, bandages - types of bandages, tying the bandages - slings and its uses, different types of slings, applying the sling for different parts of the body according to the area.

UNIT III

First aid for different type of wounds, abrasions wound, incision wound, contused wound, lacerated wound, punctured wound and gun shot wound - Complications of wounds - Bleeding its types and its management - First aid for asphyxia.

UNIT IV

Fractures its types and its first aid management - First aid for fractures of spine, skull, collar bone, lower jaw, rib, humerus, forearm, hand, fingers, pelvis, femur, leg and foot - First aid for muscles and tendons injuries cramps, sprain and strain.

UNIT V

Care and prevention of sports injuries - protective equipments for sports - technical factors in overuse injuries. Emergency First aid Response, Emergency care of patient with suspected spinal cord injury.

Learning Outcomes

1. Able to understand the concepts of First Aid.
2. Able to do various bandages and wounds
3. Able to identify and recognize possibilities of sports Injuries and its management

Peer Group Teaching and Discussion Concept

Group Discussion on concept of First aid, Role Play as First Aider and Victim

REFERENCE

Authors Guide (2007) First aid to the injured, St.Johns Ambulance,Chennai. Baker

(2008): The Hughston Clinic Sports Medicine Book, Williams & Wilkins Lillegard,

Butcher & Rucker(2009) Handbook of Sports Medicine: A symptom Oriented

Approach, Butterworth & Heinemann

Reed(2007) Sports Injuries – Assessment and Rehabilitation, W.B.Saunders. Richard

B. Birrer(2005) Sports Medicine for the primary care Physician, CRC Press

Stephen Eustace, Ciaran Johnston, Pat O'Neill, John O'Byrne.(2005) Sports injuries examination, imaging and management.

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GENERIC ELECTIVE COURSE

CONSTRUCTION AND MAINTENANCE OF PLAY FIELDS

Learning Objectives

1. To Understand the concept of Track and Field Marking
2. To Understand the concept of Play Field Marking
3. To Understand the concept of surfaces of Play Fields

UNIT I

Non Standard Track: Area Required, Calculation of RDR, CDR, Curve, Straight, line, Lane and Track method of calculation and Marking Procedure. Periodical Maintence.

UNIT II

Standard Track as per IAAF: Area Required, Calculation of RDR, CDR, Curve, Straight , line, Lane and Track method of calculation and Marking Procedure. Periodical Maintence.

UNIT III

Filed Events : Method of Marking and Construction of Throwing events: Shot-put, Hammer Discus and Javelin. Method of Marking and Construction of Jumping events: Long Jump, Triple Jump, High Jump, Pole Vault.

UNIT IV

Construction and Maintence of Rectangular Play Fields: Basketball, Football, Hockey, Handball, Kabaddi, Kho- Kho, Volleyball,. Construction and Maintence of Circular : Play Fields: Cricket.

UNIT V

Surface: Natural, Wooden, Artificial/ Synthetic fields. Turf for Indoor Stadium, Turf for Kabaddi. Advantages, and Method of Maintence.

Learning Outcome

1. Able to Mark and Maintain Track and Field
2. Able to Mark and Maintain Play Field Marking
3. Able to Understand the concept of surfaces of Play Fields

Peer Group Teaching and Discussion Concept

Group Discussion on teaching Track marking, field Marking, Rectangular and Circular Field Marking. Discussion on Merits and Demerits of various surfaces.

REFERENCE

Anand, R.L (1987) Play Field Manual, Patiala : NIS Publication.

Authors Guide (2014) IAAF Competition Rules 2017-2018, Monaco Cedex: IAAF Publishing .

Authors Guide (2002) Rules of Games and Sports, New Delhi : YMCA Publishing House.

Authors Guide (2000) FIBA Official Basket Rules : Munich..

Bonder, J.B (1984). How to be a Successful Coach. New York: Prentice Hall, Inc. Breshahan, Tuttle., & Cretzmeyer. (1997). Track and Field Athletics. New Jersey: Prentice Hall, Inc.

Bunn, J. W (1951) The Art of Officiating Sports, Englewood Cliff.: Prentice Hall.

Cart E. Klafs., & D, Arnheim. (2000), Modern Principles of Athletic Training. St.Louis: C. V. Mosphy Company.

Chelliah, S.N (1990), Vilayattu Vithi Muraihal, Chennai: Raj Mohan Pathipagam.

Gangopaddhayoy, S. R. (2008). Encyclopaedia of Sports Training. New Delhi: Sport Publication.

George Immanuel. (1997). Track and Field Event layout and Marking. Chennai: Krishnamurthy and Co.

Hardayal Singh. (2005). Sports Training - General Theory and Methods. Patiala: NSNIS.

Josse, P, Moprtensen., & John, M,Copper. (1998). Track and Field for Coach and Athlete. St.Louis: C.V.Mosphy Company.

Krishna Murthy, J. (2007). Training of Physical Education Students. New Delhi: Verma Publication.

Ronald, P. Peffifer., & Brent C. Mangur. (1998). Concept of Athletic Training. London: Jones and Bartlett publications.

Thomas, J.P. (1982). Let us Coach Soccer. New Delhi: The YMCA Publishing House.

Yograj Thani. (2003). Sports Training. New Delhi: Sports Publication.

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GENERIC ELECTIVE COURSE

TOURISM MANAGEMENT IN INDIA

Learning Objectives

1. To Understand the Geographical units of India.
2. To Understand the International and Domestic Tourism
3. To Understand the UNESCO world heritage sites in India.

UNIT I

Geographical unit of India: Location, Position, Neighborhood, Climate, People and language. National Tourism Policy, Enhancing India's Competitiveness as a Tourism Destination.

UNIT II

Definition of Tourism, types of tourism. Basic components of tourism, Motivation of tourism. International tourist, Domestic tourist, Various kinds of tourism.

UNIT III

Accommodation: Definition of hotel types of hotel hotel terminology. Transport : Air transport, Rail transport, Water transport, Road transport.

UNIT IV

Organizations role of NTO, functions of NTO, role of WTO, role of TTDC- role of ITDC in promoting tourism.

UNIT V

UNESCO world heritage sites in India, Monuments, Ancient temple of India , Forts, Palaces, Museums.

Learning Outcomes

1. Able to understand the Geographical units of India.
2. Able to understand the International and Domestic Tourism
3. Able to understand and identify the UNESCO world heritage sites in India.

Peer Group Teaching and Discussion Concept

Group Discussion on teaching Geographical units of India. Comparative Discussion on UNESCO world heritage sites in India. Discussion on Challenges and trends in Indian tourism.

REFERENCE

Authors Guide (2002), National Tourism Policy, Ministry of Tourism , Government of India, New Delhi.

Bhatia A.K.,(2003) International-Tourism, Sterling Publishers Pvt Ltd, New-Delhi.

Bhatia A.K.,(2003) Tourism Development Principles and Practices, Sterling Publishers Pvt Ltd, New-Delhi.

Prannath Seth, (1997) Successful tourism management, Sterling Publishers: New Delhi.

Satyender Singh Malik, (2006), Potential of Adventure Tourism in India,Akam Kala Prakashan Publisher.

Simon Hudson (2006) ,Sports and Adventure Tourism, Viva Book Private Ltd New Delhi.

Thandavan and Revathy,(2005) Grish Tourism Poduct,Volume-1,Dominant Publishers, Delhi.

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TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

Chennai – 600 127

MASTER OF PHYSICAL EDUCATION (M.P.Ed) DEGREE COURSE

(Two Years)

Choice Based Credit System

Regulations

(for students admitted from 2023 – 2024 & Onwards)

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

Master of Physical Education (M.P.Ed) Degree Course

(Two Years)

Choice Based Credit System

REGULATIONS AND REGULATIONS

(for students admitted from 2023 -2024 & Onwards)

1. Eligibility for Admission to the Course

a) Bachelor of Physical Education (B.P.Ed) or equivalent with at least 50% marks

Note

A candidate shall be eligible for admission to the Master of Physical Education degree course (M.P.Ed) if he/she has received a degree in 10+2+3+2 / 10+2+4+2 / 10+2+5+2 pattern from a University recognised by Tamil Nadu Physical Education and Sports University.

b) A minimum inter college level participation in sports and games is compulsory.

c) The candidates should not have completed 35 years of age as on 1st July. However, relaxation of 3 years shall be given for SC/ST candidates.

d) Ex-Servicemen / Experienced Physical Education Teachers shall be given relaxation of 6 years of age. Working in Government Regular Post / Government Aided Regular Post only Eligible and Three years of service mandatory to apply for this age relaxation in regular post only.

e) The candidate should be medically fit and free from any deformity. (Physical Disabled, Intellectually Challenged, Visually impaired, Hearing Impaired, Stammering, Postural Deformities, any other Major Deformities candidates with any other deformities are not eligible to undergo this programme)

f) Pregnant women are not permitted either for admission or to undergo the course. If violated, they will not be permitted to continue the course.

g) Admission shall be made on the basis of ranking for a total of 150 marks as detailed below:-

1.	Qualifying Examination	25 marks
2.	Sports and Games Participation	25 marks
3.	Games and Sports Skill test	25 marks
4.	Physical Efficiency Test	25 Marks
5.	Written Test	35 marks
6.	Personal Interview	15 marks
	Total	**150 marks**

Qualifying Examination

Marks obtained in qualifying Degree shall be converted to a maximum of 25 marks. For example if a candidate secured 1800 marks out of 2400. His / Her marks for qualifying examinations is [1800 / 2400] x 25 = **18.75 marks.**

Sports and Games Participation – 25

The norms for award of marks for the sports and games participation are furnished below:-

Any one which is applicable / advantageous

1. Representing the Country 25
2. Securing first two places in National/ All India/ Inter-University 25
3. Representing the State/ university 15
4. Representing the District/ division 10
5. Representing the colleges 05

(Supporting certificates should be produced)

Physical Efficiency Test (Track and Field) Maximum Marks: 25

Candidates will be tested in the following Track and Field events:-

a) 100 Mts. - 10 Marks
b) Shot-Put - 10 Marks
c) Long Jump - 5 Marks

Games and sports skill test -25

The candidates should choose any one of the following games and sports.

1. Athletics **2. Cricket** **3. Basketball** **4. Football** **5. Hockey** **6. Handball**	**7. Kabaddi** **8. Kho-Kho** **9. Volleyball**

The test will be conducted by three judges. Out of the three, one will be the Head of the Institution/ Head of the Department and one senior most Associate Professor/ Assistant Professor from the College/ Department and one specialist in particular skill/ event will be appointed by the Head of the Institution/ Department

5. Written Test :

Multiple Chooise Questions 35*1=35 Marks,

(Questions from B.P.Ed, B.P.E.S and B.Sc (Physical Education) and Current affairs in sports), Written Examination conducted by the concern university department admission committee / college admission committee only,

6. Personal Interview

Personal Interview will be conducted by the University department admission committee members / college admission committee members only, to asses the knowledge of the communication, knowledge about the physical education and sports, specialization and other current affairs.

2. Course of Study

a. Duration of the Course - The duration of the course of study is two (02) academic years, consisting of four semesters. The total working days shall not be less than 200 days in an Academic year. Each semester consists of not less than 100 working days excluding examination. which shall comprise 450 teaching clock hours for each semester (exclusive of the days for the conduct of university end-semester examinations).

b. Each working day shall consist of four hours of Practical Work (Morning and Evening – 2 hours for each session) and three hours of theory in between.

c. Undergoing Internship, Intensive Practice Teaching / Coaching in neighbouring schools/colleges and village placement programme shall be compulsory for all the students.

d. The Course of study shall consist of three parts Viz Part I, Part II, Part III and Part IV as given below.

Part I - **Theory**
(Core, Discipline Specific Elective and Generic Elective)

Part II - **Practicum**

Part III - **Internship**

Part IV - **Ability and Skill Enhancement Courses**
(Ability Enhancement Compulsory Courses, Skill Enhancement Courses and Co- Curricular Courses)

3). SCHEME INSTRUCTION AND EXAMINATION

First Semester

Part	Subject Code	Name of Paper/Component	Hours of Instruction/ Week		Scheme of Examination				
			Theory	Practical	Duration of Exam	CIA	CE	Total	Credit
I		**Core Course– Theory**							
	23PA1CT101	Research Process in Physical Education and Sports Sciences	4	-	3	25	75	100	4
	23PA1CT102	Yogic Sciences	4	-	3	25	75	100	4
	23PA1CT103	Tests, Measurement and Evaluation in Physical Education	4	-	3	25	75	100	4
	23PA1DE101	**Discipline Specific Elective Course**							
	A,B,C,D	Any one paper from the basket of Choices for Odd Semester	4	-	3	25	75	100	4
II		**Core Course – Practicum**							
	23PA1CP101	**Yogic Practices**: Asanas, Pranayama, Kriyas, Bandhas, Mudras, Suryanamaskar and Meditation. Common Yoga Protocol suggested by AYUSH.	-	6	3	50	-	50	3
	23PA1CP102	**Aerobics**: Touch Out, 'V' Step, 'A' Step, Cross Over Step, Jump on the Spot, Knee Curl, , Front Kick, Knee and Arm Lift, Side Kick.		6	-	100	-	100	3
	23PA1CP103	**Track and Field Events Part I:** Sprint, Middle and Long Distance Running, Relay Races	-	6	3	100	-	100	3
	23PA1CP104	**Game of Specialization –II (Second Best)**	-	4	3	100	-	100	2
		Internship							
III	23PA1IN101	**Class Room Teaching:** Five Lessons on Theory Subjects. **Field / Laboratory Work:** Test, Measurement and Evaluation/ Fitness Training. **Participation**: Participation in Intramural and Extramural Tournaments	-	4	3	50	-	50	2
			16	**26**		**500**	**300**	**800**	**29**
			42 hrs						

Part	Semester	Ability Enhancement Compulsory Courses (AECC)				
IV	23PA1AE101		Personality Development and Life Coping Skills	2	Remarks	2

Second Semester

Part	Subject Code	Name of Paper/Component	Hours of Instruction/ Week		Scheme of Examination				
			Theory	Practical	Duration of Exam	CIA	CE	Total	Credit
I		**Core Course – Theory**							
	23PA1CT201	Applied Statistics in Physical Education and Sports	4	-	3	25	75	100	4
	23PA1CT202	Sports Biomechanics and Kinesiology	4	-	3	25	75	100	4
	23PA1CT203	Sports Psychology and Sociology	4		3	25	75	100	4
	23PA1DE201	**Discipline Specific Elective Course**							
	A,B,C,D	Any one paper from the basket of Choices for Even Semester	4	-	3	25	75	100	4
II		**Core Course – Practicum**							
	23PA1CP201	**Track and Field Events Part II:** Long Jump, Triple Jump, Shot Put, Discus Throw, Javelin Throw **Game of Specialization –I (Second Best)**	-	6	-	50	-	50	3
III		**Internship**							
	23PA1IN202	**Teaching/Coaching Practice** **Officiating:** Game of Specialization –II (Second Best)	-	6	-	50	50	100	3
	23PA1IN203	**Teaching/Coaching Practice** **Officiating: Track and Field Events Part I and II**	-	6	-	50	50	100	3
	23PA1IN204	**School/ College/ Institution** **Internship:** Teaching Practice and Officiating	-	4	-	100	-	100	2
	M15206 D	**Class Room Teaching:** Five Lessons on Theory Subjects. **Field / Laboratory Work:** Sports Psychology/ Kinesiology and Sport Biomechanics **Participation**: Participation in Intramural and Extramural Tournaments	-	4	-	50	-	50	2
			16	**26**		**400**	**400**	**800**	**29**
			42 hrs						

Part	Sem	**Ability Enhancement Compulsory Courses (AECC)**				
IV	2		Human Rights	2	Remarks	2
		Co -Curricular course				
			Community Engagements - Village Placement programme	2	Remarks	2

Sports Entrepreneur Skill Development Training, Water Warrier Or Swachcha Bharat Abhiyan.during first year summer vacation for 15 days* during first year summer vacation for 15 days***

Third Semester

Part	Subject Code	Name of Paper/Component	Hours of Instruction/W		Scheme of Examination				
			Theory	Practical	Duration of Exam	CIA	CE	Total	Credit
		Core Course – Theory							
I	23PA1CT301	Sports Medicine, Athletic Care and Rehabilitation	4	-	3	25	75	100	4
	23PA1CT302	Physiology of Exercise	4	-	3	25	75	100	4
	23PA1CT303	Scientific Principles of Sports Training	4	-	3	25	75	100	4
	23PA1DE303	**Discipline Specific Elective Course**							
		Any one paper from the basket of Choices for Odd Semester	4	-	3	25	75	100	4
		Generic Elective (Any one Course from the list of courses offered)	4	-	3	25	75	100	4
II		**Core Course – Practicum**							
	23PA1CP301	**Track and Field Events Part III :** Pole Vault, High Jump, Hammer Throw, Hurdles, Combined Events	-	6	-	50	-	50	3
	23PA1CP302	**Game of Specialization –II (First Best)**	-	4	-	50	-	50	2
	23PA1CP303	**Combative Sports & Martial Arts**: Boxing, Fencing, Stick Fencing (Silambam), Kalari, Judo, Karate, Taekwondo and Kung-Fu	-	4	-	50	-	50	2
	23PA1CP304	**Fitness Training:** Conditioning Exercises: General and Specific. Training Methods : Weight Training (Free Weights and Machine Weights)- Circuit Training – Interval Training- Fartlek Training - Plyometric, Swiss ball Training – Medicine Ball Training – Core Board Training- Cross Training.	-	4	-	50	-	50	2
		Internship							
III	23PA1IN301	**Field / Laboratory Work:** Athletic Care, Physiotherapy and Rehabilitation/ Sports Training/Physiology of Exercise	-	4	-	100	-	100	2
	23PA1IN302	**Class Room Teaching :** Five Lessons on Theory Subjects **Participation**: Participation in Intramural and Extramural Tournaments Educational Tour, Stadium Visit, Organising Project Sports Meet.	-	4	-	100	-	100	2
	23PA1IN303	Sports Entrepreneur Skill Development Training Or Swachcha Bharat Abhiyan.	-	-	-	100	-	100	2
			16	**26**		**625**	**375**	**1000**	**35**
			42 hrs						

Part	Semester	**Skill Enhancement Course**				
IV	23PA1SE301 3		Sports Tourism (or) Software Based Applied Statistics	2	Remarks	2
		Co -Curricular course				
	23PA1CC301		NSS / Organisation of Project Sports Meet and Participation in Sports Related Events / Approved Online Courses/ MOOC.	2	Remarks	2

Fourth Semester

Part	Subject Code	Name of Paper/Component	Hours of Instruction/ Week		Scheme of Examination				
			Theory	Practical	Duration of Exam	CIA	CE	Total	Credit
I		**Core Course – Theory**							
	23PA1CT401	Information and Communication Technology (ICT) in Physical Education	4	-	3	25	75	100	4
	23PA1CT402	Sports Management and Curriculum Design in Physical Education	4	-	3	25	75	100	4
	23PA1CT403	Dissertation	4	-	3	25	75	100	4
	23PA1DE401	**Discipline Specific Elective Course**							
	A,B,C,D	Any one paper from the basket of Choices for Odd Semester	4	-	3	25	75	100	4
II		**Core Course – Practicum**							
	23PA1CP401	**Game of Specialization-I (First Best)** (Any one of the Major Games)	-	6	-	50	50	100	3
	23PA1CP402	Track and Field Specialization (Any one Track and Field Events)	-	6	-	50	50	100	3
		Internship							
III	23PA1IN401	**Internship/ Intensive Teaching/Coaching Practice-** Coaching Lesson (Track and Field)	-	4	-	50	-	50	2
	23PA1IN402	**Internship/ Intensive Teaching/ Coaching Practice-** Coaching Lesson (Game of Specialization –II) (First Best)	-	6	-	100	-	100	3
	23PA1IN403	**Internship in Officiating**: Officiating and Organisation of Tournaments.	-	4	-	50	-	50	2
			16	**26**	-	**400**	**400**	**800**	**29**
		Total	**42 hrs**						

Part IV Ability and Skill Enhancement Courses

Sem	Subject code	Course/Components	Hours of Instruction week/course	Number of courses	Credit/ course	Total credits
Part IV						
	Ability Enhancement Courses **Ability Enhancement Compulsory Courses (AECC)**					
1		Personality Development and Life Coping Skills	2	-	Remarks *	2
2		Human Rights	2		Remarks *	2
3	**Skill Enhancement Courses** (Any one paper from the basket of Choices)		20 hrs	-	Remarks *	2
	Co-Curricular course					
2		The Community engagements - Village Placement programme (VPP)	5 Days	Remarks*		2
3		NSS / Organisation of Project Sports Meet and Participation in Sports Related Events / Approved Online Courses/ MOOC.	5 Days / Varied Duration	Remarks*		2
					Total Credits (Part IV)	**10**

*** Excellent /Good/ Satisfactory/ Unsatisfactory**

Total Minimum Credits to earn the degree	
Components	**Credits**
Part I, II, II Sem 1- 4 **(29+29+35+29)**	**122**
Part IV (1-3)	**10**
Total Minimum Credits	**132**

Other Courses offered by the Department

Generic Elective Course

1. **Recreational and Inclusive Games**
2. **Special Olympics**

Skill Enhancement Courses

1. **Sports Tourism**
2. **Software Based Applied Statistics**

COURSE STRUCTURE & CREDIT ABSTRACT

Part	Semester – Credits Subject	I	II	III	IV	Total Credit
I	Core –Theory	12	12	12	12	48
	Discipline Specific Elective (DSE)	4	4	4	4	16
	Generic Elective	0	0	4	0	4
II	Core – Practical	11	3	9	6	29
III	Internship	2	10	6	7	25
IV	Ability and Skill Enhancement Courses	-	-	-	-	-
	AbilityEnhancementCompulsory Courses (AECC)	2	2	-	0	4
	Skill Enhancement Courses (SEC)	0	0	2	0	2
	Co-Curricular course	0	2	2	0	4
	Grand Total	31	33	39	29	132

MARKS ABSTRACT

Part	Semester – Credits Subject	I	II	III	IV	Total Marks
I	Core –Theory	300	300	300	300	1200
	DSE	100	100	100	100	400
	Generic Elective			100		100
II	Core – Practical	350	50	200	200	800
III	Internship	50	350	300	200	900
IV	Ability and Skill Enhancement Courses					
	Ability Enhancement Compulsory Courses (AECC)	Remarks (2 Credits)	Remarks (2 Credits)			Remarks (4 Credits)
	Skill Enhancement Courses (SEC)			Remarks (2 Credits)		Remarks (2 Credits)
	Co-Curricular course		Remarks (2 Credits)	Remarks (2 Credits)		Remarks (4 Credits)
	Grand Total	**800**	**800**	**1000**	**800**	**3400**

MARKS AND CREDIT ABSTRACT

SEMESTER	CREDITS	TOTAL MARKS
I	31	800
II	33	800
III	39	1000
IV	29	800
Grand Total	132	3400

1. Degree

The candidates shall have subsequently undergone the prescribed programme of study in a College affiliated to this University for not less than two academic years comprising 4 semesters, passed the examinations prescribed and fulfilled such conditions as have been prescribed thereof.

2. Duration

The duration of all PG programmes is two years including B.P.Ed and M.P.Ed. Each year shall consist of two semesters, viz. Odd and Even semesters. Odd semester shall be from June/July to October/November and Even semester shall be from November/December to April/May. There shall be not less than 100 working days which shall comprise 450 teaching clock hours for each semester (exclusive of the days for the conduct of university end-semester examinations).

3. Span of Period

a) Time = N+2 years for the completion of programme. Where 'N' stands for the normal or minimum duration prescribed for completion of the programme.

b) In exceptional circumstance, a further extension of one more year may be granted. The exceptional circumstances are spelt out clearly by the relevant statutory body concerned of the University.

c) During the extended period the student shall be considered as a private candidate and also not be eligible for ranking.

The above conditions are applicable to the Redo/Transfer/Readmission Candidates.

4. The CBCS-LOCF System

All Programmes (named after the Core subjects) mentioned earlier shall be conducted through Choice Based Credit System (CBCS) and Learning Outcomes Based Curriculum Framework (LOCF). It is an instructional package developed to suit the needs of students to keep pace with the developments in higher education and the quality assurance expected of it in the light of liberalization and globalization in higher education.

5. Project

Each candidate shall be required to take up a Project Work and submit it at the end of the final year. The Head of the Department shall assign the Guide who, in turn, will suggest the Project Work to the student in the beginning of the final year. A copy of the Project Report will be submitted to the University through the Head of the Department on or before the date fixed by the University. The Project will be evaluated by an internal and an external examiner nominated by the University. The candidate concerned will have to defend his/her Project through a Viva-voce.

6. Semesters

In each semester, Courses are offered in 15 teaching weeks and the remaining 5 weeks are to be utilized for conduct of examinations and evaluation purposes. Each week shall have 30 working hours spread over 5/6 days a week.

7. Credits

The term "Credit" refers to the weightage given to a course, usually in relation to the instructional hours assigned to it. For instance, a six-hour Course is assigned three to six credits,

four/five-hour Course is assigned three to five credits. However, in no instance the credits of a Course can be greater than the hours allotted to it.

The total minimum credits required for awarding M.P.Ed Candidates are 132,

Credits	
UG Programme B.P.ES	140 credits
BPEd	133 Credits
MPEd	132 Credits

8. Course

Each Course is designed with lectures/tutorials/laboratory or field work/seminar/ Project/practical training/assignments/term paper or report writing etc., to meet effective teaching and learning requirements.

9. Examinations

i. There shall be examinations at the end of each semester, for odd semesters in the month of October/November; for even semesters in April/May.

ii. A candidate who does not pass the examination in any course(s) may be permitted to appear in such failed course(s) in the subsequent examinations to be held in October/November or April/May. However, candidates who have arrears in Practicals shall be permitted to appear for their arrears in Practical examination only along with Regular Practical examination in the respective semester.

iii. Viva-voce: Each candidate shall be required to appear for Viva-voce Examination in defence of the Project only.

iv. The results of all the examinations will be published through the College where the student underwent the Course as well as through University Website. In the case of private candidates, the results will be published through the Centres in which they appeared for the examinations as well as through University Website.

10.ATTENDANCE REQUIREMENTS:

I. Students must have 75% of attendance in each semester to appear for the End Semester Examinations.

II. Students who have attendance between 70% and 74% shall apply for condonation in the prescribed form with the prescribed fee.

III. Students who have attendance between 65% and 69% shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

IV. Students who have attendance between 60% and 64% shall carry over the End Semester Examinations in the ensuing Semester.

V. Students who have attendance below 60% are not eligible to appear for the End Semester Examinations. They shall re-do the semester(s) and therefore, they shall not move to the ensuing semester.

VI. A student can avail condonation only once during the course of study.

VII. Hall tickets will be issued to the eligible candidates only if they produce 'No Dues Certificate' from the Department, the Registrar's Office, the Library and the Hostel Warden at the time of issue of "Hall Ticket" for the End Semester Examinations.

11. Question Paper Pattern

External marks 75 marks **UG** programmes **40% Pass** **PG** programmes **50%** Pass		No of Questions	Mark per question	Marks
	Part A	MCQ 10	1	10
	Part B	Short notes 5	2	10
	Part C	Explain briefly 5	5	25
	Part D	Elaborate 3	10	30
	Total marks			75

Section A: For 20 Marks

i. : 10 Questions (MCQ) x 1 Marks = 10 Marks.

ii. : 5 questions x 2 Marks = 10 Marks.

(Descriptive type/one question from one Unit)

Section B: For 25 Marks

5 Questions x 5 Marks = 25 Marks

(Answer any three out of 5 out of 8 questions)

Section C: For 30 Marks

3 Questions x 10 Marks = 30 Marks

(Answer any three out of 5 questions and one question from each unit)

12. Evaluation

The performance of a student in each Course is evaluated in terms of percentage of marks with a provision for conversion to grade points. Evaluation for each Course shall be done by a continuous internal assessment (CIA) by the Course teacher concerned as well as by an end semester examination and will be consolidated at the end of the semester. The components for continuous internal assessment are:

	Exam/Test	Marks
Internal marks 25 marks for all programmes	First Internal Exam (after 30th working day)	5
	Second Internal Exam (after 60th working day)	5
	Model Exam (after 90th working day)	10
	Assignment	3
	Seminar	2
	Total marks	**25**

External marks 75 marks **UG** programmes **40% Pass** **PG** programmes **50%** Pass		No of Questions	Mark per question	Marks
	Part A	MCQ 10	1	10
	Part B	Short notes 5	2	10
	Part C	Explain briefly 5	5	25
	Part D	Elaborate 3	10	30
	Total marks			75

Attendance need not be taken as a component for continuous assessment, although the students should secure a minimum of 75% attendance in each semester. In addition to continuous evaluation component, the end semester examination, which will be a written-type examination of at least 3 hours duration, would also form an integral component of the evaluation. The ratio of marks allotted to continuous internal assessment and to end semester examination is 25:75. The evaluation of laboratory component, wherever applicable, will also be based on continuous internal assessment and on an end-semester practical examination with 40:60 ratio.

Passing Minimum

Name of the Programme	**Internal**	**External**	**Total**
UG	Minimum 10 marks	40%	40%
PG	Minimum 12 marks	50%	50%

13. Conferment of the Master's Degree

A candidate shall be eligible for the conferment of the Degree only after he/ she has earned the minimum required credits for the Programme prescribed therefore

Credits	
UG Programme B.P.ES	140 credits
BPEd	133 Credits
MPEd	132 Credits

14. Ranking: University Rank Examination

1. The University Rank Examination shall be conducted for the toppers (First Rankers) of all the colleges (having passed their examinations in the first appearance within the prescribed duration of the programme) including autonomous / non-autonomous streams and they are required to write two examinations. Absence from an examination shall not be taken as an attempt.
2. The question papers of the examinations comprise objective type questions covering the core courses in each of the Programmes generally followed by both autonomous / non- autonomous streams.
3. The top scorers in this University Rank Examination would be declared as University Rank Holders, irrespective of their grades in their respective University end semester examinations.
4. Rank Certificate will be issued for a Programme as follows :

    a) Only THREE Ranks if the student's strength is below 20
    b) Only FIVE Ranks if the student's strength is above 20 but below 50.
    c) Only TEN Ranks where the student's strength exceeds 50 but is less than 100
    d) Only 20 Ranks if the student's strength is 100 and above
    e) The student's strength of the course concerned will be indicated in the RankCertificates.

15. Un Aided Stream

The above regulations shall be applicable for the candidates undergoing the programmes in Un Aided Stream also.

16. Grievance Redressal Committee

The College shall form a Grievance Redressal Committee for each Course in each Department with the Course Teacher and the HOD as the members. This Committee shall solve all grievances relating to the students Continuous Internal Assessment marks.

17. Revision of Regulations and Curriculum:

The University may from time to time revise, amend and change the regulations and thecurriculum, if found necessary.

18. Grading System

1. Grading

Once the marks of the CIA and the end-semester examination for each of the courses are available, they will be added. The marks thus obtained, will then be graded as per the schemeprovided in Table 1.

From the second semester onwards the total performance within a semester and the continuous performance starting from the first semester are indicated by **Semester Grade Point Average (GPA)** and **Cumulative Grade Point Average (CGPA),** respectively. These two are calculated by the following formulae:

$$GPA = \frac{\sum_{i=1}^{n} C_i G_i}{\sum_{i=1}^{n} C_i G_i}, \qquad \text{WAM (Weighted Average Marks)} = \frac{\sum_{i=1}^{n} C_i M_i}{\sum_{i=1}^{n} C_i},$$

where 'C_i' is the Credit earned for the Course i; 'G_i' is the Grade Point obtained by the student for the Course i . 'M' is the Marks obtained for the course i and 'n' is the number of Courses **passed** in that semester.

CGPA= Average GPA of all the Courses starting from the first semester to the current semester.

2. Classification of Final Results

i. The classification of final results shall be based on the CGPA, as indicated in Table 2.

ii. For the purpose of Classification of Final Results, the candidates who earn the CGPA 9.00 and above shall be declared to have qualified for the Degree as "Outstanding". Similarly, thecandidates who earn the CGPA between 8.00 and 8.99, 7.00 and 7.99, 6.00 and 6.99, and
5.00 and 5.99 shall be declared to have qualified for their Degree in the respective programmes as "Excellent", "Very Good", "Good", and "Above Average" respectively.

iii. Absence from an examination shall not be taken as an attempt.

Table 1

Grading of the Courses

Marks Range	Grade Point	Corresponding Grade
90 and above	10	O
80 and above but below 90	9	A+
70 and above but below 80	8	A
60 and above but below 70	7	B+
50 and above but below 60	6	B
Below 50	N.A.	R.A.

Table 2 Final Result

CGPA	Corresponding Grade	Classification of Final Results
9.00 and above	O	Out standing
8.00 to 8.99	A+	Excellent
7.00 to 7.99	A	Very Good
6.00 to 6.99	B+	Good
5.00 to 5.99	B	Above Average
below 5.00	R.A.	Re-Appearance

Credit based weighted Mark System is to be adopted for individual semesters and cumulative semesters in the column 'Marks Secured' (for 100).

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19.Courses

Each Course is designed with lectures/tutorials/laboratory or field work/seminar/ Project/practical training/assignments/term paper or report writing etc., to meet effective teaching and learning requirements.

20.Ability Enhancement Courses / Skill Enhancement Courses :(Part IV)

To successfully complete the MPEd course the students must under go the Ability Enhancement Courses under the sub headings of Ability Enhancement Compulsory Courses (AECC) Skill Enhancement Courses and Co-Curricular course)

Generic Elective

To successfully complete the MPEd course the students must undergo and complete anyone of the generic elective (Open Elective) in the third Semester.

Peer Group Teaching and Discussion Concept

MPEd is a Teacher Trainer Course in Physical Education, to inculcate the teaching and discussion habits on the subject matter Peer Group Teaching and Discussion Concept(PGTDC) is included in the syllabus. Teachers of the concerned subjects are asked to encourage the students in this activity

21.Games as the Specialization

Note: The student has to select any two different games as the Specialization – I (Second best) and Specialization - II (First Best) in I and II years respectively from the following games/ sports.

List of Major Games/ Sports for Specialization	
1. Basketball	**6 Kabaddi**
2. Cricket	**7. Kho-Kho**
3. Football	**8.Volleyball**
4. Hockey	
5. Handball	

22.Internship/ Teaching Practice/ Community engagements

a) In internship a student (teacher trainee) is undergoing supervised practical training. Internship/ Teaching practice includes Teaching & observation in the Department/ College. Intensive Teaching Practice in the neighbouring Schools,

b) Schools for intensive teaching shall be decided by the Staff-in-charge of Teaching Practice and Head of the Department / Principal of the College.

c) A minimum of 30 lessons, Students shall complete 15 General and 15 Particular lessons/ Coaching Lessons in 15 working days under the supervision of the assigned Department /College and physical education staff in the schools.

d) Community engagements (Village Placement Programme). The programme includes teaching indigenous activities, basic skills in sports and games giving exposure to teachers in the teaching-learning process.

d) For the Community engagements (Village Placement programme) the students shall visit the neighbouring village for a minimum period of five days and organise the programmes such as

1. Physical Education/ Physical Exercise related programmes

2. Awareness Programmes related to health and fitness

3. Cleaning, creation of place for physical activities, sports and games.

4. Survey related to health and fitness of the public.

The Community engagements (Village Placement programme) record with details of programmes organised and photo graphs shall be submitted at the time of the University practical examinations for the evaluation of external examiners.

Note

i. For the practice teaching examination conducted by the University, there shall be one External and one Internal Examiner.

ii. For Coaching Practice, each student shall maintain a Coaching Practice Record book, which shall contain records of 10 teaching, 10 coaching general and 10 officiating plans.

iii. A candidate who fails in Coaching Practice Examination may present himself/herself in the subsequent University Coaching practice Examination.

Requirement for Passing

No candidate shall be eligible for the award of the M.P.Ed degree unless he/she has passed the written examinations (Part I), Practicum (Part II), Internship/ Teaching Practice (Part III) and Part IV.

23. Medium of Instructions

Medium of instructions ENGLISH ONLY, Students has to write the examination in English only.

24.Inter University Sports Participation and Special Permission for University Examination

A student representing the University / State / Nation in a game or sport and misses the University Semester Examination will appear for a special supplementary University Examination as stipulated by the University. Special permission may be granted by the controller of examination as per the rules and regulations of the university examinations provided the request must be submitted through proper channel well in advance. The Special Examinations will be conducted in the University Main Campus , Chennai 600127 only.

25.Internal Test and Assignment – Special Permission

In case, a student unable to appear for an internal test due to participation in inter collegiate/ university sports competition / any such programme of the University with prior permission from the concerned head of the faculty / department/ Principal, he / she may be permitted to appear for a special test / tests before the pre-semester examination.

Such a student appearing for a special supplementary University Examination shall not be considered as an arrear / arrears in a paper / papers and shall not be deprived of ***RANK in the University***.

A student who fails in any one or more papers in the semester examination will be permitted to rewrite the paper or papers in the subsequent semester examination.

To qualify for the degree, supplementary candidates are required to pass all the papers prescribed for the course within a period of three years after he/she complete the course. Beyond this period, the candidate shall follow the current syllabi for the examination if applicable. Examination fee will be collected normally according to the rules and regulations of the university. A Separate examination fee will be collected in this case.

Students who fail in a paper/papers are permitted to apply for recounting or re valuation in examination section of the University within the prescribed period with specified fee.

Appeal against the results of the semester examination shall be made to the controller of examinations by the student concerned through the Head of the Department/ Principal of the affiliated college within 15 days of the publication of results by paying re-totaling /revaluation fee.

26. Instant Examination for Outgoing Students

Instant Examinations will be conducted only in the University Main Campus, Chennai 600127 for the outgoing students who failed in **any two papers from theory and/or practical papers** are eligible to apply for Instant Examination by paying prescribed examination fee**.** The date of instant examination will be intimated by Controller of Examinations of Tamil Nadu Physical Education and Sports University.

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CORE PAPER – I

RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES

Learning Objectives

1. Gain knowledge about research in the field of physical education
2. To understand the concept of sample and population
3. To testing the existing theories/trainings methods
4. To develop systematic and scientific approach in finding solutions for the questions.

UNIT I

Meaning and Definition of Research - Need, Nature and Scope of research in Physical Education. Classification of Research: Basic Research, Applied Research, Action Research. Identification, Location and formulation of Research Problem - Criteria for selection of a problem. Qualities of a good researcher. Ethical Issues in Research.

UNIT II

Meaning and Definition of Historical Research - Steps in Historical Research - Sources of Historical Research. Primary Data - Secondary Data - Historical Criticism: Internal Criticism, External Criticism. Descriptive Methods of Research**:** Survey Study - Case study - Normative Study. Tools of research- Questionnaires, opinionnaires, interviews and observation. Sources and steps of literature search- library, research data bases, internet-search engines, online journals. Note taking and critical reading.

UNIT III

Nature, meaning and methods of experimental research. Meaning and Definition of Hypothesis. Formulation, types and testing of Hypothesis. Experimental Methods of Research: Meaning of variable - Types of Variables - Nature and meaning of experimental Research. Types of Experimental Design: Single Group Design, Reverse Group Design, Repeated Measure Design, Static Group Comparison Design, Equated Group Design, Factorial Design.

UNIT IV

Meaning of Data, its types and collecting measures , Meaning and Definition of Sample and Population. Sampling – Process and techniques. Types of Sampling: Probability Methods : Systematic Sampling,Cluster sampling, Stratified Sampling. Area Sampling-Multistage Sampling. Non – Probability Methods: Convenience Sample, Judgment Sampling, Quota Sampling.

UNIT V

Chapterization of Thesis/ Dissertation: Front Materials, Body of the Thesis- Back materials. Method of Writing Research proposal, Thesis/ Dissertation. Method of writing abstract and full paper for presenting in a conference and to publish in journals. Mechanics of writing Research Report – Method of writing bibliography for books, journals, unpublished thesis and web resources.

Learning outcomes

1. Identify the research problem in the field of physical Education and sports
2. Know to Summarize the various research literature
3. Understand and apply the basics of statistics in research.
4. Organize the samples and sampling techniques which is relevant to the study.
5. Apply the systematic methods in writing research thesis

Peer Group Teaching and Discussion Concept

Group Discussion on Qualities of Good Researcher and Criteria for Selecting Good Research. Discussion with Research Problem: Selection of Samples, Variables, Tools and Report Writing.

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CORE PAPER II

YOGIC SCIENCES

Learning Objectives

1. To understand and apply the underlying concepts of Yoga
2. To promote knowledge and awareness of skeletal alignment and body mechanics, emphasizing a safe and intelligent use of the body
3. To cultivate breath control, relaxation techniques and kinaesthetic awareness

UNIT –I

Meaning and Definition of Yoga. Origin, History and evolution of Yoga. Asthanga Yoga: Yama, Niyama, Asana, Pranayama, Prathyahara, Dharana, Dhyana, Samadhi, Principles of Yogic Practices – Asana, Pranayama and Mediation. Principles, Philosophy and scope of Yoga. Yogic practices for various age groups. Yoga – Values – Spirituality, Yogic practices for personality development

UNIT –II

Asanas : Types – Advanced asanas and Benefits. Pranayama: Aspects of Pranayama - Methods and benefits. Nadis and Chakras: Major Chakaras - Benefits of clearing and balancing Chakras. Preparatory exercises & Loosening exercise: Techniques and benefits. Meaning, types and benefits of Koshas. Concept of Trigunas. Surya Namaskar: Methods and benefits. Asanas: Types- Techniques and Benefits. Counter posture.

UNIT – III

Shat Kriyas- Meaning, Techniques and Benefits of Neti-Dhauti- Kapalapathi-Trataka - Nauli – Basti. Bandhas:Meaning, Techniques and Benefits ofJalendraBandha, JihvaBandha, UddiyanaBandha, MulaBandha. Mudras : Meaning, Techniques and Benefits of Hasta Mudras, Asamyuktahastam, Samyuktahastam, Mana Mudras, Kaya Mudras, Banda Mudras , Adhara Mudras . Meditation: Meaning, Techniques and Benefits of Meditation Types:- Passive and active. Saguna Meditation and Nirguna Meditation, Techniques, Benefits.

UNIT IV

yoga and Sports: Yoga Supplemental Exercises -Yoga Compensation Exercises- Yoga Regeneration Exercises- Power Yoga. Role of Yoga in Psychological Preparation of athlete: Mental Wellbeing, Anxiety, Stress, Depression, Concentration, Self Actualization. Effect of Yoga on Physiological System: Circulatory, Skeletal, Digestive, Nervous, Respiratory, Excretory System. Difference between yogic exercises, Exercises and its applications

UNIT –V

Yoga for skill development: Yoga for performance enhancement of sports persons, Yoga management of selected sports injuries, Yoga for Leadership, Yogic Diet for Fitness and Hygiene. Scientific importance of yogic Exercises in organic development and its Medical effects

Learning outcomes

1. Understand the basic Concepts of Yoga
2. Apply the principles of Yoga to live healthy and active life style.
3. Promote the awareness of health through yoga
4. Analyse the techniques and of body posture to bring out healthy change.
5. Develop the knowledge through practice, participate and organize.

Peer Group Teaching and Discussion Concept

Group Discussion and Preparation for Yoga Day Celebration – Yoga Awareness Programme- Importance of Yogic Diet. Teaching Yogic Postures with simplified models developed by the students.

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CORE PAPER III

TESTS, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Learning Objectives

1. Administer a variety of tests as they apply to physical education, health and fitness.
2. Analyses and evaluate various fitness movements
3. Conduct the research Study through test and measurement

UNIT I

Introduction to test, measurement and Evaluation & Classification of test : Meaning and Definition of Test, Measurement and Evaluation. Need and Importance of Test and Measurement in Physical Education-Type and classification of test – standardized test and teacher made test- objective test and subjective test. Types and construction of Standard Knowledge Tests

UNIT II

Criteria selection of Test: Criteria for Test Selection - Scientific Authenticity. Establishing Validity, Reliability, Objectivity. Norms - Administration of Test :Duties of Advance Preparation – Duties during testing – Duties after testing.

UNIT III

Motor FitnessTest: Indiana Motor Fitness Test (For elementary and high school boys, girls, and College Men. Physical FitnessTest: AAHPERD Health Related Fitness Battery (revised in 1984. Cardio vascular test: Harvard step test, 12 minutes run/walk test, Multi-stage fitness test (Beep test) . JCR Test. Tests for Psychological Variables – Anxiety, Aggression, Team Cohesion, Achievement Motivation, Mental-toughness and Self Efficacy.

UNIT IV

Testing of Physiological Phenomenons: Blood pressure, Breathing frequency, Vital Capacity, Heart rate, Pulse rate, Body Temperature and Body Composition. , Aerobic Capacity: The Bruce Treadmill Test Protocol, 1.5 Mile Run test for college age males and females. Anaerobic Capacity: Margaria-Kalamen Power test, Anthropometric Measurements: Method of Measuring Height, Standing Height, Sitting Height, Body Mass Index, Ponderal Index, Somatotype and posture evaluating techniques. Method of Measuring Skin folds: Biceps, Triceps, Sub scapular, Suprailiac

UNIT V

Sports Skill Test: Badminton: Miller Wall Volley Test. Basketball: Johnson Basketball Test, Harrison Basketball Ability Test. Handball:ZINC handball test. Cricket : Sutcliff Cricket test. Hockey: Friedel Field Hockey Test, Harban's Hockey Test. Volleyball:Russel Lange Volleyball Test, Brady Volleyball Test. Football: Johnson Soccer Test , MC-Donald Volley Soccer Test. Tennis: Dyer Tennis Test.

Learning outcomes

1. Understand the Test, Measurement and Evaluation in physical education, Health and Fitness.
2. Know about the different types of test for different sports and games.
3. Apply the tests in minor research areas.
4. Analyse the performance and movements in the field of sports.
5. Evaluate the battery test and others tests prescribed by the government efficiently.

Peer Group Teaching and Discussion Concept

Group Discussion on Duties of Test Administration. Role Play as Tester and Subjects.

Teaching the above tests in the practical setting with peer students under the supervision of Teacher.

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CORE PAPER V

APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS

Learning Objectives:

After completing this subject, it enable to understand about

1. Gain knowledge about the basic concepts of statistics, need of statistics and central tendency & dispersion,
2. Sampling, hypothesis testing, data analysis using descriptive statistics.
3. How to analysis the data using SPSS software.
4. To testing the existing theories/trainings and modifying
5. To develop systematic and scientific approach

UNIT - I

Basic Definitions and Measures of Central Tendency: Meaning, Definition and Importance: Raw Score, Class Intervals -Continuous and Discrete Series, Construction of Frequency Tables, Measures of Central Tendency: Mean Median and Mode - Meaning, Definition, Calculation of Mean, Median and Mode for raw and grouped data.

UNIT – II

Measures of Variability- Range, Quartile Deviation, Mean Deviation, Standard Deviation- Meaning, Definition and calculation. The Normal Curve: Meaning, Properties and Uses, Checking Normality of data, Skewness and Kurtosis.

UNIT - III

Correlation- Pearson Product Moment Correlation, Spearman Rank Order Correlation, Phi Correlation, Biserial Correlation Partial and Multiple Correlation. Regression Lines.

UNIT - IV

Testing of Hypothesis - Procedure, Types of Hypothesis, Level of Significance, One Tailed and Two Tailed Test, Degrees of Freedom, Test of Significance for Difference of Means- t Test -Independence and Dependence Test, Z-Test, One Way Analysis of Variance.

UNIT - V

Application of Parametric and Non-Parametric Statistical Techniques in research. Non Parametric: Chi Square Test – Equal Occurrence Test, Independence of Attributes, Contingency Coefficient; Graphical Representation – Line Diagram, Bar Diagram- Multiple Bar Diagram, , Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, and Pie Diagram – Computer Applications – Statistical Packages for Data Analyses – SPSS- introduction of SPSS Package, E-Mail, search engines and Microsoft Office.

Learning outcomes

1. Understand and apply the statistics in research.
2. Organize the samples and sampling techniques which is relevant to the study.
3. Apply the statistics in research thesis for evaluation

Peer Group Teaching and Discussion Concept

Group Discussion on need and Importance of Statistics in Physical Education. Discussion on application of apt statistical technique. Discussion on testing the Hypothesis.

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CORE PAPER VI
SPORTS BIOMECHANICS AND KINESIOLOGY

Learning Objectives

1. Know the scientific principles of body movements
2. Know the mechanical analysis of sports
3. Know the importance of kinesiology and biomechanics to Physical Education teacher, athletes and coaches.

UNIT I

Meaning, nature, scope and role of Applied Kinesiology and Sports Biomechanics. Modern Trends in Biomechanics . Joints and their Movements - Planes and axes. Meaning of Dynamics, Kinematics (linear and angular), Kinetics, Statics Centre of gravity - Line of gravity, plane of the body and axis of motion, Vectors and Scalars.

UNIT II

Origin, insertion, action and Leverage of the muscles: Pectoralis major and minor, Deltoid, Biceps, Triceps (Anterior and Posterior), Trapezius, Seratus, Sartorius Rectus femoris, Rectus Abdominous, Quadriceps, Hamstring, Gastronemius. Posture, Postural deformation and Corrections. Muscular analysis of Motor Movements.

UNIT III

Meaning and definition of Motion. Types of Motion: Linear motion, angular motion, circular motion, uniform motion. Law of acceleration, Principles related to the law of Inertia, Law of acceleration, Law of counter force. Meaning and definition of force - Sources of force - Force components - Force applied at an angle - pressure - friction – Buoyancy, Spin – impact and elasticity- Centripetal force - Centrifugal force.

UNIT IV

Freely falling bodies - Projectiles - Equation of projectiles, Principles of Projections-stability. Principles of Equilibrium, and force, spin and elasticity. Factors influencing equilibrium - Guiding principles for stability - static and dynamic stability. Meaning of work, power, energy, kinetic energy and potential energy. Leverage – classes of lever – Applications of Levers in sports - Water resistance - Air resistance- Air Dynamics and Water Dynamics.

UNIT V

Analysis of Movement: Types of analysis: Kinesiological, Biomechanical. Cinematographic. Methods of analysis – Visual, Instrument. Mechanical Analysis of various sports activities: Walking, Running, Jumping, Throwing, Pushing, Pulling Lifting, Catching, Hitting, Spiking, Kicking,. Analysis of skill/ techniques of games: Basketball, Cricket, Football, Hockey, Volleyball, Track and Field , Swimming and Gymnastics.

Learning outcomes

1. Identify biomechanical, health, physiological, and psychological limitations to and interventions for improving physical performance.
2. Analyse and explain the mechanisms underlying biomechanical, physiological, and psychological changes that occur during after acute and chronic exercise.
3. Develop physical conditioning programs based on scientific principles designed to develop physical fitness and improve athletic performance.

4. Understand mechanical principles can be applied to the analysis of human movement to assess and improve performance and reduce risk of injury.
5. Know effectiveness of human movement using mechanical principles.

Peer Group Teaching and Discussion Concept

Preparation of Models fro teaching origin, insertion and actions of Muscle. Discussion on Biomechanical Principles involved in fundamental movements and Game Skill Variables.

REFERENCE

Anthony Blazevich (2007) Sports Biomechanics the Basics: Optimising Human Performance London: A& C Black publishers ltd.

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CORE PAPER VII

SPORTS PSYCHOLOGY AND SOCIOLOGY

Learning Objectives

1. To know and to understand the sportsmen behaviour.
2. To know the various psychological factors affecting sport performance.
3. To know the relationship of the sports person with society in various sports settings.

UNIT I

Meaning, Definition, History, Need and Importance of Sports Psychology. Present Status of Sports Psychology in India. Motor Learning: Basic Considerations in Motor Learning– Cognitive process-memory and thinking. Principles of motor skill learning. Motor Perception - Factors Affecting Perception – Perceptual Mechanism. Personality: Meaning, Definition, Structure – Measuring Personality Traits. Effects of Personality on Sports Performance, Importance of Sport Psychology for Physical Education teachers and Coaches.

UNIT II Motivation in sports-types, theories and dynamics, Psychological factors affecting sports performance- Achievement Motivation – Meaning and Its methods of measuring. Anxiety: Meaning and Definition, Nature, Causes, Method of Measuring Anxiety. Competitive Anxiety and Sports Performance. Stress: Meaning and Definition, Causes. Stress and Sports Performance. Aggression: Meaning and Definition, Method of Measurement. Aggression and Sports Performance. Self-Concept: Meaning and Definition, Method of Measurement. Personality:Dimensions, theories. Personality and performance, Imagery: Meaning, Types, Uses, how it works, basic of imagery training. Transfer of Training and its types with its implications in sports.

UNIT III Goal Setting: Meaning and Definition, Process of Goal Setting in Physical Education and Sports. Relaxation: Meaning and Definition, types and methods of psychological relaxation. Psychological Skill Training for activation and relaxation . Long and Short term psychological preparation / competition. Psychological Tests: Types of Psychological Test: Instrument based tests: Passalong test – Tachistoscope - Reaction timer - Finger dexterity board - Depth perception box - Kinesthesiometer board. Questionnaire: Sports Achievement Motivation, Sports Competition Anxiety. Psychological factors, Stress, Anxiety, Tension and Aggression, Self-confidence, emotions, concentration, mental practices and goal settings affecting Sports Performance, Exercise and psychological well-being, Exercise in the reduction of anxiety and depression, exercise and mood changes, how exercise enhances well-being. Psychology of young athletes - Reasons of participation and discontinuation of sports, effective coaching practice

UNIT IV Sports Sociology: Meaning and Definition – Sports and Socialization of Individual Sports as Social Institution. National Integration through Sports. Sociological basis of Physical Education: Socialization process, social nature of men and physical activity, sports as cultural heritage of mankind, customs, traditions and sports, competition and cooperation. Leadership: Meaning, Definition, types. Leadership and Sports Performance. Spectators and their effect on the performance of the sportsmen.

UNIT V Group: Definition and Meaning, Group Size, Groups on Composition, Group Cohesion, Group Interaction, Group Dynamics. Current Problems in Sports and Future Directions Sports Social Crisis Management - Women in Sports: Sports Women in our Society, Participation pattern among Women, Gender inequalities in Sports. Sociometric, economics and politics in sports. Manipulative socialization and coerced conformity- Relationship between sport and culture- Socialization via games and sport.

Learning outcomes

1. Explain group mechanisms and group psychology in a sports context

2. Reflect upon motivational psychology as applied to sports activities

3.Formulate relevant constructs of exercise psychology

4.Demonstrate the ability to discuss sociological theories, concepts, and ideas in large and small groups and to express empirically as well as theoretically-based opinions.

5. To apply core sociological theories to specific social problems in order to analyse social problems.

Peer Group Teaching and Discussion Concept

Group Discussion on Role of Sports Psychology. Role Play as Player, Coach, and Psychologist. Group Discussion on: Current Problems in Sports and Future Directions – Sports Social Crisis Management -Gender inequalities in Sports.

REFERENCE

Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.

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CORE PAPER IX

SPORTS MEDICINE, ATHLETIC CARE AND REHABILITATION

Learning Objectives

1. By learning the subject the students will be aware of the various injury in sports.
2. The students after learning will gain knowledge about the treatment of various injury in sports.
3. After completion of this subject the students will learn how to give rehabilitation.
4. This subject will also make the student learn about prevention of injuries.

UNIT I

Sports Medicine: Meaning and Definition. History, Need and Importance. Types of Exercises: Therapeutic exercise, coordination exercises, balance exercises, strength exercise, gym ball exercise and gait training and exercises. Principles to be followed for prescribing exercises. Sports Injuries: Definition, Types of Injuries, signs and symptoms. RICER and PRICER: Advantages and disadvantages. Aquatic therapy: Definition, benefits and uses. Posture: Definition, types of Abnormal posture: Lordosis, Scoliosis and Kyphosis. Corrective Exercise for Lordosis, Scoliosis and Kyphosis. Physiological Responses of various therapeutic modalities and rehabilitation.

UNIT II

Rehabilitation: Meaning and Definition. Stretching: Definition, Types of Stretching: Static Stretching, Passive Stretching, Dynamic Stretching, Ballistic Stretching, Active Isolated (AI) Stretching, Isometric Stretching and Proprioceptive Neuromuscular Facilitation. PNF techniques, Pattern, Methods - Advantages of Stretching and Disadvantages of Stretching. Manual Muscle Testing: Muscular strength, Muscular endurance, Range of muscle work.

UNIT III

Head Injury: Explanation, causes, Types, Symptoms, Treatment for unconscious and conscious persons. Neck and Spine Injuries- causes. Cervical Fracture: Symptoms and signs, Classification of cervical Spinal injuries - Emergency First aid Response, Emergency care of patient with suspected spinal cord injury. Prevention of Cervical Fracture. Supportive and aids for Head neck and spine injuries and its prevention. Massage Therapy Treatments Classification- Exercise for Neck and Back.

UNIT IV

Common Shoulder Injuries: Instability, Impingement, Rotator Cuff Injuries.-Common Elbow Injuries, Common wrist Injuries- Acute Traumatic Injuries, Chronic Injury.-Fractured rib- Definition, Signs & symptoms, Treatment- Breathing exercises. Relaxation Exercises to Reduce Stress, Anxiety, and Depression. Rotator Cuff and Shoulder Conditioning Program. Wrist and Elbow Strengthening and Stretching Exercises. Hand and Fingers Strengthening and Stretching Exercises. Supports for Upper Limb and Chest

UNIT V

Lower Limb and Abdomen Injuries. Mechanism of Injury, Signs & Symptoms and, Treatment of Hip -Adductor Stain- Hip joint dislocations- Knee-Medial collateral ligament injury-Lateral collateral ligament injury - Anterior cruciate ligament rupture-. Ankle- Lateral ankle ligament injuries- Medial ankle ligaments injuries- Lateral ankle ligaments injuries- Abdominal Wall Injuries - Rehabilitation of Abdominal Wall Injuries. Exercises to lower limb. Supporting and protecting aids to Lower limb. Sports Shoe- types. Importance and role of physiotherapy in sports.

Learning outcomes

1. Understand the primary responsibilities the sports trainer has in preventing sports injuries and providing initial care for injured athletes.
2. Demonstrate the basics of sport first aid during and after game situation.
3. Recognise and appropriately treat common sports injuries and conditions from onset through rehabilitation.
4. Identify and apply knowledge of anatomy to the design and execution of research studies.

Peer Group Teaching and Discussion Concept

Discussion on primary responsibilities the sports trainer has in preventing sports injuries and providing initial care for injured athletes. Role Play as Injured Athlete and Rehabilitation Facilitator under the supervision of Teacher.

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CORE PAPER X
PHYSIOLOGY OF EXERCISE

Learning Objectives

1. Understand basic knowledge of Physiology of Human body
2. Implement the knowledge in the field of physical Education
3. Demonstrate practical knowledge of basic scientific facts and principles underlying normal body structure and function

UNIT I

Skeletal Muscle and Exercise : Exercise Physiology its scope and importance in the field of physical education and sports - Structure of the Skeletal Muscle –Functional Properties of Skeletal Muscle - Muscle Tone - Types of Muscle Fiber – Muscle Contraction: Sliding Filament Theory and types of muscle contraction – Heat Production in the Muscle - Neurotransmission and Movement mechanism, Neuro-muscular junction and transmission of nerve impulse, kinaesthetic sense organs and neural control of motor skills. – Muscle training Parameters : Strength, Endurance, Hypertrophy and Power - Effect of exercises and training on the muscular system.

UNIT II

Cardiovascular System and Exercise**:** Structure of Heart – Types of Circulation – Blood vessels - Heart Valves and Heart Sounds - Conduction System of the Heart - Blood Supply to the Heart – Blood Pressure - Cardiac Cycle - Cardiac Output: Stroke and minute Volume - Heart Rate - Factors Affecting Heart Rate - Cardiac Hypertrophy – Athletic Heart – Cardiovascular Endurance - Effect of exercises and training on the Cardio vascular system. Cardio respiratory adaptations to long and short term physical activities.

UNIT III

Respiratory system and exercise : Structure of Respiratory Tract - Physiology of Respiration – Types of Respiration - Mechanism of Breathing - Respiratory Muscles and Training - Minute Ventilation - Ventilation at Rest and During Exercise - Diffusion of Gases - Exchange of Gases in the Lungs - Exchange of Gases in the Tissues – Respiratory Rate - Control of Ventilation - Oxygen Debt – Second Wind - Lung Volumes and Capacities - Effect of exercises and training on the respiratory system.

Unit-IV

Bioenergetics : Bio-chemical aspects of exercise . Metabolism: Anabolism and Catabolism – ATP as energy currency – ATP - PC or Phosphogen System - Anaerobic Metabolism - Aerobic Metabolism – Lactate threshold – Metabolism of food products and energy transfer. Aerobic and Anaerobic Systems During Rest and Exercise - Short Duration High Intensity Exercises - High Intensity Exercise Lasting Several Minutes - Long Duration Exercises and recovery process. Physiological aspects of fatigue. Restoration of energy stores.

UNIT V : Climatic Factors, Ergogenic Aids and Doping : Climatic conditions and sports performance: Variation in Temperature and Humidity - Thermoregulation – Sports performance in hot climate, Cool Climate, high altitude. Factors influencing performance in Sports, Ergogenic aids and doping. Environmental influence on human physiology under exercise. Influence of Anabolic steroids, Choline, Androstenedione, Beta Blocker, Creatine, Human growth hormone on sports performance. Narcotic, Stimulants: Amphetamines, Caffeine, Ephedrine, Sympathomimetic amines. Stimulants and sports performance . Women in sports-trainability, physiological gender differences and special proplems of women athletes. Aging – Physiological consequences, life style management and healthful aging .

Learning outcomes

1. Understand the basic principles of physiology and Exercise Physiology
2. Apply the knowledge in the field of physical education and movement activity.
3. Analyze the practical knowledge during the practical situation.
4. Remember and recall the definition of physiology and co-relate the principles of physiology.
5. Appraise the effects during the training and practical sessions

Peer Group Teaching and Discussion Concept

Discussion on physiological adaption on various systems of the body due to exercises.

Discussion on Energy Transfer - Stimulants and sports performance.

REFERENCE

Amritkumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: PoompugarPathipagam.

Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs.

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Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications.

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CORE PAPER XI

SCIENTIFIC PRINCIPLES OF SPORTS TRAINING

Learning Objectives

1. Understand the scientific principles of sports training.
2. Fix and adopt the training load
3. Prepare the sports person for the competition

UNIT I

Sports training: Definition. Aim, Characteristics, Principles of Sports Training. Over Load: Definition, Causes of Over Load, Symptoms of Overload. Remedial Measures - Super Compensation- Development of Physical Fitness through training: Altitude Training, Cross Training, Autogenic Training, Ideo motor Training, Technical and Tactical Preparation for Sports.

UNIT II

Physical Fitness Components: Strength: Methods to improve Strength: Weight Training, Isometric, Isotonic, Circuit Training. Speed: Methods to Develop Speed: Repetition Method, Downhill Run, Parachute Running, Wind Sprints. Endurance: Methods to Improve Endurance: Continuous Method, Interval Method, Repetition Method, CrossCountry, Fart lek Training.

UNIT III

Flexibility: Methods to improve the Flexibility- Stretch and Hold Method, Ballistic Method. Special Type Training: Plyometric Training. Training for Coordinative Abilities: Methods to improve Coordinative abilities: Sensory Method, Variation in Movement Execution Method, Variation in External Condition Method, Combination of Movement Method. Types of Stretching Exercises.

UNIT IV

Training Plan:Macro Cycle, Meso Cycle, MicroCycle. Short Term Plan and Long Term Plans. Periodisation:Meaning, Single, Double and Multiple Periodisation. Preparatory Period, Competition Period and Transition Period. Principles of Motor- Skill Acquisition, Transfer of Training Effects. Sports Talent Identification- process and Procedures. High Performance Training its process and procedures - Techniques and Skill – its Characteristics and importance, Different stages of techniques development and technique training . tactics and strategy.

UNIT V

Definition of Doping – Side effects of drugs- Dietary supplements - IOC list of doping classes and methods. Blood doping - The use of erythropoietin in blood boosting - Blood doping control- The testing programmes - Problems in drug detection - Blood testing

in doping control - Problems with the supply of medicines subject to IOC regulation : over-the-counter drugs (OTC) - prescription only medicines (POMs)- Controlled drugs (CDs).Reporting test results.

Learning outcomes

1. Understand training as performance based science
2. Explain different means and methods of various training
3. Prepare training schedule for various sports and games
4. Appraise types of periodization for performance development
5. Create various training facilities and plans for novice to advance performers

Peer Group Teaching and Discussion Concept

Group Discussion on Training Load of Elite Athletes - Preparation of Training Schedules for Game of their Choice. Preparation of Exercise for Demonstration with Training Gadgets.

REFERENCE

Bunn, J.N. (1998) Scientific Principles of Coaching. New Jersey: Engle Wood Cliffs. Prentice Hall Inc.

Cart, E. Klafs. & Daniel, D. Arnheim.(1999) Modern Principles of Athletic Training. St.Louis: C.V. Mosphy Company.

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Jensen, C.R.,&Fisher,A.G.(2000) Scientific Basic of Athletic Conditioning. Philadelphia.

Ronald, P. Pefiffer. (1998). Concepts of Athletic Training, 2nd Edition. London: Jones and Bartlett Publications.

YograjThani. (2003). Sport s Training . Delhi: Sports Publications.

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CORE PAPER XIII

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN PHYSICAL EDUCTION

Learning Objectives

1. To know the necessity of information and communication technology in physical education
2. Helps to improves the computer assisted works in sports
3. Able use the applications of computer in sports

UNIT I

Communication and Classroom Interaction: Concept, Elements, Process and Types of Communication, Communication Barriers and Facilitators of communication, Communicative skills of English - Listening, Speaking, Reading and Writing, Concept and Importance of ICT Need of ICT in Education and Physical Education. Scope of ICT: Teaching Learning Process, Publication Evaluation, Research and Administration Challenges in Integrating ICT in Physical Education

UNIT II

Fundamentals of Computers :Characteristics, Types and Applications of Computers Hardware of Computer: Input, Output & Storage Devices .MS Office Applications: MS Word: Main Features & its Uses in Physical Education. MS Excel: Main Features &its Applications in Physical Education. MS Power Point: Preparation of Slides with Multimedia Effects. MS Publisher: Newsletter & Brochure

UNIT III

ICT Integration in Teaching Learning Process. Approaches to Integrating ICT in Teaching Learning Process. Project Based Learning (PBL). Co-Operative Learning. Collaborative Learning. ICT and Constructivism: A Pedagogical Dimension. E-Learning & Web Based Learning. E-Learning. Web Based Learning. Visual Classroom.

UNIT IV

Using Computers in Physical Education**:** Research, Biomechanics, Exercise Physiology, Motor Learning, Sports Psychology. – Analyzing the data using statistics in Spread Sheet: Concept and Calculation of Mean, Standard Deviation, “t” test, Correlation.

UNIT V

SPSS Package:Introduction, Feeding Data, Naming the variables, Grouping the Data. Computation of Descriptive Statistics, Correlated and Uncorrelated "t" ratio, Analysis of Variance, Co-efficient of Correlation.

Course Outcome

1. Understand concept of information and communication technology in physical education field
2. Analyse sporting data of various types via astute use of statistical packages.
3. Practice mathematics, statistics, information technology in sport technology related problems.
4. Offer Hands on Knowledge in information and communication Technology

Peer Group Teaching and Discussion Concept

Teaching the selected area of subject using the ICT gadgets – Discussion on Merits and Demerits of various methods of Teaching. Encouraged to Prepare Teaching Aids from Waste Products. Hand on experience in the ICT lab.

REFERENCE

Ram B(2006), New Age International Publication, Computer Fundamental, Third Edition.

Brain under IDG Book. India (p) Ltd Teach Yourself Office 2000, Fourth Edition-2001

Douglas E. Comer (2005), The Internet Book, Purdue University, West Lafayette.

Heidi Steel Low price Edition, Microsoft Office Word 2003- 2004.

Research and Development Wing (2006) ITL Education Solution Ltd. Introduction to information Technology,

Pradeep K. Sinha &Priti; (2006) Sinha, Foundations computing BPB Publications .

Rebecca (1999)Bridges Altman Peach pit Press, Power point for window.

Sanjay Saxena, (2006) Vikas Publication House, Pvt. Ltd. Microsoft Office for ever

one, Second Edition.

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CORE PAPER XIV

SPORTS MANAGEMENT AND CURRICULUM DESIGN IN PHYSICAL EDUCATION

Learning Objectives

1. To identify the basic principles of Sports Management.
2. To know about organizational management and leadership.
3. To identify important issues and future trends in the field of sports management
4. Understand curriculum according to the needs of the students
5. Construct the curriculum for various levels
6. Update the present need which is mandatory

UNIT I

Management: Concept and Principles of Management. Sports Management: Definition, Importance. Basic Principles and Procedures of Sports Management. Functions of Sports Management. Personal Management: Objectives and principles of Personal Management, Personal Policies, Self-Appraisal, communication skills and time management , essential skills of administration. Guiding Principles for organizing physical education and sports programmes in institutions.

UNIT II

Management of infrastructure, equipment, finance and personnel. Programme Management: Factors influencing programme development. Organisation and Functions of Sports bodies**.** Financial management – objectives, purposes, principles and scope. Competitive Sports Programs, Benefits, Management Guidelines for School, College Sports Programs, Management Problems in instruction programme, Community Based Physical Education and Sports program. Management and Maintenance of Records and Registers as per Department of School Education requirements. Role of Sports Manager – Inter-personal, informational and decision making. Managerial skills-technical, human and conceptual.

UNIT III

Purchase and Care of Supplies of Equipment: Planning and Preparation of Budget, Facility Management : Planning, procuring and maintenance of facilities – Indoor and outdoor facilities . Planning and management of sports infrastructure . Guidelines for selection of Equipments and Supplies, Purchase of equipments and supplies, Equipment Room, Equipment and supply Manager. Guidelines for checking, storing, issuing, care and maintenance of supplies and equipments. Public Relations in Sports: Planning the Public Relation Program - Principles of Public Relation - Public Relations in School and

Communities - Public Relation and the Media. Professional Ethics. Mass media communication and Publicity, qualifications of Public relation officer.

Event Management – its principles , planning, check list, rehearsal, itinerary, execution, reporting and follow-up procedures of an event.

UNIT IV

Curriculum: Meaning and Definition of Curriculum. Curriculum Development – Concepts of Curriculum planning – Subject matter for different levels of education. Principles of Curriculum Construction: Students centred, Activity centred, Community centred, Forward looking principle, Principles of integration. Approaches to Curriculum : Subject centred, Learner centred and Community centred, Curriculum Framework. Application of Idealism, Naturalism, Realism, Pragmatism, Existentialism, Humanism in Physical Education. Curriculum Design and content – importance , selection and classification of subject matter with reference to age,sex, and differently abled pupils . Integrated programmes for boys and girls. Course content for academic and professional courses.

UNIT V

Factors affecting curriculum: Sources of Curriculum materials – text books – Journals – Dictionaries, Encyclopedias, Magazines, Internet. Integration of Physical Education with other Sports Sciences – Curriculum research, Objectives of Curriculum research – Importance of Curriculum research. Curriculum Evaluation : concepts and purpose , procedure and appraisal. Supervision – Objectives, principles and importance of supervision. Techniques of supervision, Duties and responsibilities of a supervisor.

Course Outcome

1. Know sports management and employ principles of strategic planning, and financial and human resource management.
2. Assess marketing needs and formulate short term and long term solutions.
3. Conceive, plan, execute, and evaluate a sports event.
4. Introduce the teaching and curriculum objectives and course module design
5. Analyse the planning strategies, teaching, learning and assessment
6. Develop strategies to promote quality learning, practice marking and consider methods of course and self-evaluation
7. Evaluating learning intentions and the process that is guided through explicit and manageable criteria

Peer Group Teaching and Discussion Concept:

Discussion on strategic planning, and financial and human resource management. Preparation of Curriculum and Syllabus for the modern Society. Discussion on Challenges and trends in Physical Education and Sports.

REFERENCE

Aggarwal, J.C (1990). Curriculum Reform in India- World overviews, Doaba World Education Series-3 Delhi: Doaba House, Book seller and Publisher.

Arora, G.L. (1984): Reflections on Curriculum , New Delhi: NCERT.

Bonnie, L. (1991). The Management of Sports. St.Louis: Mosby Publishing Company, Park House.

Bucher A. Charles,(1993) Management of Physical Education and Sports (10th ed.,) St. Louis:

Carl, E, Willgoose. (1982.Curriculum in Physical Education, London: Prentice Hall.

Charles, A, Bucher & March, L, Krotee. (1993). Management of Physical Education and Sports. St.Louis: Mosby Publishing Company.

Chelladurai, P. (1999). Human Resources Management in Sports and Recreation. Human Kinetics.

McKernan, James (2007) Curriculum and Imagination: Process, Theory, Pedagogy and Action Research, . U.K: Routledge

NCERT (2005). National Curriculum Framework-2005, New Delhi: NCERT.

NCERT (2000). National Curriculum Framework for School Education, New Delhi: NCERT.

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CORE PAPER XV

DISSERTATION

1. The student shall have dissertation for M.P.Ed in IV Semester. The title and proposal shall be approved by the Guide and Head of Department/ Principal of the College.

2. The dissertation must be submitted on or before the last theory university examination IV Semester duly signed by Guide and Head of Department / Principal of the College.

3. The format Prescribed by the University shall be followed.

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LIST OF DISCIPLINE SPECIFIC ELECTIVE

ODD SEMESTER

Physical Fitness and Wellness
Sports Engineering and Sports Technology

Adapted Physical Education
Professional Preparation for SLET/NET in Physical Education

EVEN SEMESTER

Sports Journalism and Mass Media (or)
Health Education and Sports Nutrition

Value and Environmental Education (or)
Educational Technology in Physical Education

DISCIPLINE SPECIFIC ELECTIVE
PHYSICAL FITNESS AND WELLNESS

Learning Objectives

1. Promote the knowledge of physical fitness and wellness
2. Create fitness awareness among youth, various health problems and its impacts
3. Able understand the importance of physical fitness and to create good health.

UNIT I

Physical Fitness: Meaning and Definition, Concepts, Techniques, Principles and values of physical fitness. Types and Components of Fitness : Health Related Fitness-Motor and Skill Related Fitness - Current trends in fitness and conditioning, components of total health fitness and the relationship between physical activity and lifelong wellness. Meaning and Definition, Scope and Benefits of Wellness –Components of wellness – Relationship between fitness and wellness.

UNIT II

Nutrients: Diet and Nutrition, Nutrition labeling information, Food Choices, Food Guide Pyramid, Influences on food choices-social, economic, cultural, food sources, Comparison of food values. Weight Management-proper practices to maintain, lose and gain. Eating Disorders, Proper hydration. Body Image- Factors influencing body Image.

UNIT III

Aerobic Exercise :Cardio respiratory Endurance Training; proper warm-up, cool down, and stretching, monitoring heart rates during activity. Assessment of cardio respiratory fitness and set goals to maintain or improve fitness levels. Cardio respiratory activities including: power walking, pacer test, interval training, incline running, distance running, aerobics and circuits.

UNIT IV

Anaerobic Exercise: Resistance Training for Muscular Strength and Endurance; Safety techniques (spotting, proper body alignment, lifting techniques, spatial, awareness. and proper breathing techniques). Weight training principles and concepts; basic resistance exercises (including free hand exercise, free weight exercise, weight machines, exercise bands and tubing. medicine balls, fit balls) **Flexibility Exercise:** Flexibility Training, Relaxation Techniques and Core Training. Safety techniques (stretching protocol; breathing and relaxation techniques) types of flexibility exercises dynamic, static),

UNIT V

Life Style Management : Stress Management, Smoking, Sleep Improvement, Depression management, Issues and Challenges of fitness and wellness: Leader, Values, Pupil Relation, technology, infrastructure, finance, time and career. Develop basic competency in relaxation and breathing techniques. Pilates, Yoga.

Course Outcome

1. Explain the history and philosophy of public physical fitness as well as its core values, concepts, and functions across the globe and in society.

2. Identify the methods, and tools of public health data collection, use, and analysis

3. Relate the underlying science of wellness and disease to opportunities for promoting and protecting health across the life course.

4. Identify the socio-economic, behavioural, biological, environmental, and other factors that impact physical fitness and contribute to health disparities.

5. Apply the principles of training and maintain a physical fitness.

Peer Group Teaching and Discussion Concept

Group Discussion on . Modern concept of Physical fitness and Wellness. . Role Play as Trainer and Client to calculate Exercise Intensity. Discussion on Diet for sports competition, eating pattern, Foods to avoid.

REFERENCE

David K. Miller & T. Earl Allen(1989), Fitness, A life time commitment, Surjeet Publication Delhi.

Dificore Judy, the complete guide to the postnatal fitness, A & C Black Publishers Ltd. Bedford row, London 1998

Uppal A.K (1992), Physical Fitness, Friends Publications (India),

Warner W.K. Oeger& Sharon A. Hoeger(1990) Fitness and Wellness, Morton Publishing Company.

Elizabeth & Ken day (1986), Sports fitness for women, B.T. Batsford Ltd, London.

Emily R. Foster, KarynHartiger& Katherine A. Smith (2002), Fitness Fun, Human Kinetics Publishers.

Lawrence, Debbie (1999), Exercise to Music. A & C Black Publishers Ltd. 37, Sohe Square, London.

Robert Malt(2001), 90 day fitness plan, D.K. publishing, Inc. 95, Madison Avenue, New York .

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DISCIPLINE SPECIFIC ELECTIVE

ADAPTED PHYSICAL EDUCATION

Learning Objectives

1. To understand the need and importance of adapted physical education
2. To enable the students to know the purpose aim and objectives of adapted physical education
3. To understand the role of games and sports in disability and physical activity implications

   Through adapted physical education
4. Understand wide range of disabilities and associated characteristics
5. Understand how specific individual characteristics can influence movement skill functioning

UNIT-I

Meaning need and importance of adapted physical education. Purpose, aims and objectives of Adapted physical education. Definition of disabling condition. Physical education for persons with disabilities-benefits of physical education for students with disabilities-recreational sports opportunities ,competition opportunities, special Olympics, paralympics and deaf Olympics. History of adapted sports. Current status of Adapted Physical Education in india

UNIT-II

Guiding principles of adapted physical education-communication with parents-parents as teachers- unified sports. facilities and equipment: disabled friendly facilities and equipment: minimum equipment, additional equipment, evaluation equipment-physical fitness: value of physical fitness-factors contributing to poor fitness-evaluating physical and motor fitness for persons with disabilities

UNIT-III

Classification of disabilities-intellectual disabilities, emotional impirement, visual impirement, hearing impirement, neuromuscular impirement, orthopedic impirement-adapted physical education activities-aims and objectives-specific

guidelines-visual impirement, hearing impirement, intellectual disabilities, orthopedic impirement

UNIT-IV

Cerebral Palsy:- Nature, Characteristics, Classification of Neuromuscular disability, Planning the Programme. Orthopaedic Handicaps:- Nature, Programme Planning. Cardiopathic Conditions:- Nature, Programme. Convalescence:- Nature, Programme. Postural deviations:- Exercise Programme to improve posture

UNIT-V

Low Physical Fitness:- Nature, Causes, Components, Tests, Development of Physical Fitness. Inefficient Body mechanics:- Values, Causes, Testing, Programme to improve Body mechanics. Nutritional disturbances:- Nature, Associated Problems, Programme. Visual impairments:- Causes, Testing, Programme. Auditory impairments:- Causes. History of adapted sports. Current status of Adapted Physical Education in india

Learning Outcomes

1. Getting knowledge about treating disabled sports persons
2. Students will be aware of various categories of disabilities
3. Students are abled to learn the psychological and physiological factors that affect the differently abled sports person
4. Knowing the importants of adapted physical education

Peer Group Teaching and Discussion Concept

Group Discussion on Role of physical education teacher in adapted Physical Education..Group Discussion on: current scenario of adapted physical education in india.

REFERENCE

Adapted Physical Education and J.P. Winnicks (Ed) 4th Edition.

Human Kinetic's www.humankinetics.com 2005.

Development and Adapted Physical Education. Clarke Harrison H. and Clarke David H. Englewood Cliffs N.J. Prentice Hall, inc., 1963.

Adapted Physical Education Fait Holis F. Phiadelphia W.B. Saunders Co., 1962.

Adapted Physical Education and Recreation, Auxter David, Pyfer Jean, Huetting carol, Mosby, Year Book inc., 1993.

Physical Therapy for Sports. Eitner Doris, Meissner Buty, Ork Helmut, W.B. Saunders Company, Philadelphia 1982.

The Principles of Exercise Therapy Gardiner Dena M. C.B.S. Publishers and Distributors, Delhi, 1985

. Friz Sandy: Sports & Exercise massage, Elsevier Mosby-2005.

DISCIPLINE SPECIFIC ELECTIVE

SPORTS JOURNALISM AND MASS MEDIA

Learning Objectives

1. To promote the awareness of sports through journalism
2. To learn the techniques to sports organization through media
3. To know about Sports journalism and mass media contribution in sports field

UNIT I

Meaning and Definition of Journalism. Ethics of Journalism - Canons of journalism- Sports Ethics and Sportsmanship - Reporting Sports Events. National and International Sports News Agencies.

UNIT II

Sports Bulletin :Journalism and sports education - Structure of sports bulletin - Compiling a bulletin- Types of bulletin . Role of Journalism in the Field of Physical Education: Sports as an integral part of Physical Education - Sports organization and sports journalism- General news reporting and sports reporting.

UNIT III

Mass Media in Journalism : Radio and T.V. Commentary - Running commentary on the radio - Sports experts comments. Role of Advertisement in Journalism. Sports Photography: Equipment- Editing –Publishing. Media and Sports.

UNIT IV

Brief review of Olympic Games, Asian Games, Common Wealth Games World Cup, National Games and Indian Traditional Games. Preparing report of an Annual Sports Meet for Publication in News paper. Organization of Press Meet.

UNIT V

Sports organization and Sports Journalism – General news reporting and sports reporting. Methods of editing a Sports report. Evaluation of Reported News. Interview with an elite Player and Coach.

Learning outcomes

1. Understand the basic Journalism and Mass Media in Journalism.
2. Apply the media in sports field for promotion.
3. Promote the awareness of Sports organization and Sports Journalism.
4. Develop the knowledge through Journalism and Mass Media, participate and organize.

Peer Group Teaching and Discussion Concept

Group Discussion on Role of Journalism and Mass Media in Physical Education. Role Play as Journalist Player and Coach. Group Discussion on: Current Problems in Sports

REFERENCE

Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi :Surjeet Publications

Ahiya B.N. &Chobra S.S.A. (1990) Concise Course in Reporting, New Delhi: Surjeet Publications

Bhatt S.C. (1993) Broadcast Journalism Basic Principles, New Delhi. Haranand publication

Varma A.K. (1993) Advanced Journalism New Delhi: Haranand publication.

Rangasam, Parthasarathy (1991) Journalism in India from the Earliest Times to the President Sterling publication Pvt. Ltd.

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DISCIPLINE SPECIFIC ELECTIVE
HEALTH EDUCATION AND SPORTS NUTRITION

Learning Objectives

1. Identify dietary carbohydrate and protein sources, Identify proper hydration principles and discuss the importance of hydration for physical performance
2. Demonstrate knowledge of a healthy diet for physical performance and demonstrate an ability to utilize this knowledge to complete a self-diet critique.
3. Demonstrate an understanding of health and to develop determination and values of desirable body weight

UNIT I

Health Education**:** Concept, Dimensions, Spectrum and Determinants of Health Definition of Health, Health Education, Health Instruction, Health Supervision

Aim and objective of Physical Education, Health Education and Recreation. Guiding Principles of Health and Health Education. Health Service and guidance instruction in personal hygiene.

UNIT II

Health Problems in India: Communicable and Non Communicable Diseases Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive, Population, Personal and Environmental Hygiene for schools, Objective of school health service, Role of health education in school Health Services - Care of Skin, Nails, Eye Health Service, Nutritional Service, Health Appraisal, Health Record, Healthful School Environment, first- aid and emergency care. Signs, Symptoms and prevention of communicable Diseases: Malaria, Small Pox, Dysentery, Mumps, Typhoid and AIDS. Psychosomatic Disorders / sedentary life style diseases : causes , symptoms and prevention, Effects of smoking, alcohol, & drugs on health, prevention and rehabilitation.

UNIT III

Hygiene and Health: Meaning of Hygiene, Type of Hygiene, Dental Hygiene, Effect of Alcohol on Health, Effect of Tobacco on Health, Life Style Management, Management of Hypertension, Management of Obesity, Management of Stress. Balanced Diet. Obesity related health problems. Body weight control and its significance on health. Role of Exercise , dieting and combination of exercise and dieting on weight control.

UNIT IV

Introduction to Sports Nutrition: Meaning and Definition of Sports Nutrition, Role of nutrition in sports, Basic Nutrition guidelines. Misuse of Drugs in Sports. Nutrients: Ingestion

to energy metabolism: Carbohydrate, Protein and Fat, Role of carbohydrates, Fat and protein during exercise. Nutrition and Dietary Manipulations. Chief Minister's Mid day meals Scheme. Understanding of malnutrition and nutritional supplements.

UNIT V

Nutrition and Weight Management :Concept of Body mass index (BMI), Obesity and its hazard, Dieting versus exercise for weight control Maintaining a Healthy Lifestyle**,** Weight management program for sporty child**,** Role of diet and exercise in weight management**,** Design diet plan and exercise schedule for weight gain and loss.

Learning outcomes

1. Restate the role of nutrients and caloric requirements
2. Sketch the basic classification, functions and utilization of nutrients.
3. Point out diet for various competitions and nutrient supplements for performance.
4. Evaluate the factors affects health and solutions for wellness.
5. Design caloric requirements for various sports and age groups.

Peer Group Teaching and Discussion Concept

Discussion on role of nutrients and caloric requirements ,Classification, functions and utilization of nutrients. Discussion and Teaching on various competitions and nutrient supplements for performance.

REFERENCE:

Bucher, Charles A. "Administration of Health and Physical Education Programme".

Hanlon, John J. "Principles of Public Health Administration" 2003.

Turner, C.E. "The School Health and Health Education".

Moss and et. At. "Health Education" (National Education Association of U.T.A.)

Nemir A. 'The School Health Education" (Harber and Brothers, New York).

Nutrition Encyclopedia, edited by Delores C.S. James, The Gale Group, Inc. Boyd-

Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and Robertson.

Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons.

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DISCIPLINE SPECIFIC ELECTIVE
SPORTS ENGINEERING AND SPORTS TECHNOLOGY

Learning Objectives

1. To understand the procedure of selection and use of various sports engineering and technologies.
2. To learn the mechanics of engineering materials in sports field
3. Help to improve knowledge about building and maintain playing surface.
4. To understand the procedure of selection and use of various sports technologies.
5. To learn the method of construction and installation of sports surface
6. Help to improve knowledge about modern playing equipment

UNIT I

Introduction to sports engineering and Technology: Meaning of sports engineering, human motion detection and recording, human performance, assessment, equipment and facility designing and sports related instrumentation and measurement.

Building and Maintenance: Sports Infrastructure- Gymnasium, Pavilion, Swimming Pool, Indoor Stadium, Out-door Stadium, Play Park, Academic Block, Administrative Block, Research Block, Library, Sports Hostels

UNIT - II

Mechanics of engineering materials: Concept of internal force, axial force, shear force, bending movement, torsion, energy method to find displacement of structure, strain energy. Biomechanics of daily and common activities –Gait, Posture, Body levers, ergonomics. Sports Dynamics: Introduction to Dynamics, Kinematics to particles – rectilinear and plane curvilinear motion coordinate system. Kinetics of particles.

UNIT III

Sports Technology: Meaning, definition, purpose, advantages and applications. General principles and purpose of instrumentation in sports, Workflow of instrumentation and business aspects, Technological impacts on sports.

Science of Sports Materials: Adhesives- Nano glue, nanomoulding technology, Nano turf. Foot wear production, Factors and application in sports, constraints. Foams- Polyurethane, Polystyrene, Styrofoam, closed-cell and open-cell foams, Neoprene, Foam. Smart Materials - Shape Memory Alloy (SMA), Thermo chromic film, High-density modeling foam.

UNIT IV

Modern surfaces for play fields, construction and installation of *sports surfaces. T*ypes of materials – synthetic, wood, polyurethene. Artificial turf. Modern technology in the construction of indoor and outdoor facilities. Technology in manufacture of modern play equipments- electronic equipments. Use of computer and software in Match Analysis and Coaching.

UNIT V

Modern equipments: Playing Equipments: Balls : Types, Materials and Advantages. Bat/Stick/ Racquets: Types, Materials and Advantages. Clothing and shoes: Types, Materials and Advantages. Measuring equipments: Throwing and Jumping Events. Protective equipments: Types, Materials and Advantages. Sports equipment withnano technology, Advantages.

Learning outcomes

1. Plan, develop, communicate, implement, and evaluate technology-infused strategic plans.
2. Maintain and manage a variety of digital tools and resources for use in technology-rich sports environment
3. Design, develop, and implement technology-rich sports program that model of sports field and promote digital age best practices playing and assessment.
4. Find out how successful were the teachers' efforts in contributing to the realization of the fundamental objectives of sports.

Peer Group Teaching and Discussion Concept

Group Discussion on need and Importance of Sports Engineering in Physical Education.

Modern Training Equipments. Discussion on Playing Structure and its merits and demerits. And need and Importance of Sports Technology in Physical Education.

Modern Training Equipments. Discussion on Playing Surfaces and its merits and demerits.

REFERENCE

Franz K. F. (2013) Editor, Routledge Handbook of Sports Technology and Engineering :Routledge.

Steve Hake, Editor, The Engineering of Sport (CRC Press, 1996) Franz K.

F(2007) Editor The Impact of Technology on Sports II, CRC. Helge N

(2009) Sports Aerodynamics (Springer Science & Business Media.

Youlin Hong, (2013) Editor Routledge Handbook of Ergonomics in Sport and Exercise: Routledge.

Jenkins M.,(2003) Editor Materials in Sports Equipment, Volume I :Elsevier.

Colin White, Projectile Dynamics in Sport: Principles and Applications Eric C.

(2010) Editor Sports Facility Operations Management :Routledge.

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DISCIPLINE SPECIFIC ELECTIVE

PROFESSIONAL PREPARATION FOR SLET/NET IN PHYSICAL EDUCATION

(Question Paper Patten : 75 Multiple Choice Questions)

Learning Objectives

1. To gain a knowledge about preparation for SLET and NET
2. To know syllabus for SLET and NET exams
3. Helps to develop profession based preparation

UNIT I

Teaching Aptitude: Teaching: Nature, objectives, characteristics and basic requirements- Learner's characteristics -Factors affecting teaching -Methods of teaching. Teaching aids - Evaluation systems. Research Aptitude: Research: Meaning, characteristics and type: Steps of research -Methods of research -Research Ethics. Thesis writing.

UNIT II

Reasoning (Including Mathematical): Number series; letter series; codes; Relationships; classification . Logical Reasoning : Understanding the structure of arguments. Coding and Decoding.

UNIT III

Philosophies of Education as applied to Physical Education – Idealism, Naturalism, Realism, Pragmatism, Existentialism, Humanism. Biological basis of physical activity – benefits of exercise, growth and exercise, exercise. and well – being sex and age characteristics of adolescent, body types. Play and Play theories, general principles of growth and development, Principles of motor – skill acquisition, transfer of training effects. Physical Education in ancient Greece, Rome and Germany, Sweden, Denmark and Russia. Olympic Movement – Historical development of Ancient and Modern Olympic Games.

UNIT IV

Physiology of Muscular activity, Neurotransmission and Movement mechanism. Physiology of respiration. Physiology of blood circulation. Factors influencing performance in sports. Athletic injuries – their management and rehabilitation. Therapeutic modalities. Joints and their movements – planes and axes. Levers. Laws of motion, principles of equilibrium and force, spin and elasticity. Posture, Postural deformities and their correction. Muscular analysis of Motor movement. Mechanical analysis of fundamental movements – (running, jumping, throwing, pulling and pushing).

UNIT V

Characteristics and principles of sports training. Training load and periodization. Training methods and specific training programme for development of various motor qualities. Technical and Tactical preparation for sports. Short-term and long – term training plans. Rules of Games and Sports and their interpretations: Athletics, Badminton, Basketball, Cricket, Hockey, Tennis, Football, Volleyball. Criteria of test evaluation. Concepts and assessment of physical fitness, motor fitness, motor ability and motor educability. Skill test for Badminton, Basketball, Hockey, Tennis, Football, Volleyball.

Course Outcome

1. Understand the preparation for SLET and NET exams.
2. It helps to aware about professional preparation
3. It helps for study to syllabus base concept.
4. Understanding nature of question items (Multiple – Choice (simple selection), Multiple – Selection (or multiple completion), Assertion & Reasoning, Sequencing type, Matching type and Para – Phrasing).

Peer Group Teaching and Discussion Concept

Group Discussion on need and Importance of Professional Preparation in Physical Education. UGC- NET/ SET Old Questions and Answers. Discussion on pattern of Questions.

REFERENCE

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Ansari M S (2010) UGC - JRF and Lectureship Paper I Teaching and Research Aptitude New Delhi : Gupta.

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DISCIPLINE SPECIFIC ELECTIVE
VALUE AND ENVIRONMENTAL EDUCATION

Learning Objectives

1. Promote the knowledge of value and environmental education.
2. Create health awareness among youth, various health problems and its impacts
3. Able understand the importance of environment and to create good environment

UNIT I

Values: Meaning, Definition, Concepts of Values. Value Education: Need, Importance and Objectives. Moral Values: Need and Theories of Values. Value Systems: Meaning and Definition, Personal and Communal values, Corporate values, Consistency, Internally consistent, Internally inconsistent , Judging Value System, Commitment, Commitment to values.

UNIT II

Concept and development of Self Confidence, Positive Thinking, Goal Setting, Interpersonal relationship, Love and Truthfulness, Integrity and Character, Peace and Nonviolence, Universal Brotherhood and Social harmony, Learning from Nature.National Integration and Value Education.

UNIT III

Value Education in the Present Scenario. Attitude: Meaning and Importance of Attitude. Self Esteem: Meaning and Importance of Self Esteem. Interpersonal Skills: Meaning and Importance of Interpersonal Skills. Subconscious Mind and Habits: Forming Positive Habits, Preparing Sub conscious Mind .

UNIT IV

Definition, Scope, Need and Importance of environmental studies., Concept of environmental education, Historical background of environmental education, Celebration of various days in relation with environment, Plastic recycling and prohibition of plastic bag / cover, Role of school in environmental conservation and sustainable development, Pollution free ecosystem.

UNIT V

People and Environment: People and environment interaction. Sources of pollution. Pollutants and their impact on human life. Exploitation of natural and energy resources. Natural hazards and mitigation. Occupational Hazards. Pollution – Air, Water, Sound and radiation , Effects of pollution on health, preventive and safety measures from pollution.

Learning Outcome

1. Explain the role of values, concepts, and functions across the globe and in society.

2. Able to explain Value Education- Goal Setting- Self Efficacy and Self Esteem

3 Apply the principles of project implementation, including planning, assessment, and evaluation in organizational and community initiatives.

Peer Group Teaching and Discussion Concept

Group Discussion on Waste Management . Preparation for Wealth out of Waste (WoW) Initiatives. Awareness Camping on Pollution control, Say No to Plastic and similar concepts.

REFERENCE

Dhananjay Joshi (2010) Value Education in Global Prespective. New Delhi : Lotus Press .

Kannan.K (2009) Soft Skills, Madurai: Yadava College Publication

MohitChakrabarti (2008): Value Education: Changing Perspective, New Delhi : Kanishka Publication.

Padmanabhan. A &Perumal .A (2009), Science and Art of Living, Madurai: Pakavathi Publication

Shiv Khera (2002), You Can Win, NewDelhi: Macmillan India Limited.

Venkataiah. N (2009)Value Education. - New Delhi: APH Publishing Corporation.

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Rao, M.N. &Datta, A.K. (1987)Waste Water Treatment (Oxford & IBH Publication Co. Pvt. Ltd.).

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Heywood, V.H. and Watson V.M., Global biodiversity Assessment (U.K.: Cambridge University Press).

Jadhav, H. and Bhosale, V.M. (1995) Environmental Protection and Laws (Delhi: Himalaya Pub. House).

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DISCIPLINE SPECIFIC ELECTIVE
EDUCATIONAL TECHNOLOGY IN PHYSICAL EDUCATION

Learning Objectives

1. To understand the procedure of selection and use of various educational technologies.
2. To learn the method ofInstructional Design
3. Help to improve new horizons of educational technology

UNIT I

Nature and Scope: Educational technology-concept, Nature and Scope. Forms of educational technology: teaching technology, instructional technology, and behaviour technology; Transactional usage of educational technology: integrated, complementary, supplementary stand-alone (independent); programmed learning stage; media application stage and computer application stage.

UNIT II

Systems Approach to Physical Education and Communication: Systems Approach to Education and its Components: Goal Setting, Task Analysis, Content Analysis, Context Analysis and Evaluation Strategies; Instructional Strategies and Media for Instruction. Effectiveness of Communication in instructional system; Communication - Modes, Barriers and Process of Communication.

UNIT III

Instructional Design :Instructional Design: Concept, Views. Process and stages of Development of Instructional Design. Overview of Models of Instructional Design; Instructional Design for Competency Based Teaching: Models for Development of Self Learning Material.

UNIT IV

Audio Visual Media in Physical Education: Audio-visual media - meaning, importance and various forms Audio/Radio: Broadcast and audio recordings - strengths and Limitations, criteria for selection of instructional units, script writing, pre-production, post-production process and practices, Audio Conferencing and Interactive Radio Conference. Video/Educational Television. Use of Television and CCTV in instruction and Training, Video Conferencing, SITE experiment, Use of animation films in Teaching Physical Activities.

UNIT V

New Horizons of Educational Technology: Recent innovations in the area of ET interactive video - Hypertext, video-texts, optical fiber technology - laser disk, computer conferencing. Procedure and organization of Teleconferencing/ Interactive video-experiences of institutions, schools and universities. Computer Assisted Instruction/ Teaching in Physical Education and Sports.

Learning outcomes

1. Plan, develop, communicate, implement, and evaluate technology-infused strategic plans.
2. Maintain and manage a variety of digital tools and resources for use in technology-rich learning environment
3. Design, develop, and implement technology-rich learning program that model principles of learning and promote digital age best practices in teaching, learning and assessment.

Peer Group Teaching and Discussion Concept

Teaching the selected area of subject using the ICT gadgets – Discussion on Merits and Demerits of various methods of Teaching. Encouraged to Prepare Teaching Aids from Waste Products. Hand on experience in the ICT lab.

REFERENCE

Amita Bhardwaj (2003), New Media of Educational Planning".Sarup of Sons, New Delhi.

Bhatia and Bhatia (1959). The Principles and Methods of Teaching (New Delhi : Doaba House.

.Dasgupta D.N, Communication and Education, Pointer Publishers Education and Communication for development, O. P. Dahama, O. P. Bhatnagar, Oxford (Page 68 of 71) IBH Publishing company, New Delhi

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Kochar, S.K. (1982)Methods and Techniques of Teaching (New Delhi, Jalandhar, Sterling Publishers Pvt. Ltd.

Kozman, Cassidy and k Jackson, (1952). Methods in Physical Education (W.B. Saunders Company,Philadelphia and London.

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ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)
HUMAN RIGHTS

Learning Objective

1. To impart the basic ideas about human rights at post-graduation level.
2. To provide different aspects of human rights which includes children and women.
3. To learn not only the basic rights but also can understand the duties to be carried out in the days to come.

UNIT I

Introduction to Human Rights: Human rights: Meaning-Definition-Need and Importance , types of human rights- UNHRC (united nations human rights commission)- human rights in India.

UNIT II

Classification of Human Rights: Right to liberty – Right to life Right to equality – Right to Dignity – Right against Exploitation – Educational Rights – Cultural Rights – Educational Rights – Economic Rights – Political Rights – Social Rights.

UNIT III

Women and Children: Rights of Women – Female feticide and Infanticide and selective abortion – Physical assault and Sexual harassment – Domestic Violence – Violence at work place – Remedial Measures.

UNIT IV

Multi-Dimensional Aspects of Human Rights: Labour rights – Bodendlabour- Child labour – Contract labour –Migrant labour – Domestic Women labour – Gender equity – Rights of Ethnic refugees– Problems and remedies – Role of trade union in protecting the unorganized labourers.

UNIT V

Grievance and Redressal Mechanism: Redressal Structure and functions of National and State level Human Rights Commission – constitutional remedies .

REFERENCE

Baradat Sergio and SwaronjaliGlosh. Teaching of human rights. Dominant Publishers and distributers, New Delhji, 2009.

Roy A. N. Human Rights Achievements and challenges: Vista international Publishing house, Delhi, 2005.

Asish Kumar das and Prasant Kumar Mohanty. Human Rights in India: Sarup and Sons. New Delhi, 2007.

BaniBorgihain. Human Rights Social Justice and Political Challenge. Kansika Publishers and distributers New Delhi, 2007.

Velan, G. Human Rights and Development Issues: The associated publishers, Ambalacantt, 2008.

Meena , P.K. human Rights theroryand practice: MuraliLal and Sons, New Delhi, 2008.

Bhavani Prasad Panda. Human rights Development and environmental law: Academic excellence, Delhi, 2007.

Viswanathan, V.N Human Rights – Twenty First Century Challenges: Kalpaz Publications, New Delhi, 2008.

Ansari, M.R. Protecting Human Rights: Max Ford Books, New Delhi, 2006.

Rao, M.S.A. Social Movements in India – Social Movements and Social Transformation in India Vol.1 & 2: Manohar Publications, New Delhi, 1978.

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ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)
PERSONALITY DEVELOPMENT AND LIFE COPING SKILLS

Learning Objective

1. To impart the basic ideas about personality development.
2. To impart the basic ideas about life coping skills
3. To frame the concepts of Goal Setting

UNIT I

Personality – Definition and Meaning - Dimensions of Personality Stress Management The Nature of Stress – A wellness Lifestyle – Distress symptoms: emotional distress, cognitive distress, Behavioural distress, physical distress symptoms – managing stress : exercise, nutrition, sleep, healthy pleasures – self talk and stress.

UNIT II

Relaxation Definition and Meaning. Methods: breathing techniques, meditation techniques, visualization techniques – self hypnosis- muscle relaxation techniques – Physical Activity and Sports Participation- Using social support. Maintaining Trust Developing and maintaining trust – being trusting and trustworthy – building interpersonal trust – re-establishing trust after it has been broken – trusting appropriately – trust and friendship.

UNIT III

Emotional Intelligence Definition and Meaning. Components of Emotional Intelligence and emotional competence - components of emotional intelligence Importance of Attitude: Meaning and Definition. Attitude and Success – Factors Determining Attitude . Benefits of Positive Attitude . Steps in Building Positive attitude.

UNIT IV

Goal Setting: Importance of Goal- SMART- Goals: Balanced- Quality not Quantity- Health- Social Responsibilities- Consistent with values- Activity and accomplishment- Meaningless Goals. Managing Time The basis of effective goals – steps to be followed to obtain optimum results from goal setting – Identifying the reasons for procrastination – guidelines to overcome procrastination – priority management at home and college

UNIT V

Life-coping Skills: Life-coping skills: Communication, Computer, Accounts and Arithmetic/Statistics, Analyzing Skills : Rational Thinking, Decision Making, Problem Solving and Reasoning) Personal Skills: Responsibility, Integrity/Honesty, Self-Management & Social Engagement. The dearth of personal skills: Corruption, Violence and Social conflicts. Resolving Interpersonal Conflicts Understanding conflicts of Interests- conflict strategies – negotiating to win – negotiating to solve the problems – steps for effective problem solving negotiating – refusal skills.

Learning Outcomes

1. Understand and develop the individuals' personality development.
2. Empower the individuals in life coping skills
3. Able to frame the concepts of Goal Setting

REFERENCE

Johnson, D.W. (1997). Reaching out – Interpersonal Effectiveness and Self Actualization. 6th ed. Boston: Allyn and Bacon.

Robbins, S. P. and Hunsaker, Phillip, L. (2009). Training in Interpersonal skills. Tips for managing people at work. 5th ed. New Delhi: PHI Learning.

Sherfield, R. M. ; Montgomery, R.J. and Moody, P, G. (2010). Developing Soft Skills. 4th ed. New Delhi: Pearson.

Shiv Khera (2006), You Can Win, Macmillan ; New Delhi.

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SKILL ENHANCEMENT COURSES

SPORTS TOURISM IN INDIA

Learning Objective

1. To impart the basic ideas about Sports Tourism in India

2. To impart the basic ideas the avenues in the area of Sports Tourism in India

UNIT I

Definition of tourism, types of tourism, basic components of tourism, motivation of tourism international tourist domestic tourist various kinds of tourism.

UNIT II

Cultural tourism in India, Indian handicrafts, Customs of India, Fairs and festivals of Indian Music and dance of India.

UNIT III

Definition of sports tourism, Classification of sports tourism, types of sports tourism, benefits of sports tourism.

UNIT IV

Adventure Sports Tourism, Definition, types of adventure sports tourism adventure sports tourism destinations in India. Institutional Structure of Indian Sports.

UNIT V

Impacts of sports tourism, Economic impacts, social cultural impacts, role of government in promoting sports tourism in India. Opportunities and Challenges

Learning Outcomes:

1. The student able to understand challenges and trends in Sports Tourism in India

2. The student able to understand avenues and job opening in Sports Tourism in India

REFERENCE

Authors Guide (2014), India China Economic and Cultural Council , Sports Tourism in India, China National Tourist Office, China

Bhatia A.K.,(2003) International-Tourism, Sterling Publishers Pvt Ltd, New-Delhi.

Bhatia A.K.,(2003) Tourism Development Principles and Practices, Sterling Publishers Pvt Ltd, New-Delhi.

Prannath Seth, (1997) Successful tourism management, Sterling Publishers Pvt Ltd, New Delhi.

Satyender Singh Malik, (2006), Potential of Adventure Tourism in India, Akam Kala Prakashan Publisher.

Simon Hudson (2006) ,Sports and Adventure Tourism, Viva Book Private Ltd New Delhi.

Thandavan and revathy,(2005) Grish Tourism Poduct,Volume-1,Dominant-Publishers,Delhi.

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SKILL ENHANCEMENT COURSES

SOFTWARE BASED APPLIED STATISTICS

UNIT I

Introduction to Software in Statistics- Benefits of Software in Statistics- Introduction and Basic Arithmetical Operation in MS Excel- Introduction to the basics of SPSS.

UNIT II

Measures of Central Tendency : Mean, Median and Mode . Computation of Mean, Median and Mode through MS Excel. Computation of Mean, Median and Mode through SPSS.

UNIT III

Measures of Dispersion : Range – Mean Deviation- Quartile Deviation- Standard Deviation . Computation of Standard Deviation through MS Excel. Computation of Standard Deviation through SPSS.

UNIT IV

Correlation: Pearson Product Moment Correlation –Spearman Rank order Correlation. Computation of Pearson Product Moment Correlation –Spearman Rank order Correlation. Computation of Bi-vitiate Correlation through SPSS .

UNIT V

Comparison of Mean: Independent 't' Test - Dependent 't' Test - ANOVA. Computation of Independent 't' Test - Dependent 't' Test - ANOVA Deviation through MS Excel. Computation of Independent 't' Test - Dependent 't' Test - ANOVA through SPSS.

REFERENCE

Best, John W. and Kalm James, V.(1980) Research in Education, New Delhi: Prentice Hall of India.

Clarke David.H and Clarke H, Harrison (1984) Research processes in Physical Education, New Jersey : Prentice Hall Inc.,

Clarke, H. Harrison and Clarke David H. (1972) Advanced Statistics, New Jercy: Prentice Hall Inc.

Craig Williams and Chris Wragg(2006) – Data Analysis and research for sport and exercise science, London Routledge Press.

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Jerry R Thomas and Jack K Nelson(2000) Research Methods in Physical Activities, Illnosis : Human Kinetics;

Paul R kinnear and Colin D Gray (2006) –SPSS 14 Made Simple , New York: Psychology Press.

Thirumalaisamy (1998) Statistics in Physical Education, Karaikudi: Senthilkumar publishers.

Thomson AL,(1986) The Art of Using Computers, Boyd & Frasher Boston: Publishing Co.,

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GENERIC ELECTIVE COURSE

RECREATIONAL AND INCLUSIVE GAMES

UNIT I

Recreation: Meaning, Definition and Need. Recreational Games: Types of Recreational Games: Methods for Conducting Relays: Simple File Relay Method. Relay Races: Simple Running Relay - Backward Running Relay- Hopping Relay- One Leg Relay - Jumping on Both Feet Relay - Jump the "Ditch" Relay- Sore-Toe Relay- Lame-Dog Relay 9. Elephant Walk Relay- Crab Relay- Frog-Jumping Relay - Leap Frog Relay- Leap Frog Spoke Relay- Kangaroo - Jumping Relay - Zig - zag Relay - Tunnel Relay - All-up Relay (Change the Club Relay) -. All-up and All-down Relay - Giddy Giddy Relay - Jump-the Stick Relay- Pony-Express Relay Ball Pass Vs Team Running Relay .

UNIT II

Tag Games : Meaning of Tag Games. Tag Games : Simple Tag (Ordinary Tag)- Whip Tag - Hopping Tag (Nondi Tag) - Sore-Spot Tag - Squat Tag- OstrichTag - Namaskar Tag- Chain Tag- Three Deep - Two Deep- Crows and Cranes - Streets and Alleys - Cat and Mice -Policeman and Thief- Mid-night- Magic Wand.

UNIT III

Goal Games : Good Morning - Squirrels In Trees- Snatch a Club - Come with Me- . Get Your Partner - Merry-Go-Round- Form Twos, Threes, Fours - Fire in the Mountain, Run, Run, Run (Fire Warden) -. Fruit Basket - Postman - Circle Snatch (Circle Rush)- . Musical Rush - Guard the Treasure- Circle Attention- Snatch the Handkerchief- Miscellaneous Games: Spud - Poison Circle- Dodge ball - Luggage Van - . Find the Leader- In the Pond on the Bank.

UNIT IV

Inclusive Games: Meaning, Definition and Need. Preschool Inclusive Activities: Airplane Fly- Body Bowling- Doughnut Delivery- Sticky Marshmallow- Turrey Pluck-Apple Picking- Mystery Search- Ice Cream Cone Creators- Beams and Ladders- Bulldozer Blast- Feed the Animals- Flying High.

UNIT V

Primary Inclusive Activities: Car Rally- Skittle ball- Toy Soldier- Octopus Tag- Puppy Dog Tails- Rolling Red Light- Duck Hunt- Fill the Basket- Marbles- Ponies in the Barn- Roll Over. Advanced Activities: Centipede- Pin Ball - The Giants Gum Ball- Happy Landings- Strike Back- Across the Great Divide - Gym Invaders- The Tortoise and The Hare . Adapted Sports Activities: Baseball –Football.

REFERENCE

Baneroft, Jessie H. Games New York: The Macmillan Company, 1959

Edmundson, Joseph. The Best Party Games. London Pan Books Ltd. 1968

Geri, Frank H. Illustrated Games Rhythms and Stunts for children New Jersey: Engle-Wood Clifts, Printice- Hall, 1957

Hindman, Drawin A. Hand Book of Indoor Games and contest, London: Nicholas Kaye Ltd, 1957

Lichtman, B. (1993). Innovative games. Champaign, IL: Human Kinetics.

Mason, Bernard S. And Michell Elmer D. Social Games for Recreation New York A. S. Barnes and company. 1935

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Morris, G. S., & Stiehl, J. (1989). Changing kids games. Champaign, IL: Human Kinetics.

Pangrazi, R. P. & Dauer, V. P., (1994). Dynamic physical education for elementary school children (11th ed). New York: Macmillan.

Poppen, J. D., & Jacobson, S. A. (1982). Games that come alive. Puyallup, WA: Action Productions.

Smith, Charles F. Games and Games Leadership New York: Dodd Mead and Company, 1953

Susan L. Kasser.( ) Inclusive Games. Champaign, IL: Human Kinetics.

The National Fitness Corps Hand Book Ministry of Education Government of India, 1965

Thomas Mathew, (1984) 150 Selected Minor Games, Alagappa University College of Physical Education, Karaikudi.

Thomas, J. P. Physical Education Lessons. Madras, Gnanodaya Press, 1967

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GENERIC ELECTIVE COURSE
SPECIAL OLYMPICS

UNIT I

Foundation of Special Olympics: mission of special Olympics - Special Olympics philosophy- Special Olympics vision - Special Olympics athlete's oath - official logo - goal of Special Olympics - founding principles of special Olympics - history and growth of special Olympics - worldwide structure of Special Olympics - accredited program structure – special Olympics Bharat (India) structure.

UNIT II

Definition of intellectual disability - General statement of eligibility - Eligibility for participation in special Olympics : General statement of eligibility - Age requirements - degree of disability. Identifying persons with intellectual disabilities. registration of athletes. participation by individuals with down syndrome who have Atlanto-Axial instability.

UNIT III

Selection procedure in special Olympics : Individual sports- team sports. divisioning in special Olympics. Rresponsibility of the competitor – coaches code of conduct. honest effort rule.

UNIT IV

Special Olympics and volunteers. orientation to volunteer. volunteer opportunities . official sports : official summer sports- official winter sports – recognised sports. Medical and safety standards. Coaching Special Athletes. organising training session : warm- up-main part- cool-down.

UNIT V

Sports Specific Coaching : Coaching and teaching basic sport skills - Fundamental skill development. Levels of instruction - General rule and modification of rules: Track events –Field events – Basketball - Cricket – Football – Volleyball.

REFERENCE

Authors Guide (2008) Special Olympics Bharat , Trainer Manual, First Edition, New Delhi-India.Pp-No: 1-392.

Authors Guide (2012) Special Olympics Bharat, Master Trainer Handbook , Ministry of Youth Affairs & Sports Government of India, Scheme of Sports and Games for the Disabled, Fourth Edition. New Delhi- India. Pp.-No: 1-487.

Authors Guide (1937) American Association of Intellectually and Development Disabilities (AAIDD), New York, America.

Authors Guide (2007) World Health Organization, Global Resources for Persons with Intellectual,**ISBN:** 978 92 4 156350 5.

Siperstein, G. N., Harada, C. M., Parker, R. C., Hardman, M. L., & McGuire, (2005).Comprehensive National Study of Special Olympics Programs in the United States. A special report. University of Massachusetts Boston. Washington, DC: Special Olympics, Inc.

Saperstein, G.N., Norins, J., Corbin, S., & Shriver, T. (2003).Multinational Study of attitudes toward individuals with intellectual disabilities. Washington, DC: Special Olympics, Inc.

Trainer Manual (2009), Special Olympics, Bharat. India: Published by Special Olympic National Office, New Delhi India.

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TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

SCHEME OF EXAMINATION & SYLLABUS

OF

Bachelor of Science (Yoga)

B.Sc (Yoga)

UNDER

FACULTY OF YOGA

w.e.f. Session 2023-24

B.Sc in Yoga - Regular

REGULATIONS AND SYLLABUS – (CBCS-University Department)

[For the candidates admitted from the academic year 2023-2024-onwards]

❖ **Name of the Department:**	➢ DEPARTMENT OF YOGA
❖ **Name of the subject discipline:**	➢ YOGA
❖ **Programme of level:**	➢ B.Sc.
❖ **Duration for the course:**	➢ Full Time (Three Years)
❖ **Eligibility:**	➢ +2 Pass
❖ **Stream:**	➢ Regular
❖ **Medium:**	➢ English

1. CHOICE-BASED CREADIT SYSTEM

The learning process is more adaptable with a Choice-Based Credit system. With this setup, students can learn at their own pace. In conjunction with the relevant university committee, the student will select electives from among the many options made available by the department. The students take extra classes and get more credits than they need. They can also take use of the knowledge of all the faculty members at their disposal by learning across and within disciplines.

2. CREDITS

The term "CREDIT" describes the importance placed on a course, typically in connection to the number of credit hours allotted to it. Credits are typically allocated to each course based on how many lectures, tutorials, laboratory sessions, and other learning opportunities are necessary to cover the course material in a 15-week period. Weekly lectures last for one hour, or one credit. One credit is equivalent to two hours of laboratory or filed work.

The Tamil Nadu Physical Education and Sports University follows the **Choice Based Credit System (CBCS)**. One credit is equal to one teaching hour per week during the semester. The CBCS in B.Sc., Yoga Degree Programme would have five components and the total credit requirements for all components in three years is 140 credits.

1 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

2 **Core course:** Are course that are basic to the subject of the degree. This is a course which is to be compulsorily studied by a student as a core requirement to the completion of the program.

3 **Elective Courses:** This is a course that is supportive to the discipline of study, provides an expanded scope, enables exposure to some other domains or nurtures proficiency/skills. Elective papers can be of two types: Discipline Specific Elective (DSE) and Generic Elective (GE).

4 **Discipline Specific Elective (DSE):** These courses are inter disciplinary in nature and considered similar to core course. And, the students have to choose one course from the option provided for them.

5 **Generic Elective (GE):** These courses add generic proficiency to the students. Students have to choose generic elective courses in consultation with the head of the department from the Generic Elective courses offered by other Division of study in Sports Science or from other Departments in university.

6 **Skill Enhancement Courses (SEC)** (minimum 4 for regular courses): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work. The main purpose of these courses is to provide students life-skills in hands-on mode so as to increase their employability.

7 **Ability Enhancement Courses (AEC):** The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; i. Environmental Science and ii. English/Hindi/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.

8 **Ability Enhancement Compulsory Courses (AECC):** Environmental Science, English Communication/Hindi Communication/MIL Communication.

The following are the components:

3. CREDIT DISTRIBUTION

The Credit distribution for the six semesters aregivenbelow:

SEMESTER	CREDITS	TOTAL MARKS
I	23	**800**
II	23	**800**
III	23	**800**
IV	25	**800**
V	26	**800**
VI	21	**800**
	141	**4000**

4. COURSE WEIGHT

1. Courses have been designed with weightage of one, two, three /four credits, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise lectures/tutorials/ laboratory/fieldwork/outreach activities/project work/ vocational training/viva/seminars etc. or a combination of some of these.
2. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

5. PROGRAMME

The term "programme" refers to any set of classes that can culminate in a certificate or degree being granted.

6. COURSES

"COURSES" is the name of a program's component (a paper). The department uses a unique course code to identify each course it offers. To effectively address the needs of teaching and learning, a course includes lectures, tutorials, laboratories, seminars, projects, hands-on training, report writing, viva-voces, or a mix of these.

7. SEMESTERS

Two semesters make up an academic year. Courses are offered throughout 15 teaching weeks per semester, with the additional 5 weeks to be used for conducting exams and gathering assessment data. 30 hours of work are broken up into 5 or 6 days each week.

8. DEPARTMENTAL COMMITTEE

The department's faculty makes up the department committee. The departmental committee will oversee selecting students for all the programmes that the department offers, conducting entrance exams and selection processes, checking records, admitting students, and providing evaluations. The departmental committee decides the courses to consider and defines how many credits should be distributed per semester and per course. It will also list the number of lectures, tutorials, practical seminars, etc. for each subject. Teachers create the courses (core, discipline-specific electives, and non-major electives), which are then approved by departmental committees. The board of studies must approve all courses that the departmental committee has approved. The course's instructor will also oversee keeping students enrolled in the course.

9. ELIGIBILITY FOR ADMISSION

The candidates should have completed 12th standard (10+2) in any discipline form a recognized board or equivalent.

10. MEDIUM OF INSTRUCATION: English& Tamil

11. MINIMUM DURATION OF PROGRAMME

Three years are allotted for the programme. There will be two semesters—odd and even—in each year. Even semesters run from November/December to April/May, and odd semesters run from June/July to October/November. Each semester must have at least 90 working days with a minimum of five hours of instruction per day. This equates to 450 teaching clock hours (excluding days used to hold university end-of-semester exams).

12.EXAMINATION AND EVALUATION

The examination shall be conducted separately for theory and practical to assess (remembering, understanding, applying , analyzing ,evaluating and creating) the knowledge required during the study. There shall be two systems of examinations viz., internal, and external examinations. The internal examinations shall be continuous internal assessment tests 1 (CIA 1&2).

1. Each course will be assessed on the basis of 100 marks. The marks would be divided between internal and external assessment.
2. There shall be one end semester external examination for each course in every semester consisting of 75% (75 marks) weight in theory and 75% (75 marks) in practical courses.

3 .Each Theory course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	Marks
Attendance	**5**
Assignments /Seminars /quizzeetc	**5**
Test Paper – I & Test Paper - II	**5**
Model Examination	**10**
Total	**25**

4.Each Practical Course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Practicum	Marks
Attendance	**5**
Internal Viva	**5**
Rough Record	**5**
Lab Performance	**10**
Total	**25**

5. The minimum passing standard will be 40% for the external and internal component of each theory course, i.e. 30 marks out of 75 (external - 40% of 75 marks) and 10 marks out of 25 (internal - 40% of 25 marks).In practical minimum passing standard will be 40% for the external exam and internal assessment for each practical course.

13. INTERNAL ASSESSMENT

The internal assessment shall comprise a maximum of 25 marks for each subject. The following procedure shall be followed for awarding internal marks.

S.NO	CONTENT	MARKS
1	Average marks of two CIA test	15
2	Attendance	2
3	Seminar/group discussion/quiz	4
4	Assignment/field trip report/case study report	4
	Total	25

14. PATTERN OF QUESTION PAPER AND EVALUATION:

The following procedure will be followed for evaluation:

a) The Question paper pattern under CBCS will include three sections carrying 2 marks, 5 marks and10 marks questions respectively.

I. PART– A-10Questions, (Answer all the questions) - 10 X 2 = 20 Marks
II. PART- B– 5 Questions – 11(a) (or) Question – 11(b) - 5 X 5 = 25 Marks
III. PART– C- 5 Questions, (Answer any three questions)- 3 X 10 = 30Marks

b) Single valuation will be done by the Examiners duly appointed by the University. The answer scripts are valued either by internal or external examiners.

c) A student is required to secure a minimum of40% marks in each course in the End Semester Examinations, i.e. 30marks out of 75 and a total of 40 marks out of 100 including Internal Assessment.

15.ATTENDANCE REQUIREMENT FOR APPEARING SEMESTER EXAMINATIONS:

1 Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course.

2 Students must have 75% of attendance in each course for appearing in the examination.

3 Students who have 74% to 70% of attendance shall apply for condonation in the prescribed form with the prescribed fee.

4 Students who have 69% to 65% of attendance shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

5 Students who have below 64% to 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Carry over to the next semester.

6 Students who have below 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Re do the course.

16. END SEMESTER EXAMINAITION (ESE)

1 The ESE will consist of à written examination of three hours duration for a maximum score of 75. The following procedure will be followed for evaluation.

2 A candidate who has secured a minimum of 40 marks in all courses prescribed in the programme and earned a minimum of the credits will be considered to have passed the Bachelor's Degree Programme.

PART- A -10Questions, (Answer all the questions) - 10 X 2 = 20 Marks

PART- B - 5 Questions – 11(a) (or) Question – 11(b) - 5 X 5 = 25 Marks

PART- C - 5 Questions, (Answer any three questions)- 3 X 10 = 30Marks

3 Distribution of 25 Marks for Semester End Practical Examination weightage on the following:

Components of External Evaluation of practicum	Marks
Lab Experiment / Field Experiment	10

Lab Performance / Demonstration	5
Viva-voce	5
LabRecord	5
.Total	25

4. A Student will be issued, hall ticket only if one produces "**No Dues**" certificates from the concerned department, the laboratory, the Registrar's Office, the Library and Hostel.

17. THE AWARD OF GRADES IS AS FOLLOWS:

Range of Marks	Grade Points	Letter Grade	Description
90 and above	9.0-10.0	O	Outstanding
80 to 89	8.0-8.9	D+	Excellent
75 to 79	7.5-7.9	D	Distinction
70 to 74	7.0-7.4	A+	Very Good
60 to 69	6.0-6.9	A	Good
50 to 59	5.0-5.9	B	Average
Less than 50	0.0	U	Re-appear
ABSENT	0.0	AAA	Absent

18. PROJECT.

PLAN OF WORK: The candidate shall undergo project/dissertation work during the final semester. The candidate should prepare a scheme of work for the dissertation/project and should get approval from the guide. The candidate, after completing the dissertation / project work, shall be allowed to submit it to the university department at the end of the final semester. If the candidate id desirous of availing the facility from other department/universities / laboratories / organizations.

19.INTERSHIP

The students who have opted for an internship must undergo various hospitals (naturopathy, siddha, Allopathy) in the reputed organizations to assure therapeutic. The student must find hospitals related to their discipline (public limited /private limited/owner/NGOs etc..,) in consultation with the faculty in charge/ Mentor and get approval from the head of the department and department committee before going for internship.

1. No. of copies of dissertation/project report/ internship report

2.The candidate should prepare three copies +2(including guide and scholar) of the dissertation/project report/ internship report and submit the same for the evaluation of the examiners.

3.Format to be followed for internship report.
The format / certificate for internship report to be followed by the student are given below.

4.Tittle page – **Format of the tittle page**

Tittle of Internship Report

Internship report submitted in partial fulfilment of the requirement for the

B.sc / M.sc Yoga &Yoga Therapy degree in **……** to the Department of yoga, TNPESU, 600127.

By

(Student Name)

(Register Number)

University Logo

20. VILLAGE PLACEMENT PROGRAMME

The aim of the introduction of this village placement programme is to extend out to reach environmental awareness, social activities, hygiene, and health to the rural people of this region. The students in their third semester have to visit any one of the adopted village within the jurisdiction of deportment of yoga, TNPESU and can arrange various programs to educate the rural mass in the following areas for five day based on the theme.

1. Yoga for all,

2. Naturopathy food,

3. 365 days yogic practices.

SEMESTER- I

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	UYO23LT101	Tamil – I/ Spl. English	3	3	25	75	100
Part-II	UYO23LE102	English I	3	3	25	75	100
Part-III	UYO23CT103	Fundamentals of Yoga	4	4	25	75	100
	UYO23CT104	Human Anatomy and Physiology - I	4	4	25	75	100
	UYO23CE105	Classical Yoga – I	4	3	25	75	100
	UYO23SE101	Human Anatomy and Physiology - Practicum-I	4	2	25	75	100
	UYO23SE102	Classical Yogic Practices – I	4	2	25	75	100
Part-IV	UYO23AE101	Soft Skill Development – I (English)	2	2	50	50	100
			28	**23**	**225**	**575**	**800**
Remark:Soft skill I - 2 hours handled by English: Totally 3+2=5							

SEMESTER- II

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	UYO23LT201	Tamil – II / Spl. English	3	3	25	75	100
Part-II	UYO23LE202	English II	3	3	25	75	100
Part-III	UYO23CT203	Basic Texts in Yoga	4	4	25	75	100
	UYO23CT204	Classical Yoga– II	4	4	25	75	100
	Elective	Human Anatomy & Physiology – II		3			100
	UYO23SE201	Classical Yogic Practices – II (Practical)	4	2	25	75	100
	UYO23SE202	Human Anatomy & Physiology – II (Practical)	4	2	25	75	100
	Naan Mudhalvan	Communication Skills for Employability	4	2	50	50	100
			26	**23**	**200**	**600**	**800**

Note:

1. *Naan Muthalvan - Skill course - external 50 marks will be assessed by industry and internal will be conducted by the respective course teacher.

SEMESTER- III

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	UYO23LT301	Tamil - III / Spl. English III	3	3	25	75	100
Part-II	UYO23LE302	English III	3	3	25	75	100
Part-III	UYO23CT303	Patanjali Yoga Sutras	4	4	25	75	100
	UYO23CT304	Methodology of Teaching Yoga	4	4	25	75	100
	UYO23CE305	Computer Application in Yoga	4	3	25	75	100
	UYO23SE301	Teaching Practices	4	2	25	75	100
	UYO23SE301	Computer Programming	4	2	25	75	100
Part-IV	UYO23AE101	Soft Skills Development-II	4	2	25	75	100
			30	**23**	**200**	**600**	**900**
Remark: Soft skill I - 2 hours handled by English: Totally 3+2=5							

SEMESTER- IV

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	UYO23LT401	Tamil-IV /Spl. English IV	3	3	25	75	100
Part-II	UYO23LE402	English - IV	3	3	25	75	100
Part-III	UYO23CT403	Research Process in Yoga	4	4	25	75	100
	UYO23CT404	Yoga Therapy – I	4	4	25	75	100
		Indian Traditional Systems of Medicine and therapies		3			
	UYO23SE401	Classical Yogic Practices – III	4	2	25	75	100
	UYO23SE404	Clinical Applications of Yoga Therapies	4	2	25	75	100
Part-IV	Naan Mudhalvan	http://kb.naanmudhalvan.in/Special:Filepath/Microsoft_Course_Details.xlsx	4	2	50	50	100
	UYO23ES301	Environmental studies	2	2	25	75	100
			28	**25**	**250**	**650**	**900**

Note:

1. *Naan Muthalvan - Skill course - external 50 marks will be assessed by industry and internal will be conducted by the respective course teacher.
2. A minimum of four weeks Internship will be carried out during the summer vacation after the **second year.** Viva Voce will be conducted by the internal examiners of the Department and marks shall be sent to the COE of University for its inclusion in the **Fifth Semester Marks Statement.**

SEMESTER- V

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-III	UYO23CT501	Yogic Psychology	4	4	25	75	100
	UYO23CT502	Hatha Yoga Text – I	4	4	25	75	100
	UYO23CT503	Classical Yoga with props & Modifications – IV	4	4	25	75	100
	UYO23CE504	Basic Biomechanics	4	3	25	75	100
	UYO23AE501	Nutrition & Yogic Diet / Modifications'	4	3	25	75	100
	UYO23SE502	Yoga Project & Viva voce	4	4	25	75	100
Part-IV	UYO23VE501	Value Education	2	2	25	75	100
		Internship		2			100
			30	**26**	**200**	**600**	**900**

Note:

1. # Only Continuous Internal Assessment (CIA).
2. A Group of five members work and submit the report for assessment.

SEMESTER- VI

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-III	UYO23CT601	Tirumoolar'sTirumandiram	4	4	25	75	100
	UYO23CT602	Stress Management	4	4	25	75	100
	UYO23CT603	Revenue models in Yoga	4	4	25	75	100
	UYO23SE601	Yoga Therapy – II	4	3	25	75	100
	UYO23SE602	Advanced Yogic Practices	4	3	25	75	100
Part-IV	UYO23EA602	Extension Activities - Village placement Programme	2	1	50	50	100
Part-V	UYO23CE601	Corporate Interaction / Yoga centre visit / Entrepreneurship	-	2	-	-	100
			22	**21**	**175**	**425**	**700**

***L (Lecture), T (Tutorial), P (Practical), C (Credits), CIA (Continuous Internal Assessment), ESE (End Semester Exam)**

Note:

1. @ No University Examinations. Only Continuous Internal Assessment (CIA)

G - Discipline Specific Elective Courses (DSEC)

V semester

1) Usage of Yogic props

2) Introduction to Traditional Indian systems of Medicine & therapies

3) Yoga and fitness

4) Basic Biomechanics

5) Hatha Yoga Texts

6) Yogic diet and Nutirition

VI Semester

1) Tirumoolar'sTirumandiram

2) Yoga Therapy - II

3) Yoga and Wellness

4) Revenue Models in Yoga

5) Methods of Naturopathy

6) Stress management

B.Sc. Yoga

Semester	Credits	Marks
I	23	800
II	23	800
III	23	800
IV	25	800
V	26	800
VI	21	800
Total	141	4000

B.SC. (YOGA)

3 years (6semesters)

SEMESTER - I

DETAILED SYLLABUS

BSY101 SPECIAL ENGLISH I (C)

FIRST YEAR SEMESTER I

OBJECTIVES:

To improve Four Primary Skills though prose, poem, short story, one act plays and grammar.

To make learners comprehend and appreciate various cultures and varieties of presentation in the representative texts.

LEARNING OUTCOMES:

1. Students can analyze a poem, prose short story etc.
2. Students can describe, explicate, poem. Prose, short stories etc.
3. Students can be participating all kinds of grammatical practice and exercise in the beginning level.
4. To help learners understand the salient features of one-act plays.
5. To expose learners to the sociological and psychological dimensions of characterization

UNIT-I- PROSE

i. My Greatest Olympic Prize - Jesse Owens

ii. If, you are wrong, admit it - Dale carnage

UNIT-II- POEM

i. Pulley - George Herbert

ii. La Belle Dame Sans Merci - John Keats

UNIT-III- SHORT STORIES

i. The Snake in the Grass - R.K. Narayan

ii. Three Questions - Leo Tolstoy

UNIT-IV- ONE ACT PLAY

i. A Marriage proposal - Anton Chekhov

ii. The Goat - Edward Albee

UNIT-V- BASIC ENGLISH GRAMMAR

i. Parts of Speech

ii. Kinds of Sentence

iii. Tense and their forms.

iv. Sentence Patterns

TEXTBOOK

1. Bhongle, Rangrao. (Ed) Contemporary American Literature: Poetry, Fiction, Drama and Criticism.
2. Collins - An Introduction to American Literature Crawford, Bartholow V et al. American Literature.

REFERENCE BOOK

1. Mathiessew, F.O. American Literature up to Nineteenth Century Spiller - Cycle of American Literature - A New Harvest of American Literature
2. Great Indian “Twentieth Century writers and their works” by Emerald publications.

PART – II

BSY102 ENGLISH - II

FIRST YEAR SEMESTER I

UNIT - I

i. PROSE

ii. Abraham Lincoln: Gettysburg Address

iii. G.K. Chesterton: On running after one's hat.

UNIT - II

i. POETRY

ii. George Herbert: Pulley or Gift of God

iii. Robert Frost: Mending wall

iv. A.D.Hope: Prometheus Unbound

UNIT- III

i. DRAMA

ii. Norman McKinnell:The Bishop's Candlesticks

UNIT- IV

i. SHORT STORY/VALUE EDUCATION Somerset Maugham: The Ant and the Grasshopper

ii. Henry: The Gift of the Magi

UNIT- V

i. COMMUNICATIVE GRAMMAR

ii. Articles

iii. Prepositions

iv. Verbs and Tenses

v. Framing Questions

vi. Question

vii. Punctuation

BSY103 - FUNDAMENTALS OF YOGA

Program Objectives:

- To know about the origin and History of Yoga
- To know about the conception of Yoga
- To understand the philosophy of Yoga
- To know about the yoga perspective in Books & Epics
- To know about the concept of Yoga in vedantic approach

UNIT - I

i. Yoga: Meaning – Definitions – Need - Nature - Aim and Objectives, Principles, Philosophy and Scope of Yoga
ii. Philosophy: Scope of Philosophy
iii. Shad Darshanas: Nyaya, Vaiseshika, Sankhya, Yoga, Mimamsa, Vedanta.
iv. Misconceptions and Clarifications of Yoga-Yoga and Education.

UNIT - II

History of Yoga - Modern Developments - Contribution to yoga by Vedas, Upanishads, Tantra, Bhagavad Gita, Yoga Vasishtha, Yoga Sutras, Thirumandiram, Yoga YajnavalkyaSamahitha, Goraksataka, Hatha Yoga Pradipika, GherandaSamhitha, Siva Samhitha, Hatha Ratnavali, Siddha SiddhantaPaddihati, NaradaBhakthi Sutras, Yoga Rahasya.

UNIT - III

Contributions to Yoga by Ramakrishna, Swami Vivekananda, Sivananda, Sri Aruobindo, Maharishi Mahesh Yogi, Swami Rama, Krishnamacharya, Swami Kuvalayananda, Ramana Maharishi, Vethathiri Maharishi, Swami Dayanand Saraswathi- Sri YogendrajiParamahamsaYoganada- B.K.S Iyengar, GurumahanParanjothiyar.

UNIT – IV

Contributions of Yoga to Religions: Hinduism, Jainism, Buddhism, Christianity, Islam, Sufism - Spirituality - Role of Yoga & Religions on Spirituality - Methods to promote Spirituality.
Paths of Yoga: Hatha Yoga, Bhakti Yoga, Jnana Yoga, Karma Yoga, Raja Yoga, Mantra Yoga, Laya Yoga, Yantra Yoga.

UNIT - V

Ashtanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, Samadhi.
Schools of Yoga: Sivananda Yoga, Integral Yoga, Bihar School of Yoga, Kundalini Yoga, Ashtanga Yoga, Viniyoga, Iyengar Yoga, Hatha Yoga, Swara Yoga, One Minute Meditation and Mantra Yoga.

Program Outcomes:

- Student can get the basic knowledge about Yoga.
- They will get the full idea about the Etymology and Principles of Yoga
- Student can get full knowledge in Indian Philosophy
- They can get the very valuables thoughts in the most popular books and epics.
- Finally, the student will get a fullblueprint about Yoga.

References:

1. Iyengar B. K. S (1976), “Light on Yoga”, London, Unwin paper packs.
2. Sivananda Saraswathi Swami (1934), “Yoga Asanas Mudras”, My magazine of India.”
3. Satyendra Saraswathi Swami (2008), “Asana, Pranayama, Mudra, Bandha”, Munger: Yoga Publications Trust.
4. Iyengar B.K.S (2008) Light on pranayama, New Delhi: Haper Collins publishers India.
5. Vishnu Devananda Swami (1972), “The complete Illustrated Book of Yoga”, New York Pocket Books.
6. Chandrasekaran K (1999), “Sound health through yoga”, Sedapatti: Prem Kalyan Publications.
7. Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari: Yoga Niketan trust.
8. Coulter, H David (2001) Anatomy and Hatha yoga, USA: Body and Breath Inc.
9. Kirk Martin (2006) Hatha Yoga Illustrated Champaign: Humenkinetics.
10. Gharote (2004) “Applied Yoga”, Lonavala: Kaivalyadhama.
11. Kathy Lee Kampmeier and Diane M. Ambrosini (2006), “Instructing Hatha Yoga, Champaign: Human Kinetics.”

BSY104- HUMAN ANATOMY AND PHYSIOLOGY - I

Program Objectives:

- To know about the structure and function of cell
- To know about the Nervous system
- To understand the Digestive system
- To know about the Respiratory system
- To know about the Cardiovascular system
- To Know about the Endocrine system

HumanAnatomy(Section- A)

Unit-I: Theory

GeneralAnatomy:

(1) Cell:Parts,Name ofCytoplasm organellesand inclusionwiththeirFunctions.
(2) Epithelium:Typeswithexamplesandlightmicroscopicstructure.
(3) ConnectiveTissue:Classification withemphasis totendon andligament.
(4) Cartilage:Types with example.
(5) Bone:Typeswithexample,typesofOssification(StageofOssificationnotrequired).
(6) Joints:Classification withexample, emphasisto synovialjoints.
(7) Muscles:Types(detailsofEMpicturenotrequired).
(8) Nervoustissue:StructureofaNeuron,SynapseReflexarc,DegenerationandRegeneration oftheNerve,typicalspinal nerve.
(9) Embryology

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(a) Ovum, Spermatozoa,fertilization and formation of germlayersand their derivations.
(b) Developmentofskin,fascia,bloodvessels,lymphatic.
(c) Developmentofbones,axialandappendicularskeletonandmuscles.
(d) Neuraltube,developmentofspinalcord, Brainstemandbrain(cerebrum, cerebellum)

Unit-1I: Regional AnatomySuperior Extremity

(1) Pectoral region, Axilla, Brachial plexus, muscles of arm (front & back), muscles of forearm(front & back) palm (muscle, nerve, vessels) Synovial Bursae of hand and palmar spaces,nerves(axillary,median, ulnar, radial),Cutaneous distribution according todermatomes,RelatedClinicalanatomy.
(2) Joints:Shouldergirdle,shoulder, elbow, radial-ulnar,wrist, first carpo-metacarpaljoints.

InferiorExtremity

(1) Front of thigh, femoral triangle, lumber plexus, lnguinal group of lymph Nodes, glutal region,back of thigh, leg (anterior, lateral, posterior compartments) foot (dorsum, plantar), Venousdrainage of inferior Extremity, Nerve and their distribution (femoral, sciatic, tibial, commonperoneal,obturator),Archesoffoot,Cutaneousdistributionaccordingtodermatomes,Related clinicalAnatomy.
(2) Joint,hip, knee, ankle, sub-talar&mid-tarsal joints.

Unit-III

Abdomen&Pelvis

(1) Abdominal wall, inguinal canal, Stomach, Liver, spleen, pancreas, kidney with ureter, smallIntestine, Large Intestine, Abdominal Aorta, Portal vein, Diaphragm, Sacral plexus,

posteriorabdominalwall.
(2) Sacro-Iliacjoint.

Thorax

(1) Thoracic wall, typical intercostals space, Mediastinum (boundaries, contents), Heart with itsinternal and external features, Blood vessels, Typical spinal Nerve, movement of ribs duringRespiration, pleura, lungs.

Head&Neck

(1) Muscle of face, Cutaneous distribution of Trigeminal nerve, Triangles of neck (anterior &posterior) Sternocleidomastoid and Trapezius muscles, Muscle of mastication, Nasal cavity,PharynxandLarynx(Parts, Sensorydistribution).
(2) Joints: Temporo-mandibularJoint,Atlanto-occipitalandAtlanto-Axialjoints.

Unit-IV:Neuroanatomy

(1)GeneralIntroductionandclassification,AutonomicNervoussystem
(3) Sympathetic and Para Sympathetic with their difference in distribution and function). Spinalcord,spinalReflex,Pyramidalandextra-pyramidaltracts(DetailNucleusnotrequired),Blood supply; brainstem: gross features and blood supply; Cerebellum: gross features andfunctions;Cerebrum:grossfeatures,functionalareas,bloodsupply;Relatedclinicalanatomy.

CranialNerves

(1) Namesinorder,IndividualCranialNervedistribution,IdeaaboutUpperMotorNeuronandLowerMotor Neuron, applied Anatomy.

VertebralColumn

(1) Identificationof vertebraeof differentregions.
(2) Intervertebraljoints

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(3) rvertebraldisc
(4) Muscles ofvertebral column
(5) Weighttransmission
(6) Applied anatomy
(7) Radiologicalanatomy

Unit V

Impact of yogic practices on the Anatomy and physiology of different systems of human body-cells, bones, joints and muscles, skin. Cardio-vascular system, respiratory system, digestive & excretory system. Hematological and immune system, glands, nervous system, body metabolism, special senses, locomotor system.

Program Outcomes:

- Student can get the basic knowledge about cell.
- They will get the idea about Nervous system of our body.
- Student can get Knowledge about Respiratory system.
- They can get knowledge about Cardiovascular system.
- They can get knowledge about endocrine system.
- Finally, the student will get full knowledge about cells, Tissues, Respiratory system, Cardiovascular system, and Nervous system of our body.

References:

1. Telles Shirley (2006) A Glimpse of the human body, Bangalore, Swami Vivekananda yoga prakashana

2. Shri Krishna (1988) Notes on structure and functions of human body and Effects of yogic practices on it, Mumbai: ICYHC, Kaivalyadhama.

3. Ray S Dutta (2001) Yogic Exercise: Physiologic and psychic processes, New Delhi:

4. Evelyn C peace (1997) Anatomy and physiology for nurses, New Delhi: Jaypee Brothers.

5. Leslie Kumar (2007) Yoga Anatomy, Champaign: Human Kinetics

6. Nagendra Kumar (2007), Yoga Bhyasa for week days, Bangalore: OM mantra DevoBhava.

7. Gore M.M. (2003) Anatomy and Physiology of yogic practices, Lonavala Kanchanprakshan.

8. Bruce, J. Noble (1986) Physiology of Exercise and Sport. St. Louis C.V. Mospy.

9. Shavel LG (1981) Essentials of Exercise Physiology, New Delhi: Surjeet Publication.

10.Fax. E.L. and Mathew D.K., (1981) The Physiological basis of Physical Education and Athletics III Ed. Philadelphia W.B. Sannders.

11.Clerke D.H., (1975) Exercise Physiology, New Jersy: Prentice Hall.Selvalakshmi. S (2017) Anatomy and Physiology Madurai: Shanlax Publications.

UY023CE105 - CLASSICAL YOGA - I

Program Objectives:

- To know about the Essential of Yoga Practices
- To know about the Loosening Exercise
- To understand the Basics of Asanas.
- To know about the Pranayama & Kriyas.
- To know about the concept of Bandas, Mudras and Relaxation Techniques.

UNIT - I

Essentials of Yogic Practices - cleanliness and food, bath, time, sun, closing eyes, place, breathing, awareness, age limitations, sequence, blanket, clothes, position, emptying the bowels and stomach counter pose, contra-indications, duration, straining, special provisions for women and patients, fitness, posture, side effects.

UNIT - II

Loosening Exercise (sithalikarmavyayama) and Surya Namaskar (Bihar school of yoga 12 Steps) -Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, and Benefits.

UNIT – III

i. **Asana:** Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each asana.
ii. **Standing:** Ardhachakrasana, Padhahastasana, Trikonasana, Ekapadasana.
iii. **Sitting:**Padmasana, vajrasana, Ustrasana, Patchimotasana.
iv. **Supine:**Utthanapadasana, Arthahalasana, Savasana.
v. **Prone:** Bhujangasana, Ardhashalabasana, Makrasana.

UNIT - IV

i **Pranayamaand Kriyas:** Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every one.

ii **Pranayama**- Surya nadi, Chandra nadi, suryabhedhana, Chandra bhedhana, Nadisudhi.

iii **Kriya –** Kapalapathi, Vamanadhauti.

UNIT – V

Bandha, Mudra and Relaxation Technique: Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every one.

Bandha : JalandiraBandha, MoolaBandha.

Mudras : Chin mudra, chinmaya mudra, adi mudra, Brahma mudra, Bhairava mudra, Bhairavi mudra.

Relaxation Techniqe: InstantRelaxation Technique, Quick Relaxation Technique.

Program Outcomes:

- Student can get the basic knowledge about Essential of Yogic Practices.
- They will get the full idea about the Asanas.

- Student can get full knowledge about Pranayama and Kriyas.
- They can get full knowledge about Mudras and Bandhas
- Finally, the student will get full theoritical Knowledge about Relaxation Technique.

References:

1. Iyengar B. K. S (1976) Light on yoga, London, Unwin paper packs.
2. Sivananda Saraswathi swami (1934) Yoga Asanas Madras: My magazine of India.
3.SatyendraSaraswathi swami (2008) Asana, Pranayama, Mudra, Bandha, Munger: Yoga publications trust.
4. Iyengar B.K.S (2008) Light on pranayama, New Delhi: Haper Collins publishers India.
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6. Chandrasekaran K (1999) sound health through yoga Sevdvfdapatti: Prem Kalyan Publications.
7. Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari: Yoga niketan trust.
8. Coulter, H David (2001) Anatomy and Hatha yoga, USA:Body and Breath Inc.
9. Kirk Martin (2006) Hatha Yoga Illustrated Champaign: Humenkinetics.
10. Gharote (2004) Applied yoga, Lonvla: Kaivalyadhama.
11. Kathy Lee Kapppmeier and Diane M. Ambrosini (2006) Instructing Hatha Yoga, Champaign: Human Kinetics.

PRACTICAL -I: CLASSICAL YOGIC PRACTICES – I – (PRACTICUM - I)

Program Objectives:

- To know about the Essential of Yoga Practices
- To know about the Loosening Exercise
- To understand the Basics of Asanas.
- To know about the Pranayama & Kriyas.
- To know about the concept of Bandas, Mudras and Relaxation Techniques.

UNIT - I

Essentials of Yogic Practices - cleanliness and food, bath, time, sun, closing eyes, place, breathing, awareness, age limitations, sequence, blanket, clothes, position, emptying the bowels and stomach counter pose, contra-indications, duration, straining, special provisions for women and patients, fitness, posture, side effects.

UNIT - II

Loosening Exercise (sithalikarmavyayama) and Surya Namaskar (Bihar school of yoga 12 Steps) - Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, and Benefits.

UNIT – III

Asana

Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every asana.

Standing:

Ardhachakrasana, Padhahastasana, Trikonasana, Ekapadasana.

Sitting:

Padmasana, vajrasana, Ustrasana, Patchimotasana.

Supine:

Utthanapadasana, Arthahalasana, Savasana.

Prone:

Bhujangasana, Ardhashalabasana, Makrasana.

UNIT - IV

Pranayamaand Kriyas

Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every one.

Pranayama- Surya nadi, Chandra nadi, suryabhedhana, Chandra bhedhana, Nadisudhi. **Kriya –** Kapalapathi, Vamanadhauti.

UNIT – V

Bandha, Mudra, and Relaxation Technique

Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each one.

Bandha

JalandiraBandha, MoolaBandha.

Mudras

Chin mudra, chinmaya mudra, adi mudra, Brahma mudra, Bhairava mudra, Bhairavi mudra.

Relaxation Techniqe:

Instant Relaxation Technique, Quick Relaxation Technique.

Program Outcomes:

- Student can get the basic knowledge about Essential of Yogic Practices.
- They will get the full idea about the Asanas.
- Student can get full knowledge about Pranayama and Kriyas.
- They can get full knowledge about Mudras and Bandhas

References:

1. Iyengar B. K. S (1976) Light on yoga, London, Unwin paper packs.
2. Sivananda Saraswathi swami (1934) Yoga Asanas Madras: My magazine of India.
3. SatyendraSaraswathi swami (2008) Asana, Pranayama, Mudra, Bandha, Munger: Yoga publications trust.
4. Iyengar B.K.S (2008) Light on pranayama, New Delhi: Haper Collins publishers India.
5. Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York Pocket Books.
6. Chandrasekaran K (1999) sound health through yoga Sedapatti: Prem Kalyan Publications.
7. Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari: Yoga niketan trust.
8. Coulter, H David (2001) Anatomy and Hatha yoga, USA:Body and Breath Inc.
9. Kirk Martin (2006) Hatha Yoga Illustrated Champaign: Humenkinetics.
10. Gharote (2004) Applied yoga, Lonvla: Kaivalyadhama.
11. Kathy Lee Kapppmeier and Diane M. Ambrosini (2006) Instructing Hatha Yoga, Champaign: Human Kinetics.

PRACTICAL -II: HUMAN ANATOMY AND PHYSIOLOGY–I (PRACTICAL)

Program Objectives:

Objectives: The objectives behindteachingAnatomy and Physiologyis to

- Makestudentsfamiliarwith the systems of the body.
- Give a hand on experience about the human body usingmodels, charts and pictures.
- Makestudentsunderstand the organization of the body with respect to structural components.

UNIT - I

SuperiorExtremity

(1) Demonstrations on dissected specimens of upperlimb.
(2) Osteology:clavical,scapula,humerus,radius,ulna,articulatedhand,orderofcarpalbones.
(3) Surfaceanatomy

InferiorExtremity

(1) Demonstration on dissectedspecimens oflowerlimb
(2) Osteology:Hipbone,femur,tibia,fibula,articulatedfoot(Identificationoftarsalandmajor muscleattachments).
(3) SurfaceAnatomy

UNIT -II

Abdomen&pelvis

(1) Abdominalviscera, Visceraof pelvis andblood vessels.
(2) Osteology: lumbarvertebrae, sacrum,bonypelvis

Thorax

(1) Demonstrationoncadaverofthoracicwall,mediastinalstructure,Heart,Lungs.
(2) Osteology:Sternum,Ribs(onlygeneralfeatures),ThoracicVertebrae(Identification,generalfeatures).

UNIT - III

Head&Neck

(1) Demonstrationoncadaveroforalcavity,nasalcavity,pharynx,larynx,sagittalsections ofhead&neck,muscles of faceand triangles ofneck.
(2) Cranial bones (Identification of individual bone with general features), Base of skull :different foramina in relation to cranial nerves, Cranial fossae and their relation tobrainand Hypophysis cerebri, , Cervicalvertebrae.
(3) Surfaceanatomy.
(4) Radiologicalanatomy.

UNIT - IV

Neuroanatomy

(1)Demonstrationofgrossspecimensofspinalcord,brainstem,cerebellum,cerebrumandmeninges,Identi ficationofcranialnervesemergingfrombrainandbrainstem

Histology

(1) Epithelium(Simple,Compound)
(2) Connectivetissue (Cartilage&Bone)

(3) Muscle(smooth &skeletal)
(4) Nervoustissue(nervetrunk,spinalcord,cerebellum,cerebrum,dorsalrootganglion,sympatheticganglion)
(5) Bloodvessels(Large&mediumsizedarteriesandvein)

UNIT – V

Continuous Evaluation by the Teachers.

Program Outcomes:

- Student can get the basic knowledge about Demonstration of Human Skeleton.
- They will get the full idea about the Osteology and Myology.
- Student can get full knowledge in Bones and Joints.
- They can get the knowledge about Demonstration of Organs and viscera.
- Finally, the student will get full practical knowledge in Anatomy.

B.SC. (YOGA)
3 years (6semesters)

SEMESTER - II

DETAILED SYLLABUS

BSY201 PART I - LANGUAGE TAMIL – II/ HINDI – II/ SPL.ENGLISH

SPECIAL ENGLISHII (C)

OBJECTIVES:

1. To make students involved in Listening and writing for developing Basic Learning Skills and make familiar with Literary works and practice in analyze and describe literary works.

LEARNING OUT COMES:

1. To expose learners to short story writing over the centuries
2. To provide learners an insight into different cultures
3. To help learners appreciate different themes, strategies and techniques employed by the writers.

UNIT I - PROSE

1. The Refugee - K.A. Abbas
2. The lion and the Lamb - Leonard Clark

UNIT II – POEMS

1. The solitary Reaper -William wordsworth
2. Gift - Alice Walker

UINIT III- SHORT STORIES

1. The Postmaster - Rabindranath Tagore
2. The Model millionaire - Oscar wilde

UNIT IV- ONE ACT PLAYS

1. The dear departed: A comedy in one-act Stanley Houghton
2. The Sherif's Kitchen - Ronald Gow

UNIT V- COMMUNICATIVE GRAMMAR

Grammar, Framing Questions, common errors, more Grammars, word building, prefix and suffix.

TEXT BOOK

1. Panorama English for communication by Emerald publications.
2. Effective Communication Skills prepared and published by MTD

REFERENCE BOOKS:

1. English Grammar in use by Raymond Murphy, Cambridge publication 3rd edition.
2. Basic English Grammar by Betty.S.Azar and Stacy A.Hagen Pearson Publication 4th edition.

BSY202 PART II – LANGUAGE ENGLISH – II

UNIT- I

i PROSE

ii George Orwell: Sporting Spirit

iii Abdul Kalam: My visions for India

UNIT- II

i POETRY

ii Rudyard Kipling: If

iii Nissim Ezekiel: Night of the Scorpion

iv Emily Dickinson: Because I could not stop for Death

UNIT- III

i DRAMA

ii W H Andrews&GeoffreyDearmer: The Referee

UNIT- IV

i SHORT STORY/VALUE EDUCATION

ii Nadine Gordimer: Comrades

iii A.J. Cronin: Two Gentlemen of Verona

UNIT- V

i COMMUNICATIVE GRAMMAR

ii Degrees of Comparison

iii Direct and Reported Speech

iv Phrasal Verbs

v Use of Modals :Will, Can, Must, Shall

BSY203 BASIC TEXTS IN YOGA

Program Objectives:

- To know about the origin and History of Vedas and Upanishads.
- To know about the Bhagavad Gita.
- To understand the Yoga Vasista.
- To know about the yoga perspective in Hatha Yogic Texts.
- To know about the concept of Ancient Texts.

Unit – I

1. **Ishavasyopanishad:** Concept of Karmanishta; Concept of Vidya and Avidya; Knowledge ofBrahman;Atma Bhava

2. **KenaUpanishat: Indwelling Power;** Indriya and Antahkarana; Self and the Mind; Intutiverealizationof the truth; Truthtranscendental; Moral of YakshaUpakhyana

3. **KathaUpanishad :**Definition of Yoga;NatureofSoul;ImportanceofSelfRealization;

4. **Prashna Upanishad**: Concept of Prana and rayi (creation); Pancha pranas; The five mainquestions

Unit - II

5. **Mundaka Upanishad**: Two approaches to Brahma Vidya-the Para and Apara; The greatnessof Brahmavidya, The worthlessness of Selfish-karma; Tapas and Gurubhakti, The origin ofcreation,Brahmanthe target ofMeditation

6. **Mandukya**:Four Statesof Consciousness and its relation to syllables in Omkara

7. **Aitareya:**ConceptofAtma,UniverseandBrahman.

8. **Taittiriya Upanishad** Concept of Pancha Kosha; Summary of Shiksha Valli; Ananda Valli;Bhruguvalli.

9. **ChandogyaUpanishad**:Om(udgitha)Meditation;Sandilyavidya

10. **Brihadaryanaka Upanishad** : Concept of Atman and Jnana Yoga. Union of Atman andParamatman.

Unit –III
Bhagavad Gita
GeneralIntroductiontoBhagavadGita(B.G.).DefinitionsofYogainB.G.andtheirrelevance&Scope;Essential sofB.G-themeaningsofthetermsAtmaswrupa,Stithaprajna,SankhyaYoga

UNIT - IV

(Chpt.II), Karma Yoga (Chpt.III), Sanyasa Yoga and Karma Swarupa (Sakama and Nishkama) etc;Samnyasa, Dhyana Yogas (Chpt. VI); Nature of Bhakti (Chpt.XII), Means and Goal of Bhakti-Yoga;The Trigunas and modes of Prakriti; Three Kinds of Faith. Food for Yoga Sadhaka, Classification offood(Chpt.XIV&XVII)Daivasura-Sampad-VibhagaYoga(Chpt.XVI);Moksa-

UpadesaYoga(Chpt.XVIII)

Unit – V. Yoga Vasishtha

Highlights of Yoga Vashitha, Concept of Adhis and Vyadhis; Psychosomatic Ailments; The fourGatekeepers (Pillars) to Freedom; How Sukha is attained the Highest State of Bliss; Practices toovercome the Impediments of Yoga; Development of Satvaguna; Eight limbs of Meditation; JnanaSaptabhumika.

Program Outcomes:

- Students can get the basic knowledge about Yoga in Bhagavad Gita.
- They will get the full idea about the Yoga Vasista.
- Student can get full knowledge in Indian Ancient Texts.
- They can get the very valuables thoughts in the Hatha Yogic Texts.
- Finally, the student will get full Knowledge about Vedas and Upanishads.

References:

- Iyenger B.K.S (1976) Light on yoga, London, Unwin paperpacks
- Sivananda Sarawathi swami (1934) Yoga Asanas Madras My magazine of india.
- Satyanadasarawan swami (2008) Asana, Pranayama. Mudra, Bandha, munger: Yoga publications trust
- Iyenger B.K.S (2008) Light on pranayama. New Delhi :Haper Collins
- publishers India.
- Chandrasekaran k (1999) Sound Health Through Yoga, Sedapatti: Prem kalyan Publications
- Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books.
- Yogeshwaranandseraswathi swami (1975) First steps to higher yoga,Gangothari: Yoga niketan trust.
- Coulter, David (2001) Anatomy and Hatha yoga, USA Body, and Breath Inc
- Kirk Martin (2006) Hatha Yoha Illustrated Champaign. Humenkinetics
- Gharote (2004) Applied yoga, Lonvla. Kaivalyadhama
- Gharote (2004) Applied yoga, LonvlaKarvaiyadhama.
- Kathy Lee Kappmeier and Diane M.Ambrosini (2006) Instructing Hatha Yoga, Champaign: Human Kinetics.
- Satyanandasararwati Swami (2007) Meditations from thitantrasMurgar: yoga publications Trust.

CLASSICAL YOGA– II

Program Objectives:

- To know about the Essential of Yoga Practices
- To know about the Loosening Exercise
- To understand the Basics of Asanas.
- To know about the Pranayama & Kriyas.
- To know about the concept of Bandas, Mudras and Relaxation Techniques

Unit-I

Essentials of yogic practices, cleanliness and food, bath, time, sun, closing eyes, place, mirror, breathing, awareness, age limitations, sequence, blanket, clothes, position, emotying the bowels and stomach counter pose, contra-indications, duration, straining, special provisions for women and patients, fitness, posture, side effects.

Unit-II

Loosening Exercise (sukshmavyama) and Surya Namaskar (Bihar school of yoga 24 Steps) -Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, and Benefits.

Unit – III

Asana
Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every asana.
Standing:
Ardhakatichakrasana, Triyangathadasana, Parivarthatrikonasana, Veerabadhrasana-
Sitting:
Uttitapadmasana, Vakrasana, Komukasana, Janu sirasana.
Supine:
Chakrasana, Pavanamukthasana,Sedhubandasana.
Prone:
Dhanurasana, Shalabasana,Triyangabujangasana, Makrasana.

Unit - IV

Pranayamaand Kriyas
Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every one

Pranayama- Anulomaviloma, Savithripranayama,ujjayipranayama,bastrika.
Kriya – Trataka, Neti.

Unit V

Bandha, Mudra, Relaxation Technique and Meditation
Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every one
Bandha
JalandiraBandha,UdiyanaBandha, MoolaBandha.
Mudras
Pritivi Mudra, Vayu mudra, Varuna Mudra, Prana mudra, Akasha mudra, Bhairava mudra, Bhairavi mudra.
Relaxation Techniqe:
Quick Relaxation Technique.
Meditation

Yoga nidra, Om Meditation.

Program Outcomes:

- Student can get the basic knowledge about Essential of Yogic Practices.
- Theywillget the full idea about the Asanas.
- Student can get full knowledge about Pranayama and Kriyas.
- They can get full knowledge about Mudras and Bandhas
- Finally, the studentwillget full theoraticalKnowledge about Relaxation Technique.

References:

- Iyenger B.K.S (1976) Light on yoga, London, Unwin paperbacks.
- Sivananda Sarawathi swami (1934) Yoga Asanas Madras: My magazine of India.
- Satyanadasarawari swami (2008) Asana, Pranayama, Mudra, Bandha, munger:Yoga publications trust.
- *Iyenger B.K.S (2008) Light on pranayama. New Delhi. HaperCollinspublishers India.
- *Chandrasekaran k (1999) Sound Health Through Yoga, Sedapatti: Prem kalyan Publications
- *Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books.
- *Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari. Yoga niketan trust.
- *Coulter, H David (2001) Anatomy and Hatha yoga, USA: Body and Breath Inc.
- *Kirk Martin (2006) Hatha Yoga Illustrated Champaign: Humenkinetics,
- *Gharote (2004) Applied yoga, Lonvla. Kaivalyadhama.
- *Gharote (2004) Applied yoga. Lonvla: Kaivalyadhama.
- *Kathy LceKappmeier and Diane M.Ambrosini (2006) Instructing Hatha Yoga,Champaign: Human Kinetics.
- Satyanandasararwati Swami (2007) Meditations from thitantrasMurgar yoga publications Trust.

Human Anatomy And Physiology –II

GeneralPhysiology

Unit-1:1.IntroductionandScope of Physiology

Cellandtissue-Itsstructure,principalconstituents,propertiesandfunctionsincludingcelldivision

1. Body Fluid.

(a) Blood: Composition and general functions of plasma. Blood cells – structure andfunction - Red Blood cells, white Blood Cells – including numbers and approximatelengthof life –position, structureandfunction of cells ofReticulo endothelial system.

(b) Bloodclottingincludingbleedingtimeandclottingtime,factorsacceleratingorslowing the process. Blood groups and their significance, Rh-factor, Hemoglobin andE.S.R.

(c) FormationofBlood,tissuefluidandlymph.

UNIT – II

2. Cardio-VascularSystem.

(a) Structureand properties of Heart Muscles and nervesupplyof Heart.

(b) Structureandfunctionsofarteries,capillaries andveins.

(c) Cardiaccycle andHeartsound.

(d) Cardiacoutputmeasurements, factorsaffecting HeartRateand itsregulation.

(e) Cardio-vascularreflexes**.**

(f) Bloodpressure,itsregulation,physiologicalvariation,peripheralresistance,FactorsControllingBlood Pressure, Hemorrhage.

(g) ECG studyand stresstest.

3. RespiratorySystem.

(a) MechanismofRespiration,Changesindiameterofthorax,Intra-pleuralandIntra-pulmonarypressure.

(b) Quantities oflungvolume,tidaland residualvolume,vitalcapacity.

(c) Gaseousinter-changes inlungandtissues.

(d) Controlofrespiration-Nervousandchemicalsignificanceofchangesinrateanddepth,transportation of oxygenand carbon dioxide.

(e) Respiratorystates-anoxia,asphyxia,Cyanosis, Acclimatization.

4. DigestiveSystem

(a) Generalarrangementofalimentarycanal,liver,pancreas-position,structureandfunctions.

(b) NutritionandDiet-carbohydrate,protein,fat,salts,water,vitaminsandmineralsdigestion,absorption andMetabolism.

Unit-III:ReproductiveSystem.

(a) Sex determination and development of puberty, male sex hormones,

spermatogenesis,Female sex hormones, menstrual cycle. Ovulation, pregnancy, Function of placenta,lactation.

1. **ExcretorySystem.**

   (a) Gross and minute structures of kidney, renal circulation, Mechanism of formation ofurine, Glomerular filtration rate and tubular function, renal function and renal tests.Physiologyof micturition.

2. **EndocrineSystem.**
   (a) Structureandfunctionofpituitary(anterior&posterior).Thyroid,Para-thyroid,adrenalcortex, adrenal medulla, Thymusand pancreas.
   (b) Bloodsugarregulation.

3. **Skin-Structureandfunctions.**

Unit-IV:NeuromuscularPhysiology

1. **Cell Membrane**–IonicandPotentialgradient andtransport.
2. **Muscle**s – Types of muscular tissue – Gross and Microscopic structure – function. Basis ofmuscle contraction – changes in muscle contraction, Electrical – Biphasic and mono-phasicactionpotentials,chemical,Thermalandphysicalchanges,IsometricandIsotoniccontraction.
3. **Motorunitsandits properties**–clonus, tetanus,allor nonelaw,Fatigue.
4. **Nerve**–Grossandmicroscopicstructureofnervoustissue,oneneuron–Generationofactionpotential – Nerve impulsecondition

UNIT - V

5. **NeuromuscularJunction.**
6. **Degeneration** – Regeneration ofperipheralnerves,electro tonus and Pfluger'slaw.
7. Typesandpropertiesofreceptors,typesofsensations,synapse,reflexarc,itsproperties-occlusion,summation, sub minimal fatigue etc.
8. **Tracts**–Ascendinganddescendingandextra-pyramidal tracts.
9. FunctionsofE.E.G.
10. FunctionsofCerebralcortex,cerebrum, cerebellum, Basal ganglia.
11. Thalamus – connection and functions.
12. Reticularformation– toneposture&equilibrium,Autonomic nervoussystem.
13. SpecialSenses Eye-Errors ofrefraction, equilibrium, Autonomicnervous system.
14. Speechand its disorders.
15. Earand Vestibularapparatus, taste, olfactory, somatic sensations.

TEXT BOOKS :

1. TortoraandBryan:AnatomyandPhysiology
2. Khurana: Anatomyand Physiology
3. TextbookofAnatomy(IIIvolumes)–BDChaurasia
4. PracticalAnatomy–Cunningham
5. DrShirleyTelles&DrHRNagendra,AGlimpseintothehumanbody,SwamiVivekanandaYoga Prakashana,Bangalore, 2002

REFERENCEBOOKS:

1. Gore,M.M.:AnatomyandPhysiologyofYogicpractices(KanchanPrakshan,Lonaval a,2003)
2. SriKrishna:NotesonStructureandFunctionsofHumanBodyandEffectsofYogicprac ticeson it(Kaivalydhama S.M.Y.M Samiti,Lonavala,1988)
3. Charu,Supriya :SarirRachanaevamKriyaVigyan
4. Evelyn,C.Pearce:AnatomyandPhysiologyforNurses(FaberandFaberLtd.London,1 968)
5. Chatterjee,C.C.: HumanPhysiology(Vol.I& II)(MedicalAlliedAgency,Calcutta,1992)
6. LanPeateandMuralidharanNayar– FundamentalofAnatomyandPhysiologyforstudentsnurses
7. Evelyn, C. Pearce-Anatomyand Physiologyfor Nurses

BSY205P PRACTICAL -I: CLASSICAL YOGIC PRACTICES – II

Program Objectives:

- To know about the Essential of Yoga Practices
- To know about the Loosening Exercise
- To understand the Basics of Asanas.
- To know about the Pranayama & Kriyas.
- To know about the concept of Bandas, Mudras and Relaxation Techniques.

Unit-I

Essentials of yogic practices, cleanliness and food, bath, time, sun, closing eyes, place, mirror, breathing, awareness, age limitations, sequence, blanket, clothes, position, emotying the bowels and stomach counter pose, contra-indications, duration, straining, special provisions for women and patients, fitness, posture, side effects.

Unit-II

Loosening Exercise (sukshmavyama) and Surya Namaskar (Bihar school of yoga 24 Steps) -Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, and Benefits.

Unit – III

Asana
Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every asana.
Standing:
Ardhakatichakrasana, Triyangathadasana, Parivarthatrikonasana, Veerabadhrasana-1.
Sitting:
Uttitapadmasana, Vakrasana, Komukasana, Janu sirasana.
Supine:
Chakrasana, Pavanamukthasana,Sedhubandasana.
Prone:
Dhanurasana, Shalabasana,Triyangabujangasana, Makrasana.

Unit - IV

Pranayamaand Kriyas
Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every one

Pranayama- Anulomaviloma, Savithripranayama,ujjayipranayama,bastrika.
Kriya – Trataka, Neti.

Unit V

Bandha, Mudra, Relaxation Technique and Meditation
Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every one
Bandha
JalandiraBandha,UdiyanaBandha, MoolaBandha.
Mudras
Pritivi Mudra, Vayu mudra, Varuna Mudra, Prana mudra, Akasha mudra, Bhairava mudra, Bhairavi mudra.

Relaxation Techniqe:
Quick Relaxation Technique.
Meditation
Yoga nidra, Om Meditation.

Program Outcomes:

- Student can get the basic knowledge about Essential of Yogic Practices.
- Theywillget the full idea about the Asanas.
- Student can get full knowledge about Pranayama and Kriyas.
- They can get full knowledge about Mudras and Bandhas
- Finally, the studentwillget full practicalKnowledge about Relaxation Technique.

References:

- Iyenger B.K.S (1976) Light on yoga, London, Unwin paperpacks.
- Sivananda Sarawathi swami (1934) Yoga Asanas Madras: My magazine ofindia.
- Satyanadasarawari swami (2008) Asana, Pranayama, Mudra, Bandha, munger:Yoga publications trust.
- *Iyenger B.K.S (2008) Light on pranayama. New Delhi. HaperCollinspublishers India.
- *Chandrasekaran k (1999) Sound Health Through Yoga, Sedapatti: Prem kalyan Publications
- *Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books.
- *Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari. Yoga niketan trust.
- *Coulter, H David (2001) Anatomy and Hatha yoga, USA: Body and Breath Inc.
- *Kirk Martin (2006) Hatha Yoga Illustrated Champaign: Humenkinetics,
- *Gharote (2004) Applied yoga, Lonvla. Kaivalyadhama.
- *Gharote (2004) Applied yoga. Lonvla: Kaivalyadhama.
- *Kathy LceKappmeier and Diane M.Ambrosini (2006) Instructing Hatha Yoga,Champaign: Human Kinetics.
- Satyanandasararwati Swami (2007) Meditations from thitantrasMurgar yoga publications Trust.

BSY206P PRACTICAL -II: HUMAN ANATOMY AND PHYSIOLOGY - II

Program Objectives:

- To know about the Measurement of Blood Pressure.
- To know about the Muscle Examinations.
- To understand the Sensory function.
- To know about the Measurement of Pulse rate, Respiratory rate and Temperature.
- To know about the Identification of a Specimen.

UNIT-I

(a) Hematology: RBC count, WBC count, differential count. ESR, Bleeding & Clotting time,Estimationof hemoglobin, Bloodgroups.

UNIT-II

Human Physiology: Examination of (a) Respiratory system (b) heart and arterial pulse (c)deep and superficial reflexes (d) cranial nerves(e) motor system (f) sensory systemincludinghigherfunction(g) measurement ofblood pressure.

UNIT-III

Measurement of Blood Pressure
Measurement of Temperature, Pulse rate, Respiratory rate Sensory function –Examinations-Muscle Examinations

UNIT-IV

Identification of a specimen organ and explain its functions.

UNIT V

Identification of a specimen organ and explain its functions.

EffectofExercisesonbodyphysiology

Program Outcomes:

- Student can get the basic knowledge about Muscle Examinations.
- They will get the full idea about the Measurement of Temperature and Pulse rate in Human body.
- Student can get full knowledge about Sensory functions.
- They can get the idea about how to measure Blood pressure.
- Finally, the student will get full knowledge about Physiology.

References:

- Arthur C. Guyton & John Edward Hall (2006), Textbook of Medical Physiology, Florida, United States, Elseiver Standards.

- Surinder H Singh & Krishna Garg. (2008), Anatomy and Physiology for nurses & allied health sciences, New Delhi CBS Publishers.
- Sivaramakrishnan S. (2006), Anatomy and Physiology for PhysicalEducation, New Delhi, Friends Publsihers.
- Anne Waugh &AlsonGraunt (2005) Anatomy and Physiology in Health and Wellness, Allahabad, ChurheillLivingtone.
- Clark Robert K (2005), Anatomy & Physiology-Understanding the Humanbody, Suddury, United States, Jones &Bartiett.
- Shri Krishna (1985) Notes on Structure and Functions of Human body &Effects of Yogic practices in it, Mumbai. ICYHC Kaivalyadhama.
- Dutta Ray (2001) Yogi Exercises, New Delhi: Jaypee Brothers.
- Shirley Telles (2006) A Glimpse of the human, Bangalore: SwamiVivekananda yoga prakashana
- 9 Leslie kaminoff (2007) yoga anatomy, champaign: Human Kinetics
- 10 Peter L. Williams & Roger Waswie (1988) Gray's Anatomy, Edinburgh:Chuchill Livingstone.
- 11. Evelyne C peace (1997) Anatomy & Physiology for Nurses, New Delhi:Jaypee Brothers.
- 12. Gore MM. (2003) Anatomy & Physiology for yogic practices, Lonavala :KamhanPrakshan.

BSY207COMMUNICATION SKILLS
(Ability enhancement Compulsory Course (AECC))
Advanced Level: English Language Communication Skills for Employability- Trainings offered to registered students through Naan Mudhalvan

Program Objectives:

- To know about the Importance of Communication.
- To know about the types of communication.
- To understand the agenda preparation.
- To know about the soft skills.
- To know about the Group Discussion.

Unit 1:

Communication: Meaning, definitions, goals, need, scope- Basics of communication- Characteristics of Communication - one to one-one to group – Real Communication - Role of Communication in the present scenario

Unit II:

Barriers to Communication - Do's and Dont's of Communication skills - Types of Communication

Verbal Communication: Reading listening, writing, speaking skills, telephonic Communication, face to face interactions, Non-verbal Communication: Gestures, Body posture, facial expression, eye contact, poise, body movements, dress.

Unit III:

Letter writing-Report writing - Memo's - Note Making - Agenda preparation.

Unit IV:

Soft skills-Interview skills - preparing for an interview - presentation skills - Body language - speaking - pronounication - voice - Modulation of speech - structure of presentation.

Unit V:

Group discussion - art of listening and expressing - Role of Yoga on Communication skills.

Program Outcomes:

- Student can get the basic knowledge about communication.
- They will get the full idea about the Important of Communication in any field in day-to-day life.
- Student can get full knowledge in Agenda Preparation.
- They can get the idea about Soft skills.
- Finally, the student will get Interview skills.

References:

i. 'Soft Skills', University of Madras, Chennai

ii. 'Communication Skills', University of Madras, Chennai.

Community Service

Duration	:	Five Days
Semester	:	I
Mode of Evaluation	:	Internal Assessment.
Maximum Marks	:	100
Subject	:	YOGA
Nature of Programme	:	To bring awareness to community on Yoga



VILLAGE PLACEMENT PROGRAMME

The Village Placement Programme will be arranged for the First Year Students during the First Semester for five days in the nearby village as an awareness programme. The mode of evaluation will be Internal Assessment for Maximum marks as 100 Marks. The Nature of the programme is based on the curriculum on Yoga therapy for the people in the village for the common disease or ailments.

B.SC. (YOGA)

3 years (6semesters)

SEMESTER - III

DETAILED SYLLABUS

SECOND YEAR

BSY301 Part I - Language

Tamil – III/ Hindi – III/ Spl.English

इकाई –1

हिन्दी की उपभाशाओं का सामान्य परिचय– 1. पश्चिमी हिन्दी 2. पूर्वी हिन्दी 3. राजस्थानी 4. बिहारी 5. पहाड़ी

इकाई –2

राश्ट्रभाशा के रूप में हिन्दी का विकास–
खड़ी बोली का सम्पर्क भाशा के रूप में विकास
राजभाशाः तात्पर्य एवं महत्व
राश्ट्रभाशा हिन्दी की समस्याएँ

इकाई –3

देवनागरी लिपि–
(1) विकास
(2) नामकरण
(3) विशेशताएँ

इकाई –4

कार्यालयीन पत्र –
परिपत्र, आदेश, अधिसूचना, ज्ञापन, अनुस्मारक

इकाई –5 पाठ संकलन–

1. कविता – पुश्प की अभिलाशा (माखनलाल चतुवदी)
2. कहानी – उसने कहा था (चक्रधर र्मा गुलेरी)
3. निबंध – लोभ और प्रीती (आचार्य रामचंद्र ुक्ल)

सहायक ग्रंथः–

1.हिन्दी भाशा का उद्भव और विकास– उदय नारायण तिवारी
2.नागरी लिपि और उसकी समस्याएँ– नरेश मिश्र
3.नागरी लिपि और हिन्दी वर्तनी– बिहार हिन्दी ग्रंथ, अकादमी, पटना
4.राश्टभाशा और राश्ट्रीय एकता– दिनकर, उदयांचल, पटना
5.राजभाशा के आन्दोलन में – राजनारायण दुबे, प्रकाशन संस्थान, दिल्ली
6.राश्ट्रभाशा और हिन्दी – राजेन्द्र मोहन भटनागर , के.ही. संस्थान, आगरा

BSY301 PART I - LANGUAGE TAMIL – III/ HINDI – III/ SPL.ENGLISH

UNIT- I:

i PROSE

ii Jesse Owens: My Greatest Olympic Prize

iii Stephen Leacock: With the Photographer

UNIT -II

i POETRY

ii William Blake: The Poison Tree

iii P.B. Shelley: Ozymandias

iv Rabindranath Tagore: Where the Mind is Without Fear

UNIT- III

i DRAMA

ii GB Shaw: Arms and the Man

UNIT -IV

i SHORT STORY/VALUE EDUCATION

ii Frank Stockton: The Lady or the Tiger?

iii Guy de Maupassant: The Necklace

UNIT- V

i COMMUNICATIVE GRAMMAR

ii Paragraph Writing

iii Essay writing

iv Letter Writing- Formal and Informal

v Comprehension

vi Note making.

vii Expansion of Ideas and Proverbs

S

BSY303 PATANJALI YOGA SUTRAS -1

Program Objectives :

- To know about the Nature and Aim of Yoga according to Patanjali
- To know about the conception of Chitta-Vikshepas
- To understand the concept of Ishwarapranidhana
- To know about the nature of samadhi
- To know about the concept of karmashya and karmavipaka.

Unit-1

Definition, Nature and Aim of Yoga according to Patanjali. Concept of Chitta and Chitta Bhumis; ChittaVrittis and ChittaVrittinirodhopaya (Abhyasa and Vairagya).

Unit-2

Concept of Bhavapratyaya&Upaypratayaya, SadhanPanchak, Chitta-Vikshepas (Antaraya), EktattvaAbhyasa,Chitta-prasadanam.

Unit-3

Concept of Ishwara and attributes of Ishwara, Process of Ishwarapranidhana.

Concept of Kriya Yoga. Types of Meditation.

Unit-4

Types and nature of Samadhi: Adhyatmaprasada and Ritambharaprajna; Samprajnata, Asamprajnata, Sabeeja&Nirbeeja Samadhi.

Unit-5

Difference between Samapattis and Samadhi. theory of Kleshas ; Concept of Karmashaya and Karmvipaka.

Program Outcomes:

- Student can get the basic knowledge about Aim of Yoga about patanjali.
- They will get the full idea about the Antarayas in Yoga sutra.
- Student can get full knowledge in Kriya yoga.
- They can get the very valuable thoughts about types of Samadhi.
- Finally, the student will get full knowledge about basics in Yoga sutra.

References

- Certification of Yoga Professional official Guide Book, Ministry of AYUSH, Government of India.
- Patanjali Yoga Sutras by swami Vivekananda.
- The Yoga Sutra of Patanjali.

BSY304 METHODALOGY OFTEACHING YOGA

Program Objectives:

- To know about the Yoga Education
- To know about the Methods in Yoga Teaching
- To understand the lesson plan
- To know about the usage of yogic Props
- To know about the concept of Yoga competitions

Unit 1:

i Education: Yoga Education, Goal, Scope and importance, Principles of Teaching Yoga-Yogic, psychological, Physiological, Pedagogical, sociological.

ii Meaning of methodology of teaching - factors influencing Methodology, Presentation technique.Role of language, Voice, fluency, clarity, and body language in Teaching.

iii Factors of Yoga Education: Teacher, Student and Teaching-Guru-Shishya Parampara;Types of students and teachers-promotion of leadership qualities.

Unit II:

i Methods in Yoga Teaching
ii Lecture method
iii Response to instruction method (method)
iv Individualized Instructional Method
v Group discussion Method
vi Directed Practice Method
vii Project method
viii Demonstration Method
ix Lecture cum Demonstration Method
x Imitation Method
xi Dramatization Method

Unit III:

i Teaching aids:
ii Audiovisual aids
iii Visual aids
iv Audio aids
v Models.
vi Props

Wooden brick and foot rest belt, ropes, slanting plank, chair, stool, bench, Box, the heart rate, ladder stool and drum, bolster and pillow, bandage, weight, the horse, big and small.

Unit IV:

Preparing lesson plan-

i Essentials of a good lesson plan
ii Advantages of preparing a lesson plan
iii Contents of a lesson plan
iv Class management-formation of the class
v Conducting yoga practical lessons: Precautions and contra-indications of practices

Lesson plan:

a. Assembly and roll call
b. Relaxation & prayer
c. Loosening the joints
d. Introduction of practice
e. Demonstration
f. Individual practice
g. Group practice
h. Yoga game (if time permits)
i. Question and answer session
j. Relaxation.
k. End prayer

Unit V:

i Organizing yoga class, Yoga camp, workshops in yoga, Yoga tours. Yoga games are competitions, classification of age groups for competitions.
ii Evaluation; Advantages ; Devices of evaluation.

Program Outcomes:

- Student can get the basic knowledge about Principles of Teaching Yoga
- They will get the full idea about the Methods in Yoga Teaching
- Student can get full knowledge in Teaching aids
- They can get the very valuables thoughts in the Preparing lesson plan
- Finally, the student will get full blue print about methodology of teaching yoga.

References

1. Gharote M.L. and Ganguly SK (2001) Teaching Methods for yogic practices Lonavla: Kaivalyadhama.
2. Sivananda Yoga teachers training Manual, val morin: Sivananda Ashram Yoga Camp.
3. Anandamitra (1991) Teachers' Manual Calcutta: Ananda MargaProcarakaSamgha.
4. Thirunarayanan and Hariharan (1975) Methods in Physical Education, Karaikudi.
5. Basavaraddi Ishwar (2010) Yoga Teacher's Manual for school teachers, New Delhi: Morarji Desai National Institute of Yoga.
6. Lily Pritam Telu Ram (1981) Health and Hygiene, Delhi: Vikas publishing House pvt ltd
7. Raghavan (1965) Hand book of health educstionkaraikudi: Meenal enterprises
8. Sunitha Pant Bansal (2008) Diet in diseases

BSY305P PRACTICAL – I: TEACHING PRACTICES

I. PRACTICE OF TEACHING IN YOGA

a. Illustration of the need for a lesson plan.

b. Illustration of the need for a content plan.

c. Demonstration of types of teaching methods.

d. Demonstration of optimum use of teaching aids viz. audio-visual aids.

e. Practical training on class management.

f. Practical demonstration of critical observation, active supervision and interaction.

g. Method of preparing for an ideal setting based on the specific requirement of the class.

h. Demonstration on use and importance of body language, communication skills and personal conduct in an ideal class.

i. Evaluation methods of an ideal Yoga class.

j. Methods of customizing Yoga class to meet individual needs.

The student will have demonstrations and training in the above-mentioned aspects of teaching methods.

Each candidate is expected to complete 5 hours of individual class, 5 classes for a small group, 5 classes for a large group demonstrating the use of essential requirements for an ideal class. (e.g.: One on Shat Karma, One on Asana, one on Pranayama, one on Bandha /Mudra, and one lesson on Meditation) under the supervision of their Yoga Practical Teacher. Each student will also have to prepare and give at least one Lecture cum Demonstration on different topics of Yoga. The record of each of these classes must be maintained in the „Practical Record‟ format for evaluation.

The practice teaching lessons and a Lecture cum Demonstration assignment should be observed / examined by the Yoga Practical Teacher. These marks shall be considered as the Practicle Class Tests (internal assessment) of this practical paper.

II. VIVA-VOCE

Viva-voce shall be on Methods of Yoga Teaching and Presentations of Lesson/s

BSY306P PRACTICAL – II: COMPUTER PROGRAMMING

Program Objectives:

- To know about the basics of computer
- To know about Microsoft word.
- To understand Microsoft Excel.
- To know about the Microsoft Powerpoint
- To know about the Usage of Internet Explores.

UNIT-1

Introduction to computer-Definition -Types of Computers - basic parts – Hardware - Software Input and Output devices - Arithmetic & Logic Unit- Control Unit-CPU - Comparison of human beings and computer.

UNIT-11

Microsoft Word: Title Bar, Menu bar, Standard tool bar - Formatting tool bar - Ruler Status bar-task bar. Creating documents - formatting - editing-deleting-copying saving.

Unit III

Microsoft Excel: Title Bar, Menu bar, Standard tool bar - Formatting tool bar - Formal bar-Rules - Status bar-task bar, creating documents - formatting-editing-deleting-copying-saving-charts and mathematical operations.

Unit IV

Microsoft PowerPoint: Preparing a slide- Animation - Clipart, pictures from file background designing Computers and Communications Copying saving - Presentation - working with slides - adding slides - printing - running a slide show presentation.

Unit V

Internal - Introduction History - Uses - Connection Worldwide Web - Usage of internet explores- Search box - E-mail - Outwork Express-Inbox, Outbox, Sent items - Drafts - Sending Messages, save, print, reply, forward, previous message and text chatting-Role of computer in teaching the techniques of yoga, research & data analysis, literature collection through internet.

Program Outcomes:

- Student can get the basic knowledge about Basics in yoga.
- They will get a full idea about the Microsoft Word.
- Students can get full knowledge about Microsoft Excel.
- They can get the knowledge about Microsoft PowerPoint.
- Finally, the student will get full knowledge about using the Internet.

Reference:

1) Venugopal,"Fundamentals of Prentice All India.
2) Sudharsan C & John Manojkurnar Computer Fundamentals., RBA publication, Chennai.
3) Dromwey, how to solve it by computer, Tata Mcgraw, Gill.
4) Jayashree Computer for beginners,Vikas Publishing House, New Delhi

COMPUTER APPLICATION IN YOGA- (SKILL ENHANCEMENT COURSE (SEC))

Program Objectives:

- To know about the practical knowledge about MS word.
- To know about the Spread Sheet.
- To understand the practical knowledge about MS PowerPoint.
- To know about the Usage of internet.
- To know about the knowledge about Database.

1. MS-WORD

1. Create advertisement is MS WORD
2. To illustrate the concept of mail merging in word.
3. Document creation with scientific notation
4. Test manipulation with scientific notation
5. Table creation, table formatting and conversion.
6. Mail Merger and letter preparation
7. Drawing and Flow Chart.
8. Show the different effect for the given text in the document.
9. Create a table of employee and calculate the next salary.
10. Design a table with merge cells and split cells technique.

2. **SPREAD SHEET**

11. To create a Spread Sheet to analyze the marks of the students in a class and to create appropriate charts.
12. Charts in Spread Sheets
13. Formula and Formula Editor
14. Inclusion of objects, pictures and graphics protecting the document and sheet.
15. Sorting and import/export features.
16. Create suitable chart to show the census data in Indian Sports.
17. Create a suitable chart to show the students average in the class.
18. Create an electronic spread sheet of student marks, and find the total, average and respective class secured by each student.
19. Generate the numbers vertically starting from 10 to 100 withstep value 5.

3. **POWER POINT**

21. To create the presentation for the department using the power point.
22. Animation in Power point Presentation
23. Designing the Power point Presentation
24. Timing for the slides in Power point Presentation
25. Background designing in Power point Presentation.
26. Designing the Power point Presentation using audio and Video.

4. **INTERNET LAB**

27. Browsing a Web Site.
28. Composing and sending a mail
29. Forwarding and replying to mails.
30. Downloading Articles / Web content.
31. Literature survey using search enquires

5. **DBMS LAB**

32. Creation of database table with constaints
33. Modification of data in a table.
34. 28 GUI applications using VB (Single calculator, dollar conversionetc.,)
35. Database Applications using VB (insert, update, delete).

Program Outcomes:

- Student can get the basic practical knowledge about MS Word.
- They will get the full idea about the knowledge of Spreadsheet.
- Student can get full practical knowledge about MS Powerpoint.
- They can get the usage of internet.
- Finally, the student will get full Basic practical knowledge about Computer.

References:

1. Peter Norton," Introduction to Computers", 6h Edition, Tata Mcgraw Hill.

2. Ashok N. Kamthane, " Computer Programming", Pearson Education India.

3. Groff Weinberg. "The complete Reference SQL", 2" Edition, Tata Mcgraw Hill.

4. Bott Special Edition using Microsoft Office 2007, Pearson Education India.

5. Gray W. Harsen and James V Harsen (1996) Data Base Management and DesiSSgn, Prentice Hall

6. Jeffrey A Hotter, Mary B Prescolt, Fred R. Medadden (2002), Modern. database Management, Prentice Hall.

7. Robert IT Futrell, Donald F. shafer Linda, (2002) Quality software project management Pearson Education, Asia.

8. “Soft Skills” University of Madras, Chennai

9. ‘Communication Skills," University of Madras, chennai.

10. Mangal S.K. (2002), Advanced Educational Psychology, Prentice Hall of India, New Delhi.

11. Sampath, K. et.al (1998) Introduction to educational technology, Sterling Publishers, New Delhi.

12. Keemar.K. (1997) Educational Technology, New Age International publishers, New delhi.

13. Chauhan S.S.(1985) Innovations in Teaching Learning Process, NewDelhi: Vikas publishing House.

14. Rajasekar. S. (2005) Computer Education and Educational Computing. Hyderabad: Neel Kamal Publications.

15. Jyohanty Jagannath (2004), Modern Trends in Educational Technology, " Hyderabad: Neel Kamal Publications.

16. Vedanayagam E.G. (1988) Teaching Technology for College Teachers, New Delhi, Sterling Publishers.

17. Kumar K. (1997) Educational Technology, New Delhi: New Age International Publishers.

Teaching Practices in Government School

Duration	:	Five Days
Semester	:	III
Mode of Evaluation	:	Internal Assessment
Maximum Marks	:	100
Subject	:	Yoga
Nature of Programme	:	To bring awareness to gain knowledge, to teach and train people

B.SC. (YOGA)

3 years (6semesters)

SEMESTER - IV

DETAILED SYLLABUS

BSY401 Part I - Language Tamil – IV/ Hindi – IV/ Spl.English

YOGA LANGUAGE SANSKRIT

Program Objectives:

- Basic structure of Samskritam sentences
- Conversation in Samskritam
- Read and write Devanagari script

Unit I: Basics of Samskritam

i Origin of language

ii Uniqueness of Samskritam

iii SamskritaVarnamala – Svaras, Vyanjanas and Ayogavaha (UtpattiSthana and Prayatna)

iv Transliteration rules

v Intro Parts of speech in Samskritam – Karaka, Linga, Vibhakti, Vachana

Unit II: Speaking skills

i SamskritaSambhashanaShibira of Samskrita Bharati

ii Daily Greetings

iii Numbers till 100

iv Identifying time in Samskritam

v Framing basic sentences

Unit III: Basic grammar lessons

i Introduction to Sandhi – Svara, Vyanjana and Ayogavahas

ii Introduction to Samasa – 4 types of Samasas

iii Introduction to Karaka – 6 Karakas

Unit IV: Memorization of selected verses and declensions of common (selected) words

i 20 selected Subhashitas verses

ii 35 SubantaRupas and 10 Dhatus

Text Book:

- sVempatiKutumbaSastri, Vaakyavyavahaara, RashtriyaSaàskåtaSamsthana, Deemed University, New Delhi 110058.

BSY402 PART II – LANGUAGE ENGLISH – IV

UNIT- I

i PROSE
ii R.K.Narayan: Engine Trouble
iii Sashi Tharoor: Indian Identity

UNIT- II

i POETRY
ii Tennyson: The Brook
iii W.H.Auden: The Unknown Citizen
iv Langston Hughes As I Grew older

UNIT -III

i DRAMA
ii William Shakespeare: Act IV Scene I- Trial scene from The Merchant of Venice

UNIT- IV

i SHORT STORY/VALUE EDUCATION
ii Tagore: Cabuliwallah
iii Anita Desai: The Devoted Son

UNIT- V

i COMMUNICATIVE GRAMMAR
ii Preparation for Interview
iii Job Application, The Covering Letter
iv Report Writing
v E-Mall Communication
vi Curriculum Vitae

BSY403 PATANJALI YOGA SUTRAS – II

Program Objectives:

- To know about the Concept of Chaturvyuhavada
- To know about the conception of Ashtanga Yoga
- To understand the Dhayana
- To know about the siddhis
- To know about the concept of Karmas

Unit-1

Nature of dhukha, Concept of Chaturvyuhavada, Drishyanirupanam, Drasthanirupanam, Prakriti-Purusha Samyoga**.**

Unit-2

Brief Introduction to Ashtanga Yoga; Yama- Niyama; Concept of Vitarka&Mahavrata; Asana, Pranayama, Pratyahara and their siddhis.

Unit-3

Introduction of Dharana, Dhyana and Samadhi. Nature of Sanyama; Concept of Chitta samskara, Parinamatraya and vibhutis.

Unit – 4

Five means of Siddhis, concept of NirmanChitta, Importance of siddhis achieved through Samadhi.

Unit-5

Four types of Karmas; Concept of Vasana; Dharmamegh Samadhi and its result, VivekaKhyatiNirupanam, Kaivalya Nirvachana.

Program Outcomes:

- Student can get the basic knowledge about Siddhis
- They will get the full idea about the Ashtanga Yoga
- Student can get full knowledge in Dhayana& Samadhi
- They can get idea about the Types of karma
- Finally, the student will get full blue print about Pathanjali Yoga Sutra.

References

- Certification of Yoga Professional official Guide Book, Ministry of AYUSH, Government of India.
- Patanjali Yoga Sutras by swami Vivekananda.
- The Yoga Sutra of Patanjali.

BSY404 TRADITIONAL SYSTEM OF MEDICINE AND THERAPY

Program Objectives:

- To know about the origin and History of Yoga Therapy
- To know about the Ayurveda
- To understand the Therapeutic applications fordiesase
- To know about the Therapeutic applications for stress
- To know about the Therapeutic applications forpregnancy- Pre and post natal care

Unit I:

History of yoga therapy- Essence and Principles of Yoga therapy-Physiology and pathology in the yoga- Shatra- koshas- doshas- Panchaprana¬Application of Yoga and its types — Methodology in Yoga Therapy — Factors (Heyam, Hetu, Hanam and Upayam) — Methods (Darsanam, Sparsanam, Prasanam, NadiPariksa) Examination of Vertebra, joints, muscles, Abdomen and Nervous system and therapeutic yoga practices- Modification of yogic practices — Yogic diet- Yogic diet for Human systems— Nadis and chakras.

Unit II:

Application of traditional Indian medical systems and therapies: Ayurveda — Doshas, Dinacarya, Ayurvedic diet, Panchakarma therapy.

Siddha — Five elements theory, physical constituents, pathology (Kayakalpa, Kitchen, Herbal and other types of medicine) Varmam and Thokkanam, Exercise therapy, Cryo therapy, Acupressure, Acupuncture, Chromo therapy, Magnet therapy, Music therapy, Pranic healing, Magentotherapy, Naturopathy, Modalities of Naturopathy

Unit III:

Therapeutic applications for High blood pressure, Obesity, Diabetes Mellitus, Asthma, Sinusitis, Migraine, Arthritis, Back pain, Thyroid problems, constipation, impotency, infertility, stroke, Epilepsy, Parkinson's disease, sleep disorders, skin diseases, insomnia, Anaemia

Unit IV:

Therapeutic applications for psychological disorders:

Neurosis: stress, depression, eating disorders, suicide, hysteria

Psychosis: Schizophrenia, autism, Bipolar disorders, dementia

Personality disorders: Paranoid, histrionic, drug addicts- Smoking, Alcoholism, Gambling — Anti social activities.

Unit V:

Therapeutic applications for the problems of women- Amenorrhea, Dysmenorrhea, menorrhagia, metrorrhagia, Hypomenorrhoea, oligomenorrhoea, polymenorrhoea, leucorrhoea, uterus related problems, miscarriage, pregnancy- Pre and post natal care, PCOD.

Program Outcomes:

- Student can get the basic knowledge about Yoga Therapy
- They will get the full idea about the Traditional Indian medical systems and therapies.
- Student can get full knowledge in Therapeutic applications for disorders.
- They can get the very valuables thoughts in Therapeutic applications for psychological disorders.
- Finally, the student will get full idea about theTherapeutic applications for the problems of women.

References:

1. BalkrishnaAcharya (2006) Ayurveda its principles anfPhilophies, Hardwar: DivyaPrakashan
2. Atharale V.B. (1980) basic principles of Ayurveda, Bombay: Pediatric clinics
3. Frawley David (2000) Yoga and Ayurveda Delhi: Motilalbanarsidass Publishers Pvt Ltd,
4. BalkrishnaAcharya (2012) A practical approach to the Science of Ayurveda, Haridwar: DivyaPrakashan
5. Frawley David and Sandra Summerfield kozak (2011) Yoga for your type New Delhi: New Age Books,
6. VasantDattatray Lad (2007) Secrets of the pulse The Ancient art of Ayurvedic Pulse Diagnosis Delhi: MotilalBanarsidass Publishers Pvt.Ltd
7. Ashwini yogi (2011) SanatanKriya. The Ageless Dimension, New Delhi: Dhyan Foundation
8. Stiles Mukunda (2009): Ayurvedic yoga therapy New Delhi: New age books
9. Sivananda Swami (2006): Practice of Ayurveda Shivanandanagar: The Divine Life Society
10. Atreya (2000) Ayurvedic Healing for women, Delhi, MotilalBeharsidass 11.Joshi Rajani (2007) Health tips from the Vedas Haridwar: ShriVedmataGayathri trust
12. Thirunarayanam (2012) Introduction to Siddha Medicine, Chennai: centre for Traditional Medicine and Research
13. Bakhru (2011) The complete Hand book of Nature cure, Mumbai: Jaico publishing House
14. Gala DR, Dhiren Gala and Sanjay gala (2008) Nature cure for common diseases, Ahmadabad: Navneet publications (India) Ltd.,
15. Murthy Chidananda (2010) yogic and naturopathic treatment for common ailments, New Delhi: Central council for research in Yoga and Naturopathy
16. BasavaraddiIshwar (2012) Important therapeutic modalities used in Naturopathy, New Delhi. Central council for Research in Yoga &Natruopathy,

BSY405 PRACTICAL – I: CLASSICAL YOGIC PRACTICES – III

Program Objectives:

- To know about the Essentials of Yogic practices.
- To know about the Basics of Loosening Exercise.
- To understand the Asanas.
- To know about the pranayama.
- To know about the concept of Bandhas and Relaxation Techniques.

Unit I:

Essentials of Yogic Practices - cleanliness and food, bath, time, sun, closing eyes, place, breathing, awareness, age limitations, sequence, blanket, clothes, position, emptying the bowels and stomach counter pose, contra-indications, duration, straining, special provisions for women and patients, fitness, posture, side effects.

Unit II:

Loosening Exercise (Pawanamuktasana series 1) and Surya Namaskar (Vinyasa Suryanamaskar) -Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, and Benefits.

Unit III:

i **Asana**
   a. Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every asana.

ii **Standing:** Tadasana, UtthitaParshvakonasana, Malasana, Moordhasana, veerabadhrasana 2.

iii **Sitting:**Triyangajanusirsasana, Bharadvajasana, Badhakonasana, Ardhamatchendra asana, simhasana.

iv **Supine:**Chakrasana, Sarvangasana, Sedhubandhasarvangasana, Matsyasana, Savasana.

v **Prone:**
   a. Poorna dhanurasana, Poorvabhujangasana, Makrasana.

Unit IV:

i **PranayamaandKriyas**Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every one

ii **Pranayama**- Vyaghra Pranayama, Sectional Breathing, Yogic Breathing, Bhramari Pranayama, Shitali Pranayama.

iii **Kriya –** Nauli, Basthi.

Unit V:

i **Bandha, Mudra and Relaxation Technique :**Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each and every one

ii **Bandha :**JalandiraBandha, MoolaBandha, UddiyanaBandha, Maha Bandha.

iii **Mudras :**Shambavi mudra, Shangu mudra, Linga mudra, Shanmuki mudra, Anjali mudra, Lotus mudra.

iv **Relaxation Techniqe:**Deep Relaxation Technique.

v **Meditation**Chakra Meditation, Japa Meditation, Vipasana Meditation.

Program Outcomes:

- Student can get the basic knowledge about Essential of Yoga practices.
- Theywillget the full idea about the Loosening practices.
- Student can get full knowledge about kriyas.
- They can get the knowledge about pranayama.
- Finally, the studentwillget the knowledge of Mudra, Bandha and Relaxation Techniques.

References:

- Iyenger B.K.S (1976) Light on yoga, London, Unwin paperpacks
- Sivananda Sarawathi swami (1934) Yoga Asanas Madras: My magazine of india.
- Satyanadasarawari swami (2008) Asana, Pranayama, Mudra, Bandha, munger: Yoga publications trust.
- Iyenger B.K.S (2008) Light on pranayama, New Delhi Haper Collins publishers India.
- Chandrasekaran k (1999) Sound Health Through Yoga, Sodapatti: Prem kalyan Publications
- Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books.
- Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari: Yoga niketan trust.
- Coulter, David (2001) Anatomy and Hatha yoga, USA: Body and Breath Inc.
- Kirk Martin (2006) Hatha Yoha Illustrated Champaign: Humenkinetic
- Gharote (2004) Applied yoga, Lonvla: Kaivalyadhama.
- Gharote (2004) Applied yoga. Lonvla: Kaivalyadhama.
- Kathy Lee Kappmeier and Diane M.Ambrosini (2006) Instructing Hatha Yoga, Champaign: Human Kinetics
- Satyanandasararwati Swami (2007) Meditations from thitantrasMurgar: yoga publications Trust.

BSY406P PRACTICAL – II: YOGA THERAPY TECHNIQUES

Program Objectives:

- To know about the common ailments
- To know about the Yogic Management ofChronic Bronchitis
- To understand the Yogic Management ofUlcerative colitis
- To know about the Yogic Management ofRheumatoid Arthritis
- To know about the Yogic Management of PCOS

UNIT-1: **Introduction to Common Ailments** I.

Physiology of stress II . Psychosomatic ailments

UNIT-2:Respiratory Disorders and Cardiovascular Disorders

Respiratory Disorders

Yogic Management of Chronic Bronchitis, Emphysema

Infectious Disorders

- Yogic Management of Tuberculosis
- Yogic Management of Pneumonia
- Yogic Management of Interstitial Lung Disease / Idiopathic pulmonary fibrosis

Cardiovascular disorders

- Yogic Management of Heart disease – Angina pectoris / Myocardial Infarction/ Post CABG rehab
- Yogic Management of Cardiac asthma

Unit-3: Gastro-Intestinal Disorders and Excretory System

Yogic Management of Gastrointestinal disorders

- Yogic Management of Ulcerative colitis
- Yogic Management of Crohn's diseases

Excretory system

- Yogic Management of Irritable bladder
- Yogic Management of Stress incontinence
- Yogic Management of End stage renal disease

Unit-4:

Musculo-Skeletal Disorders

- Yogic Management of Rheumatoid Arthritis
- Yogic Management of Psoriatic Arthritis
- Yogic Management of Gout

Unit-5:

Gynecological disorders and obstetrics

Yogic Management of Premenstrual Syndrome,Infertility – male and female,PCOS,

Antenatal care and post-natal care.

Program Outcomes:

- Student can get the basic knowledge about Yoga.
- They will get the full idea about the Etymology and Principles of Yoga
- Student can get full knowledge in Gastro-Intestinal Disorders and Excretory System
- They can get idea about theMusculo-Skeletal Disorders
- Finally, the student will get full blueprint techniques of yoga therapy.

Recommended books:

1. Yoga for Bronchial Asthma – Dr. H R Nagendra, R Nagaratna, SVYP
2. Yoga for Hypertension and Heart Diseases – Dr. H R Nagendra, R Nagaratna, SVYP
3. Yoga for Diabetes – Dr H R Nagendra, R Nagaratna, SVYP
4. Yoga for Obesity – Dr H R Nagendra, R Nagaratna, SVYP
5. The integrated approach of yoga therapy for positive health-Dr.R Nagaratha, Dr. H R Nagendra

Reference book:

1. Yoga for common disorders- Swami KoormanandaSaraswati.

BSY407P ENVIRONMENTAL STUDIES - (SKILL ENHANCEMENT COMPULSORY COURSE (SEC))

Program Objectives:

- To know about the environment
- To know about the conception of Food Energy
- To understand the Air pollution
- To know about the social issues and the environment

UNIT I

Scope and Importance-Need for Public awareness

UNIT II

Natural Resources - Water-Forest-Minerals-Food Energy-land.

UNIT III

Environmental Pollution- Definition - Causes- Effects and control measure of Air pollution-Water-Soil-Noise-Nuclear.

UNITIV

Social issues and the environment - Urban problems related to energy - Water conservation - Rainwater harvesting - Water shed management -Environmentalethics-Climate change-Global warming-Acid rain-Ozone layer deletion.

UNIT V

Human population and the environment - Population growth variation among nation population explosion - Family welfare program - Environment - and human wealth.

Program Outcomes:

- Student can get the basic knowledge about environment studies
- Student can get full knowledge causes of pollution.
- They can get the social problems related to energy
- Finally, the student will get full blue print about environmental studies.

Reference:

C. Environmental Education centre, Chennai: Environmental studies for undergraduate students. K.hainaraswamy, Environmental studies A text book for all under graduate courses, Bharathidasan University, Tiruchirapalli.

INTERNSHIP (Hospital)

Duration	:	Five Days
Semester	:	IV
Mode of Evaluation	:	Internal Assessment
Maximum Marks	:	100
Subject	:	Yoga
Nature of Programme	:	To bring awareness to gain knowledge, to teach and train people



B.SC. (YOGA)

3 years (6semesters)

SEMESTER - V

DETAILED SYLLABUS

BSY501 YOGIC PSYCHOLOGY

Program Objectives:

- To know about the Meaning, Definitionsof Psychology
- To know about the conception of yoga for different stages of life
- To understand the Types of minds
- To know about the Methods of developing spirituality.
- To know about the yoga for Anxiety.

Unit 1:

Psychology: Meaning, Definitions, Nature, Need, Scope of Psychology,Yoga and Psychology, Role of yoga on Heredity and Environment, learning, Emotions, memory, Cognition, Intelligence, Attention, attitude, personality.

Unit II:

Growth and Development: Life span periods, yoga for different stages of life: infancy, early childhood, Later childhood, adolescence, Adulthood, Old age, Women. Yoga for Professional people.

Unit III:

25 elements, koshas, Doshas, Gunas, Nadis, chakras, mind, Types of mind, folds, mental faculties, stages, states, sources and powers of mind, unfolding powers of Mind, yoga for super-consciousness.

Unit IV:

Spirituality: Meaning, definition, Role of Yoga and Religion on Spirituality, Values, types of values, divine virtues. Methods of developing spirituality.

Unit V:

Role of yoga on psychological qualities and psychological disorders

Neurosis: Anxiety, Phobias, obsessions, compulsions, stress, hysteria, Depression, Eating disorders, suicide.

Psychosis: Schizophrenia, Autism, Dementia, Bipolar disorders, Mental retardation.

Personality disorders: Paranoid. Histrionic, Drug addicts, Gambling. Alcoholism. smoking, anti-social personality disorders.

Program Outcomes:

- Student can get the basic knowledge about Yoga and Psychology
- They will get the full idea about the Yoga for Growth and Development
- Student can get full knowledge in yoga for super-consciousness.
- They can get knowledge about the Yoga and Religion on Spirituality

- Finally, the student will get full blueprint about Yogic Psychology.

References:

1. Kamlesh,M.L.(1988) Psychology in physical Education and sports, New Delhi: Metropolitan.
2. Elangovan R. (2001) UdarkaviUlaviyal, Thirunelveli: Aswin Publications.
3. Gita Mathew, (1997) Sports Psychology, Shejin and Shiju Brothers, Karaikudi.
4. Gidr, et al., (1989) Psychology, Glenview: Scott foresman and company.
5. Bringle Robert etal, (1981) understanding psychology, New York: Random House School Division New York.
6. Rishi Vivekananda (2006) practical yoga psychology, Munger: Yoga publications Trust.
7. Abhedananda Swami 2002) yoga Psychology, Kolkatta: Ramakrishna Vedanta math.
8. Mangal S.K. (1991), Psychological Foundations of Education, Ludiana: Prakash Brothers.

BSY502 HATHA YOGA TEXT – I

Program Objectives:

- To know about the introduction to Hatha Yoga Text
- To know about the conception of Shodhana kriyas in health and disease
- To understand the philosophy of Vashishtha Samhita
- To know about the Concept of Prana and Pranayama
- To know about the concept of Goal of Hatha Yoga

Unit-1

Introduction to Hatha Yoga. Aim &objectives,misconceptions about Hathayoga, prerequisites of Hathayoga (dashayama and dasha niyama),Sadhaka and Badhaka tattvas in Hathayoga; Concept of Ghata, Ghatashuddhi.

Unit -2

Concept and importance of Shodhana kriyas in Hathayoga; Importance of Shodhana kriyas in health and disease; Concept of Matha, Mitaahara, Rules & Regulations to be followed by Hatha Yoga Sadhakas.

Unit-3

Introduction to Hatha texts- Yoga Beeja, Goraksha Samhita, Vashishtha Samhita, Shiva Samhita, Siddhasiddhantapaddhati, Hatha Pradeepika, Gheranda Samhita and Hatha Ratnavali.

Unit-4

Concept of Prana and Pranayama; Pranayama-its phases and stages; Prerequisites of Pranayama in Hathayoga Sadhana.

Unit-5

Relationship between Hatha Yoga and Raja Yoga; Goal of Hatha Yoga. Relevance of Hatha Yoga in contemporary times.

Program Outcomes:

- Student can get the basic knowledge aboutConcept of Ghata
- They will get the full idea about the Importance of Shodhana kriyas in health and disease
- Student can get full knowledge in Gheranda Samhita and Hatha Ratnavali
- They can get knowledge the Pranayama in Hathayoga Sadhana.
- Finally, the student will get full blueprint about Hatha Yoga Text.

References

- Certification of Yoga Professional official Guidebook, Ministry of AYUSH, Government of India.

- Hatha Yoga Pradipika By Swami Muktibodhanda, Bihar School of Yoga.
- GherandaSamhita Sri Satguru Publications.
- HathaRatnavali the Lonavla Yoga Institute.
- Siva Samhita the Panini office, Bahadurganj

BSY503 CLASSICAL YOGA WITH PROPS – IV

Program Objectives:

- To know about the practices of Chandranamaskar with props
- To know about the practices ofAsanas with props
- To understand the practices of Pranayama
- To know about the practicesShat Kriya
- To know about the practices meditation

Unit 1:

i Essentials of Yogic Practices

ii Loosening Exercies - Pawanmuktasana series.-3

iii Suryanamaskar: Sivananda model, Chandranamaskar.

iv Usage of props like wooden brick and foot rest, Belts, Ropes, Slanting planks, Chair, Stool, Bench & box, The heart rack, Ladder stool and drum, Bolsters and pillows, Bandage, Weights, Horse (big & small)

Unit 2:

Asanas&Pranayama

Virabhadrasana, Parsvottanasana, UtthitaTrikonasana, AdhomukhaSvanasana, Karnapitasana, Kandharasana, Tittibhasana, Padma Sarvangasana, SalambaSirshasana, Gomukhasana, SetuBandhasana, Chakrasana, TriangaMukhaikapadaPachimottanasana, Marichyasana, Virasana, Svastikasana, Shashangasana, Garudasana, Mayurasana, Padma mayurasana, Bhadrasana, Simhasana, AkarnaDhanurasana, Parsvakonasana, Savasana .

Usage of props like wooden brick and foot rest, Belts, Ropes, Slanting planks, Chair, Stool, Bench & box, The heart rack, Ladder stool and drum, Bolsters and pillows, Bandage, Weights, Horse (big & small)

Pranayama

Moorchapranayama

Anulomaviloma

Sadanta Pranayama

Pranayama with Kumbhaka and bandhas

Unit 3:

Kriya, Bandha and Mudra

Shat Kriya (Kapalapathi, Trataka, Neti, Dauti, Nauli, Basti.)

Bandha: Uddiyana bandha, Molabandha

Mudras: Yoni mudra, Lotus mudra, Dhyani mudra, Sakthi mudra, Shambavi mudra, Pashinee mudra, MahaBheda mudra, Ksepana mudra.

Unit 4:Relaxation Techniqe&Meditation

QRT (QuickRelaxationTechniqe)
Meditation:walking meditation, Vipasana meditation, nine centred meditation, yogic sukshmavyayama, Sudharshana kriya, Zen meditation, Savita kidhyan Dharana, Mind Sound Resonance technique.

Unit 5:

Physiological, Psychological effects on asana, pranayama and meditation.

Program Outcomes:

- Student can get the basic knowledge about Practices of Loosening Excerices, Surya namaskar &Chandranamaskar wit props.
- They will get the full idea about the Asana with props & Pranayama with Kumbhaka and bandhas
- Student can get full knowledge in Practices of Bundha, Mudra &Reiaxation Technique
- They can getknowledge about the different ways of meditation
- Finally, the student will get full blue print about Yoga practices with props.

References:

- Iyenger BKS (1976) Light on yoga, London, Unwin paperpacks.
- Sivananda Sarawathi swami (1934) Yoga Asanas Madras: My magazine of India.
- Satyanadasatawaniwami (2008) Asana, Pranayama, Mutra, Bandha, Munger Yoga publications trust.
- Iyenger BKS (2008) Light on pranayam, New Delhi: Haper Collins publishers India.
- Chandrasekaran (1999) Sound Health Through Yoga, Sodapatti, Prem kalyan Publications.
- Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books
- Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari: Yoga niketan trust.
- Coulter, H David (2001) Anatomy and Hatha yoga, USA. Body and Breath Inc.
- Kirk Martin (2006) Hatha Yoga Illustrated Champaign: Hamenkinetics.
- Gharote (2004) Applied yoga, Lonvla: Kaivalyadhama.
- Kathy lee Kappmeier and Diane M.Ambrosini (2006) Instructing Hatha Yoga. Champaign: Human Kinetics.
- Satyanadasaraswati Swami (2007) Meditations from thitantras. Murgar: Yoga publications trust.

BSY504P PRACTICAL I: CLASSICAL YOGIC PRACTICES WITH PROPS

Program Objectives:

- To know about the practices of Chandranamaskar with props
- To know about the practices ofAsanas with props
- To understand the practices of Pranayama
- To know about the practicesShat Kriya
- To know about the practices meditation

Unit 1:

i Essentials of Yogic Practices

ii Loosening Exercies - Pawanmuktasana series.-3

iii Suryanamaskar: Sivananda model, Chandranamaskar.

iv Usage of props like wooden brick and foot rest, Belts, Ropes, Slanting planks, Chair, Stool, Bench & box, The heart rack, Ladder stool and drum, Bolsters and pillows, Bandage, Weights, Horse (big & small)

Unit 2:

Asanas&Pranayama

Virabhadrasana, Parsvottanasana, UtthitaTrikonasana, AdhomukhaSvanasana, Karnapitasana, Kandharasana, Tittibhasana, Padma Sarvangasana, SalambaSirshasana, Gomukhasana, SetuBandhasana, Chakrasana, TriangaMukhaikapadaPachimottanasana, Marichyasana, Virasana, Svastikasana, Shashangasana, Garudasana, Mayurasana, Padma mayurasana, Bhadrasana, Simhasana, AkarnaDhanurasana, Parsvakonasana, Savasana .

Usage of props like wooden brick and foot rest, Belts, Ropes, Slanting planks, Chair, Stool, Bench & box, The heart rack, Ladder stool and drum, Bolsters and pillows, Bandage, Weights, Horse (big & small)

Pranayama

Moorchapranayama

Anulomaviloma

Sadanta Pranayama

Pranayama with Kumbhaka and bandhas

Unit 3:

Kriya

Shat Kriya (Kapalapathi, Trataka, Neti, Dauti, Nauli, Basti.)

Unit 4:Bandha and Mudra,RelaxationTechniqe

Bandha: Uddiyana bandha, Molabandha

Mudras: Yoni mudra, Lotus mudra, Dhyani mudra, Sakthi mudra, Shambavi mudra, Pashinee mudra, MahaBheda mudra, Ksepana mudra.

QRT (QuickRelaxationTechniqe)

Unit 5:

Meditation: walking meditation, Vipasana meditation, nine centred meditation, yogic sukshmavyayama, Sudharshana kriya, Zen meditation, Savita kidhyan Dharana, Mind Sound Resonance technique.

Program Outcomes:

- Student can get the basic knowledge about Practices of Loosening Excerices, Surya namaskar &Chandranamaskar wit props.
- They will get the full idea about the Asana with props & Pranayama with Kumbhaka and bandhas
- Student can get full knowledge in Practices of Bundha, Mudra &Reiaxation Technique
- They can getknowledge about the different ways of meditation
- Finally, the student will get full blue print about Yoga practices with props.

References:

- Iyenger BKS (1976) Light on yoga, London, Unwin paperpacks.
- Sivananda Sarawathi swami (1934) Yoga Asanas Madras: My magazine of India.
- Satyanadasatawaniwami (2008) Asana, Pranayama, Mutra, Bandha, Munger Yoga publications trust.
- Iyenger BKS (2008) Light on pranayam, New Delhi: Haper Collins publishers India.
- Chandrasekaran (1999) Sound Health Through Yoga, Sodapatti, Prem kalyan Publications.
- Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books
- Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari: Yoga niketan trust.
- Coulter, H David (2001) Anatomy and Hatha yoga, USA. Body and Breath Inc.
- Kirk Martin (2006) Hatha Yoga Illustrated Champaign: Hamenkinetics.
- Gharote (2004) Applied yoga, Lonvla: Kaivalyadhama.
- Kathy lee Kappmeier and Diane M.Ambrosini (2006) Instructing Hatha Yoga. Champaign: Human Kinetics.
- Satyanadasaraswati Swami (2007) Meditations from thitantras. Murgar: Yoga publications trust.

BSY505P PRACTICAL – II: PSYCHOLOGICAL TESTING

Program Objectives:

- To know about the Psychological Testing for Different Psychological Variables

- Anxiety
- Assertiveness
- Study skills
- Job satisfaction
- Emotional maturity
- General Mental Alertness
- Attitude
- Adjustment
- Division of Attention
- Steadiness
- Learning
- Reaction time

Program Outcomes:

- Student can get full knowledge Psychological Testing for Different Psychological Variables

References:

1. Kamlesh.M.L. (1988) Psychology in physical Education and sports, New Delhi: Metropolitan.

2. Elangovan R. (2001) UdarkalviUlaviyal, Thirunelveli; Aswin Publications.

3. Gita Mathew (1997), Sports Psychology, Shejin and Shiju Brothers, Karaikudi.

4. Gidr, et al. (1989) Psychology, Glenview: scottforesman and company,

5. Bringle Robert etal.. (1981) understanding psychology, New York: Random House School Division New York.

6. Rishi Vivekananda (2006) practical yoga psychology, Munger: Yoga publications trust.

7. Abhedananda Swami (2002) yoga Psychology, Kolkata Ramakrishna Vedanta math.

8. Mangal S.K. (1991) Psychological Foundations of Education, Ludiana: Prakash Brothers.

BSY506 YOGA FOR CHALLENGED PEOPLE – (DISCIPLINE SPECIFIC ELECTIVE COURSE (DSEC))

Program Objectives:

- To know about the Introduction to disabilities
- To know about the conception of Goals of life
- To understand the Meaning, Definition, components, and scope of fitness
- To know about the yoga Yoga and other forms of exercises for challenged people.
- To know about the concept of yogic diet for challenged people.

Unit I:

Introduction to disabilities - Types of disabilities - Causes of disabilities - Concepts of disabilities

Unit II:

Health: Goals of life- Adhi and Vyadhi, Kleshas, Koshas, Doshas, factors affecting health Panchamahabhudas, stages of development of disease- Mental and emotional ill-health Yogic rules for good health, Dimensions of health, causes of ill-health, pillars of health. Role of yogic positive attitudes (Maitri, Karuna, Mudita and Upeksha) for healthy living, conept of Bhavas and Bhavanas with its relevance in Health and well-being.

Unit III:

Fitness for disabled: Fitness: Meaning, Definition, components and scope of fitness, yogic practices for promoting the components of fitness: Endurance, strength, speed, flexibility, agility and balance - Natural fitness – Allround fitness - Benefits of fitnessDisability Management.

Unit IV:

Developmental programs for challenged people - Yoga and other forms of exercises.

Unit V:

Diet for disabledNutrition: Macronutrients, micro nutrients, carbohydrates, fats, proteins, vitamins, minerals, water, balanced diet, benefits of vegetarian diet, gluten free and lactose free diet - composition of the meal (Grains, dairy products, vegetables and fruits nut, pulses, oil and fat), Mediterranean diet, Vegan diet, Low glycaemic diet, DASH diet, yogic diet, principles of yogic diet, characteristics of sattvic, rajasic and tamasic diet, diet for challenged people and Yogic practitioners.

Program Outcomes:

- Student can get the basic knowledge about Types& Causes of disabilities
- They will get the full idea about the Health.
- Student can get full knowledge in Fitness for disabled

- They can get knowledge about the very Diet for disabled
- Finally, the student will get full blue print about Yoga For Challenged People

References:

- Hoger (1990) Fitness and wellness, Colorado: Morton Publishing company.
- GirijaShyamsundar (2007) Nutrition perspectives Chennai: University of Madras
- Swami Sivananda (2007) Health and Hygiene Sivanandanagar: The Divine life society
- Lily Pritam Telu Ram (1981) Health and Hygiene, Delhi: Vikas publishing House pvt ltd
- Raghavan (1965) Hand book of health educstionkaraikudi: Meenal enterprises
- Sunitha Pant Bansal (2008) Diet in diseases Delhi: Pustak Mahal
- Yoga charyaSundaram (2004) diet and digestion Coimbatore: The yoga publishing house
- Syd Hoare (1986) Keep fit, Hodder and Stoughton: Teach yourself books
- Swami Sivananda (2011) Health and diet, Shivananda Nagar: The divine life society
- AnandaBalayogiBhavanani (2007) A yogic approach to stress, Puduchery: Vivekananda Yoga Research foundation
- Nagendra and Nagratha (2008) New perspectives in Stress Management, Bangalore: Vivekananda Yoga Research foundation
- Arvindjanar (2004) yoga diet, Bangalore: Sai towers
- Kathy Phillips ( ) The Spirit of Yoga London Cassell & Co
- (2016) Guidebook for QCI, Delhi, AYUSH
- Krishna Raman (1998) A Matter of Health, Chennai: East West books (Madras) Pvt. Ltd
- Elangovan (2018) Yoga Psychology, Chennai: Ashwin Publications
- Elangovan (2016) Fundamentals of Yoga, Chennai: Ashwin Publications.

BSY507 BASIC BIOMECHANICS - (SKILL ENHANCEMENT COURSE (SEC))

Program Objectives:

- To know about the meaning, definition, need and importance biomechanics in yoga
- To know about the conception of Linear and angular kinematics
- To understand the types of friction
- To know about the types of muscle contraction
- To know about the concept of Human body posture and gait analysis.

Unit-I

Biomechanics — meaning, definition, need and importance biomechanics in yoga. Branches of biomechanics — statics, dynamics, kinematics and kinetics. Motion- types of motion, linear, angular and general motion- Finishiology: Anatomical, physiological (bones, tissues, muscles and nerves).

Unit-II

Kinematics - Linear and angular kinematics. Distance, displacement, speed, velocity and acceleration in linear and angular motion. Linear and angular momentum- Scalars and vectors. Impulse, Work, power and energy, conservation of mechanical energy. Principles of projectile motion.

Unit-III

Kinetics - Force — Inertia, internal force, external force, torque, gravitational force, centripetal force, centrifugal force, ground reaction force, friction, types of friction, pressure, characteristics of force. Lever — types of lever, centre of gravity, line of gravity, balance, stability and equilibrium, types of equilibrium, factors affecting equilibrium. Newton laws of motion. Impulse momentum relationship.

Unit-IV

Planes and axis. Skeletal muscle structure, characteristics, muscle spindle, golgi tendon organ, types of muscle contraction, structural and functional classification of muscles, internal loads on the human body. Bones- types, joints, types, effects of physical activity and inactivity on bone. Origin, insertion and action of major muscles of human body.

Unit-V

Analysis of basic yogic postures — Cartesian coordinate system, visual observation, video analysis —qualitative and quantitative analysis. Electromyography- anatomical landmarks for fixing EMG sensors, EMG data interpretation. Human body posture and gait analysis.

Program Outcomes:

- Student can get the basic knowledge about Biomechanics.
- They will get the full idea about the Kinematics.
- Student can get full knowledge in Kinetics.
- They can get knowledge about the effects of physical activity and inactivity on bone
- Finally, the student will get full blueprintsabout Basic Biomechanics.

References:

- Susan J. Hall, **Basic Biomechanics**, McGraw Hill Education, 2004.
- Kathryn Lutgens et al. **Kinesiology (Scientific Basis of Human Motion)**, Brown and Bench mark, 1992.
- Knudson, Duane V. **Fundamentals of biomechanics**, Springer, 2007.
- Jacquilin Perry**. Gait analysis-Normal and pathological function,** Slack, 1992.
- Robert Frost. **Applied kinesiology**. North Atlantic Books, 2002.



VISITING YOGA EDUCATIONAL INSTITUTION

Teaching practice will be organized for 1 day during IV semester. The assessment of the students is internal for 100 marks. Students should design programme in yoga and are to teach practice and train in educational institutions for 1 day.

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B.SC. (YOGA)

3 years (6semesters)

SEMESTER - VI

DETAILED SYLLABUS

BSY601 TIRUMOOLAR'S TIRUMANDIRAM

Program Objectives:

- To know about the History of Tirumular
- To know about the conception of KargapaKriyai
- To understand the The Eight great Siddhis
- To know about the Mudra Variations
- To know about the concept of Yogic views on other tantras

Unit I:

History of Tirumular - Basics of Tirumantiram-learning and non-learning

Unit II:

Second Tantra: Creation of Microcosm - KargapaKriyai

Unit III:

Third Tantra: Ashtanga Yogam - The Eight great Siddhis-Way to Kayasiddhi Kala Chakra-Breathe rhythm - Kechari Yoga - Pariyanga Yoga - Life Span.

Unit IV:

Tantra Seven: The Six adharas-Mudra Variations - Controlling Senses

Unit V:

Yogic views on other tantras - Analytical views of Tirumular on Yoga

Program Outcomes:

- Student can get the basic knowledge about Basics of Tirumantiram
- They will get the full idea about the Ashtanga Yogam
- Student can get full knowledge in Tantra.
- They can get knowledge aboutAnalytical views of Tirumular on Yoga
- Finally, the student will get full blueprint about Tirumular'sTirumantiram.

References:

- Nagarajan and Mahalingam (1991) Thirumantiram Madras: Sri Ramakrishna Math
- Annamalai (2002) Tirumantiram, Chennai: Indian Cultural Research Institute
- Manikavasagan (2008) TirumularTirumandiram, Uma Publications

BSY602 PRINCIPLES OF YOGA THERAPY

Program Objectives:

- To know about the origin and History of yoga therapy
- To know about the Definition of Cikitsa
- To understand the Physiology and Pathology in the Yoga
- To know about the Yogam and Ksemam
- To know about the concept of koshas &doshas

UNIT - I

History of yoga therapy- Essence and Principles of Yoga therapy
Principles of ViniYoga

- Definition of ViniYoga
- Srsti Karma
- Siksana Krama
- Rakshana Krama
- Cikitsa mode of application

UNIT – II

Fundamental Principles of Yoga therapy

- Definition of Cikitsa
- Medical System vs Health Management
- Its exact role in health management
- The focus of Cikitsa
- Relationship
- Acharya

UNIT – III

Basic Concepts of Yoga therapy

- Physiology and Pathology in the Yoga – Shastra
- Ahimsa
- Union
- Work with the mind
- Important of breath
- Body – the power tool
- Technique vs effect

UNIT – IV

Progression and Individual focus in Yoga therapy

- Starting Point
- Fixing the goal

- Progression
- Coming out of practice
- Yogam and Ksemam
- Kala, Desa, Vaya, Vrtti, Sakti
- The nature of ailment
- Isvarapranidhana

UNIT – V

Physiology and pathology in the yoga- Shatra- koshas- doshas- Pancha prana- Application of Yoga and its types - Methodology in Yoga Therapy - Factors (Heyam, Hetu, Hanam and Upayam).

Program Outcomes:

- Student can get the basic knowledge about Essence and Principles of Yoga therapy
- They will get the full idea about the Basic Concepts of Yoga therapy
- Student can get full knowledge in Progression and Individual focus in Yoga therapy
- They can get idea about the very Methodology in Yoga Therapy
- Finally, the student will get full blue print about Principles of Yoga therapy.

References:

- Translated by TKV Desikarchar, 'Nathamuni`s Yoga Rahasya' 1998, Chennai, KYM publications.
- Translated by TkvDesikachar, 'Patanjali`s Yoga Sutra'.1987, Chennai, KYM publications.
- TKV Desikarchar with KausthubDesikachar and Frans Moors, 'The Viniyoga of Yoga' 2001, Chennai, KYM Publications.
- Gopi Warrier and Deepika Gunawant, 'The complete Illustrated guide to Ayurveda' 2000, Elemetn Books Ltd.
- TKV Desikachar, 'The Heart of Yoga'. 200, USA, Inner Traditions

BSY603 BASIC RESEARCH IN YOGA

Program Objectives:

- To know about the scope of Research in Yoga
- To know about the conception of Formulation of hypothesis
- To understand the Case study method
- To know about the Sampling
- To know about the concept of Historical Research

Unit 1:

Research- Meaning, Definition, Need, Nature and scope of Research in Yoga, Types of research-Basic- Applied- Action- Qualities of a researcher-Criteria in locating and selecting researchproblem.

Unit II:

Preparation of Research Proposal- Mechanism of research proposal - Formulation of hypothesis- Variables and its types.

Unit III:

Types of Research Design, Descriptive Research- Survey method, Case study method, Experimental method- Categories: Longitudinal design, Quasi Experimental design, cross sectional design, Double blind placebo design Experimental Design Types: Single group design, Reverse group design, Repeated Measures design, Static group comparison design, otated group design, Random group design, Equated group design, Factorial design.

Unit IV:

Data- Population- Sample- Subject- Sampling: Characteristics, principles, steps, determining the sample size, criteria in selection, Types of sampling: probability sampling methods- Random and complex, non-probability sampling methods

Unit V:

Methods of Research: Experimental, Descriptive, Historical, Qualitative and Quantitative methods.

Program Outcomes:

- Student can get the Preparation of Research Proposal
- They will get the full idea about the Types of Research Design
- Student can get full knowledge in Types of sampling.
- They can get knowledge about the Methods of Research
- Finally, the student will get full blueprint about Basic Research in Yoga.

Reference:

- Clarke David II and Clarke , Hamison (1984) Research processes in Physical Education, New Jersey: Prentice Hall Inc.
- Bea, John W. and Kalm James, V. (1980) Research in Education, New Delhi: Prentice Hall of India.
- Clarke, H. Hanison and Clarke David H. (1972) Advanced Statistics, New Jerycy Prentice Hall Inc.
- GarvetHeary E and Woodworth R.S (1958) Statistics in Psychology and Education, Bombay:Allied publication pvt L.
- Thirumalaisamy (1998) Statistics in Physical Education, KaraikudiSemhilkumar publishers
- Thomson AL (1986) The Art of Using Computers, Boyd &Frasher Baston Publishing Co.
- Jerry R Thomas And Jack K Nelson 2000) Research Methods in Physical i Activities, Illaosis: Humas Kinetics,
- Craig Willians and Chris Wragg 2006) -Data Analysis and research for sport and exercise science, London Routledge Press
- Paul Kinnear and Colin D Gray (2006)-SPSS 14 Made Simple, New York: Psychology Press.
- Kothari CR (1985) Research Methodology, New De: Wiley Eastems Limited
- Stangeven R (2016) Research forouerses yoga chema: publications.

BSY604P PRACTICAL- I: THERAPEUTIC YOGA

Program Objectives:

- To know about the Therapeutic yoga
- To know about the Yogic Management for Arthritis
- To understand the philosophy of Yoga
- To know about the yoga perspective in Books & Epics
- To know about the concept of Yoga in vedantic approach

UNIT - I

Therapeutic yoga approach forMusculo-skeletal disorders: Yoga practice module for Musculo skeletal disorders: Precautions and Contraindications of Yogic practices.Back Pain (Lumbago, sciatica, disc herniation; Intervertebral disc prolapse (IVDP), Arthritis, Lumbo sacral strain), Neck pain (Cervical Spondylosis).

UNIT -2

Yogic Concept for Management on Respiratory disorders: Yoga practice module for Respiratory disorders, Precautions and Contraindications of Yogic practices, Bronchial Asthma, Bronchitis, Emphysema, Allergic Rhinitis, Sleep apnea, Sinusitis

UNIT – 3

Therapeutic yogic management on Gastro intestinal and Excretory Disorders: - Dyspepsia, Hyperacidity, Peptic Ulcers, Constipation, Irritable Bowel Syndrome (IBS), Renal stones and hemorrhoids.

UNIT -4

Yogic management on Endocrine & Metabolic Disorders: Diabetes Mellitus, Thyroid Disorders, Obesity and Metabolic Syndrome. Yoga practice module for Endocrine &Metabolic disorders; Precautions and Contra-indications of Yogic practices.

UNIT - 5

Therapeutic yoga approach for Menstrual Disorder Psychological Disorder: Menstrual cramp, dysmenorrhea, pre-menstrual syndrome, Polycystic Ovarian Syndrome PCOS/PCOD. Stress, insomnia, Depression, Anxiety, Mental retardation.

Program Outcomes:

- Student can get the basic knowledge about Yoga.
- They will get the full idea about the Etymology and Principles of Yoga
- Student can get full knowledge in Indian Philosophy
- They can get the very valuables thoughts in the most popular books and epics.
- Finally, the student will get full blueprint about Yoga.

Reference book:

- Yoga for Bronchial Asthma – Dr. H R Nagendra, R Nagaratna, SVYP
- Yoga for Hypertension and Heart Diseases – Dr. H R Nagendra, R Nagaratna, SVYP
- Yoga for Diabetes – Dr H R Nagendra, R Nagaratna, SVYP
- Yoga for Obesity – Dr H R Nagendra, R Nagaratna, SVYP
- The integrated approach of yoga therapy for positive health-Dr.R Nagaratha, Dr. H R Nagendras
- Yoga for common disorders- Swami KoormanandaSaraswati.

BSY605P PRACTICAL- II: ADVANCED YOGIC PRACTICES

Program Objectives:

- To know about the origin and History of Yoga
- To know about the conception of Yoga
- To understand the philosophy of Yoga
- To know about the yoga perspective in Books & Epics
- To know about the concept of Yoga in vedantic approach

UNIT: I

i Loosening the joints.

ii Pavanmuktasana Series.

iii Suryanamaskar: kriya Suryanamaskar, Advance Suryanamaskar,

UNIT: II

Asana: Ardhabaddhapadmottaanasana. Utthita Hasta Padangusthasana. Vatayanasana. Hanumasana. Padangushthasana. Padma Sarvangasana, kranaPidasana, Vrischikasana, poornaBhujangasana, poornasalabhasana, poornaDhanurasana, poornamatsyendrasana, Eak pada Sirsasana, Koormasana, Padma Sirshasana, ArdhaBaddhaPachimottanasana, Paryangasana, Bhekasana, BaddhaPadmasana, Vamadevasana, ParivrittiJanusirshasana, Savasana.

UNIT: III

Pranayama: Kewali Pranayama (Soham), Plawini Pranayama, Kumbhaka and Bandhas with ratios.

UNIT: IV

i **Kriyas:** GhrtaNeti, DugdhaNeti, Basti (Enema), Dhandadauti, Agnishar kriya

ii **Bandhas** : Maha Bandha.

iii **Mudras:** Kaki Mudra, Bhujangini Mudra, VipareetaKarani Mudra, Kundalini Mudra, Mahavedha Mudra, Vajroli/Sahajili Mudra, Manduki Mudra, Ashwini Mudra.

UNIT:V

Meditation: Transcendental, Cyclic (S-VYASA), Guided Meditation, Dynamic Meditation, Tibetan Meditation.

Program Outcomes:

- Student can get the basic knowledge about Yoga.
- They will get the full idea about the Etymology and Principles of Yoga
- Student can get full knowledge in Indian Philosophy
- They can get the very valuables thoughts in the most popular books and epics.
- Finally, the student will get full blueprint about Yoga.

References:-

- Iyengar B.KS (1976) Light on yoga, London, Unwin Paperpacks.
- Sivananda saraswathi swami (1934) Yoga Asanas Madras; my magazine of India.
- Satyanandasaraswati swami (2008) ASANA Pranayama, Mudra, Bandha, munger: Yoga publications lrust.
- Iyenger .B.K.S (2008) Light on Pranayama, New Delhi: HAPER Collins publishers India.
- Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books.
- Chandarasekaran K (1999) Sound health through yoga sedapatti:prem Kalyan Publications.
- Yogaeswaranandsaraswathi swami(1975) First steps to higher yoga, Gangothari: Yoga niketan trust.
- Coulter, H.D avid (2001) Anatomy and Hatha Yoga, USA Body and Breath inc.
- Kirk Martin(2006)Hatha Yoga Illustrated Champaign:Humenkinetics.
- Gharote (2004)Applied yoga, Lonvla: Kaivalyadhama.
- Kathy Lee Kappmeier and Diane M. ambrosini(2006) Instructing Hatha yoga, Champaing:Human**Kinetics**.
- Satyanandasararawati swami (2007) Meditations from thitantras. Mungar: yoga publications Trust.

BSY606 PERSONALITY DEVELOPMENT - (DISCIPLINE SPECIFIC ELECTIVE COURSE (DSEC))

Program Objectives:

- To know about the scope of personality development
- To know about the human development of personality
- To understand the stress management
- To know about the Factors of personality
- To know about the Positive thinking

UNIT-I

Personality: Personality in psychology – Meaning, Definition, concept, need, nature and scope of personality development- structure of personality.

UNIT-II

Stage of human development- determinants of human development of personality- developmental processes: physical, mental, moral, social, emotional and spiritual.

UNIT-III

Guidelines on personality – values and spirituality- developing good personality based on yoga- anger and stress management- role of diet on personality.

UNIT-IV

Personality development with special emphasis on pancha kosha- Ashtanga yoga- Factors of personality- Theories of personality- Attitude- Self-esteem - Memory-Concentration-creativity-intelligence- Assessment of personality.

UNIT-V

Leadership- Qualities of leaders-Positive thinking- powers and effects of thoughts- career planning –career rules- Better human relations- time management.

Program Outcomes:

- Student can get the basic knowledge about Stage of human development
- They will get the full idea about the Guidelines on personality
- Student can get full knowledge in Theories of personality
- They can idea get about the Leadership
- Finally, the student will get full blue print about Personalitty Development.

References:

- Kamlesh M.L(1988) Psychology in physical education and sports, New Delhi, Metropolitan,
- Elangovan R.(2001) Udarkalvi , Ulaviyal, Thirunelveli: Aswin Publications

- Gita Mathew (1997) Sports Psychology Shejin and shiju brothers, Karaikudi.
- Gidr, et, al, (1989) psychology Glenview scottforesman and company
- Bringle Robert etal (1981) understanding psychology New York, Random House School Division New York.
- Rishi Vivekananda (2006) practical yoga psychology Munger. Publication trust.
- Abhedananda swami (2002) yoga psychology kolkatta:Ramakrishna Vedanta Math.
- Mangal S.K(1991) Psychological foundations of education, ludiana: prakash brothers.
- Elangovan R(2018) Yoga Psychology, Chennai: Ashwin publications.

PROFESSIONAL PREPARATION FOR NET/ SLET (SEC)

Program Objectives:

- This paper helps the students qualifying NET / SLET

UNIT-1

Teaching and Research Aptitude: Concept, Objectives, Levels of teaching (Memory, Understanding and Reflective), Characteristics and basic requirements. Learner's characteristics: Characteristics of ado•. Steps of Research adolescent and adult learners (Academic, Social, Emotional and Cognitive), Individual differences.

UNIT-2

Communication: Communication: Meaning, types and characteristics ofcommunication.Effective communication: Verbal and Non-verbal, Inter-Cultural and group communications, Classroom communication.

Information and Communication Technology: ICT: General abbreviations andterminology.Basics of Internet, Intranet, E-mail, Audio andVideoconferencing.Digital initiatives in higher education.

UNIT-3

Mathematical and Logical Reasoning:

Types of reasoning: Number series, Letter series, Codes and Relationships. Understanding the structure of arguments: argument forms, structure of categorical propositions, Mood and Figure, Formal and Informal fallacies, Uses of language, Connotations and denotations of terms, Classical square of opposition.

UNIT-4

Yoga and Health

Role of Yoga in preventive health care – Yoga as a way of life, Heyamdukhamanagatam; Potential causes of Ill-health: Tapatrayas and Kleshas, Physical and Physiological manifestation of Disease: Vyadhi, Alasya, Angamejayatva and Ssvasa-prashvasa.

UNIT -5

Applications of Yoga

Applied Philosophy: Yoga as Applied philosophy; Meaning, definition and nature of consciousness as described in Vedas, Upanishads, Bhagwad Gita, Yogasutra and Yogavashishtha; Spiritual and scientific approach to human consciousness. Yogic Method of elevation of human consciousness: Bhaktiyoga, Jnanyoga, Karmayoga, Mantrayoga, Ashtangayoga, Hathayoga.

Program Outcomes:

- Student can get knowledge about the Preparation of NET / SE

YOGA PROJECT (ORGANISING YOGA COMPETITION / WORKSHOP)

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TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

SCHEME OF EXAMINATION & SYLLABUS

OF

Master of Science (Yoga)

MSC (Yoga)

UNDER

FACULTY OF YOGA

w.e.f. Session 2023-24

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY
DEPARTMENT OF YOGA
CHENNAI-600127, TAMIL NADU

REGULATIONS AND SYLLABUS – (CBCS-University Department)

[for the candidates admitted from the academic year 2023-2024-onwards]

Name of the Department: **Department of Yoga**

Name of the Subject Discipline: **Yoga**

Programme of Level: **M.Sc.**

Duration for the course: **Full-Time**

1. CHOICE-BASED CREADIT SYSTEM

A Choice-Based Credit system is a flexible of learning. This system allows students to gain knowledge at their own tempo. The student shall decide on electives from a wide range of elective courses offered by the university department in consultation with the department committee. The Students undergo additional courses and acquire more than the required number of credits. They can also adopt an inter-disciplinary and intra-disciplinary approach to learn, and make the best use of the expertise of available faculty.

2. ELIGIBITLITY FOR ADMISSION

1. A Candidate shall be admitted to the degree of M.Sc., Yoga only if he/she produces satisfactory evidence to the effect that he/she has completed Any Bachelor's Degree recognized by the syndicate of Tamil Nadu Physical Education & Sports University and an equivalent there in 10+2+3 or 10+2+4 pattern from a recognized university with a minimum of 50% marks in aggregate.
2. The Eligible for admissions and reservation of seats shall be according to the rules framed by the governing body of this University in this regard, from time to time at par with the UGC norms and regulations of the Government of Tamilnadu.

3. COURSE OF STUDY&MINIMUM DURATION OF PROGRAMME

1 The normal duration of the M.Sc., Yoga Programme shall be four semester (Two years).

2 Each academic year shall comprise of two semester's viz. **ODD** and **EVEN** semesters. Odd semesters shall be from July to November and Even Semesters shall be from December to May.

3 Each semester there shall be not less than 90 working days consisting of 5 teaching hours per working day which shall comprise 450 teaching clock hours for each semester (exclusive of the days for the conduct of the university end-semester examination).

4. MEDIUM OF INSTRUCATION: English & Tamil

5. COURSE WEIGHT

1. Courses have been designed with weightage of two /four credits, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise lectures/tutorials/laboratory/field work/outreach activities/project work/vocational training/viva/seminars etc. or a combination of some of these.
2. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

6. CHOICE BASED CREDIT SYSTEM (CBCS)

The CBCS in M.Sc., programme would have the following five components and the minimum credit requirements for each component to be completed in two years are:

1 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

2 **Core course:** Are course that are basic to the subject of the degree. This is a course which is to be compulsorily studied by a student as a core requirement to the completion of the program.

3 **Elective Courses:** This is a course that is supportive to the discipline of study, provides an expanded scope, enables exposure to some other domains or nurtures proficiency/skills. Elective papers can be of two types: Discipline Specific Elective (DSE) and Generic Elective (GE).

4 **Discipline Specific Elective (DSE):** These courses are inter disciplinary in nature and considered similar to core course. And, the students have to choose one course from the option provided for them.

5 **Generic Elective (GE):** These courses add generic proficiency to the students. Students have to choose generic elective courses in consultation with the head of the department from the Generic Elective courses offered by other Division of study from other Departments in our university.

7. PROGRAMME

"Programme" means a course of study leading to the award of a degree in a discipline.

8. COURSES

'Courses' is a component (a paper) of a programme. Each course offered by the department is identified by A Unique course code. Acourse contains Lectures/Tutorials/Laboratory/Seminar/Project/PracticalTraining/ReportWriting/Viva-Voce or a combination of these, to meet effectively the teaching and learning needs.

1. Courses have been designed with weightage of two /four credits, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise lectures/tutorials/laboratory/field work/outreach activities/project work/vocational training/viva/seminars etc. or a combination of some of these.

2It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

9. CREDITS

The 'Credit' refers to the weightage given to a course, usually in relation to the instructional hours assigned to it. Normally, in each of the course's credits will be assigned on the basis of the number of lectures/tutorials/laboratory and other forms of learning required to complete the course content in a 15-week schedule. One credit is equal to one hour of lecture per week. For laboratory/filed work one credit is equal to two hours.

1. Core Courses (CC) - a) Theory Minimum - 48 credits

- b) Practical Minimum - 16 credits

2. Discipline Specific Elective Courses (DSEC) - 16 (4x4 Credits)

3. Ability Enhancement Compulsory Course (AECC) - 8 (2x2 Credits)

4. Co- curricular (NCCC) - 6 (2x3 Credits)

5. Skill Enhancement Course (SEC) - 4 (2x2 Credits)

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91 Credits

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10. SEMESTERS

An Academic year is divided into two semesters. In each semester, courses are offered in 15 teaching weeks and the remaining 5 weeks are to be utilized for conduct of examination and evaluation purpose. Each week has 30 working hours spread over 5/6 days a week.

11. DEPARTMENTAL COMMITTEE

The department committee consists of the faculty of the department. The departmental committee shall be responsible for admission to all the programmes offered by the department including the conduct of entrance tests/ selection, verification of records, admission, and evaluation. The departmental committee determine the deliberation of courses and specifies the allocation of credits semester-wise and course-wise. For each course, it will also identify the number of lectures, tutorials, practical, seminars etc. The courses (core/Discipline specific Elective /Non-Major Elective) are designed by teachers and approved by the departmental committees. Courses approved by the departmental committee shall be approved by the board of studies. A teacher offering a course will also be responsible for maintaining attendance registered for the course.

12. COMPONENTS

A UG programme consist of number of courses. The term “course” is applied to indicate a logical part of the subject matter of the programme and is invariably equivalent to the subject matter of a “paper” in the conventional sense. The following are the various categories of the courses suggested for the PG programmes:

A. Core courses (CC)- “core paper” means “the core courses” related to the programme concerned including practical and project work offered under the programme and shall cover core competency, critical thinking, analytical reasoning, research skill.

B. Discipline –specific electives(DSE) mean the courses offered under the programme related to the major but are to be selected by the students and shall cover additional academic knowledge, critical thinking, and analytical reasoning.

13. PROJECT/DISSERTATION

- **PLAN OF WORK:** The candidate shall undergo project/Thesis work during the final semester. The candidate should prepare a scheme of work for the Thesis/project and should get approval from the guide. The candidate, after completing the Thesis / project work, shall be allowed to submit it to the university department at the end of the final semester. If the candidate id desirous of availing the facility from other department/universities / laboratories / organizations.
- They will be permitted only after getting approval from the guide and HOD. In such a case, the candidate shall acknowledge the same in their Thesis/ project work.

14.INTERNSHIP

The students who have opted for an internship must undergo various hospitals (naturopathy, siddha, Allopathy) in the reputed organizations to assure therapeutic. The student must find hospitals related to their discipline (public limited /private limited/owner/NGOs etc..,) in consultation with the faculty in charge/ Mentor and get approval from the head of the department and department committee before going for internship.

- **No.of copies of dissertation/project report/ internship report**

  The candidate should prepare three copies +2(including guide and scholar) of the dissertation/project report/ internship report and submit the same for the evaluation of the examiners.
- **Format to be followed for internship report**

  The format / certificate for internship report to be followed by the student are given below
- Tittle page – **Format of the tittle page**
- **Tittle of Internship Report**

Internship report submitted in partial fulfilment of the requirement for the M.Sc. Yoga degree in……to the Department of Yoga, TNPESU, 600127.

- By (Student Name),
- (Register Number),
- University Logo

15.ATTENDANCE REQUIREMENT FOR APPEARING SEMESTER EXAMINATIONS:

1. Everyteachingfaculty handling a course shallberesponsible for the maintenance of attendanceregister for candidates who have registered for the course.

2. Students must have 75% of attendance in each course for appearing in the examination.
3. Studentswho have 74% to 70% of attendanceshallapply for condonation in the prescribedformwith the prescribedfee.
4 .Studentswho have 69% to 65% of attendanceshallapply for condonation in prescribedformwith the prescribedfeealongwith the MedicalCertificate.
5. Studentswho have below 64% to 60%of attendance are not eligible to appear for the examination. It isfurtheredclarifiedthat the students, Carry over to the next semester.
6. Studentswho have below 60% of attendance are not eligible to appear for the examination. It isfurtheredclarifiedthat the students, Re do the course

16.EXAMINATION AND EVALUATION

The examination shall be conducted separately for theory and practical to assess (remembering, understanding, applying, analyzing,evaluating, and creating) the knowledge required during the study. There shall be two systems of examinations viz., internal, and external examinations. The internal examinations shall be continuous internal assessment tests 1 (CIA 1&2)

The Post Graduate degree programme M.Sc., Yoga (Two Years), determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

SEMESTER	CREDITS	TOTAL MARKS
I	23	800
II	23	800
III	20	700
IV	24	800
Grant Total	**90**	**2500**

1 Each course will be assessed on the basis of 100 marks. The marks would be divided between internal and external assessment.

2 There shall be one end semester external examination for each course in every semester consisting of 75% (75 marks) weight in theory and 75% (75 marks) in practical courses.

3 Each Theory course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	Marks
Attendance	5
Assignments /Seminars /quizzes etc	5
Test Paper – I & Test Paper - II	5
Model Examination	10
Total	25

4. Each Practical Course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of practicum	Marks
Attendance	5
Internal Viva	5
Record Note	5
Yogic practices Performance	10
Total	25

a. The minimum passing standard will be 50% for the external and internal component of each theory course, i.e. 38 marks out of 75 (external - 50% of 75 marks) and 12.5 marks out of 25 (internal - 50% of 25 marks).In practical minimum passing standard will be 50% for the external exam and internal assessment for each practical course.

17. INTERNAL ASSESSMENT

The internal assessment shall comprise a maximum of 25 marks for each subject. The following procedure shall be followed for awarding internal marks.

S.NO	CONTENT	MARKS
1	Average marks of two CIA test	15
2	Attendance	2
3	Seminar/group discussion/quiz	4
4	Assignment/field trip report/case study report	4
	Total	**25**

18. PATTERN OF QUESTION PAPER AND EVALUATION:

The following procedure will be followed for evaluation:

a) The Question paper pattern under CBCS will include three sections carrying 2 marks, 5 marks and10 marks questions respectively.

PART- A -10Questions, (Answer all the questions) - 10 X 2 = 20 Marks

PART- B - 5 Questions – 11(a) (or) Question – 11(b) - 5 X 5 = 25 Marks

PART- C - 5 Questions, (Answer any three questions)- 3 X 10 = 30Marks

b) Single valuation will be done by the Examiners duly appointed by the University. The answer scripts are valued either by internal or external examiners.

c) A student is required to secure a minimum of 50% marks in each course in the End Semester Examinations, i.e., 38 marks out of 75 and a total of 50 marks out of 100 including Internal Assessment.

19.ATTENDANCE REQUIREMENT FOR APPEARING SEMESTER EXAMINATIONS:

a) Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course.

b) The Students must have 75% of attendance in each course for appearing in the examination.

c) The Students who have 74% to 70% of attendance shall apply for condonation in the prescribed form with the prescribed fee.

d). The Students who have 69% to 65% of attendance shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

e) Students who have below 64% to 60%of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Carry over to the next semester.

f). Studentswho have below 60% of attendance are not eligible to appear for the examination. It is further clarified that the students, Re do the course

g)

A student will be issued Hall Ticket only if he/she produces "No Dues" certificate from the concerned Department, the laboratory, the Registrar's Office, and the library.

20. THE AWARD OF GRADES IS AS FOLLOWS:

Range of Marks	Grade Points	Letter Grade	Description
90 and above	9.0-10.0	O	Outstanding
80 to 89	8.0-8.9	D+	Excellent
75 to 79	7.5-7.9	D	Distinction
70 to 74	7.0-7.4	A+	Very Good
60 to 69	6.0-6.9	A	Good
50 to 59	5.0-5.9	B	Average
Less than 50	0.0	U	Re-appear
ABSENT	0.0	AAA	Absent

21. VILLAGE EXTENSION PROGRAMME

The aim of the introduction of this village placement programme is to extend out to reach environmental awareness, social activities, hygiene, and health to the rural people of this region. The students have to visit any one of the adopted villages within the jurisdiction of department of yoga, TNPESU and can arrange various programs to educate the rural mass in the following areas for five days based on the theme.

1. Yoga for all,

2. Naturopathy food,

3. 365 days yogic practices.

22. THESIS

The topic of thesis will be allocated in third Semester and candidate will work for one semesters and submit a written thesis in 4th semester. The student will be awarded grade for the total number of credits earned in Thesis in III and IV semesters of study at the end of the IV semester.

PROGRAMME OUTCOMES (POs):

By the end of the program, the students will be able to

PO1	Yoga three-fold activities in the field of yoga, namely: teaching, therapy, and research.
PO2	To spread the value-based knowledge of yogic science.
PO3	Research in Yoga / Yogic Science and Yoga therapy – utilizing the traditional text-based knowledge along with modern science.
PO4	To evolve researchers in Yoga / Yogic science and trained teachers.
PO5	To train the individuals in the traditional knowledge of India in the Post Graduate level and also preventive, promotive and curative aspects of yogic practices.

PROGRAMME SPECIFIC OUTCOMES (PSOs):

By the end of the program, the students will be able to

PSO1	The Post Graduates will be having knowledge of yogic science withstudy of the classical texts along with knowledge of modern anatomy and physiology.
PSO2	They can become experienced yoga teachers, yoga therapists and yogapractitioner and can conduct research in Yoga and Yoga therapy - utilizing the traditional text-based knowledge along with modern science.
PSO3	They will be able to use yogic techniques from Astanga yoga, Hathayoga, Ghatayoga and such for treatment of various diseases. They will have the knowledge of food and lifestyle, mind body management techniques.
PSO4	They can become teacher and lecturer after the completion of the programme and they can be They can go for permanent lectureship afterUGC - NET. Job opportunities as - Lecturers / Assistant Professors.
PSO5	Yoga Therapist, Yoga Therapy consultant, Yoga Instructor, YogaTrainer. Employment Areas - Educational Institutes, Corporate sectors, Yoga Centres, Hospitals, Community Health Clubs, Resorts.

SEMESTER I

Course code	Course Title	Hours/ Week			C	Marks		
		L	T	P		CIA	ESE	Total
23PB1CT101	Foundations of Yoga	4	1	-	4	25	75	100
23PB1CT102	Anatomy and Physiology	4	1	-	4	25	75	100
23PB1CT103	Classical Yoga Practices	4	1	-	4	25	75	100
ELECTIVE - DISCIPLINE CENTRIC - I CHOOSE ANY ONE								
23PB1CE001	Yoga for Health	3	1	-	3	25	75	100
23PB1CE002	Yogic Diet and Nutrition							
23PB1CE003	Basic Relevant of Yogic Science – I							
23PB1CE004	Methods of Naturopathy							
GENERIC ELECTIVE (GE)								
23PB1GE101	Interdepartmental Elective – II (Generic) Psychology	3		-	3	25	75	100
SKILL ENHANCEMENT COURSES (SEC) - I PRACTICUM								
23PB1SE101	Classical Yogic Practices and Applied Physiology Practicum - I	-		4	2	25	75	100
ABILITY ENHANCEMENT COURSE (AEC)-I								
23PB1AE101	Communication Skill - I	4		-	2	-	-	100
		22	**4**	**4**	**22**	**150**	**450**	**700**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER II

Course code	Course Title	Hours/ Week			C	Marks		
		L	T	P		CIA	ESE	Total
23PB1CT201	Research Process in Yoga and Statistics	4	1	-	4	25	75	100
23PB1CT202	Methodology of Teaching Yoga	4	1	-	4	25	75	100
23PB1CT203	Basic Yoga Texts	4	1	-	4	25	75	100
ELECTIVE - DISCIPLINE CENTRIC - II CHOOSE ANY ONE								
23PB1CE005	Biomechanics and Kinesiology	3	1	-	3	25	75	100
23PB1CE006	Any one Sports Papers							
23PB1CE007	Yoga in World Religion Synthesis							
23PB1CE008	Professional Preparation for Competitive Exams							
GENERIC ELECTIVE (GE)								
23PB1GE201	Interdepartmental Elective – II (Generic) Exercise Physiology / Biomechanics	3		-	3	25	75	100
SKILL ENHANCEMENT COURSES (SEC) – II PRACTICUM								
23PB1SE201	Teaching Practices Practicum - II	-		4	2	25	75	100
ABILITY ENHANCEMENT COURSE (AEC)-II								
23PB1AE201	Computer Application in Yoga	4		-	2	-	-	100
		22	**4**	**4**	**22**	**150**	**450**	**700**

Note:

1. Students shall take Department Electives (DEs) from the choices available in the Department in consultation with HOD.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER III

Course code	Course Title	Hours/ Week			C	Marks		
		L	T	P		CIA	ESE	Total
23PB1CT301	Yoga for Health and Wellness	4	1	-	4	25	75	100
23PB1CT302	Patanjali Yoga Sutras	4	1	-	4	25	75	100
23PB1CT303	Yoga Therapy – I	4	1	-	4	25	75	100
23PB1CT304	Clinical Applications of Yoga Therapy	4	1	-	3	25	75	100
ELECTIVE - DISCIPLINE CENTRIC - III CHOOSE ANY ONE								
23PB1CE009	Scientific Studies in Yoga	3	-	-	3	25	75	100
23PB1CE010	Traditional Indian Systems of Medicine							
23PB1CE011	Applied Spirituality							
23PB1CE012	Advance Study of Pranayama and Meditation							
SKILL ENHANCEMENT COURSES (SEC) – III PRACTICUM								
23PB1SE301	Interdepartmental Elective – II (Generic) Classical Yogic Practices and Clinical application in Indian Traditional systems of Medicine and Therapies Practicum – III	-		-	2	25	75	100
ABILITY ENHANCEMENT COURSE (AEC)-III								
23PB1AE301	Life Skills Management- III	2		4	2	-	-	100
INTERNSHIP / INDUSTRIAL ACTIVITY (IT) -III								
23PB1IT301	Hospital / Academe/Fitness centre Internship for Hospitals/ In Schools 15 Days (Internship)	-		4	2	50	-	50
		21	**4**	**8**	**24**	**200**	**450**	**750**

Note:

1. *Internship will be carried out during the summer vacation of the first year and marks should be sent to the University by the Department and the same will be included in the Third Semester Marks Statement.
2. *15 days training in multi-specialty hospital/ school/ fitness centreto qualify for the degree and submit a mini project.

SEMESTER IV

Course code	Course Title	Hours/ Week			C	Marks		
		L	T	P		CIA	ESE	Total
23PB1CT401	Yoga Therapy – II	4	1	-	4	25	75	100
23PB1CT402	Hatha Yoga Text - II	4	1	-	4	25	75	100
23PB1CT403	Yoga in Ancient Tamil Literature	4	1	-	4	25	75	100
ELECTIVE - DISCIPLINE CENTRIC - VI CHOOSE ANY ONE								
23PB1CE013	Tirumoolar's Tirumandiram	3	-	-	3	25	75	100
23PB1CE014	Revenue Models in Yoga							
23PB1CE015	Area of Dissertation							
23PB1CE016	Yoga and Management							
23PB1TH401	Thesis with Viva-Voce	-		4	3	25	75	100
SKILL ENHANCEMENT COURSES (SEC) – IV PRACTICUM								
23PB1SE401	Advance Yoga Techniques with Props – IV	-	-	-	2	25	75	100
ABILITY ENHANCEMENT COURSE (AEC)-IV								
23PB1AE401	MOOC/SWAYAM/ Naan Mudhalvan	2	-	-	2	-	-	100
EXTENSION ACTIVITY (IT) -III								
23PB1EA401	Village Placement Programme Extension Activity- (Field Visit)	-	-	2	1	50	-	50
		17	**3**	**6**	**23**	**200**	**450**	**750**

PG - ELECTIVE (DISCIPLINE CENTRIC) – CHOOSE ANY ONE

I - SEMESTER

1) Yoga for Health

2) Yogic Diet and Nutrition

3) Basic Relevant of Yogic Science - I

4) Methods of Naturopathy

II - SEMESTER

1) Biomechanics and Kinesiology

2) Any one Sports Papers

3) Yoga in World Religion Synthesis

4)Professional Preparation for Competitive Exams

III - SEMESTER

1) Scientific Studies in Yoga

2) Traditional Indian Systems of Medicine

3) Applied Spirituality

4) Advance Study of Pranayama and Meditation

IV - SEMESTER

1) Tirumoolar's Tirumandiram

2) Revenue Models in Yoga

5) Area of Dissertation

6) Yoga and Management

SEMESTER - I

SEMESTER- I

CORE PAPER - I

SUBJECT CODE - 23PB1CT101 - FOUNDATIONS OF YOGA

Learning Objective (LO):

By the end of the course, the student will be able to

- To know about the origin and History of Yoga
- To know about the conception of Yoga
- To understand the philosophy of Yoga
- To know about the yoga perspective in Books & Epics
- To know about the concept of Yoga in Vedantic approach

UNIT - I:

History, Evolution of Yoga and Schools of Yoga: Origin of Yoga, History and Development of Yoga; Etymology and Definitions, Misconceptions, Aim and Objectives of Yoga, True Nature and Principles of Yoga, Introduction to Vedas, Upanishads, Prasthanatrayee and Purushartha Chatushtaya, General introduction to Shad-darshanas with special emphasis on Samkhya and Yoga Darshana, Yoga in Vedanta.

UNIT - II:

Modem Developments Introduction to Epics - (Ramayana, Mahabharata), Yoga in Ramayana, Yoga in Mahabharata, Introduction to Smritis and Yoga in Smritis; General introduction to Agamas and Tantra, Yoga in Tantra; Concepts of Nadi and Prana in Tantra, Kundalini, Effects of Kundalini Shakti and Shat chakra Sadhana, Yoga in Medieval Literature, Bhakti Yoga of Medieval Saints, Yoga in Narada Bhakti Sutras.

UNIT - III:

Yoga in Modern Times: Yogic Traditions of Ramakrishna and Swami Vivekananda, Shri Aurobindo; Maharshi Ramana and Swami Dayanand Saraswati, Yoga in Contemporary Times: Brief Introduction to important Yoga Paramparas (lineages), Sri T. Krishnamacharya, Yoga Parampara of Swami Shivananda Saraswati, Swami Rama of Himalayas, Maharshi Mahesh Yogi and their contributions for the development and

promotion of Yoga.

UNIT - IV:

Introduction to Schools (Streams)of Yoga: Yoga Schools with Vedanta Tradition (Jnana, Bhakti, Karma, and Dhyana), Yoga Schools with Samkhya-Yoga Tradition (Yoga of Patanjali) and Yoga Schools with Tantric Tradition (Hatha Yoga, Swara Yoga and Mantra Yoga.

UNIT - V:

Elements of Yoga and Yogic practices on Hinduism, Jainism, Buddhism, Christianity, Islam, Sufism- Spirituality - Role of yoga & Religions on Spirituality- Methods to promote Spirituality.

Reference Books:

1. Brahma Kumaries Jagdish Chander Mount Abu: PBK Ishwarlyavishwavidyalaya.
2. Desikachar (2003) Nathamuni's yoga Rahasya, Chennai: Krishnamacharya YogaMandiram.
3. Desikachar (2004) Yoga Yajnavalkya Samhita, Chennai: Krishnamacharya YogaMandiram.
4. HausthulDesikachar (2016) The Hota yoga pradipika,'Chennai: Madia Garuda.
5. Meena Ramanathan (2006)GrandasamihitaLonavla:KaivalyadamaS.M.Y.M.Samiti.
6. Subramanian (2003) The Yoga Vasishta, Chennai: Sura Books (Pvt) Ltd.
7. Swami Gambirananda (2008) Eight upanisads Kolkata: Advaita Ashrama.
8. Swami Ranganathananada (2001) The message of the Upanishads, Mumbai: Bharatiya vidya Bhavan.
9. VenkataReddy (1932) Hataratnavali, Arthameru: M.S.R.Memorial yoga series.
10. Elangovan. R (2016) Fundamentals of Yoga, Chennai: Ashwin Publications.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	Student can get the basic knowledge about Yoga
CO 2	They will get the full idea about the Etymology and Principles of Yoga
CO 3	Student can get full knowledge in Indian Philosophy
CO 4	They can get the very valuables thoughts in the most popular books and epics
CO 5	Finally, the student will get full blue print about Yoga

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	S	L	M	S	M
CO 2	S	M	L	S	M
CO 3	S	M	M	S	S
CO 4	S	M	M	S	M
CO 5	S	S	M	S	S

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

CORE PAPER - II

SUBJECT CODE - 23PB1CT102 - ANATOMY AND PHYSIOLOGY

Learning Objective (LO):

By the end of the course, the student will be able to

- To know about the structure of the body.
- To know about the necessary functions of the body.
- To give brief idea about the diseases related to each system.
- To throw light on anatomy so that student can experience the involvement of their body parts while practicing various postures of yoga.
- To know about the structure and function of cell, Nervous system, Digestive system, Respiratory system, Cardiovascular system, Endocrine system.

UNIT - I:

Introduction to Human Anatomy and Physiology: Introduction to cell, tissue, organs, and systems; Basic cell physiology-Cell Introduction, Cell Organelles, Cell membrane, Movement of the substances and water through the cell membrane, Bioelectric potentials.

UNIT – II:

Musculoskeletal systems: Skeleton - names of all bones, joints and muscles, cartilage, tendon and ligaments, types of bone, joints, and their functions; spine, muscles, and their functions; Skeletal muscles - Properties of skeletal muscles, Muscular contraction and relaxation, Neuromuscular junction, Supracetabular system, Smooth muscle- mechanism of contraction**.**

UNIT - III:

Digestive and excretory system: Anatomy of digestive system, excretory system (component organs) and their functions; Gastro intestinal system- General 5 structure of alimentary canal, Gastric secretion, Pancreatic secretion, Gastric motility-digestive peristalsis Gastrointestinal hormones - Renal physiology- Structure of kidney, Nephrons, Juxtra glomerular filtrate, Reabsorption, Secretion-mechanism of secretion, Concentrating and diluting mechanism of urine, Dialysis.

UNIT – IV:

Nervous system and glands: Structure and properties of neurons, subdivisions of nervous system and their functions, types of glands (endocrine and exocrine glands), important endocrine and exocrine glands and types of hormones their functions - Sensory nervous system, Motor nervous system, Higher functions of the nervous system, Synapse, Reflexes Cerebrospinal fluid, Blood brain and blood CSF barrier - Reproductive system: Anatomy of male and female reproductive systems.

UNIT – V:

Cardiovascular and respiratory system: Components of cardiovascular and respiratory system; functions of cardiovascular and respiratory system; Circulatory system- Functional anatomy of the heart, Properties of cardiac muscles, Conducting system of the heart, Pressure changes during cardiac cycles, Capillary circulation, Arterial and venous blood pressure; Respiratory system - Mechanism of breathing, Ventilation, Regulation of respiration, Transport of gases, Hypoxia, Artificial ventilation, Non respiratory functions of the lungs- Stress physiology- how acute and chronic stress disturbs the normal physiology.

Reference Books:

1. Gore M. M. (2003). Anatomy and Physiology of Yogic practices. KanchanPrakashan, Lonavla, India.
2. LanPeate and Muralidharan Nayar – Fundamental of Anatomy and Physiology for student's nurses.
3. Evelyn, C. Pearce- Anatomy and Physiology for Nurses.
4. Tortora and Bryan: Anatomy and Physiology
5. Khurana: Anatomy and Physiology
6. Telles Shirley (2006) A Glimpse of the human body, Bangalore, Swami Vivekananda yoga prakashana
7. Shri Krishna (1988) Notes on structure and functions of human body and Effects of yogic practices on it, Mumbai: ICYHC, Kaivalyadhama.
8. Ray S Dutta (2001) Yogic Exercise: Physiologic and psychic processes, New Delhi:
9. Evelyn C peace (1997) Anatomy and physiology for nurses, New Delhi: Jaypee Brothers.
10. Leslie Kumar (2007) Yoga Anatomy, Champaign: Human Kinetics
11. Bruce, J. Noble (1986) Physiology of Exercise and Sport. St. Louis C.V. Mospy.

12. Shavel LG (1981) Essentials of Exercise Physiology, New Delhi: Surjeet Publication.
13. Fax. E.L. and Mathew D.K., (1981) The Physiological basis of Physical Education and Athletics III Ed. Philadelphia W.B. Sannders.
14. Clerke D.H., (1975) Exercise Physiology, New Jersy: Prentice Hall.
15. Selvalakshmi. S (2017) Anatomy and Physiology Madurai: Shanlax Publications.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	Student can get the basic knowledge about cell.
CO 2	They will get the idea about Nervous system of our body.
CO 3	Student can get Knowledge about Respiratory system.
CO 4	They can get knowledge about Cardiovascular system.
CO 5	Finally, the student will get full knowledge about cells, Tissues, Respiratory system, Cardiovascular system, and Nervous system of our body.

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

CORE PAPER - III

SUBJECT CODE - 23PB1CT103 CLASSICAL YOGA PRACTICES

Learning Objective (LO):

By the end of the course, the student will be able to

- To learn how to movement all the joints in our body.
- To understand the principles and practices of each asana & pranayama.
- To will get some pint of about each asana, pranayama, relaxation technique.
- Toaware of the demonstrate each practice skilfully.
-

UNIT – I

Shatkarmas Dhauti (Kunjal), Vastra dhauti, Danda dhauti, Laghoo and Poorna sankhaprakshalana, Neti (Sutra and Jala), Kapalbhati, Agnisara, Nauli - Suryanamaskar- Suryanamaskar must be practiced traditionally and the variation in Suryanamskar may be taken into consideration based on the convenience of patients for therapy.

UNIT - II

Asnas (yogic postures) Standing Postures Ardhakati chakrasana, Hastapadasana, Ardhachakrasana, Trikonasana, Parivritta trikonasana, Parsvakanasana, Veersana, Sitting postures Paschimottanasana, Suptavajrasana, Ardhamatsyendrasana, Vakrasana, Marichasana, Malasana, Badhakanasana, Merudandasana, Akarna dhanurasana, Gumukhasana, Prone postures Bhujangasana, Salabhasana, Dhanurasana, Urdhvamukhosvanasana, Makarasana, Supine postures Halasana, Chakrasana, Sarvangasana, Matsyasana, Shavasana, Setubandhasana, Balancing postures Vrikshasana, Garudasana, Namaskarasana, Tittibhasana, Natrajasana.

UNIT – III

Pranayama Breath awareness, Sectional breathing, Nadishuddhi, Bhastrika, Ujjai, Cooling pranayama (Sitali, Sitkari and Sadanta), Bhramari, Pranayama (with Antar & Bahya Kumbhaka)

UNIT - IV

Bandhas and Mudras: Jivha Bandha, Jalandhara Bandha, Uddiyana Bandha, Mula Bandha, Maha Bandha, Yoga Mudra, Maha Mudra, Shanmukhi Mudra, Tadagi Mudra, Vipareet Karni Mudra.

UNIT – V

Practices leading to Meditation: Pranav and Soham Japa, Yoga Nidra (1,2,3), Antarmauna, Ajapa Dharana (Stage 1,2,3), Practices leading to Breath Meditation, Practices leading to Om Meditation, Practices leading to Vipassana Meditation, Practices leading to Preksha Meditation. porary Yogic Practices - Yogic Sukshma Vyayama, Cyclic Meditation (SVYASA); Mindfulness based Stress Reduction Technique (Kabatzin); Mind Sound Resonance Technique (S-VYASA); Raja Yoga Meditation (Brahmakumaris); Transcendental Meditation (Mahesh Yogi); ZEN Buddhist Meditation; Yoga Nidra (BSY); Savita Ki Dhyan Dharana (DSVV).

Reference Books:

1. Iyengar B.K.S (1976) Light on =Yoga, London, Unwin paperpacks.
2. Sivananda Sarawathi Swamy (1934) Yoga Asanas Madras: My magazine of India.
3. SatyanandaSarawari swami (2008) Asana, Pranayama, Mudra, Bandha, munger: Yoga Publications trust.;
4. Iyengar B.K.S (2008) Light on pranayama, New Delhi: Haper Collins publishers India
5. Chandrasekaran K (1999) Sound Health Through Yoga, Sedapatti: Prem kalian publications
6. Vishnu Devananda Swami (19720 The complete Illustrated book of yoga, New York: Pocket Books.
7. Yogeshwaranand Saraswathi Swami (1975) First steps to higher yoga, Gangothari: Yoga niketan trust.
8. Coulter, H David (2001) Anatomy and Hatha Yoga, USA: Body and Breatha Inc.
9. Lirk Martin (2006) Hatha Yoha Illustrated Champaign: Humenkinetics.
10. Gharote (2004) Applied Yoga, Lonvla: Kaivalyadhama.
11. Kathy Lee Kappmeier and Diane M. Ambrosini (2006) nstructing hatha Yoga Champign: Human Kinetics

12. Satyanandasaraswati swami (2007) Meditations from thitantras. Murgar. Yoga publications Trust.
13. . Swami Muktibodhananda Saraswati Sahay G.S.: Hatha Yoga Pradeepika, Bihar school of yoga publications, Munger, 2000
14. HathaYoga Pradeepika of Svatmarama, MDNIY Publication, 2013
15. Sharma BR: Jotsna (Comentory of HathaYoga Pradeepika) Kaivalyadhama, Lonavala, 2013.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	To get knowledge about how to movement of all the joints in our body.
CO 2	They will understand the principles and practice of each asana &pranayama
CO 3	They can get some pint of about each asana, pranayama & relaxation technique
CO 4	They can get full knowledge of how to demonstrate each practice.
CO 5	

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SUBJECT CODE - 23PB1CE001 - YOGA FOR HEALTH

Learning Objective (LO):

- To know about health according WHO.
- To know about the conception of Yoga and health.
- To understand the healthy living.
- To know about the kriyas details during various season.
- To know about the concept of food and food therapy.

UNIT - I

Yoga – Meaning and Relevance. Tradition and origin of yoga. The body, mind and role interlink with yoga. Concepts of yoga. Types of yoga – Hatha Yoga, Bhakti Yoga, Raja yoga, Karma yoga, Jnana yoga, Kundalini yoga, Mantra Yoga, Tantra Yoga and integral Yoga (Sri Aurobindo).

UNIT - III

Components of fitness – Flexibility, Strength, speed, ability, co-ordinative abilities and Endurance. Fitness development – cycling, Aerobic activities, Jogging, calisthenics, Rhythmic exercise, and circuit Training. Components of wellness - Factors (Psychological, Physiological and Anatomical), Progression, warming up and limbering down, Special Physical Fitness Exercise and Principles of Physical fitness development.

UNIT - III

Bandhas: Jallandhar bandha, Uddiyana Bandha, Moola bandha and Mahabandha. Yogi purification: Bamana Dhouti, Barisara Dhouti, sahaj Agnisara Dhouti, Nouli, Neti kriya, Nasa-polar shahaj Bastrikria, Water bath, Tub-bath, Hip-bath, sun bath, spinal bath, Air bath, Hot foot bath, The sitz bath, Tratak and message.

UNIT - IV

Food and meditation Food types: Sattvic (Cheese, Butter, curd, Ghee, sweet fruits, Honey, apples, bananas, Grapes, Papaya, Pomegranates, Mangoes, pears, Pineapple, Guavas, Figs etc. Rajasic (Eggs, Meat, Salt, Chillies, Chutney, Asafoetida,

Pickles, Tea, Coffee etc.) and Tamasic (Beaf, Pork, wine, onion, Garlic, Rotten, state things). Balanced diet, carbohydrate, proteins, Fats, and vitamins (Fat and water soluble).

UNIT - V

Curative power for life - threatening diseases and disorders (Arthritis, Arteriosclerosis, Chronic fatigue, diabetes, Asthma, and obesity). Yoga control the respiratory problem, high blood pressure, Body pain and weight reduction. Yogic practices reduce anxiety, create self-awareness, and provide personal social values.

Reference Books:

1. George Feuerstein: The Yoga Tradition (Its history, literature, Philosophy, and practice).
2. Sri Ananda: the complete Book of Yoga Harmony of Body and Mind (Orient Paper Backs: Vision Book Pvt. Ltd., 1982).
3. Swamy Satyananda Saraswathi: Asana, Pranayama, Mudra, Bandha (India: Yoga Publications Trust, Munger, Bihar).
4. Swami Sivandana Practice of Yoga (The Divine Life Society, Shivananda Nagar P.O. U.P. Himalayas, India).
5. Swami Sivananda Practice of Karma Yoga (The Divine Life Society, Shivananda Nagar P.O. U.P. Himalayas, India).
6. B.K.S. Iyenkar : Light on the Yoga Sutras of Patanjali (Haper Collinks Publications India Pvt. Ltd., New Delhi).
7. Iyankar B.K.S. (1989) Light on yoga: Unwin paper backs.
8. Prabhavananda (1953) Patanjali Yoga Sutras, Madras: Sri Ramakrishna Math.
9. Thirumoolar (2006), Thirumantiram, Madras: Sri Ramakrishna Math.
10. Ranganatha Swami (2001) The message of the Upanishads, Mumbai: Bharatiya Vidya Bhavan.
11. Vivekananda Swami (2005) Hinduism, Chennai: Sri Ramakrishna Math.
12. Sivananda Sri Swami (1983), Practical Lessons in Yoga, Shivananda Nagar: The Divine Life Society
13. Desikachar T K V (2004) yoga yajnavalkya samhita, Chennai: Krishnamacharya Yoga Mandiram

14. Desikachar T K V and kamsthub Desikachar, (2004) yoga Tharavali Chennai: Krishnamacharya Yoga Mandiram.
15. Kokaji R.G. (1970) Hatha Pradipita, lonavala: Kaivalyadhma.
16. Desikachar T K V (2004), Nathamuni's Yoga Rahasya Chennai: Krishnamacharya Yoga Mandiram. Swami Sivananda Practice of karma Yoga (The Divine Life Society, Shivananda Nagar P.O. U.P. Himalayas India).

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	They will get the full idea about the WHO concertation.
CO 2	They can get the examinations of various kriyas and asanas.
CO 3	Finally, the student will get Identification of food items.
CO 4	They can get idea about diet and seasonal food.
CO 5	Finally, the student will full with ideas about health care.

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SUBJECT CODE - 23PB1CE002 - YOGIC DIET AND NUTRITION

Learning Objective (LO):

- To know about the origin and History of Yogic diet & nutrition
- To know about the conception of yogic diet.
- To understand the healthy living.
- To know about the nutrition during various stages of life
- To know about the concept of Nutrition therapy

UNIT - I

Basic concepts and components of food and nutrition Understanding Nutrition, Basic Terminology in Relation to Nutrition Requirement, Human Nutritional Requirements; Concept of food, Acceptance of Food, Functions of Food; Components of Food & their Classification; Macro Nutrients –Sources, Functions and Effects on the Body; Micro Nutrients - Sources, Functions and Effects on the Body; Fat Soluble Nutrients - Sources, Functions and Effects on the Body; Water soluble Nutrients - Sources, Functions and Effects on the Body; Significance of Carbohydrate, Proteins, Lipids, Vitamins, Minerals and water in the body; Antioxidants and their Role.

UNIT - III

Yogic concept of diet and its relevance in the management of lifestyle.

UNIT - III

Nutrients, proximate principles of diet, balanced diet concept; Carbohydrates, proteins, fats – sources, nutritive values, importance; Minerals-calcium, iron, phosphorus etc. Vitamins – sources, roles, requirements

UNIT - IV

Food groups. Cereals & Millets –Selection, Preparation and Nutritive Value; Pulses, Nuts and Oil Seeds- Selection, Preparation and Nutritive Value; Milk and Milk Products- Selection, 6 Preparation and Nutritive Value; Vegetables and Fruits- Selection, Preparation and Nutritive Value, Fats, Oils and Sugar, Jaggery- Selection, Preparation and Nutritive Value.

UNIT - V

Food and metabolism. Energy- Basic Concepts, Definition and Components of Energy Requirement, Energy Imbalance Concept of Metabolism, Anabolism, Catabolism, Calorie Requirement-BMR, SDA, Physical Activity; Metabolism of Carbohydrates, Lipids and Protein; Factors Affecting Energy; Requirement and Expenditure, Factors affecting BMR.

Reference Books:

1. Hoger (1990) Fitness and wellness, Colorado: Morton Publishing Company.
2. GirijaShyamsundar (2007) Nutrition perspectives Chennai: University ofMadras.
3. Swami Sivananda (2007) Health and Hygiene Sivanandanagar: The Divine Life society.
4. Lily Pritam Telu Ram (1981) Health and Hygiene, Delhi: Vikas publishingHouse Pvt Ltd
5. Raghavan (1965) Hand book of health educstionkaraiKudi: Meenalenterprises
6. Sunitha Pant Bansal (2008) Diet in diseases Delhi: Pustak Mahal
7. Yoga charya Sundaram (2004) diet and digestion Coimbatore: The yogapublishing house.
8. Syd Hoare (1986) Keep fit, Hodder and Stoughton: Teach yourself books
9. Swami Sivananda (2011) Health and diet, Shivananda Nagar: The divine life society.
10. Ananda BalayogiBhavanani (2007) A Yogic approach to stress, Puduchery: Vivekananda Yoga Research foundation
11. Nagendra and Nagratha (2008) New perspectives in Stress Management, Bangalore: Vivekananda Yoga Research foundation
12. Arvind janar (2004) yoga diet, Bangalore: Sai towers
13. Kathy Phillips, The Spirit of Yoga London Cassell & Co
14. Krishna Raman (1998) A Matter of Health, Chennai: East West books(Madras) Pvt. Ltd
15. Elangovan (2018) Yoga Psychology, Chennai:Ashwin Publications
16. Elangovan (2016) Fundamentals of Yoga, Chennai: Ashwin Publications.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	They will get the full idea about nutrition.
CO 2	They can get the examinations of health check-up through diet.
CO 3	Finally, the student will get Identification of food items.
CO 4	They can get idea about diet and seasonal food.
CO 5	Finally, the student will full with ideas nutrition values.

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SUBJECT CODE - 23PB1CE003 - BASIC RELEVANT OF YOGIC SCIENCE - I

Learning Objective (LO):

- To develop the ability of reading and understanding of classical texts of yoga in the original language.
- To study basics of Sanskrit.
- To get the knowledge of different schools of yoga.

UNIT - I

Basic Sanskrit – I: Orthography of Devanagari Varnamala, classification of varnas, Purnakshara, Samyuktakshara, Karakas and Mrduvyanjanas, writing of Varnamala using Roman transliteration - Sanskrit words – classification of Sanskrit words, Subantas - AjanthaandHalanta words, Genders, Vachanas, cases of subanta words.

UNIT - II

Declaration -of the following words in cases – Rama, Hari, Guru,Lata, Mati, Dhenu, Phala, Vari, Gau,Asmad, Yushmad, Tad, Kim.Kriyapada in Sanskrit – Classification, Lakaras, Purushas, Vachanas. Declaration of the following root words in Lat, Lan, Lrt, Lot and Vidhi Lin –Bhu, Khad, Vad, Dhyai, Path, Sev, Kshi, Pracch, Tus, Kath, Chint, Kr.

UNIT - III

Basic Sanskrit – II: Avyayas in Sanskrit – Ca, Api, Va, Na, Vina, Saha, Tu, Kintu, Eva, Evam, Iti, Ittham, Athra, Iha, Tada, Gatva, Krtva, Labdhwa, Jitva.Upasargas – Pra, Para, Apa, Sam, Anu, Ava, Nis, Nir, Dus, Dur, Vi, Aa, Ni, Adhi, Api, Ati, Su, Abhi, Prati, Pari, Upa, Antar, Avir, Tiras.Sandhis –Savarnadhirgha, Vrddhi, Guna, Ayadhi, Stutva, SchutvaNipatas-Cha, Va, Api, Kim, Chiat, Ma Chana, Sma.Elementary knowledge of voices in Sanskrit – Active, Passive, Impersonal. Compound words – Tatpurusha, Karmadharaya, Dvigu, Dvandva, Bhahuvrihi, Avyayibhava, Karakas – its use in Sanskrit.

UNIT - IV

Study of the following chapters of Bhagavad-Gita: Sankhya yoga according to Bhagavad-GitaChapterII - Karma yoga according to Bhagavad-Gita Chapter II - Karma

yoga according to Bhagavad-Gita Chapter VI - Dhyana yoga according to Bhagavad-Gita Chapter VI.

UNIT - V

Schools of Yoga: Rajayoga, Hathayoga, Jnanayoga, Karmayoga, Mantra yoga, Bhaktiyoga.

Reference Books:

1. Anantarama Sastri, Shabda Manjari, R.S.Vadhyar & Sons, Palghat -678003.
2. L.Anantarama Sastri, Dhatu Manjari, R.S.Vadhyar & Sons, Palghat -678003.
3. Appayyadikshitha, LaghusiddhantaKaumudi, Chaukamba Oriental Series, Varanasi221001
4. Omananda Tirtha, Patanjala Yoga Pradeepa, Geeta Press, Gorakhpur.273005.
5. H.Kumar Kaul(1994), Aspects of Yoga, B.R.Publishing Corporation, Delhi 700014.
6. Swami Atmananda(1966),The Four Yogas, BharatiyaVidyaBhawan, Bombay400007
7. Swami Digambaraji (1970), Hathayoga Pradipika of Swatmarama, Kaivalyadhama, Lonavala, Pune - 410403.
8. Swami Niranjanananda(1997), Hathayogapradipika, Bihar School of Yoga-811201
9. Swami Niranjanananda(1997), Gheranda Samhita, Bihar School of Yoga-811201
10. Swami Digambarji(1997), Gheranda Samhita, Kaivalyadhama, Lonavala-410403
11. Swami Muktibodhananda(1999), Swara Yoga, Yoga Publications Trust, Munger, Bihar, India.-811201

12. T.Krishnamacharya, T.K.V.Deshikachar.,(1998)Nathamuni's Yoga Rahasya, Krishnamacharya Yoga Mandiram, Chennai-600028.

13. NaikarChandramauli S.(1997), Ghata Yoga Medha Publisher, Dharwad.

14. Vijayalakshmi M.Ed(2003), Gheranda Samhita, Shivalik Prakashan, Delhi.

15. Swami Vivekanda (1998), Four Yogas; Rama Krishna Ashrama Publication, DehiEntally Road, Kolkata –700014.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SUBJECT CODE - 23PB1CE004 - METHODS OF NATUROPATHY

Learning Objective (LO):

- To gain knowledge of Naturopathy and its applications
- To identify the benefits of incorporating naturopathy with yoga.
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UNIT - I

Yoga philosophy; The four streams of yoga;Concept of yoga and health; Yoga posture for health; Pranayama and its Medical significance; Meditation and mind; Kriyas and their Medical Significance.

UNIT - II

Philosophy of Naturopathy; Principles of Naturopathy; methods and practice of treatment in Naturopathy; Fasting, Hydrotherapy –spinal bath, hip bath, steam bath, enema, and full wet pack.

UNIT - III

History of Naturopathy; Role of Yoga and Naturopathy in the prevention and treatment of disorders of the present times. Methods of Naturopathy; Control of diet; Fasting; Mud therapy; Magneto therapy.

UNIT - IV

Special Features of Colour Therapy; Effects of colour s on the Mind and body; Preparation and use of Colour charged Medicines; and Massage therapy- Natural method of cleaning the bodynatural and health preserving dress- natural and healthy sleeping places.

UNIT - V

The basic knowledge of Acupressure-theory of Acupressure-identification of points Acupressure-Therapeutic use of Acupressure; benefits of acupressure; Acupressure treatment for common diseases.

Reference Books:

1. Prof.M. VenkataReddy(3008):Scientific Studies on Yoga,Hyderabad,A.PYogadhyayanaParisad.
2. V.M.Kulkarni (1986),Naturopathy the art of drugless healing, Srisatguru publication, Delhi.
3. Dr.TulasiraoRatti(3012), Philosophy of Yoga and Naturopathy, Lambert academic publication, Germany,
4. Swami SatyananadaSaraswati(1992),Yogic Management of CommonDiseases,Bihar School of Yoga,Munger, Bihar.
5. SwamyKuvalyanananda-: Principles of Yoga therapy,SMYMSamathi, Kaivalyadhama,

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of concept of yoga in relation to naturopathy.
CO 2	The capacity to know learns various naturopathy techniques.
CO 3	The knowledge of able to learn and train the naturopathy methods.
CO 4	The knowledge of apply the naturopathy techniques for health and disease
CO 5	To know able to identify the acupressure points

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SKILL ENHANCEMENT COURSE SCE - I

SUBJECT CODE - 23PB1SE101-

CLASSICAL YOGIC PRACTICES AND APPLIED PHYSIOLOGY PRACTICUM - I

Learning Objective (LO):

- To learn how to movement all the joints in our body.
- To understand the principles and practices of each asana & pranayama.
- Make students familiar with the systems of the body.
- Give a hand on experience about the human body using models, charts, and pictures.
- Make students understand the organization of the body with respect to structural components.

UNIT – I

Loosening Exercise Loosening the joints, Joint freeing series - Surya Namaskar: (Bihar school of yoga 12 Steps) – Prayer, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, and Benefits. Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each asana.Ardhachakrasana, Padhahastasana, Trikonasana, Ekapadasana.Padmasana, vajrasana, Ustrasana, Patchimotasana.Utthanapadasana, Arthahalasana, Savasana.Bhujangasana, Shalabasana, Makrasana.

UNIT – II

Pranayama: Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each one **-** Pranayama: Surya nadi, Chandra nadi, suryabhedhana, Chandra bhedhana, Nadisudhi.

Kriyas and Bandha:Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each one

Kriya **–** Kapalapathi, Vamanadhauti.

Bandha:JalandiraBandha, MoolaBandha, Uddiyana Bandha.

UNIT – III

Mudra and Relaxation Technique: Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each one **-** Mudras: Chin mudra, Chin maya mudra, Adi mudra, Brahma mudra, Bhairava mudra, Bhairavi mudra.Relaxation Technique : Instant Relaxation Technique, Quick Relaxation Technique.

UNIT – IV

Measurement of Temperature, Pulse rate, Respiratory rate - Measurement of Blood Pressure - Muscle Examinations

UNIT – V

Sensory functions – Examinations,Identification of a specimen organ and explain its functions.

Reference Books:

1. Arthur C. Guyton&John Edward Hall (2006) Textbook of Medical Physiology, Florida, United States, Elsiver Standards
2. Surinder H Singh & Krishna garg, (2008) Anatomy and Physiology for nurses & allied health sciences, New Delhi CBS publishers
3. Sivarama Krishnan S (2006) Anatomy and Physiology for Physical Education, New Delhi, Friends Publications.
4. Anne Waugh &AlsonGraunt (2005) Anatomy and Physiology in Health and wellness, Allahabad, ChurhcillLivingtone.
5. Clark Robert K (2005), Anatomy and Physiology Understanding the human body, Suddury, United States, Jones &Bartiett
6. Dutta Ray (2001) A Glimpse of the human, banglors: Swami Vivekananda Yoga prakashana.
7. Leslie kaminoff (2007) Yoga anatomy, champaign: Human Kinetics
8. Shirley Telles (2006) A Glimpse of the human, Bannglore: Swami Vivekananda Yoga Prakashana
9. Evelyne C Peace (1997) Anatomy &Physioogy for Nurses, New Delhi: Jaypee Brothers.

10. Gore M.M (2003) Anaotmy& Physiology for Yogic practices, Lonavala Kamhanprakshan.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	They will get the full idea about the Measurement of Temperature in our body
CO 2	They can get the examinations of muscle & sensory functions.
CO 3	Finally, the student will get Identification of a specimen organ and explain its functions.
CO 4	
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

ABILITY ENHANCEMENT COURSE (AEC) - I

SUBJECT CODE - 23PB1AE101 - COMMUNICATION SKILL

Learning Objective (LO):

- To improve the learners' vocabulary by familiarizing them with the ways of word formation
- To develop communication skills by providing theoretical knowledge of the mechanism of effective communication
- Speak English with an unaffected accent using stress and intonation
- Use acceptable English in academic writing
- Communicate in a professional way using various communication strategies

UNIT – I

Communication Skills: Role of communication in Present Days- Importance of Communication - Communication Barriers - Types of Communications: Verbal communication: Oral -Story telling- Crucial conversation – Face to Face Communication- Telephone communication, Aral- Listening and Hearing, Non - Verbal Communication: Facial Expressions- Body Language-Posture- Eye Contact, Written Communication: Journals - E-Mails - Blogs - Text Messages, Visual Communications: Signs - Symbols - Pictures.

UNIT – II

Components of Communication – Context - Encoder- Encoding - Message - Medium - Receiver – Feedback- Level of Communication – Intrapersonal – Intrapersonal- Group and Public communication, Characteristics of Communication, Memorandum: Purpose- Format- Business Memo and Agenda, Basic Skills for Communications- Listening – Speaking- Reading and Writing.

UNIT – III

Interview Skills: Preparing for Interview - Personal interview - Technical interview - Group Discussion- Body language- Pronunciation- Speaking - Presentation skills:

Preparation – The Subject – The Audience – The place- The time - Length of Talk and Structure of Presentation.

UNIT – IV

Phonetics: Elements of English Language - Phonology- Morphology-Lexis-Syntax- Grammar, The Different Speech Organs, and Their Role- The Individual Sounds- Vowel- Pure Vowel - Semi Vowel - Diphthongs - Classification of Diphthongs -Monotones - Consonants - Manner of Articulation - Place of Articulation.

UNIT – V

Strong and weak Forms of Words- Stress- Word Stress- Primary Stress- Secondary Stress- Sentence Stress, Rhyme and Rhythm – Rhythm – Intonation- Raise - Fall - Raise Fall intonation.

Reference Books:

1. Second Edition of “Communication Skills” Published by Carrier Skill Library.
2. Effective Communication Skills – A Book of MTD Training.
3. The Language Sound of Language by Michael Dobrovolsky and Francis katamba.
4. ‘Soft Skills’, University of Madras, Chennai
5. ‘Communication Skills,’ University of Madras, Chennai

Course Outcomes:

On successful completion of the course, the students should be able to:

CO1	Understandandacquireknowledgeonbasicskillsforcommunications
CO2	ExplainthebasicconceptsofSpeakEnglishwithanunaffectedaccentusingstressand intonation
CO3	Describetheapplicationofvariousinterviewskills.
CO4	AnalysetheelementsofEnglishlanguage
CO5	Explainthestrongandweakformsofwords

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER - II

PY022CT201 - RESEARCH PROCESS IN YOGA

PROGRAM OBJECTIVES:

- To know about the Meaning, Definitions, Need, Nature, and scope of research in yoga
- To know about the Types of research design
- To understand the Recent trends in yoga research
- To know about the Statistics and its types

UNIT-I:

Research –Meaning, Definitions, Need, Nature and scope of research in yoga, Types of research- Basic-Applied-Action – Qualities of a researcher-Criteria in locating and selecting a research problem- preparation of research proposal Mechanism of research proposal-formulation of hypothesis-variables and its types.

UNIT-II:

Types of research design –Describe research –survey method, case study, method, Experimental Method- Categories: Longitudinal design, Quasi Experimental design, cross sectional design, Double blind placebo design, Experimental Design Types: Single group Design Reverse group design, repeated measure design static group comparison design, Rotated group design, Random group design, Equated group design, Factorial design.

UNIT-III:

Data- Population- Sample-Subject- Sampling: Characteristics, Principles, steps, Determining the sample size, criteria in selection, Types of sampling probability sampling methods- Random and complex, Non –Probability Sampling methods- Writing Synopsis and Research report-Front Materials, Main Chapters and Back materials- Recent trends in yoga research, yoga research centers and their works in India.

UNIT-IV:

Statistics-Meaning- Need and importance in research – non-parametric statistics-Treatment of F-test, ‘t’ test one way- two way – testing- chi square-statistical packages- SPSS-SAS- data process, data analysis-Graphical Representation, Data interpretation.

UNIT-V:

Types of Statistics- Parametric and non-parametric-Normality of data-Normal Curve – Data Analysis- 't' Test, F-test Type I Type II error-ANOVA-ANCOVA (one way & two way)-Post hoc test- Pearson product moment correlation-Partial and Multiple Correlation- Regression simple linear and multiple linear-Post hoc tests.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Research
- They will get the idea about the Data Analysis
- Student can get full knowledge in Types of research design
- Finally, the student will get the need andimportance in research & Statistics

REFERENCES:

1. Clarke David H and Clarke H, Harrsion (1984) Research process in Physical Education, New Jersey: Prentice Hall Inc.
2. Best john W and Kalm James, V.(1980) research Education, New Delhi, Prentice Hall India.
3. Clarke H.Harrion and Clarke David H,(1972) Advanced Statistics, New Jerycy: Adnaced Statistics New jerycy Prentice Hall India.
4. Garrel henry E and Woodworth R.S.(1958) Statistics in psychology and education, Bombay: Allied publication pvt ltd.
5. Thirumalaisamy (1998) Statistics in physical education, Karaikudi: Senthilkumar Publishers.
6. Thomas AL(1986) The Art of Using computers, boyd& fresher Boston publishing Co.
7. Jerry R.Thomas and jack Nelson (2000) Research methods in physical Activities Illunosis: Human Kinetics:
8. Craig Williams and chris Wragg (2006) Data Analysis and research for sport and exercise science, London Routledge Press.
9. Paul R kinear and colin D Gray (2006) SPSS 14 Made simple, New York: psychology press.
10. Kothari CR (1985) Research Methodology, New Delhi: Wiley Eastern Limited.
11. Elangovan R (2016) Research processes in yoga Chennai: Ashwin Publications

Reference Books:

1. Kamlesh, M.L (1988) Psychology in physical education and sports, New Delhi.
2. Elangovan. R (2001) UdrkalviUlaviyal, Thirunelveli: Aswin Publications.
3. Gita Mathew (1997) Sports Psychology, Shejin and Shiju Brothers, Karaikudi
4. Gidretal, (1989) Psychology, Glenview: scottforesman and company.
5. Bringle Robert etal, (1981) understanding psychology, Munger: Yoga Publications Trust
6. Abhedananda Swami (2002) Yoga Psychology, Kolkatta: Ramakrishana Vedanta math.
7. RisiViveananda (2006) practical Yoga psycghology, Munger: Yoga publications Trust.
8. Mangal S.K (1991), Psychological Foundations of Educations, Ludiana: Prakash Brothers.
9. Elangovan. R (2018) Yoga Psychology, Chennai:Ashwini publications.

Course outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022CT202 - METHODOLOGY OF TEACHING YOGA

PROGRAM OBJECTIVES:

- To know about the Principles of Teaching Yoga
- To know about the basicprinciples and yoga class management
- To understand the concept methods of teaching yoga
- To know about theEssentials of a good lesson plan

UNIT- I:

Education:Yoga Education, Goal, Scope and importance, Principles of Teaching Yoga-Yogicpsychological, Physiological, Pedagogical, sociological**,** meaning of methodology of teaching - factors influencing Methodology, Presentationtechnique, Role of language, Voice, fluency, clarity and body language in Teaching**,** Factors of Yoga Education: Teacher, Student and Teaching- Guru- Shishya Parampara, Types of students and teachers – promotion of leadership qualities**,** Yogic levels of learning, Vidyarthi, Shishya, mumukshu, Yoga Guru.

UNIT- II:

Methods of Yoga Teaching, Lecture method, Response to instruction method (method), Individualized Instructional Method, Group discussion Method, Directed Practice Method, Project method, Demonstration Method, Lecture cum Demonstration Method, Imitation Method, Dramatization Method, Sources of teaching methods

UNIT- III:

Teaching aids:Audiovisual aids, Visual aids, Audio aids, Models, Props, Wooden brick and foot rest belt, ropes, slanting plank, chair, stool, bench, box, the heart rate, ladder stool and drum, bolster and pillow, bandage, weight, the horse,big and small.

UNIT- IV:

Preparing lesson plan- Essentials of a good lesson plan, Advantages of preparing a lesson plan, Contents of a lesson plan, Class management- formation of the class, conducting yoga practical lessons: Precautions and contra-indications of practices, Lesson plan:Assembly and roll call, Relaxation & prayer

Loosening the joints, Introduction of the practice, Demonstration, Individual practice, Group practice, Yoga game (if lime permits), Question and answer session, Relaxation, End prayer.

UNIT- V:

Organizing yoga class, Yoga camp, workshop in yoga, Yoga tours, Yoga games and competitions, classification of age groups for competitions, Evaluation, Advantages, Devices of evaluation.

PROGRAM OUTCOMES:

- Student can get the procedure of learning yoga
- They learned way of teaching yoga
- Student can get the overall perfection of yoga class management
- They will learn how to write a perfect lesson plan for yoga class

Reference Books:

1. Gharote M.L and Ganguly S.K (2001) Teaching Methods for yogic practices Lonavla: Kaivalyadhama
2. Sivananda, Yoga teachers training Manual. val morin: Sivananda Ashram Yoga camp
3. Anandamitra (1991) Teachers' Manual Calcutta: Ananda MargaPracarakaSamgha
4. Thirunarayanan and Hariharan (1975) Methods in Physical Education. Karaikudi
5. Basavaraddi Ishwar (2010) Yoga Teacher's Manual for school teachers, NewDelhi: Morarji Desai National Institute of Yoga

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022CT203 – BASICYOGA TEXTS

PROGRAM OBJECTIVES:

- To know about the basic yoga text
- To know about the introduction and principles of Upanishad & Yoga Upanishads.
- To understand the types of Upanishads
- To know about the Essentials of Bhagavad Gita
- To know about the concept of Yoga Vashitha

UNIT I

Introduction to Vedas and Upavedas, Upanishads, Principles Upanishad & Yoga Upanishads.Introduction to Prasthanatrayee, PurusharthaChatushtaya and goal of human life.NaradaBhaktisutra, ThirumularsThirumanthiram, Shankiya,Yajnavalkya Smriti

UNIT II

Ishavasyopanishad:Concept of Karmanishta; Concept of Vidya and Avidya; Knowledge of Brahman; Atma Bhava.

KenaUpanishad: Self and the Mind; Intuitive realization of the truth; Moral of YakshaUpakhyana.

KathaUpanishad: Definition of Yoga; Nature of Soul; Importance of Self Realization.

Prashna Upanishad: Concept of Prana and rayi (creation); Panchapranas; The six main questions;

Mundaka Upanishad: Two approaches to Brahma- Vidya- Para and Apara; The greatness of Brahmavidya; Worthlessness of Selfish-karma; Tapas and Gurubhakti; The origin of creation, the aim of Meditation-Brahmanubhuti.

UNIT III

Mandukya Upanishad: Four States of Consciousness and their relation to syllables in Omkara.

Aitareya Upanishad: Concept of Atma, Universe and Brahman.

Taittiriya Upanishad: Concept of Pancha Kosha; Summary of Shiksha Valli, AnandaValli, Bhriguvalli.

Chhandogya Upanishad: Om (udgitha) Meditation; Shandilyavidya.

Brihadaranyaka Upanishad: Concept of Atman and Jnana Yoga; Union of Atman and Paramatman

UNIT IV

BagavadGita:General Introduction to Bhagavad Gita, Definitions of Yoga, their relevance & Scope; Essentials of Bhagavad Gita - meanings of the terms Atmaswarupa, Stithaprajna, Sankhya Yoga (Chpt.II), Karma Yoga (Chpt.III), Samnyasa Yoga and Karma Swarupa (Sakama and Nishkama) Samnyasa, Dhyana Yogas (Chpt. VI); Types of Bhakta(Chpt. VII) Nature of Bhakti (Chpt.XII), Means and End of Bhakti-Yoga; The Trigunas and nature of Prakriti; Three Kinds of Faith. Food for Yoga-Sadhaka, Classification of food (Chpt.XIV& XVII) Daivasura-Sampad-Vibhaga Yoga (Chpt.XVI);Moksa-SamnyasaYoga (Chpt. XVIII)

UNIT V

Yoga Vasishtha: Salient features of Yoga Vashitha, Concept of Adhis and Vyadhis; Psychosomatic Ailments; The four Dwarpaals to Freedom; How Sukha is attained in the Highest State of Bliss; Practices to overcome the Impediments of Yoga; Development of Satvaguna; Eightlimbs of Meditation; JnanaSaptabhumika.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Yoga Text
- They will get the full idea about the principles of Yoga Upanishad
- Student can get full knowledge Essentials of Bhagavad Gita&YogaVashitha
- Finally, the student will get full blue print about basic yoga text.

Reference Books:

1. Iyenger B.K.S (1976) Light on yoga, London, Unwin paperbacks
2. Sivananda Sarawathi swami (1934) Yoga Asanas Madras My magazine of India.
3. Satyanadasarawan swami (2008) Asana, Pranayama. Mudra, Bandha, munger: Yoga publications trust
4. Iyenger B.K.S (2008) Light on pranayama. New Delhi: HaperCollinspublishers India.
5. Chandrasekaran k (1999) Sound Health Through Yoga, Sedapatti: Prem kalyan Publications
6. Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books.
7. Yogeshwaranandseraswathi swami (1975) First steps to higher yoga,Gangothari: Yoga niketan trust.
8. Coulter, David (2001) Anatomy and Hatha yoga, USA Body, and Breath Inc
9. Kirk Martin (2006) Hatha Yoha Illustrated Champaign. Humenkinetics

10. Gharote (2004) Applied yoga, Lonvla. Kaivalyadhama
11. Gharote (2004) Applied yoga, LonvlaKarvaiyadhama.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022CL201 –PRACTICAL:CLINICALPSYCHOLOGY

PROGRAM OBJECTIVES:

- To know about the Introduction to Psychopathology
- To know about the importance and benefits of yogic counselling
- To understand the Diagnostic classification of mental and behavioral disorders.
- To know about the Psycho-physiological effects and health benefits of Meditation.

UNIT - I

Introduction to models of Psychopathology, Psychoanalytic, behavioural, cognitive, and biological models; Sociobiology of health and disease; Diagnostic classification of mental and behavioural disorders.

UNIT – II

Case history taking and mental status examination, Disorders of attention, perception, thought movement, Psychodiagnosis of major Mental Disorders of the Adults and their treatment: Stress and Anxiety Disorders, and Schizophrenia, Affective Disorders, Psychosomatic Disorders, Personality Disorders and Substance abuse.

UNIT - III

Mental Disorders of Children and their treatment, Mental Retardation, Learning Disability, Attention Deficit Disorders and Hyperactivity, Autism, Fears and Phobias, Conduct disorders.

UNIT - IV

Yogic counseling and Human Consciousness, Introduction to counselling, nature approaches and challenges; Approach to counselling Attitude change towards yoga through individualized counseling, Psychological & yogic method Tackling ill effects of conflict and Frustration; Yogic methods Yoga Psychology for Adjustment: Psychological, philosophical and yogic counseling; the remedial measures; Action in relaxation-the secret of Karma Yoga; Psycho-physiological effects and health benefits of Pranayama, Shatkarma; Bandha and Mudra ; Psycho-physiological effects and health benefits of Meditation.

UNIT - V

Human Consciousness - Meaning, definition and Nature of Consciousness, Need of study of Human Consciousness, Present crisis on Human Consciousness and measures of their appropriate solutions. Human Consciousness in Ayurveda, Astrology, And Human Consciousness in modern science: Researches related to Human consciousness in Human

Anatomy, Physiology and Psychology. Various Psychological methods for development of Human Consciousness.

Program Outcomes:

- Student can get the basic knowledge about psychology
- They will get the knowledge regarding Mental Disorders of Children their treatment and its remedial measure.
- Student can get full knowledge Human Consciousness
- Finally, the student will learn Psycho-physiological effects and health benefits of Meditation.

Reference Books:

1. Hersen, M., Kazdin, A. E., &Bellack, A. S. (1991) The Clinical Psychology Handbook Pergamon. New York
2. Sweet, J. J. ,Rozensky, A. &Tovian, S. M. (1991) Handbook of Clinical Psychology in Clinical Practice. New York: Plenum.
3. Walker, C. E. (2001) Handbook of Child Clinical Psychology. New York: John Wiley & Sons.
4. Kamlesh, M.L.(1988) Psychology in physical Education and sports New Delhi Metropolitan
5. Gita Mathew (1997) psychology.glenview: scottforesman and company
6. Brimgle Robert etal.(1981) understanding psychology New York Rendom House School Division New York
7. Rishi Vivekananda (2006) Practical- Yoga Psychology Munger yoga publication Trust.
8. Abhedananda Swami (2002) Yoga psychology, Kolkta, Ramkrishna Vedanta math.
9. Mangal S.K (1991) Psychological foundation of education Ludhiana prakash Brothers.
10. Elangovan R (2018) Yoga Psychology, Chennai Ashwin Publication

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PROGRAM OBJECTIVES:

- To learn how to movement all the joints in our body
- To understand the principles and practices of each asana & pranayama
- To will get some pint of about each asana, pranayama, relaxation technique, mudra bandha, kriya & meditation.
- To aware of the demonstrate each practice skillfully.

UNIT I:

Essentials of Yogic Practices: cleanliness and food, bath, time, sun, closing eyes, place, breathing, awareness, age limitations, sequence, blanket, clothes, position, emptying the bowels and stomach counter pose, contra-indications, duration, straining, special provisions for women and patients, fitness, posture, side effects.

UNIT II:

Loosening Exercise (Pawanamuktasana series 1) and Surya Namaskar: (Vinyasa Suryanamaskar) -Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, and Benefits.

UNIT III:

Asana:Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each asana.Tadasana, UtthitaParshvakonasana, Malasana, Moordhasana, veerabadhrasana, Triyangajanusirsasana, Bharadvajasana, Badhakonasana, Ardhamatchendra asana, simhasana. Chakrasana, Sarvangasana, Sedhubandhasarvangasana, Matsyasana, Savasana. Poorna dhanurasana, Poorvabhujangasana, Makrasana.

UNIT IV:

Pranayama and Kriyas:Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each one.Pranayama:Vyaghra Pranayama, Sectional Breathing, Yogic Breathing, Bhramari Pranayama, ShitaliPranayama.Kriya:Nauli, Basthi.

UNIT V:

Bandha, Mudra and Relaxation Technique: Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each one. Bandha: Jalandira Bandha, Moola Bandha, Uddiyana Bandha, MahaBandha.Mudras: Shambavi mudra, Shangu mudra, Linga mudra, Shanmuki mudra, Anjali mudra, Lotus mudra.RelaxationTechniqe:Deep Relaxation Technique.Meditation:Chakra Meditation, Japa Meditation, Vipasana Meditation.

PROGRAM OUTCOMES:

- To get knowledge about how to movement of all the joints in our body.
- They will understand the principles and practice of each asana &pranayama
- They can get some pint of about each asana, pranayama, relaxation technique &meditation.
- They can get full knowledge of how to demonstrate each practice.

Reference Books:

1. Iyenger B.K.S (1976) Light on yoga, London, Unwin paperpacks
2. Sivananda Sarawathi swami (1934) Yoga Asanas Madras: My magazine of India.
3. Satyanadasarawari swami (2008) Asana, Pranayama, Mudra, Bandha, munger: Yoga publications trust.
4. Iyenger B.K.S (2008) Light on pranayama, New Delhi Haper Collins publishers India.
5. Chandrasekaran k (1999) Sound Health Through Yoga, Sodapatti: Prem kalyan Publications
6. Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books.
7. Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari: Yoga niketan trust.
8. Coulter, David (2001) Anatomy and Hatha yoga, USA: Body and Breath Inc.
9. Kirk Martin (2006) Hatha Yoha Illustrated Champaign: Humenkinetic
10. Gharote (2004) Applied yoga, Lonvla: Kaivalyadhama.
11. Gharote (2004) Applied yoga. Lonvla: Kaivalyadhama.
12. Kathy Lee Kappmeier and Diane M.Ambrosini (2006) Instructing Hatha Yoga, Champaign: Human Kinetics
13. Satyanandasararwati Swami (2007) Meditations from thitantrasMurgar: yoga publications Trust.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022SE201 –COMPUTERAPPLICATIONS

PROGRAM OBJECTIVES:

- To know about the Introduction History of Computer.
- To know about the Basic components of computers
- To understand the Microsoft Word & Microsoft Excel

UNIT- I

Introduction to computer- definition- History of Computers - Generations of computer (Computer Languages)- Hardware and Software: types of software - Computer Memory - Comparison of Human being and Computer.

UNIT - II

Basic components of computers: Input and Output devices - Central Processing Unit: Arithmetic & Logic Unit & Control unit -Uses of computers in different environments: corporates, educational institutes, business.

UNIT - III

Desktop Window: Parts and the versions of software - Microsoft Office application window: Title bar, Menu bar, Standard toolbar bar - Formatting toolbar bar- Scroll bar – Ruler bar - Status bar – Workspace.

UNIT - IV

Microsoft Word: Creating a document – Formatting: Change of Font style, color, Background – Editing: Cut & Paste, Copy & Paste, deleting - Insert: Picture, Objects, Table, Header & Footer – Creating a Mail Merge - Saving a document - Uses of MS-Word in Yoga.

UNIT - V

Microsoft Excel: Creating aSpreadsheet–Cell: Rows and Columns - Formula Bar: using a formula, Mathematical operations - Insert Chart: Types of Charts - Fill Series: Numbers, Dates, Days/Months –Sorting – Filters – Worksheets - Uses of MS-Excel in Yoga

PROGRAM OUTCOMES:

- Student can get the basic knowledge about computer.
- They will get the full idea about the Basic components of computer.
- Student can get full knowledge Uses of computers in different environments.

Reference Books:

1. Venugopal fundamentals of computers practice all India
2. Sudarshan C John Manoj Kumar computer fundamentals RBF Publication
3. Dromwey how to solve it by computer tata Mcggraw, Gill
4. Computer for beginners Vikas publishing house New Delhi

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

GENERIC - YOGIC PRACTICES

PROGRAM OBJECTIVES:

- To know about the origin and History of Yoga
- To know about the conception of Yoga
- To understand the philosophy of Yoga
- To know about the yoga perspective in Books & Epics
- To know about the concept of Yoga in vedantic approach

UNIT I:

Essentials of yogic practices, cleanliness and food,bath, time, sun, closing eyes, place,mirror,breathing,awareness,age limitation, sequence,blanket,clothes,position,emptying the bowels and stomach counter pose, pregnancy, contra –indication,duration, straining,special provisions for women and patients,fitness,posture, side effects.

Loosening the joints, Surya Namaskar: for children (10 steps), Bihar School of yoga model, Vivekananda Kendra model

UNIT II:

Asanas: Vrkshsasana, ParivrthaTrikonasana, Virabhatrasana, Garudasana, Padahatasana,Ushtrasana, sirshasana,Halasana, Sarvangasana,Matsyasana,Bhujangasana, Salabhasana, Dhanurasna, Navasana, Nouhasana, Siddha Yoniasana, ArthaMatsyendrasana, Pachimottanasana, Baddhakonasana,kukutasana, Padmasana, Vajrasana, Siddhasana, Savasana

UNIT III:

Pranayama, Yogic Breathing, Kapalbhati,Bhramari, Ujjayi, Sheetali, Sheetkari, Bhastrika, NadiShodhana

UNIT IV:

Kriyas:Jalaneti, Sutraneti

Bandhas:Jalandhara Bandha, Moola Bandha, Uddiyana Bandha

Mudras: Chin mudra,Chinmaya mudra, adhi mudra, Brama mudra, Bhairava mudra, Bhairavi mudra, Shanmuki mudra, vipareetakarani mudra, yoga mudra ,ashwini mudra, nasiga mudra.

UNIT V:

Meditation:Yoganidra, Rajayoga Meditation, Tratakameditation,Chakra Meditation, Nine-centered meditation, Preksha meditation, Mindfullness based stress Reduction Technique.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Yoga
- They will get the full idea about the Etymology and Principles of Yoga
- Student can get full knowledge in Indian Philosophy
- They can get the very valuables thoughts in the most popular books and epics
- Finally, the student will get full blue print about Yoga.

Reference Books:

1) Brahmakumarisjagdishchander mount Abu:PBKIshwariya Vishwa vidyalaya
2) Desikachar (2003) Nathamuni's Yoga Rahasya, Chennai: Krishanmacharya Yoga Mandiram.
3) Desikachar (2004) Yoga Yajnavalkya Samhita, Chennai: Krishanmacharya Yoga Mandiram
4) HausthulDesikachae(2016) The Hatha Yoga Pradipika, Chennai : Madia Garuda
5) Meena Ramanathan (2006) GrandasamhitaLonavala:Kaivalyadhama S.M.Y.M . Samiti.
6) Subramanian (2003) The Yoga Vasishta, Chennai: Sutra Books (Pvt) Ltd.
7) Swami Gambirananda (2008) Eight Upanishads, kolkatta: Advaita Ashrama
8) Swami Ranganathannada(2001) The message of the Upanishads,Mumbai: Bharatiya Vidhya Bhavan.
9) Venkata Reddy (1932) Hataratnavali, Arthameru. M.S.R.Memorial Yoga series.
10) Elangovan R (2016) Fundamentals of Yoga, Chennai: Ashwin Publications
11) Elangovan R (2016)Yoga Psychology, Chennai: Ashwin Publications.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

GENERIC - APPLIED YOGA

PROGRAM OBJECTIVES:

- To know about the origin and History of Yoga
- To know about the Contributions of texts to Yoga
- To understand the Role of yoga on Religions and Spirituality
- To know about the yoga perspective in Books & Epics
- To know about the concept of Yoga and Psychology

UNIT I:

Yoga: Nature, Need, Philosophy, History and Scope of Yoga - Modern Developments- Misconceptions and clarifications of Yoga- Paths of Yoga- Ashtanga yoga- Schools of Yoga - Importance of yogic practices - Benefits of Yoga on human systems Yoga for Super-

consciousness - Computer Applications in Yoga

UNIT - II

Contributions of texts to Yoga:Vedas, Upanishads, Tantra, Bhagavad Gita, Yoga vasishtha, Prasthanatrayee, PurusharthaChatushtaya, Yoga Sutras, Thirumandiram, Yoga Yajnavalkya Samhita, Goraksataka, Hatha Yoga Pradipika, Gheranda Samhita, Siva samhita, Hatha Ratnavali, Siddha SiddhantaPaddhati, NaradaBhakthi Sutras, YogaRahasya

UNIT III:

Contributions to yoga by Ramakrishna, Swami Vivekananda, Sivananda, Sri Aurobindo, Maharishi Mahesh Yogi, Swami Rama, Krishnamacharya, Swami Kuvalayananda, Ramana Maharishi, Vcthathiri Maharishi, Swami Dayanand Saraswati, B.K.S.Iyengar

UNIT IV:

Spirituality- Role of yoga on Religions and Spirituality, Value Education, Values- Types of Values - Methods to promote Values and Spirituality- Methods of teaching: Lesson plans, teaching aids - usage of props- Guru-Shishya Parampara.

UNIT V:

Yoga and Psychology- Facets of psychology and yoga - Yoga for psychological qualities - Yogic practices for various age groups - Yogic practices for various professionals - Yoga and Women - Yoga and Sports - Yoga and Mind - Nadis and chakras - Role of Yoga on personality development.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Yoga
- They will get the idea about the texts to Yoga
- Student can get full knowledge in Astanga yoga
- They can get the Methods to promote Values and Spirituality
- Finally, the student will get full blue print about Yoga.

Reference Books:

1. Brahma Kumaris Jagdish Chander Mount Abu: PBK Ishwariyavishwavidyalaya.
2. Desikachar (2003) Nathamuni's Yoga Rahasya, Chennai: Krishanmacharya Yoga Mandiram
3. Desikachar (2004) Yoga Yajnavalkya Samhita, Chennai: Krishanmacharya Yoga Mandiram
4. HausthulDesikachae (2016) The Hatha Yoga Pradipika, Chennai: Madia Garuda

5. Meena Ramanathan (2006) Grandasamihita Lonavala: KaivalyadhamaS.M.Y.M.Samiti
6. Subramanian (2003) The Yoga vasishta, Chennai: Sura Books (Pvt) Ltd
7. Swami Gambirananda (2008) Eight Upanishads Kolkata: Advaita Ashrama
8. Swami Ranganathanananda (2001) The message of the Upanishads, Mumbai: Bharatiya Vidhya Bhavan
9. Venkata Reddy (1932) Hataratnavali, Arthameru. M.S.R.Memorial Yoga series
10. Elangovan R (2016) Fundamentals of Yoga, Chennai: Ashwin Publications
11. Eangovan R (2018) Yoga Psychology, Chennai:Ashwin publications

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER - III

PY022CT301 - RESEARCH PROCESS IN YOGA

PROGRAM OBJECTIVES:

- To know about the Meaning, Definitions, Need, Nature, and scope of research in yoga
- To know about the Types of research design
- To understand the Recent trends in yoga research
- To know about the Statistics and its types

UNIT-I:

Research –Meaning, Definitions, Need, Nature and scope of research in yoga, Types of research- Basic-Applied-Action – Qualities of a researcher-Criteria in locating and selecting a research problem- preparation of research proposal Mechanism of research proposal-formulation of hypothesis-variables and its types.

UNIT-II:

Types of research design –Describe research –survey method, case study, method, Experimental Method- Categories: Longitudinal design, Quasi Experimental design, cross sectional design, Double blind placebo design, Experimental Design Types: Single group Design Reverse group design, repeated measure design static group comparison design, Rotated group design, Random group design, Equated group design, Factorial design.

UNIT-III:

Data- Population- Sample-Subject- Sampling: Characteristics, Principles, steps, Determining the sample size, criteria in selection, Types of sampling probability sampling methods- Random and complex, Non –Probability Sampling methods- Writing Synopsis and Research report-Front Materials, Main Chapters and Back materials- Recent trends in yoga research, yoga research centers and their works in India.

UNIT-IV:

Statistics-Meaning- Need and importance in research – non-parametric statistics-Treatment of F-test, ‘t’ test one way- two way – testing- chi square-statistical packages- SPSS-SAS- data process, data analysis-Graphical Representation, Data interpretation.

UNIT-V:

Types of Statistics- Parametric and non-parametric-Normality of data-Normal Curve – Data Analysis- 't' Test, F-test Type I Type II error-ANOVA-ANCOVA (one way & two way)-Post hoc test- Pearson product moment correlation-Partial and Multiple Correlation- Regression simple linear and multiple linear-Post hoc tests.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Research
- They will get the idea about the Data Analysis
- Student can get full knowledge in Types of research design
- Finally, the student will get the need andimportance in research & Statistics

Reference Books:

12. Clarke David H and Clarke H, Harrsion (1984) Research process in Physical Education, New Jersey: Prentice Hall Inc.
13. Best john W and Kalm James, V.(1980) research Education, New Delhi, Prentice Hall India.
14. Clarke H.Harrion and Clarke David H,(1972) Advanced Statistics, New Jerycy: Adnaced Statistics New jerycy Prentice Hall India.
15. Garrel henry E and Woodworth R.S.(1958) Statistics in psychology and education, Bombay: Allied publication pvt ltd.
16. Thirumalaisamy (1998) Statistics in physical education, Karaikudi: Senthilkumar Publishers.
17. Thomas AL(1986) The Art of Using computers, boyd& fresher Boston publishing Co.
18. Jerry R.Thomas and jack Nelson (2000) Research methods in physical Activities Illunosis: Human Kinetics:
19. Craig Williams and chris Wragg (2006) Data Analysis and research for sport and exercise science, London Routledge Press.
20. Paul R kinear and colin D Gray (2006) SPSS 14 Made simple, New York: psychology press.
21. Kothari CR (1985) Research Methodology, New Delhi: Wiley Eastern Limited.
22. Elangovan R (2016) Research processes in yoga Chennai: Ashwin Publications

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022CT302 –PATANJALI YOGA SUTRAS

PROGRAM OBJECTIVES:

- To know about the importance and concept of Samadhi Pada
- To know about the concept of Sadhana Pada &astanga yoga
- To understand the full concept of Vibhuti Pada & Kaivalya Pada
- To know about the Concept of Kriya Yoga

UNIT: I

Introduction to Samadhi Pada Sadhana Pada Vibhuti Pada Kaivalya Pada. Concept of Chitta, Chitta-Bhumis, Chitta-Vrittis. Abhyasa and Vairagya as the tools, Concept of Bhavapratyaya&Upaypratayaya, SadhanPanchak, Chitta-Vikshepas (Antaraya), EktattvaAbhyasa,Chitta-prasadanam. Concept of Ishwara and attributes of Ishwara, Process of Ishwarapranidhana.

UNIT: II

Concept of Kriya Yoga, theory of Kleshas; Concept of Karmashaya and Karmvipaka, Nature of dhukha, Concept of Chaturvyuhavada, DrishyanirupanaDrasthanirupanam, Prakriti-Purusha Samyoga.

UNIT: III

Ashtanga Yoga; Yama- Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi. Concept of Vitarka&Mahavrata.

UNIT: IV

Nature of Sanyama; Concept of Chitta samskara, Parinamatrayaandvibhutis.Five means of Siddhis, concept of NirmanChitta,

UNIT: V

Importance of siddhis achieved through Samadhi, Four types of Karmas; Concept of Vasana; Dharmamegha Samadhi and its result, VivekaKhyatiNirupanam, Kaivalya Nirvachana.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Pathanjali yoga sutras
- They will get the full idea about the Four padas
- Student can get full knowledge in Astanga yoga
- They will learn about the Concept of Kriya Yoga.

Reference Books:

1. Desikachar (1995) The heart of yoga Researcher: Inner Traditions International.
2. Desikachar (2008)Reflections of yoga sutras of patanjali, Chennai:T. Krishnamacharya yoga mandiram.
3. Swami prabhavananda (2002)patanjali yoga sutras madras: sri Ramakrishna math.
4. Swami: SatyanandaSarawathi (2005)Four chapters on Freedom, munger; yoga publications Trust.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022CT303 - TRADITIONAL INDIAN SYSTEMS OF MEDICINE AND THERAPIES

PROGRAM OBJECTIVES:

- To know about the origin and History of Ayurveda
- To know about the Nadis and Chakras
- To know about the History and concepts of Siddha medicine
- To know about the Panchakarma treatment & different therapeutic methods
- To know about the concept of Naturopathy

UNIT-1

Origin of Ayurveda – Aim and importance of Ayurveda , Philosophy and goals of Ayurveda, Unique Approach of Ayurveda – Ayurveda texts, chakra samhita, Sushruta Samhita, Kashyapa Samhita, Rasatantra, Unique features of Ayurveda – Hygienic principles of Ayurveda (Dhinacharya)- Five elements of Ayurveda Doshas, Gunas, Dhatus, Upahatus, Eight Categories or branches of treatment – Nadisvijnana – Nadis and Chakras,- Characteristics of different prakritis- causes of disease- method of disease examination – Ayurveda diet.

UNIT II:

Ayurveda effects of yogic principles & therapies – Ayurvedic purification practices – Panchakarma- vamanam, virechanam, basti, Anuvasana, Nasya, RaktaMoksana- Abhyanga, Swedanam, Nasayam, Njavarakizhi, Pizhichil.

UNIT III:

History and concepts of Siddha medicine: Principles of Siddha Medicine System, Five Elements Theory, Three Biological Humars, Seven Physical Constituents, PanchaBhudas, Pancha Koshas, Types of Siddha Medicine, Importance ofKarakalpak, Kitchen and herbal medicine, Diet Regulations, Varmam and Thokkanam, Treatment of siddha Medicine for life style diseases.

UNIT IV:

Concept of Naturopathy, Principles of Naturopathy, Methods of Naturopathy: Diet, Fasting, Treatment by earth, water treatment, Treatment by rays, Massage.

UNIT V:

Acupuncture, Acupressure, Exercise therapy, Physiotherapy, Music therapy, Color therapy, Magneto Therapy, Reiki.

PROGRAM OUTCOMES:

- Student can get the knowledge aboutIndian systems of medicine and therapies
- They will get the full idea about Ayurveda
- Student can get full knowledge in Siddha medicine
- They can get the knowledge inTreatment by PanchaBhudas
- The student will get the knowledge inMethods of Naturopathy.

Reference Books:

1. Balakrishnan Acharya(2006) Ayurveda its principles and philophies, Hardwar, DivyaPrakashan.
2. AtharaleV.B.(1980) basic principles of Ayurveda, Bombay, Pediatric Clinics.
3. Frawley David (2000) Yoga and Ayurveda Delhi: Motialbanarsidass publishers Pvt Ltd.
4. Balakrishnan Acharya(2012) A practical approach to the science of ayurveda, Haridwar: Divyaprakashan
5. Frawley David and Sandra summerfieldkazak (2011) yoga for you type new delhi: new age books.
6. Vasant Dattatray lad (2007) Secrets of the pulse the ancient art of ayurvedic pulse diagniosis Delhi: Motilal Banarsidass publishers pvt ltd.
7. Ashwini yogi(2011) sanatan kriya. The ageless dimension, new delhi .Dhyan Foundation.
8. Stiles Mukunda(2009), Ayurvedic Yoga therapy New delhi: New age books
9. Sivananda Swami (2006):Practice of ayurvedaShivanandanagar. The divine life Society.
10. Atreya (2000) Ayurvedic Healing for women, delhi, Motilal Beharsidass.
11. Joshi rajani(2007) Health tips from the Vedas Haridwar, Shri vedmata Gayathri trust.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022CL301 - CLASSICAL YOGA PRACTICES – III

PROGRAM OBJECTIVES:

- To learn about the Pawanamuktasana series practices&surya namaskar
- To understand the principles and practices of each asana& pranayama
- To will get some pint of about each asana, pranayama, relaxation technique, mudra bandhas & meditation.
- To learn about the types of kriya
- To aware of the demonstrate each practice skillfully.

UNIT I:

Essentials of Yogic Practices: Emptying the bowels and stomach counter pose, contra-indications, duration, straining, special provisions for women and patients, fitness, posture, side effects, pregnancy women, Group yoga, Individual yoga.

UNIT II:

Loosening Exercise (Pawanamuktasana series 2) and Surya Namaskar (Surya Namaskar: for children 10 Steps, Vivekananda Kendra Model) -Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, and Benefits.

UNIT – III

ASANA:Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each asana.

Garudasana, Utkarasana, Arthabathapadahastasana, Nadrajasana, Utkatasana, Arthachandrasana, Matsyendrasana, *AkarnaDhanurasana*, *Vajra KapotasanaPadmaMatsyendrasana*, Lingasana, Koormasana, Kandarasana, Sarvangapadmasana, Savasana,Poovabujangasana, Adhomukhamandukasana, ParsvaDhanurasana.

UNIT - IV

Pranayama and Kriyas: Name, Meaning, Definition, Guidelines, Procedure, Breathing technique, Awareness, Contra-indication, Benefits, Type and Category of each one.

Pranayama: Seetali, Seethkari,Sadhantha,Dog Breathing, Murcha Pranayama, Nadisudhi, ujjayi pranayama.

Kriya: laghuprakshalana, laghushankhaprakshalana.

Bandhas:Jalandhara Bandha, Moola Bandha, Uddiyana Bandha, Maha Bandha.

Mudras: Ganeshamudra,Ashwini mudra, Vipareetakarani Mudra, Nasiga mudra, Mahamudra.

UNIT V:

Meditation:Rajayoga meditation, Trataka Meditation, Soham Meditation, Walking Meditation.

PROGRAM OUTCOMES:

- Student can get the knowledge about classical yoga practices
- To get knowledge about how to movement of all the joints in our body.
- They will understand the principles and practice of each asana &pranayama
- They can get pint of about eachasana, pranayama, relaxation technique, mudra bandhas & meditation.
- They can get full knowledge of how to demonstrate each practice.

Reference Books:

1. Iyenger B.K.S (1976) Light on yoga, London, Unwin paperbacks
2. Sivananda Sarawathi swami (1934) Yoga Asanas Madras: My magazine of india.
3. Satyanadasarawari swami (2008) Asana, Pranayama, Mudra, Bandha, munger: Yoga publications trust.
4. Iyenger B.K.S (2008) Light on pranayama, New Delhi Haper Collins publishers India.
5. Chandrasekaran k (1999) Sound Health Through Yoga, Sodapatti: Prem kalyan Publications
6. Vishnu Devananda Swami (1972) The complete Illustrated book of yoga, New York: Pocket Books.
7. Yogeshwaranandsaraswathi swami (1975) First steps to higher yoga, Gangothari: Yoga niketan trust.
8. Coulter, David (2001) Anatomy and Hatha yoga, USA: Body and Breath Inc.
9. Kirk Martin (2006) Hatha Yoha Illustrated Champaign: Humenkinetic
10. Gharote (2004) Applied yoga, Lonvla: Kaivalyadhama.
11. Gharote (2004) Applied yoga. Lonvla: Kaivalyadhama.
12. Kathy Lee Kappmeier and Diane M.Ambrosini (2006) Instructing Hatha Yoga, Champaign: Human Kinetics
13. Satyanandasararwati Swami (2007) Meditations from thitantrasMurgar: yoga publications Trust.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022CL302 - CLINICAL APPLICATIONS IN TRADITIONAL SYSTEMS OF MEDICINES AND THERAPIES

PROGRAM OBJECTIVES:

- To know about the Methodology in yoga therapy
- To know about the Ayurveda
- To know about theTherapeutic applications of disease
- To know about the problems of the women
- To know about the Therapeutic management for psychological disorders

UNIT-I

Methodology in yoga therapy- Factors (Heyam, Hatu, Hanam and Upayam), Methods (Darsanam, Sparsanam, Prasnam and Nadipariksa) Examination of Vertebra, Joints, muscles, Abdomen and Nervous System and therapeutic yoga practices-Modification of Yogic practices.

UNIT-II

Application of traditional Indian medical systems and therapies:Ayurveda- Doshas, Dinacharya, Ayurvedic Diet, panchakarma therapy, Siddha – Five elements theory, Physical constituents' pathology(Kayakalpa, kitchen herbal and other types of medicine) Varmam and Thokkanam: Exercise therapy Music therapy, Pranic Healing, Magnetotherapy, Naturopathy and Modalities of Naturopathy, Refloxology.

UNIT-III

Therapeutic Applications for High Blood Pressure, Obesity, Diabetes, Mellitus, Asthma, Sinusitis, Migraine, Arthritis, Back pain, Thyroid problems, Constipation, Impotency, Stroke, Epilepsy, Parkinson's disease, sleep disorders, skin diseases, insomnia, Anaemia.

UNIT-IV

Therapeutic applications for psychological disorders:Neurosis: Stress, Depression, autism, eating disorders,Psychosis: Schizophrenia, autism, bipolar disorders, dementia, Personality Disorders: Paranoid, histrionic, drug addicts-Smoking, Alcoholism, Gambling-Anti-social activities.

UNIT-V

Therapeutic applications for the problems of women-Amenorrhea, Dysmenorrhea, Menorrhagia, Hypomenorrhoea, Olimenorrhoea, Polymenorrhoea, Leucorrhea, uterus related problems, miscarriage, pregnancy-pre and post-natal care, PCOS.

PROGRAM OUTCOMES:

- Student can get the knowledge aboutIndian systems of medicine and therapies
- They will get the full idea about Ayurveda
- Student can get full knowledge in therapeutic applications for disease
- They can get the knowledge about the methods of yoga therapy
- The student will get the knowledge in therapeutic management for psychological disorders.

Reference Books:

1. Balkrishna Acharya(2006) Aayurveda is principles of and philophies, Hadwar:DivyaPrakashan.
2. AtharaleV.B.(1980) basic principles of Ayurveda, Bombay: Pediatric clinics.
3. Frawley David (2000) yoga and Ayurveda Delhi:Motilalbanarsidass publishers pvt .Ltd,

4. Balkrishna Acharya(2012) A practical approach to the Ayurveda,Harida:DivyaPrakashan.
5. Frawley David and Sandra Summerfield kozak(2011)Yog For Your Type New Delhi: New Age Books,
6. Vasant DuttatrayLad(2007) Secrets of the pulse The Ancient art of Ayurvedic pulse Diagnosis Delhi: MotillalBanarsidass Publishers Pvt. Ltd.
7. Aswini yoga (2011) sanatan. The Ageless Dimension, new Delhi: Dhyan Foundation.
8. Stiles mukunda (2009)Ayurvedic yoga therapy New Delhi:New age books.
9. sivananda swami (2006): practices of Ayurveda Shivanandangar: The Divine Life Socity.
10. Atreya (2000) Ayurvedic Healing for women, Delhi: Motilal Beharsidass.
11. Joshi Rajani (2007) Health tips from the Vedas Haridwar: Shri vedmattaGayathri trust.
12. Thirunarayanam (2012) Introduction to siddha medicine, Chennai:centre for Tradional Medicine and Research.
13. Bakhru (2011) The complete hand book of nature cure, Mumbai: Jaico publishing house.
14. Gala DR. Dhiran Gala and Sanjay gala (2008) Nature cure for common diseases, Ahamadabadnavneet publications, (india) Ltd,
15. Murthy Chidananda (2010) yogic and naturopathic treatment for common ailments new delhi Central council for research in yoga and Naturopathy,
16. Basavaraddiishwar (2012) important therapeutic modalities used in Naturopathy, New Delhi Central council for research in yoga and Naturopathy,
17. Murthy Chidananda(2011) Yoga and Naturopathy New Delhi Central Council for research in yoga and naturopathy

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**

CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022AE301 - PERSONALITTY DEVELOPMENT

PROGRAM OBJECTIVES:

- To know about the Personality development
- To know about the Stage of human development
- To know about the yoga for personality development
- To know about the concept of Time management.

UNIT-I

Personality: Personality in psychology – Meaning, Definition, concept, need, nature, and scope of personality development- structure of personality.

UNIT-II

Stage of human development- determinants of human development of personality- developmental processes: physical, mental, moral, social, emotional and spiritual.

UNIT-III

Guidelines on personality – values and spirituality- developing good personality based on yoga- anger and stress management- role of diet on personality.

UNIT-IV

Personality development with special emphasis on pancha kosha- Ashtanga yoga- Factors of personality- Theories of personality- Attitude- Self-esteem, Memory-Concentration-creativity-intelligence- Assessment of personality.

UNIT-V

Leadership- Qualities of leaders-Positive thinking- powers and effects of thoughts- career planning –career rules- Better human relations- time management.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about personality development
- They will get the full idea about the human development
- Student can get full knowledge in values and spirituality
- They can get the very valuables thoughts in the Factors of personality
- Finally, the student will get full blue print about personality.

Reference Books:

1. Kamlesh M.L(1988) Psychology in physical education and sports, New Delhi, Metropolitan,
2. ElangovanR.(2001) Udarkalvi , Ulaviyal, Thirunelveli: Aswin Publications
3. Gita Mathew (1997) Sports Psychology Shejin and shiju brothers, Karaikudi.
4. Gidr, et, al, (1989) psychology Glenview scottforesman and company
5. Bringle Robert etal (1981) understanding psychology New York, Random House School Division New York.
6. Rishi Vivekananda (2006) practical yoga psychology Munger. Publication trust.
7. Abhedananda swami (2002) yoga psychology kolkatta:Ramakrishna Vedanta Math.
8. Mangal S.K(1991) Psychological foundations of education, ludiana: prakash brothers.
9. ElangovanR(2018) Yoga Psychology, Chennai: Ashwin publications.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

GENERIC - STRESS MANAGEMENT

PROGRAM OBJECTIVES:

- To know about the Conceptsof stress
- To know about the conception of Yoga
- To understand the philosophy of Yoga
- To know about the yoga perspective in Books & Epics
- To know about the concept of Yoga in vedantic approach

UNIT I:

Meaning, Concepts, levels, types, reaction, causes,symptoms, complications, remedies, stress, and yoga

UNIT II:

Sources of stress: internal and external, release of stress

UNIT III:

Texts on stress, Kleshas and stress, Stress, and koshas

UNIT IV:

Effective stress management- Diet, yogic practices- systems of medicine and therapies

UNIT V:

Frustration,conflicts and psychosomatic disorders, relationship between body and mind, mental health.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Yoga
- They will get the full idea about the Etymology and Principles of Yoga
- Student can get full knowledge in Indian Philosophy
- They can get the very valuables thoughts in the most popular books and epics
- Finally, the student will get full blue print about Yoga.

Reference Books:

1. Hoger (1990) Fitness and wellness, Colorado: Morton Publishing company
2. Swami Sivananda (2007)Health and Hygiene Sivananda Nagar: The Divine life society.

3. GirijaShyamsundar (2007) Nutrition perspectives Chennai: University of Madras.
4. Lily PritamTeluRam(1981) Health and Hygiene, Delhi: Vikas publishing House pvt ltd.
5. Ragavan(1965) Hand book of health educstionkaraikudi: Meenal enterprises.
6. Syd Hoare (1986) Keep it, Hodder, and Stoughton: Teach yourself books
7. Swami Sivananda (2011)Health and Diet, Sivanandanagar: The Divine life society.
8. Ananda BalayogiBhavanani (2007) A yogic approach to stress, Puduchery: Vivekananda Yoga research foundation.
9. Nagendra and Nagratha(2008) New perspectives in Stress Management, Bangalore: Vivekananda Yoga research foundation.
10. Arvind janar (2004) yoga diet, Bangalore: Sai towers
11. Kathy Phillips (2007) the Spirit of Yoga London Cassell &Co
12. Guide book (2016) for QCI, Delhi, AYUSH
13. Krishna Raman (1998) A Matter of Health, Chennai: East West books (Madras) Pvt. Ltd.
14. Elangovan R (2016)Yoga Psychology, Chennai: Ashwin Publications

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

GENERIC - YOGA THERAPHY

PROGRAM OBJECTIVES:

- To know about the origin and History of Yoga
- To know about the conception of Yoga
- To understand the philosophy of Yoga
- To know about the yoga perspective in Books & Epics
- To know about the concept of Yoga in vedantic approach

UNIT I:

History of yoga therapy- Essence and Principles of Yoga therapy-Philosophy and pathology in the yoga- Shatra-Koshas-doshas-Pancha prana- Application of Yoga and its types- Methodology in Yoga Therapy- Factors(Heyam, Hetu, Hanam and Upayam)- Methods (Daraanam, Sparsanm, Prasanam ,NadiPariksa)

Examination of vertebra, Joints,muscles, Abdomen and Nervous system and therapeutic yoga practices- Modification of yogic practices- Yogic diet for Human systems- Yogic diet- Nadis and Chakras.

UNIT II:

Application of traditional Indian medical systems and therapies:Ayurveda – Doshas,Dinacharya, Ayurvedic diet, Panchakarma therapy, Siddha- Five elements theory, physical constituents, pathology(kayakalpa, kitchen, Herbal and other types of medicine) Varmam and Thokkanam, Exercise therapy, music therapy, cryo therapy, Acupressure, Acupuncture, Chromo therapy, Magneto therapy, Pranic healing, Naturopathy, Modalities of Naturopathy

UNIT III:

Therapeutic application in Yoga for High blood pressure, Obesity,Diabetes Mellitus, Asthma, Sinusitics, Migraine, Arthritis, Back pain, Thyroid problems, Constipation, Impotency, Infertility, Storke,Epilepsy, Parkinson's disease,Sleep disorders, Skin diseases, Insomnia , Anaemia.

UNIT IV:

Therapeutic applications in Yoga for psychological disorders:Neurosis: Stress, Depression, eating disorder, suicide, hysternia, Psychosis: Schizophrenia, Autism, Bipolar disorders, Dementia, Personality Disorders: Paranoid, histrionic, drug addicts- Smoking, Alcoholism, Gambling-Anti social activites.

UNIT V:

Therapeutic applications in Yoga for the problems of Women- Amenorrhea, Dysmenorrhoea, Menorrhagia, Metrorrhagia, Hypomenorrhoea, Oligomenorrhoea, Polymenorrhoea, Leucorrhoea, Uterus related problems, Miscarriage, Preganacy- Pre and Post-natal care, PCOS.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Yoga
- They will get the full idea about the Etymology and Principles of Yoga
- Student can get full knowledge in Indian Philosophy
- They can get the very valuables thoughts in the most popular books and epics
- Finally, the student will get full blue print about Yoga.

Reference Books:

1. Balkrishna Acharya (2006) Ayurveda its principles and philosophies Hardwar: DivyaPrakashan
2. Atharale V.B (1980) basic principles of Ayurveda, Bombay: Pediatric clinics
3. Frawley David (2000) Yoga and Ayurveda Delhi: Motilal BanarsidasPublihers Pvt Ltd.
4. Balkrishna Acharya (2012) A practical approach to the science of Ayurveda Hardwar: DivyaPrakashan
5. Frawley David and Sandra Summerfield kozak (2011) Yoga for your type New Delhi: New age books.
6. Vasant Dattatray Lad (2007) Secrets of the pulse the ancient art of Aurvedic Pulse Diagnosis Delhi: Motilal Banarsidass publishers Pvt.ltd.
7. Ashwni Yogi (2011) sanatan kriya. The Ageless Dimension, New Delhi: Dhyana Foundation.
8. Stiles Mukunda (2009): Ayurvedic Yoga theraphy New Delhi: New age books
9. Sivananda Swami(2006): Practice of Ayurveda Shivanandanagar: The divine life society.
10. Atreya (2000) Ayurvedic Healing for women, Delhi, Motilal Beharsidas.
11. Joshi Rajani(2007) Health tips from the vedas Haridwar: Sri Vedmata Gayathri trust.
12. Thirunarayanam (2012) Introduction to Siddha Medicine, Chennai: center for Traditional Medicine and Research.
13. Bakhru (2011) The complete Hand book of Nature cure, Mumbai: Jaico publishing House.
14. Gala DR, Dhiren Gala and Sanjay gala (2008) Nature cure for common diseases, Ahmadabad: Navneet publications (India) Ltd.,
15. Murthy Chidananda (2010) yogic and naturopathic treatment for common ailments, New Delhi: Central council for Research in Yoga & Naturopathy.
16. BasavaraddiIswar (2012) Important therapeutic modalities used in Naturopathy,New Delhi. Central Council for Research in Yoga & naturopathy
17. Murthy Chidananda (2011) yogo and naturopathy, New Delhi: Central council for Research in Yoga & Naturopathy.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – IV

PY022CT401 - YOGA THERAPY

PROGRAM OBJECTIVES:

- To know about the origin of Yoga Therapy
- To know about the Methods in Yoga Therapy
- To understand the Indian traditional systems of medicine
- To know about the Therapeutic application of physical & psychological disorders

UNIT I:

History of yoga therapy- Essence and Principles of Yoga therapy- Physiology and pathology in the yoga- Shatra- koshas- doshas- Granthis - Pancha prana-Apphcation of Yoga and its types- Methodology in Yoga Therapy - Factors (Heyam,Hetu, Hanam and Upayam) - Methods (Darsanam, Sparsanam, Prasnam, NadiPariksa)Examination of Vertebra, joints, Muscles, Abdomen and Nervous System andTherapeutic applications - Modification of yogic practices - yogic practices forHuman Systems - Yogic diet.

UNIT II:

Application of Indian traditional systems of medicine and therapies:Ayurveda, Ashtanga Ayurveda, Doshas, Dinacarya, Ayurvedic diet, Panchakarmatherapy - Siddha - Five elements theory, physical constituents, pathology (Kayakalpa,Kitchen, Herbal and other types of medicine) – Naturopathv, Principles ofnaturopathy - Modalities of Naturopathy - Varmam and Thokkamim, Physiotherapy, Acupressure, Acupuncture, Chromo therapy, Music therapy, Pranic Healing

UNIT III:

Therapeutic application of yoga: High blood pressure, Obesity, Diabetes, Mellitus, Asthma, ulcer, Migraine, Arthritis, Back pain, Thyroid problems,constipation, impotency, infertility, stroke, Epilepsy, Parkinson’s disease, sleepdisorders.

UNIT IV:

Therapeutic application of yoga for psychological disorders:Neurosis: stress, depression, eating disorders - Psychosis: Schizophrenia, autism,bipolar disorders, dementia - Personality disorders: Paranoid, histrionic, drug addicts-

Smoking, Alcoholism, Gambling - Anti-Social Activities.

UNIT V:

Therapeutic application of yoga for the problems of women- Amenorrhea, Dysmenorrhea, menorrhagia, metrorrhagia, Hypomenorrhoea, oligomenorrhoea,polymenorrhoea, leucorrhoea, uterus related problems, miscarriage, pregnancy- Preand post-natal care, PCOS.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Yoga Therapy
- They will get the full idea about the Indian traditional systems of medicine
- Student can get full knowledge Therapeutic management for disorders.
- Finally, the student will get full blue print about Yoga Therapy.

REFERENCES:

1. ShemanthakamaniNarendhan et.al (2008) yoga and pregnancy, Bangalore: Swami Vivekananda Yoga Prakshana.
2. Nagarathna& Nagendra (2008) Yoga brounchialAsthma, Bangalore: Swami Vivekananda Yoga Prakshana
3. Nagarathna& Nagendra (2007) yoga for digestive disorders, Bangalore: Swami Vivekananda Yoga Prakshana
4. Sri kanta ss et.al (2008) yoga for diabetes, Bangalore: Swami Vivekananda Yoga Prakshana
5. Nagarathna& Nagendra (2008) yoga for Hypertension & Heart disease, Bangalore: Swami Vivekananda Yoga Prakshana
6. Nagarathna& Nagendra (2008) yoga for Arthritics, Bangalore: Swami Vivekananda Yoga Prakshana
7. Nagarathna& Nagendra (2008) yoga for back pain, Bangalore: Swami Vivekananda Yoga Prakshana
8. 8. ShivanandaSaraswati(1975),yogic therapy Gawhati,Brahmacharyayogeswarumachal yojashram
9. Sundaram yoga charya (2004), Sundara yogic therapy, Coimbatore: The yoga publishing Home.
10. Phulgonda Sinha (1976) yogic cure for common diseases, Delhi: Orient paper backs

11. Joshi (1991) yoga and Nature - Cure therapy New Delhi: Sterling publishers Pvt Ltd
12. Chandrasekaran (2012) Yoga therapy, Chennai: VHF Publications

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022CT402 - HATHA YOGA TEXTS

PROGRAM OBJECTIVES:

- To know about the origin and History of Yoga
- To know about the conception of Yoga
- To understand the philosophy of Yoga
- To know about the yoga perspective in Books & Epics
- To know about the concept of Yoga in vedantic approach

UNIT- I

Aim & objectives, misconceptions about Hatha yoga, prerequisites of Hatha yoga (dashayama and dasha niyama), Sadhaka and Badhaka tattvas in Hatha yoga; Concept of Ghata, Ghatashuddhi, Concept and importance of Shodhana kriyas in Hathayoga; Importance of Shodhana kriyas in health and disease; Concept of Matha, Mitahara, Rules & Regulations to be followed by Hatha YogaSadhakas.

UNIT – II

Asanas in Hatha Texts:Definition, pre requisites and special features of Yoga-asana; Asanas in Hatha Pradeepika, Hatha Ratnavali, Shiv Samhita, VasishthaSamhita,Gheranda Samhita- benefits, precautions, and contra indications of differentAsanas;

UNIT- III

Pranayama in Hatha Texts: Concept of Prana and Pranayama; Pranayama-its phases and stages; Prerequisites of Pranayama in Hathayoga Sadhana; Pranayama in Hatha Pradeepika, Gheranda Samhita; Shiv Samhita, Vashishtha Samhita-benefits, precautions, and contra indications of differentPranayama.

UNIT- IV

Mudras and Bandhas: Concept and definition of Bandha and Mudras in Hatha Pradeepika, Hatha Ratnavali and Gheranda Samhita; Shiv Samhita, Vashishtha Samhita-benefits, precautions, and contra indications.

UNIT- V

Other Practices:Concept, definition, benefits, and Techniques of Pratyahara, Dhyana in Gheranda Samhita; Concept and benefits of Nada and Nadanusandhanain Hatha Pradeepika,

Four (stages) Avasthas of Nadanusandhana; Relationship between Hatha Yoga and Raja Yoga; Goal of Hatha Yoga. Relevance of Hatha Yoga in contemporarytimes.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Yoga
- They will get the full idea about the Etymology and Principles of Yoga
- Student can get full knowledge in Indian Philosophy
- They can get the very valuables thoughts in the most popular books and epics
- Finally, the student will get full blue print about Yoga.

REFERENCES:

1. Brahma kumaries Jagdish Chander Mount Abu: PBK Ishwarlyavishwavidyalaya.
2. Desikachar (2003) Nathamuni's yoga Rahasya, Chennai: Krishnamacharya yoga Mandiram.
3. Desikachar (2004) Yoga Yajnavalkya Samhita, Chennai: Krishnamacharya yoga Mandiram.
4. HausthulDesikachar (2016) The Hota yoga pradipika,'Chennai: Madia Garuda.
5. Meena Ramanathan (2006) GrandasamihitaLonavla:KaivalyadamaS.M.Y.M.Samiti.
6. Subramanian (2003) The Yoga Vasishta, Chennai: Sura Books (Pvt) Ltd.
7. Swami Gambirananda (2008) Eight upamisads Kolkata: Advaita Ashrama.
8. Swami Ranganathananada (2001) The message of the upanisads, Mumbai: Bharatiya vidya Bhavan
9. VenkataReddy (1932) Hataratnavali, Arthameru: M.S.R.Memorial yoga series
10. Elangovan. R (2016) Fundamentals of Yoga, Chennai: Ashwin Publications

PY022TS401 –THESIS

1. To acquire practical knowledge.
2. To acquire skill in the administration of yoga practices in the real life.
3. To identify some common problems found among people.
4. To do a systematic investigation into such problems.
5. To suggest remedial measures to make life more meaningful and purposeful.
6. To learn the clinical method, case history writing, measurement of clinical symptoms, psychological parameters. Application of statistics on the initial and final dada recorded.

PY022CL401 - CLASSICAL YOGA PRACTICES WITH PROPS (PRATICAL)

PROGRAM OBJECTIVES:

- To know about the Essentials of Yogic Practices
- To know about the practices of Chandra namaskar.
- To understand the philosophy of Yoga
- To know about the concept of Yoga by using props

UNIT 1:

Essentials of Yogic Practices:LooseningExercies - Pawanmuktasana series. Suryanamaskar: Sivananda model, Chandranamaskar.Usage of props like wooden brick and foot rest, Belts, Ropes, Slanting planks, Chair, Stool, Bench & box, The heart rack, Ladder stool and drum, Bolsters and pillows, Bandage, Weights, Horse (big & small)

UNIT 2:

Asanas &Pranayama: Virabhadrasana, Parsvottanasana, UtthitaTrikonasana, AdhomukhaSvanasana, Karnapitasana, Kandharasana, Tittibhasana, Padma Sarvangasana, SalambaSirshasana, Gomukhasana, SetuBandhasana, Chakrasana, TriangaMukhaikapadaPachimottanasana, Marichyasana, Virasana, Svastikasana, Shashangasana, Garudasana, Mayurasana, Padma mayurasana, Bhadrasana, Simhasana, AkarnaDhanurasana, Parsvakonasana, Savasana.

Usage of props like wooden brick and foot rest, Belts, Ropes, Slanting planks, Chair, Stool, Bench & box, The heart rack, Ladder stool and drum, Bolsters and pillows, Bandage, Weights, Horse (big & small).

Pranayama: Moorchapranayama, Anulomavilloma, Sadanta Pranayama, Pranayama with Kumbhaka and bandhas

UNIT 3:

Kriya:Shat Kriya (Kapalapathi, Trataka, Neti, Dauti, Nauli, Basti.)

UNIT 4:

Bandha and Mudra, Relaxation Technique: Bandha: Uddiyana bandha, Molabandha, Mudras: Yoni mudra, Lotus mudra, Dhyani mudra, Sakthi mudra, Shambavi mudra, Pashinee mudra, MahaBheda mudra, Ksepanamudra.QRT (Quick Relaxation Techniqe)

UNIT 5:

Meditation: Walking meditation, Vipasana meditation, nine centred meditation, yogic sukshmavyayama, Sudharshana kriya, Zen meditation, Savita kidhyan Dharana, Mind Sound Resonance technique.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Yoga
- They will get the full idea about the yogic practices
- Student can get full knowledge about yoga props
- They can get the very valuables thoughts in the most popular books and epics
- Finally, the student will get full blue print about Yoga.

REFERENCES:

1. Iyenger BKS (1976) Light on yoga, London, Unwin paperbacks.
2. Sivananda Sarawathi swami (1934) Yoga Asanas Madras: My magazine of India.
3. Satyanadasatawaniwami (2008) Asana, Pranayama, Mutra, Bandha, Munger Yoga publications trust.
4. Iyenger BKS (2008) Light on pranayam, New Delhi: Haper Collins publishers India.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**

CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PYO22CL402-PRACTICALS - COMPUTER PROGRAMMING

PROGRAM OBJECTIVES:

- To know about the origin and History of computer
- To understand how to handle the software
- To know about the power point
- To know about the browsing a web site

UNIT – I

MS-WORD: Create advertisement is MS WORD, to illustrate the concept of mail merging in word. Document creation with scientific notation, Test manipulation with scientific notation, Table creation, table formatting and conversion.MailMerger and letter preparation, Drawing and Flow Chart.Show the different effect for the given text in the document. Create a table of employee and calculate the next salary. Design a table with merge cells and split cells technique.

UNIT - II

SPREAD SHEET: To create a Spread Sheet to analyze the marks of the students in class and to create appropriate charts. Charts in Spread SheetsFormula and Formula Editor, Inclusion of objects, pictures and graphics protecting thedocument and sheet.Sorting and import/export features.Create suitable chart to show the census data in Indian Sports.Create a suitable chart to show the students average in the class.Create an electronic spread sheet of student marks, and find the total, average and respective class secured byeachstudent.Generate the numbers vertically starting from 10 to 100 with step value 5.

UNIT - III

POWER POINT: To create the presentation for the department using the power point.Animation in Power point Presentation, Designing the Power point Presentation, Timing for

the slides in Power point Presentation, Back ground designing in Power point Presentation.Designing the Power point Presentation using audio and Video.

UNIT – IV

INTERNET LAB: Browsing a Web Site.Composing and sending a mail

UNIT – V

Forwarding and replying to mails. Downloading Articles / Web content.Literature survey using search enquires

PROGRAM OUTCOMES:

- Student can get the basic knowledge about computer
- They will get the full idea about the handle the software
- Student can get full knowledge about the operate the power point
- They can efficiently use the Internet Lab
- Finally, the student will get full blue print about computer programme.

REFERENCE:

1. Venugopal, "Fundamentals of Prentice All India.
2. Sudharsan C & John Manojkurnar Computer Fundamentals., RBA publication, Chennai
3. Dromwey, how to solve it by computer, Tata Mcgraw,Gill.
4. Jayashree Computer for beginners,Vikas Publishing House, New Delhi

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022SE401 - ENVIRONMENTAL STUDIES

PROGRAM OBJECTIVES:

- To know about the environment
- To know about the conception of Food Energy
- To understand the Air pollution

- To know about the social issues and the environment

UNIT - I

Scope and importance- need for public awareness.

UNIT -II

Resources – Water – Forest – Minerals- Food Energy- land.

UNIT - III

Ron mental – pollution- definition – causes- Effects and control measure of Air pollution – Water- Soil-Noise- Nuclear.

UNIT - IV

Social issues and the environment- Urban problems related to energy – Water conservation –Rainwater harvesting- Water shed management- Environment ethics- Climate change – Global warning – Acid rain – Ozone layer deletion.

UNIT - V

Human Population and the Environment – population growth variation among Nation population explosion –Family welfare program- Environment – and human wreath.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about environment studies
- Student can get full knowledge causes of pollution.
- They can get the social problems related to energy
- Finally, the student will get full blue print about environmental studies.

REFERENCE:

1. C.R.B Environmental- Education Centre, Chennai: Environmental studies for until gladiate students.
2. K kainaraswamy, Environmental studies A text book for all under graduate course, Bharathidasan University, Tiruchirappalli.

M.SC YOGA -DSE

PY022DE001 - YOGA FOR HEALTH AND WELLNESS

PROGRAM OBJECTIVES:

- To know about the yoga for health and wellness
- To know about the yoga for diseases
- To understand the positive attitude
- To know about the Scope of Wellness & Fitness
- To know about the principles of health living

UNIT - I

Health: Goals of life – Adhi and Vyadhi, Kleshas, Doshas, Factors affecting Health – Panchamabhudas (Five Elements), Rules for Good Health, Dimension of Health, and Pillars of Health – Disease: Stages of Development of Disease - Mental and Emotional ill-health, Causes of ill-health, Mode of Transmission.

UNIT - II

Yoga for Communicable Diseases: Malaria, Typhoid, Cholera, Whooping cough, Tuberculosis, Measles, Venereal diseases.Yoga for Life Style Diseases: High Blood Pressure, Diabetes Mellitus, Obesity, Cancer, Stoke.

UNIT - III

Role of yogic positive attitudes (Maître, Karuna, Mudita and Upeksha) for Healthy Living, concept of Bhavas and Bhavanas with its relevance in Health and well – being.Health and Environment – Mental Health – Concepts of Health: Air, Water, Food, Clothing, Exercise- Rules ofHealth – Sanitary Laws- Personal Hygiene of Human Systems- Population Explosion and it is control.

UNIT - IV

Wellness & Physical Fitness: Meaning, Scope of Wellness & Fitness, Components of wellness & Fitness: Endurance, strength, speed, flexibility, agility, and balance - Natural fitness - Benefits of Wellness & Fitness

UNIT - V

Yogic Rule for Good Health: Positive yogic principles of health living, Ashtanga yoga of Patanjali for Healthy Living, Yogic Practices for Healthy Living, Relationship of Health, Fitness, Wellness, Total – Wellbeing and Yoga.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about yoga for health and wellness
- They will get the full idea about the Health and Environment

- Student can get full knowledge in yogic management on disease.
- They can get the idea about the Benefits of Wellness & Fitness
- Finally, the student will get full blue print about Yoga for health & wellness.

REFERENCES:

1. Hoger (1990)Fitness and wellness, Colorado: Moton publishing company.
2. GirijaShyamsundar (2007) Nutrition perspectives Chennai: University of Madras.
3. Swami Sivananda (2007) Health and HygieneSivanandanagar: The Divine life society.
4. Lily Pritam Telu Ram (1981) Health and Hygiene,Delhi: Vikas publishing House Pvt ltd.
5. Raghavan (1965) H and book of health education karaikudi: Meenal enterprises.
6. Sunitha pant Baasal (2008) Dit in diseases Delhi: pustakmahal.Yogacharyasundaram (2004) ditt and digestion Combatore; The yoga publishing house.
7. Syd Hoare (1986) keep fit, Hodder and Stoughton: Teach yourself book.
8. Swami sivananda (2011) Health and diet, shivananda Naga: The divine life society.
9. Ananda Balayogi Bhavani (2007) A yogic approach to stress, puduchery: Vivekananda Yoga Research foundation.
10. Arvind janar (2004) yoga diet, Bangalore: sai towers & Co
11. Krisha Raman (1998) A matter of Health, Chennai: East West books (Madras) pvt. Ltd.
12. Elangovan(2018) Yoga psychology, Chennai: Ashwin publications.
13. Elangovan2018)FundamentalsofYoga, Chennai:Ashwin publications.
14. Nagendra and Nagratha (2008) New perspective in Stress Management, Bangalore: Vivekananda Yoga Research Foundation.

PY022DE002 –YOGIC DIET AND NUTRITION

PROGRAM OBJECTIVES:

- To know about the origin and History of Yogic diet & nutrition
- To know about the conception of yogic diet.
- To understand the healthy living.
- To know about the nutrition during various stages of life
- To know about the concept of Nutrition therapy

UNIT - I

Nutrition: Macronutrients (Carbohydrates, Lipids/Fats, Proteins) –Micronutrients(Vitamins, Minerals), Water, Fiber. Diet: Balanced diet, Gluten free and Lactose free Diet - Mediterranean Diet, Vegan diet, Low Glycemic Diet, Dietary Approaches to Stop Hypertension (DASH),Summer Diet, Detox Diet, Brain-boosting diet, Anti-stress Diet - Benefits of Diet.

UNIT - II

Yogic diet: Introduction and concept of Ahara&Mitahara; Classification in Yogic Diet according to Traditional Yoga Texts; Diet according to the body constitution (Prakriti) - Vata, Pitta and KaphaGunas Principles of Yogic Diet, Characteristics of Sattvic, Rajasic and Tamasic Diet.

UNIT - III

Concepts of Diet - Pathya and Apathya according to Gheranda Samhita, Hatha Prad eepika and Bhagavad Gita; Importance of yogic diet in Yoga Sadhana and its role in Healthy Living;Diet& Nutrition for Health, Food for the Body and Mind,Harmful food, Dietary FoodRules, Laws of karma.

UNIT - IV

Nutrition during various stages of life Infants, School going, Adolescence, Adulthood, and Old age. Nutrition during Prenatal& Postnatal Women.

UNIT - V

Nutrition therapy for Infectious Diseases: Malaria, Typhoid, Cholera, Whooping Cough, Tuberculosis, Measles, Venereal Diseases.

Nutrition therapy for Lifestyle Diseases: High Blood Pressure, Diabetes Mellitus, Obesity, Cancer, Stroke.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Yogic diet & nutrition.
- They will get the full idea about the Yogic diet in Traditional Yoga Texts
- Student can get full knowledge in Concepts of Diet in hatha yoga text and Bhagavad Gita.
- They can get the idea about the Nutrition during various stages of life Infants
- Finally, the student will get full blue print about Yogic diet & nutrition.

REFERENCES:

17. Hoger (1990) Fitness and wellness, Colorado: Morton Publishing Company.
18. GirijaShyamsundar (2007) Nutrition perspectives Chennai: University ofMadras.
19. Swami Sivananda (2007) Health and Hygiene Sivanandanagar: The Divine Life society.
20. Lily Pritam Telu Ram (1981) Health and Hygiene, Delhi: Vikas publishingHouse Pvt Ltd
21. Raghavan (1965) Hand book of health educstionkaraiKudi: Meenalenterprises
22. Sunitha Pant Bansal (2008) Diet in diseases Delhi: Pustak Mahal
23. Yoga charya Sundaram (2004) diet and digestion Coimbatore: The yogapublishing house.
24. Syd Hoare (1986) Keep fit, Hodder and Stoughton: Teach yourself books
25. Swami Sivananda (2011) Health and diet, Shivananda Nagar: The divine life society.
26. Ananda BalayogiBhavanani (2007) A Yogic approach to stress, Puduchery: Vivekananda Yoga Research foundation
27. Nagendra and Nagratha (2008) New perspectives in Stress Management, Bangalore: Vivekananda Yoga Research foundation
28. Arvind janar (2004) yoga diet, Bangalore: Sai towers
29. Kathy Phillips ( ) The Spirit of Yoga London Cassell & Co
30. Krishna Raman (1998) A Matter of Health, Chennai: East West books(Madras) Pvt. Ltd
31. Elangovan (2018) Yoga Psychology, Chennai:Ashwin Publications
32. Elangovan (2016) Fundamentals of Yoga, Chennai: Ashwin Publications.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**

CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022DE003 - YOGA IN EDUCATION

PROGRAM OBJECTIVES:

- To know about the aim of Yoga education.
- To know about the Modern Education.
- To understand the Education Psychology.
- To know about the life skills.
- To know about the Challenges in Indian Education.

UNIT-I

Education Meaning- Definition- Need, Aim and Objectives- Ways for Education- Pillars- Scope.

UNIT-II

Education in ancient times Modern Education- Sex Education- Relationships of Education. Yoga Physical Education and Psychology.

UNIT-III

Education Psychology

Pedagogy – Theories of pedagogy

UNIT-IV

Life Skills

UNIT-V

Basic and Higher Education, Issues and Challenges in Indian Education, Careers of Yoga Field – Avenues of Placements – Teaching Career – Coaching Career – Fitness and Health related Career – Therapy related Career – Research Laboratories - Fellowship – UGC – State Cooperation.

PROGRAM OUTCOMES:

- Student can get the basic knowledge Scope of Yoga education.
- They will get the full idea about the Physical Education and Psychology
- Student can get full knowledge in Pedagogy
- They can get about the knowledge of Higher Education
- Finally, the student will get full blue print about Yoga education.

REFERENCES:

1. Swami Sivananda (2007) Health and Hygiene Sivanandangar: The Divine life society.
2. Lily Pritam Telu Ram (1981) Healtrh and Hygiene Delhi: Vikas publishing House Pvt ltd.
3. Raghavan (1965) Hand book of health education karaikudi: Meenal enterprises.
4. Sunitha pant Baasal (2008) Dit in diseases Delhi: pustak mahal.
5. Yoga charyasundaram (2004) ditt and digestion Coimbatore; The yoga publishing house.
6. Syd Hoare (1986) keep fit, Hodder and Stoughton: Teach yourself book.
7. Swami Sivananda (2011) Health and diet, shivananda Naga: The divine life society.
8. Ananda Balayogi Bhavani (2007) A yogic approach to stress, puduchery: Vivekananda Yoga Research foundation.
9. Arvind janar (2004) yoga diet, Bangalore: sai towers & Co
10. Krisha Raman (1998) A matter of Health, Chennai: East West books (Madras) pvt. Ltd
11. Elangovan(2018) Yoga psychology, Chennai:Ashwinpublacations.
12. Elangovan(2018)Fundamentals ofYoga, Chennai:Ashwin publications.
13. Nagendra and Nagratha (2008) New perspective in Stress Management, Bangalore: Vivekananda Yoga Research Foundation.

14. **Course Outcomes:**

15. On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

16.

17. Mapping With Programme Outcomes:

18.

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

19.

20. *S-Strong 3 ; M-Medium 2 ; L-Low 1

Y022DE004 - METHODS OF NATUROPATHY

PROGRAM OBJECTIVES:

- To know about the origin and History of Naturopathy.
- To know about the Mud therapy
- To understand the Hydro therapy
- To know about the Naturopathy Diet
- To know about the concept of naturopathy.

UNIT – I

Naturopathy: Meaning - Definitions - Scope - Principles and Philosophy of Naturopathy- Modalities of Naturopathy: fasting therapy, mud therapy, Massage therapy, air therapy, chromo therapy,Magnetotherapy, Sun rays

UNIT - II

Mud therapy: Mud pack, Chest pack, Mud Bath, Mud pack for face, Knee mud pack, Banana leaf bath

UNIT - III

Hydro therapy: Enema, Hip Bath, alternative hip bath, Stiz Bath, SpinalBath, Spinal spray bath, Foot and arm bath, Hot foot bath, Arm bath.

UNIT – IV

Steam bath ,Sauna bath, Sponge bath, immersion bath, Friction bath, Under water massage,Wet sheet pack, chest pack, knee pack,Local steam, steam inhalation, Jet spray massages, Color Hydrotherapy, Whirlpool bath.

UNIT - V

Naturopathy Diet (Eliminative, soothing,constructive)

PROGRAM OUTCOMES:

- Student can get the basic knowledge about naturopathy.
- They will get the full idea about the Principles and Philosophy of Naturopathy
- Student can get full knowledge types of Mud therapy.
- They can get the idea about the Types of Hydro therapy.
- Finally, the student will get full blue print about naturopathy.

REFERENCES:

1. Johi, K.S (2008) Speaking of yoga nature-cure Therapy, New Delhi: New dawn press group

2. Bakhren H.K (2011) The complete hand book of Nature cure, Ahmadabad: Jaico publication house

3. Chidarard da Murthy (2011) Yoga and Naturopathy, New Delhi: Central council for research in yoga and Naturopathy

4. Basavaraddi V Ishwar (2012) Important therapeutic modalities used inNaturopathy, New Delhi: Central council for research in Yoga and Naturopathy

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022DE005 - TIRUMOOLAR'S TIRUMANTIRAM

PROGRAM OBJECTIVES:

- To know about the origin and History of Tirumathiram
- To know about the KargapaKriyai
- To know about the Ashtanga Yogam
- To understand the Tantra Seven
- To know about the Yogic views on other tantras
- To know about the concept of Yoga in vedantic approach

UNIT I:

Highlights and concepts of Yoga Therapy in Tirumantiram, History of Tirumular – Basics of Thirumantiram –learning and non-learning

UNIT II:

Second Tantra: Creation of Microcosm – KargapaKriyai

UNIT III:

Third Tantra: Ashtanga Yogam – The Eight great Siddhis – Way to Kayasiddhi – Kala Chakra – Breathe rhythm – Kechari Yoga – Pariyanga Yoga – Life Span

UNIT IV:

Tantra Seven: The Six adharas – Mudra Variations – Controlling Senses

UNIT V:

Yogic views on other tantras – Analytical views of Thirumular on Yoga Therapy Symptoms of death, longevity.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Tirumanthiram.
- They will get the full idea about the Creation of Microcosm.
- Student can get full knowledge in Yoga Therapy in Tirumantiram
- They can get idea about the The Eight great Siddhis
- Finally, the student will get full blue print about Tirumathiram.

REFERENCES:

1. Nagarajan and Mahalingam (1991) Thirumantiram Madras: Sri Ramakrishna Math
2. Annamalai (2002) Tirumantiram, Chennai: Indian Cultural Research Institute
3. Manikavasagan (2008) TirumularTirumandiram, Uma Publications

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PY022DE006 - STATISTICS IN YOGA

PROGRAM OBJECTIVES:

- To know about the origin and History of statistics.
- To know about the conception of Normal distribution
- To know about the Hypothesis
- To know about the Nonparametric.

UNIT-I

Statistics-Basic Concept -Need and Importance of Statistics; Data-Raw and Grouped, Types of data; Concept and Calculations of Measures of Central Tendency-Mean, Median and Mode; Measures of Variability- Range, Mean Deviation, Quartile Deviation and Standard Deviation.

UNIT-II

Introduction To Normal Distribution - Normal Curve - Characteristics of Normal Curve - Properties of Normal Curve - Standard Normal Curve - Problem Based on Normal Distribution - Uses of Normal Distribution.

UNIT-III

Testing Of Hypothesis - Procedure, Types of Hypotheses, Level of Significance, One Tailed and Two Tailed Test, Degrees of Freedom; Test of Significance for Difference of Means- t Test -Independence and Dependence Test, Z-Test; One Way Analysis of Variance.

UNIT-IV

Correlation- Pearson Product Moment Correlation, Spearman Rank Order Correlation, Phi Correlation, Biserial Correlation Partial and Multiple Correlation

UNIT-V

Non-Parametric: Chi Square Test - Equal Occurrence Test, Independence of Attributes, Contingency Coefficient; Graphical Representation - Line Diagram, Bar Diagram- Multiple Bar Diagram, Pie Diagram.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about statistics

- They will get the full idea about the Uses of Normal Distribution.
- Student can get basic knowledge in Correlation.
- They can get idea about the testing of hypothesis
- Finally, the student will get full blue print about statistics.

REFERENCES:

1. Blum, J.R., and Fattu, N.A. 1954. Nonparametric methods. Rev.Educ.Res., 24,467-487.
2. Conover, W.J. Practical Nonparametric statistics, 2nd edition. New York; John wiley& sons, 1980.
3. Gibbons,J.D., and Chakraborti. S., Nonparametric Statistical Inference, 3d ed., New York, Marcel Dekker. 1992.
4. Kraft, Charles H. and Van Eeden. Constance A Nonparametric Introduction to Statistics. New York: Macmillian, 1968.
5. Owen, D.B. Handbook of Statiscal Tables. Reading, Mass; Addison- Wesley,1962.
6. Siegel, Sidney. Nonparametric statistics for the behavioral Sciences. New York: McGraw-Hill, 1956.
7. Varma J.Prakash ; Sports Statistics Copywright 2000 by Venus Publication.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**

CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PYO22DE007 -AREA OF DISSERTATION

PROGRAM OBJECTIVES:

- To know about the area of dissertation
- To know about the Review of literature
- To understand the research work.
- To know about the uses ofstatistical techniques
- To know about the research report.

Questions and answers are to be prepared according to the research design and topic finalized:

UNIT - I

Front materials of the research work: Title, front page, certificate by the supervisor, declaration by the scholar, curriculum vita, dedication, acknowledgements, Table of contents, list of tables, list of illustrations, list of appendices. Introductory chapter: justification and usefulness of the topic, objectives of the study, statement of the problem, hypothesis, significance of the problem, delimitations, meaning and the definitions of the terms.

UNIT - II

Review of related literature: types of reviews, studies on independent and dependent Variables, methodology; selection of subjects(sampling, sampling design selected), selection of variables(justification for selecting independent and dependent variables), experimental design selected, pilot study, criterion measures, reliability of data, reliability of instruments, testers reliability, subject reliability, orientation of subjects, training procedure, scheduling, tests administered.

UNIT - III

Collection of data, statistical techniques used, data process, analysis, and interpretation. test of significance, level of significance, results of dependent variables, discussions on hypothesis.

UNIT - IV

Criteria (validity, reliability, representatives, generalizability) fulfilled summary, conclusions and recommendations for practitioners, government and society, back materials; bibliography,appendix.

UNIT - V

Mechanics of writing the research report: font size, space, paper, margin, pagination, numbers and symbols, binding, language, grammar ,spelling, uses of computer, qualities of the scholar improved, supervisors role, experience gained in doing the research work.

PROGRAM OUTCOMES:

- Student can get the basic knowledge about Research work.
- They will get the idea about Review of literature
- Student can get full knowledge statistical techniques.
- They know writing the research report
- Finally, the student will get full blue print about dissertation.

REFERENCE:

1. Best w john and james v leahn(1996) research in education, new Delhi: prentice_ hall of India pvt. Ltd,
2. Kothari C.R.(1985) research methodology new delhi: wiley eastern limited.
3. Clarke david. H and Clarke H, Harrison(1984) research processes in physical education, new jersey: prentice hall inc.,
4. Best, john W. and kalmjames, V.(1980) research in education, new delhi: prentice hall of India.
5. Clarke, H. Harrison, and Clarke davidH.(1972) advanced statistics, new jerky: prentice hall inc.
6. Garret henry E and Woodsworth, R.S(1958) statistics in psychology and education, Bombay: allied publication pvt. Ltd.,
7. Thirumalaisamy(1998) statistics in physical education, karaikudi: senthilkumar publishers'
8. Thomson AL,(1986) the art of using computers, boyd&frasherboston: publishing co.,

9. Jerry R Thomas and jack K Nelson(2000) research methods in physical activities, Illnosis: Human kinetics;
10. Craig Williams and chriswragg(2006)_data analysis and research for sport and exercise science, London rout ledge press.
11. Paul R kinnear and Colin D gray(2006)_SPSS 14 made simple, new York : psychology press.
12. Elangovan R (2016) research process in yoga, Chennai; ashwin publications

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

PYO22DE008 - Professional Preparation for NET/ SLET (SEC)

PROGRAM OBJECTIVES:

- To know about the Research Aptitude.
- To know about the conception to prepare for communication.
- To understand the ideology to prepare for Data interpretations.
- To know about the concept of preparation for NET/SLET (SEC).

UNIT-1

Teaching and Research Aptitude:Concept, Objectives, Levels of teaching (Memory, Understanding and Reflective), Characteristics and basic requirements. Learner's characteristics: Characteristics of ado• Research: Meaning, Types, and Characteristics, Positivism and Post- positivistic approach to research. Methods of Research: Experimental, Descriptive, Historical, Qualitative and Quantitative methods. Steps of Research adolescent and adult learners (Academic, Social, Emotional and Cognitive), Individual differences.

UNIT-2

Communication:Communication: Meaning, types and characteristics ofcommunication.Effective communication: Verbal and Non-verbal, Inter-Cultural and group communications, Classroomcommunication. Barriers to effectivecommunication, Mass-Media, andSociety.

Information and Communication Technology:ICT: General abbreviations andterminology, Basics of Internet, Intranet, E-mail, Audio andVideo-conferencing. Digital initiatives in highereducation.ICTandGovernance.

UNIT-3

Mathematical and Logical Reasoning: Types ofreasoning: Number series, Letter series, Codes andRelationships. Understanding the structure of arguments: argument forms, structure of categorical propositions, Mood and Figure, Formal and Informal fallacies, Uses of language, Connotations and denotations of terms, Classical square ofopposition.Evaluating and distinguishing deductive and inductive reasoningAnalogies.

UNIT-4

Data interpretations: Sources, acquisition, and classification ofData.Quantitative and QualitativeData.Graphical representation (Bar-chart, Histograms, Pie-chart, Table-chart, and Line-chart) and mapping ofData.DataInterpretation. DataandGovernance.

UNIT-5

Higher Education System:Institutions of higher learning and education in ancient India.Evolution of higher learning and research in post-Independence India. Oriental, Conventional and Non-conventional learning programmes inIndia. Professional, Technical and Skill Base dedication.Value education and environmental education. Policies, Governance, and Administration.

PROGRAM OUTCOMES:

- Student can get the Research Aptitude
- They will get the full idea about the communication
- They can get about the Mathematical and Logical Reasoning
- Finally, the student will get full blue print about methodology of preparation for NET/SLET(SEC)

Course Outcomes:

On successful completion of the course, the students should be able to:

CO 1	The knowledge of the basics of Sanskrit
CO 2	The capacity to understand the classical texts.
CO 3	The knowledge of yogic concepts in Bhagavad-Gita.
CO 4	The knowledge of different schools of yoga.
CO 5	

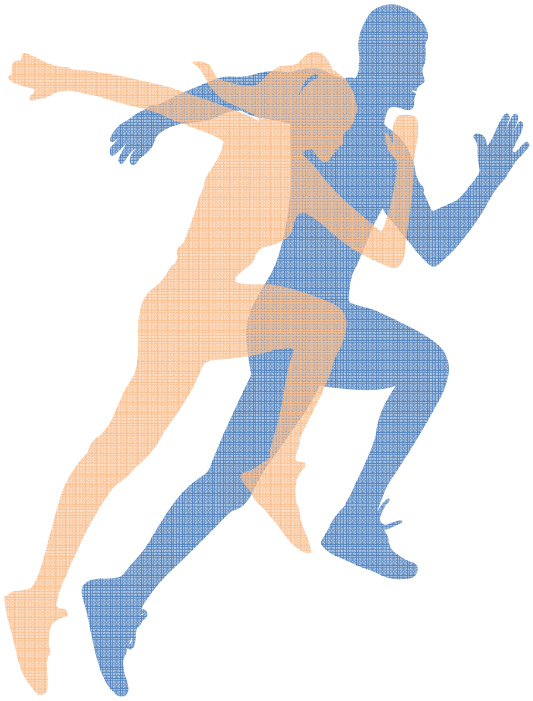
Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI- 600 127



SYLLABUS

B.Sc., EXERCISE PHYSIOLOGY AND NUTRITION

(REGULAR-2023-2024)

DEPARTMENT OF EXERCISE PHYSIOLOGY AND NUTRITION

CHENNAI - 600 127

DESCRIPTION OF THE DEPARTMENT

The Department of Exercise Physiology and Nutrition (EPN) examines the physiological responses and adaptations of the human organism to physical activity. Considerable emphasis is given toward understanding how the body functions during exercise and adapts to long-term training. Subjects related to bioenergetics, musculoskeletal physiology, cardiorespiratory physiology, neuroendocrinology, basic nutrition, clinical nutrition and sports nutrition will be taught. In addition, the physiological effects of factors such as age, gender, body composition, and the environment on human performance will be imparted, along with various strength and conditioning training. Opportunities for research and applied, practical experiences are the core of the instructional methods for graduate students.

MISSION OF THE DEPARTMENT

The Department of Exercise Physiology and Nutrition seeks to promote the health of individuals and communities through research, teaching, and service activities in exercise physiology, human nutrition and the application of these sciences in academic, Sports, clinical, public health, and industry settings

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REGULATIONS

The Choice Based Credit System (CBCS) and Learning Outcomes Based Curriculum Framework (LOCF) for three years B.Sc. Degree programme in Exercise Physiology and Nutrition will be implemented from the academic year 2023-2024.

1. ELIGIBITLITY FOR ADMISSION

1.1 A candidate shall be admitted to the degree B.Sc. in Exercise Physiology and Nutrition Only if he/she produces satisfactory evidence to the effect that he/she has successfully completed Plus Two (XII Std any Science Group), under SB/CBSE/CSE recognized by the syndicate of TNPESU.

1.2 Reservation as per university / State Government rules, from time to time at par with the UGC norms and regulations of the Government of Tamilnadu. The total number of seats for UG is 30 (Thirty). Period of completion is not more than **six years** from the date of first admission.

2. COURSE OF STUDY

2.1 The normal duration of the B.Sc., Exercise Physiology and Nutrition Programme shall be six semester (THREE years).

2.2 There shall be two semester's in an academic year, the ODD and EVEN semesters. Odd semesters shall be from July to November and Even Semesters shall be from December to May.

2.3 Each semester will have a minimum of 90 working days and each day will have five working hours. Teaching is organized into a modular pattern of credit courses. Credit is normally related to the number of hours a teacher teaches a particular subject.

3. CHOICE BASED CREDIT SYSTEM (CBCS) - LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)

The Tamil Nadu Physical Education and Sports University follows the Choice Based Credit System (CBCS) and Learning Outcomes Based Curriculum Framework (LOCF). One credit is equal to one teaching hour per week during the semester. The CBCS in B.Sc., Exercise Physiology and Nutrition Degree Programme would have five components and the total credit requirements for all components in three years is 140 credits.

3.1 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

3.2 **Core course:** Are course that are basic to the subject of the degree. This is a course which is to be compulsorily studied by a student as a core requirement to the completion of the program.

3.3 **Elective Courses:** This is a course that is supportive to the discipline of study, provides an expanded scope, enables exposure to some other domains or nurtures proficiency/skills. Elective papers can be of two types: Discipline Specific Elective (DSE) and Generic Elective (GE).

3.4 **Discipline Specific Elective (DSE):** These courses are inter disciplinary in nature and considered similar to core course. And, the students have to choose one course from the option provided for them.

3.5 **Generic Elective (GE):** These courses add generic proficiency to the students. Students have to choose generic elective courses in consultation with the head of the department from the Generic Elective courses offered by other Division of study in Sports Science or from other Departments in university.

3.6 **Skill Enhancement Courses (SEC)** (minimum 4 for regular courses): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work. The main

purpose of these courses is to provide students life-skills in hands-on mode so as to increase their employability.

3.7 **Ability Enhancement Courses (AEC):** The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; i. Environmental Science and ii. English/Hindi/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.

3.8 **Ability Enhancement Compulsory Courses (AECC):** Environmental Science, English Communication/Hindi Communication/MIL Communication.

CREDIT ABSTRACT

Course Components	Type of Courses	Semester						Total Credits
		I	II	III	IV	V	VI	
		Credits						
Part – I	Language / Special English/Hindi	1	1	1	1	-	-	**12**
Part – II	English	1	1	1	1	-	-	**12**
Part – III	Core Courses	2	2	2	2	4	2	**56**
	Core Elective Courses	1	1	1	1	2	2	**24**
	Summer Internship	-	-	-	-	1	-	**2**
	Project work	-	-	-	-	-	1	**4**
Part – IV	Skill Enhancement Courses (Non-Major Electives)	2	2	1	2	-	-	**14**
	Skill Enhancement Courses (Entrepreneurial Skill)	-	-	1	-	-	-	**1**
	Ability Enhancement Courses	1	1	1	1	-	-	**8**
Part – V	Value Education	-	-	-	-	1	-	**2**
	Environmental Studies	-	-	-	1	-	-	**2**
	Extension Activity	-	-	-	-	-	1	**1**
	Professional Competency Skill	-	-	-	-	-	1	**2**
	Grant Total	**8**	**8**	**8**	**9**	**8**	**7**	**140**

4. COURSE WEIGHT

4.1 Courses have been designed with weightage of one, two, three /four credits, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise lectures / tutorials / laboratory/ field work / outreach activities / project work / vocational training / viva / seminars etc. or a combination of some of these.

4.2 It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

5. CREDIT DISTRIBUTION

The Credit distribution for the six semesters are given below:

SEMESTER	CREDITS	TOTAL MARKS
I	23	**800**
II	23	**800**
III	22	**800**
IV	25	**900**
V	26	**800**
VI	21	**600**
		4700

6. ASSESSMENT AND EVALUATION

6.1 Each course will be assessed on the basis of 100 marks. The marks would be divided between internal and external assessment.

6.2 There shall be one end semester external examination for each course in every semester consisting of 75% (75 marks) weight in theory and 75% (75 marks) in practical courses.

6.3 Each Theory course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	Marks
Test Paper – I & Test Paper – II	**10**
Seminars	**3**
Assignments	**2**
Model Examination	**10**
Total	**25**

6.4 Each Practical Course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Practicum	Marks
Internal Viva	**10**
Lab Record	**5**
Lab Performance	**10**
Total	**25**

6.5 The minimum passing standard will be 40% for the external and internal component of each theory course, i.e. 30 marks out of 75 (External - 40% of 75 marks) and 10 marks out of 25. In practical minimum passing standard will be 40% for the external exam and internal assessment for each practical course.

7. ATTENDANCE

7.1 Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course.

7.2 Students must have 75% of attendance in each course for appearing in the examination.

7.3 Students who have 74% to 70% of attendance shall apply for condonation in the prescribed form with the prescribed fee.

7.4 Students who have 69% to 65% of attendance shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

7.5 Students who have below 64% to 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Carry over to the next semester.

7.6 Students who have below 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Re do the course

8. END SEMESTER EXAMINAITION (ESE)

8.1 The ESE will consist of à written examination of three hours duration for a maximum score of 75. The following procedure will be followed for evaluation.

8.2 A candidate who has secured a minimum of 40 marks in all courses prescribed in the programme and earned a minimum of the credits will be considered to have passed the Bachelor's Degree Programme.

Pattern	Total No. of Question	Number of Question to be Answered	Marks for each Question	Total Marks
MCQ	10	10	1	**10**
Short Answer	5	5	2	**10**
Short Essay / Problem Type	10	5	5	**25**
Essay / Problem Type	5	3	10	**30**
Total				**75**

8.3 Distribution of 25 Marks for Semester End Practical Examination weightage on the following:

Components of External Evaluation of practicum	Marks
Lab Experiment / Field Experiment	10
Lab Performance / Demonstration	5
Viva-voce	5
Lab Record	5
.Total	25

8.4 A Student will be issued, hall ticket only if one produces "**No Dues**" certificates from the concerned department, the laboratory, the Registrar's Office, the Library and Hostel.

9. GRADING SYSTEM

A ten point rating is used for the evaluation of the performance of the student to provide a letter grade for each course and overall grade for the Bachelors Programme. The letter grade assigned is given below:

Letter	Grade	Grade Point	Range of Marks
O	Outstanding	10	90 Above
A+	Excellent	9	80-89
A	Very Good	8	70-79
B+	Good	7	60-69
B	Above Average	6	50-59
C	Pass	5	40-49
RA	Reappear	0	0-39

9. INTERNSHIP AND FIELD TRAINING

Internship and field training is an important component of Exercise Physiology and Nutrition that provides students with the opportunity to gain applied practical experience in the field of Exercise Physiology and Nutrition. It allows a student to employ what is learned in class in a supervised environment, which is critical in order to further develop professional skills and assure quality practice. The students will undergo Internship training /Field training/ Clinical practice in TNPESU campus/ Sports Development Authority of TamilNadu (SDAT) coaching Centres / Sports Authority of India (Various coaching Centres of SAI) / Government Medical College/ other sporting centers shall be evaluated through internal assessment only. At the end of Internship/field training, the student shall submit a certificate from the organization where he /she has undergone training and a brief report. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally.

PROGRAMME OUTCOMES (POs):

After successful completion of three year degree program in Exercise Physiology and Nutrition/ Sports Biomechanics should be able to:

PO1	Demonstrate and an understanding of major concepts in all disciplines of Exercise Physiology and Nutrition
PO2	Solve the problem and also think methodically, independently and draw a logical conclusion. Employ critical thinking and the scientific knowledge to design, carry out, record, demonstrate, plan, and analyze.
PO3	The graduates will display professional and ethical behavior. The graduates will be able to communicate professionally.
PO4	Create an awareness of the impact of Exercise Physiology and Nutrition on the environment, society, and development outside the scientific community.
PO5	After completion of graduation, they would be able to apply the acquired concepts and principles to study different branches of Exercise Physiology and Nutrition in their future career. When a student pursues for postgraduate studies, he or she can make use of all the applications, field or laboratory which he or she has gained knowledge. This B.Sc. Programme will also help students to enhance their employability for jobs in different sectors.

PROGRAM SPECIFIC OUTCOMES (PSOs):

PSO1	Identify and list out common structure and functions of various systems of human body, macro and micro nutrition and assessments.
PSO2	Explain various physical and physiological changes in our bodies.
PSO3	Understand various life style management
PSO4	Explain the role and impact of different environment, exercise, fitness, strength and conditioning and weight loss programs.
PSO5	Identify different nutrients beneficial to humans
PSO6	Identify various potential risk factors to health of humans.
PSO7	Explain the importance of sports Nutrition, clinical nutrition and general nutrition.
PSO8	Use tools of information technology for all activities related to Exercise Physiology and Nutrition.

SEMESTER- I

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	23UC1LT101	Tamil I / Special English I	3	3	25	75	100
Part-II	23UC1LE101	English I	3	3	25	75	100
Part-III	23UC1CT101	Human anatomy and Physiology - I	4	4	25	75	100
	23UC1CT102	Fundamentals of Food Science	4	4	25	75	100
	23UC1CE101	Health Education	4	3	25	75	100
	23UC1SE101	Human anatomy and Physiology - Practicum-I	4	2	25	75	100
	23UC1SE102	Fundamentals of Food Science - Practicum-II	4	2	25	75	100
Part-IV	23UC1AE101	Soft Skills –I (Presentation Skills)	2	2	50	50	100
		Library	2	-	-	-	-
			30	**23**	**225**	**575**	**800**
Remark :Soft skill I - 2 hours handled by English: Totally 3+2=5							

SEMESTER- II

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	23UC1LT201	Tamil II / Special English II	3	3	25	75	100
Part-II	23UC1LE201	English II	3	3	25	75	100
Part-III	23UC1CT201	Human Anatomy and Physiology – II	4	4	25	75	100
	23UC1CT202	Human Nutrition	4	4	25	75	100
	23UC1CE201	Clinical Exercise Testing Procedures and Assessment	4	3	25	75	100
	23UC1SE201	Human Nutrition - Practicum-II	4	2	25	75	100
	23UC1SE202	Clinical Exercise Testing Procedures and Assessment -III	4	2	25	75	100
Part-IV	23UC1AE201	Naan Mudhalvan – Medical Coding for Employability	4	2	50	50	100
			30	**23**	**200**	**600**	**800**

Note:

1. *Naan Muthalvan - Skill course - external 50 marks will be assessed by industry and internal will be conducted by the respective course teacher.

SEMESTER- III

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	23UC1LT301	Tamil III / Special English III	3	3	25	75	100
Part-II	23UC1LE301	English III	3	3	25	75	100
Part-III	23UC1CT301	Kinesiology	4	4	25	75	100
	23UC1CT302	Fundamentals of Sport and Exercise Biochemistry	4	4	25	75	100
	23UC1CE301	Training and Performance	4	3	25	75	100
	23UC1SE301	Kinesiology Practicum -I	4	2	25	75	100
	23UC1SE302	Training and Performance Practicum -II	4	1	25	75	100
Part-IV	23UC1AE301	Soft Skills –II (Written Skills)	4	2	25	75	100
			30	**22**	**200**	**600**	**800**

SEMESTER- IV

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	23UC1LT401	Tamil IV / Special English IV	3	3	25	75	100
Part-II	23UC1LE401	English IV	3	3	25	75	100
Part-III	23UC1CT401	Clinical Nutrition and Dietetics	4	4	25	75	100
	23UC1CT402	Sports Biomechanics	4	4	25	75	100
	23UC1CE401	Weight Management	3	3	25	75	100
	23UC1SE401	Weight Management - Practicum - I	4	2	25	75	100
	23UC1SE402	Sports Biomechanics - Practicum - II	4	2	25	75	100
Part-IV	23UC1AE401	* Naan Mudhalvan – Digital Skills for Employability - Office Fundamentals (SEC-VII) http://kb.naanmudhalvan.in/Special:Filepath/Microsoft_Course_Details.xlsx	3	2	50	50	100
	23UC1ES401	Environmental studies	2	2	25	75	100
			30	**25**	**250**	**650**	**900**

Note:

1. *Naan Muthalvan - Skill course - external 50 marks will be assessed by industry and internal will be conducted by the respective course teacher.
2. A minimum of four weeks Internship will be carried out during the summer vacation after the **second year.** Viva Voce will be conducted by the internal examiners of the Department and marks shall be sent to the COE of University for its inclusion in the **Fifth Semester Marks Statement.**

SEMESTER- V

Parts	Course Code	Course	Hours / Week)		Marks		
			L/TP	C	CIA	ESE	Total
Part-III	23UC1CT501	Sports Nutrition	4	4	25	75	100
	23UC1CT502	Strength Training and Conditioning for Fitness	4	4	25	75	100
	23UC1CT503	Research Methodology and Statistic	4	4	25	75	100
	23UC1CT504	Ergogenic Aids	4	4	25	75	100
	23UC1CE501	Nutrition Through Lifecycle	3	3	25	75	100
	23UC1CE502	Sports and Exercise Psychology	3	3	25	75	100
Part-IV	23UC1CI501	# Fitness Training Internship Report and Viva	4	2	100	-	100
Part-V	23UC1VE501	Value Education	4	2	25	75	100
			30	**26**	**200**	**600**	**800**

Note:

1. # Only Continuous Internal Assessment (CIA).
2. A Group of five members work on a Project and submit the report for assessment.

SEMESTER- VI

Parts	Course Code	Course	Hours / Week)		Marks		
			L/TP	C	CIA	ESE	Total
Part-III	23UC1CT601	Applied Exercise Physiology	4	4	25	75	100
	23UC1CT602	Clinical Exercise Physiology	4	4	25	75	100
	23UC1CE601	Nutrition for Health, Fitness and Sports	3	3	25	75	100
	23UC1CE602	Introduction to Sports Injury and Rehabilitation	3	3	25	75	100
	23UC1CP601	Project with Viva voce	4	4	25	75	100
Part-IV	23UC1PC602	Professional Competency (Aptitude and reasoning skills for competitive Examinations)	4	2	50	50	100
Part-V	23UC1AE601	@ Extension Activity (NCC/NSS/Red Cross, etc)	-	1	-	-	-
			30	**21**	**175**	**425**	**600**

***L (Lecture), T (Tutorial), P (Practical), C (Credits), CIA (Continuous Internal Assessment), ESE (End Semester Exam)**

Note:

1. @ No University Examinations. Only Continuous Internal Assessment (CIA)

SEMESTER- I

COURSE CODE – 23UC1CT101
HUMAN ANATOMY AND PHYSIOLOGY – I

Learning Objectives

1. To impart knowledge on structure and functions of different organs
2. Learn the integrated functioning of cells, tissues, organs and systems
3. To introduce the interrelationship between nutritional science and physiological functions

UNIT-I Cell Biology: Introduction to human anatomy, Anatomical terms, language of anatomy, levels of organization, various organ systems. Cell: Definition, structure and function. Cell division: Mitosis and Meiosis. Tissues: Definition, classification and function- Epithelial tissue, Connective tissue, Muscle tissue and Nervous tissue-Body Membranes.

UNIT-II- Blood: Definition and Functions- Composition of blood – Types and Functions of blood cell –Red Blood Cells (RBC) -Hemoglobin, White Blood Cells (WBC)- Types of White Blood Cells – platelets and Plasma. Blood Grouping and Typing. Blood Clotting - Definition and Mechanism.

UNIT-III –Bones: Histology and Physiology of Bones -A brief introduction to bones, joints, ligaments and muscles of the body-Structure and Functions of Skeletal System- anataomical terms of bones - axial skeleton, appendicular skeleton. Bones of the upper limb, Bones of the lower limb, the vertebral column, the sternum, ribs and the skull. Types of Bones- Sex Differences in the Skeleton.

UNIT-IV Cardiovascular System: Position, Structure and Function of the heart. - Types of Blood Vessels: Arteries, Capillaries and Veins. Cardiac Cycle and Heart Sounds. Blood Flow - Arterial Pulse and Blood pressure – Definition, Procedure to measure and its values. Types of circulation: Systemic, Pulmonary, Coronary and Portal circulation. Lymphatic system- structure and function.

UNIT-V Respiratory system: Structure and Functions of Upper and Lower Respiratory System. Mechanism of breath inspiration and Expiration. Mechanism and Control of respiration., Gaseous exchange in lungs and tissues, Transport of oxygen and carbon dioxide.

Reference Books:

1. Jason LaPres, Beth Kersten and Yong Tang, (2016),Gunstream's Anatomy & Physiology: With Integrated Study Guide, Sixth Edition, McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121.
2. Cinnamon L. VanPutte, Jennifer L. Regan & Andrew F. Russo, (2017), Seeley's Anatomy & Physiology, Eleventh Edition, McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121.
3. Sembulingam. K and Prema Sembulinga,(2012), Essentials of Medical Physiology, Sixth Edition, Jaypee Brothers Medical Publishers (P) Ltd, 4838/24, Ansari Road, Daryaganj,New Delhi 110 002, India.
4. SurrinderH.singh, Krishna Garg, (2008), "Anatomy & Physiology for Nurses & Allied Health Sciences". CBS.
5. Clancy, John & Andrew J.McVicar (1995), "Physiology & Anatomy – A Homestatic Approach", London: Edward Arnold, A Division of holder head line PLC.
6. Guyton, A.C. (1979) Physiology of the Human Body. 5th ed. Saunders College ofPublishing, Philadelphia.

E-Learning resources

1. https://www.youtube.com/watch?v=iUc0qZX5z4M&list=PLyj7LvLOVR9pnvfF2TmRLXZ5NkyzlE8tI.
2. https://www.youtube.com/watch?v=jFKCXL-iNxA&list=PLyj7LvLOVR9pnvfF2TmRLXZ5NkyzlE8tI&index=11
3. https://www.youtube.com/watch?v=9KOZ2pr7yTE&list=PLyj7LvLOVR9pnvfF2TmRLXZ5NkyzlE8tI&index=3
4. https://www.youtube.com/watch?v=EFGvb6_tuoA&list=PLyj7LvLOVR9pnvfF2TmRLXZ5NkyzlE8tI&index=5.
5. https://www.youtube.com/watch?v=hXNtcxfdd3E&list=PLyj7LvLOVR9pnvfF2TmRLXZ5NkyzlE8tI&index=17
6. https://www.youtube.com/watch?v=R_8lx3Nt0OM&list=PLyj7LvLOVR9pnvfF2TmRLXZ5NkyzlE8tI&index=16
7. https://www.youtube.com/watch?v=OsrrNDid7XU&list=PLyj7LvLOVR9pnvfF2TmRLXZ5NkyzlE8tI&index=19

Course Outcomes

CO No	Course outcomes
CO 1	Identify the major levels of organization, major components of each organ and define the relationship between anatomy and physiology
CO 2	Describe the composition of different blood groups and their role in the body.
CO 3	Identify the classification of bones and joint movements
CO 4	Identify the structure and label the parts of respiratory system. Lung volumes and capacities
CO 5	Illustrate the Structure and Function of the heart.

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER- I

COURSE CODE – 23UC1CT102
FUNDAMENTALS OF FOOD SCIENCE

Course Objectives

After studying this paper, the student should be able to:

1. To impart knowledge on the classification of food groups, composition and nutritive value of different food ingredients.
2. Understand the science of food and factors that affect its quality, Nutritive value
3. Understand the physical, biological and chemical characteristics of various foods and their uses.
4. Apply knowledge of foods in planning diets and preparing meals that are safe, nutritious and palatable.

UNIT – I Nutrient content of foods and Cooking Methods: Definition of Food - Components of food - Nutrition, Nutrients - History of Nutrition- Food groups for balanced diets - Physiological functions of food - **Cooking Methods:** Moist Heat Methods-Boiling-Simmering- Stewing-Steaming-Pressure cooking Merits-Demerits -Dry Heat Methods- Air as medium of cooking- Fat as medium of cooking-Combination of Cooking Methods-Merits and Demerits -Solar cooking – Microwave cooking – Food safety – Food preservation – Benefits of sprouting and fermentation.

UNIT - II Cereals, Millets, Pulses, Legumes and Nuts: Classification of Cereals, Structure, nutrient composition, storage, processing, milling, parboiling, scientific methods of preparation and cooking, acceptability and palatability of rice, wheat, maize and millets Cooking of starches- Dextrinization and gelatinization, retrogradation and resistant starch. **Pulses and legumes** - Types, nutritive value, methods of cooking, effect of soaking and germination, judicious combination of cereals and pulses-complementary effect, soya beans, fava beans and kesari dhal- methods to inactivate /remove toxins; storage. **Nuts** - types, composition, market forms, roasting, steaming of nuts, nuts butters; uses in sweets, baking, and confectionery; Storage.

UNIT – III Vegetables and Fruits: Classification, nutritive value, effect of cooking on colour, texture, flavour, appearance and nutritive value, Purchase - storage and preservation. **Fruits:** Classification, nutritive value, changes during ripening, enzymatic browning, uses, preservation. **Nuts and Oil Seeds:** Nutritive Value of Nuts-Specific Nuts and Oil Seeds-Role of Nuts in Cookery Phytonutrients and polyphenols.

UNIT – IV Milk and Milk Products: Nutritive value, kinds of milk, pasteurization, and homogenization, coagulation of milk, fermentation of milk; milk products - whole and skimmed milk, milk powders and yogurt, ghee, butter, cheese. Storage and preservation. **Meats** - structure, nutritive value, selection of meat, postmortem changes in meat, ageing, factors affecting tenderness of meat, methods of cooking and storage**. Egg**- structure, composition, nutritive value, storage, deterioration during storage - Physical and Chemical changes. Egg cookery- effect of heat, sugar, salt, acid, and starch on egg protein; Evaluation of egg quality; Role of egg in cookery. **Fish**- Classification, composition, nutritive value, selection, changes during cooking and spoilage of fish.

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UNIT- V- Fats and oils, sugars: Types, sources-animal fats and vegetable fats, functions, processing- difference between cold pressed and regular cooking oils, hydrogenated fat, emulsification, rancidity, smoking point. Factors affecting absorption of oils while frying foods, harmful effects of reheated oils. **Sugars:** Types and market forms of sugars; stages of sugar cookery, crystallization, factors affecting crystallization, uses in confectionery.

Reference Books:

1. Srilakshmi B (2015), 'Nutrition Science' Fourth Edition, New Age International Publishers, New Delhi.
2. Manay S and Shadaksharaswamy M, (1997), 'Food Facts and Principles' New Age International Publishers, New Delhi.
3. Srilakshmi B (2019) Food Science, (7th Ed.) New Age International Publishers.
4. Thangam E.Philip, Modern Cookery for Teaching and the Trade Volume - 1&2 (6th Revised Edition), Orient Black.
5. Vaclavik, V.A. and Elizabeth, W.C. (2013) Essentials of Food Science.2nd ed. Springer Publication, New Delhi.

E-Learning resources

1. https://egyankosh.ac.in/handle/123456789/329473
2. http://epgp.inflibnet.ac.in/Home/Download

Course Outcomes

CO 1	Identify, Define and classify different food groups, nutrients, and different pre-preparation and cooking methods adopting best practices of health and safety.
CO 2	Describe the composition and nutritive value of different food groups and their role in cookery from current literature.
CO 3	Define and explain the physical and chemical changes occurring in the nutritive and non-nutritive constituents of different foods during various cooking processes.
CO 4	Apply the current understanding of food science to describe the various sustainable food practices like energy and nutrient conservation methods
CO 5	Analyze and understand the principles in cooking and its effect on sensory attributes and nutrients.

Mapping with Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – I

COURSE CODE – 23UC1CE101

HEALTH EDUCATION

Learning Objectives:

After studying this paper, the student should be able to:

1. It builds students' knowledge, skills, and positive attitudes about health.
2. The health education program motivates students to improve and maintain their health, prevent disease, and reduce risky behaviors.
3. Students will gain the knowledge and skills to remain healthy throughout their lives.

UNIT-I Health Education - Health Education: Meaning, Concept and Principles - Health – Importance, Components, Health Promoting Behaviours - Role of Personal Hygiene, Mental Hygiene, Sleep Hygiene, Occupational Hygiene in physical education and sports - Role of Different Agencies in Promoting Health (WHO, UNICEF, Local Bodies).

UNIT – II Health hazards of modernization-pollution, effect of population explosion on health hazards, family and community life - Communicable and non-communicable diseases - role of host agent and environment in the spread and control of communicable diseases - body defenses - immunity-natural and acquired - importance of regular medical check-up in preventing the diseases - immunization schedule and importance of booster doses - Morbidity and mortality in India - National Health Programmes - Primary health care, meaning and scope - Health care set-up in rural and urban areas.

UNIT – III Importance of international health - International health measures to check spread of communicable diseases form one country to another - quarantine measures - World Health Organization-its functions and activies - UNICEF functions and activities - Significance of World Health Day.

UNIT – IV Approved systems of medicine being practiced in India - Prescription and non-prescription drugs - habit-forming drugs - dangers of self-medication and going to a quack- Health set-up at the village, town, district, state and country levels - voluntary agencies working in the field of health and health education.

UNIT – V Awareness of HIV and AIDS - harmful effects of alcohol and tobacco - Evils associated with promiscuity - child and drug abuse - Adolescence education and sex-education – Birth Control Measures. Mental and Emotional Health: Hormones and Neurotransmitters - Common Stressors and Conditions – Bullying - Depression and Suicide - Eating Disorders.

Reference Books:

1. Donatelle, R. (2009). *Health: The basics*. 8th edition. San Francisco, CA: Pearson Education, Inc.
2. Joint Committee on Terminology. (2001). Report of the 2000 Joint Committee on Health Education and Promotion Terminology. *American Journal of Health Education*.
3. McKenzie, J., Neiger, B., Thackeray, R. (2009). *Planning, Implementing, & Evaluating Health Promotion Programs*. 5th edition. San Francisco, CA: Pearson Education, Inc.
4. Simons-Morton, B. G., Greene, W. H., & Gottlieb, N. H... (2005). *Introduction to Health Education and Health Promotion*. 2nd edition. Waveland Press.
5. Nash T.N. (2006). Health and physical education. Hyderabad: Nilkamal Publishers.
6. DandonPublication.Chandra, S., Sothi, &Krishnan.P. (2005). Health education and physical education. Delhi: Surject Publications. ·
7. Mangal, S. K. (2005). Health and physical education. Ludhiana: Tandon Publication book market.

Course Outcomes

CO 1	Understand Role of Personal Hygiene and Importance of Health
CO 2	Describe the effect of population explosion on health hazards, family and community life.
CO 3	Explain the International health measures to check spread of communicable diseases form one country to another
CO 4	To understand Approved systems of medicine being practiced in India
CO 5	Analyze and understand the Awareness of HIV and AIDS

Mapping with Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SKILL ENHANCEMENT COURSE SEC-I (NME)

23UC1SE101	HUMAN ANATOMY AND PHYSIOLOGY CORE PRACTICUM-I

1. Recording of Radial Pulse
2. Recording of Carotid Pulse
3. Recording of Respiratory Rate (RR)
4. Recording of Pulmonary Volumes and Capacities

Practical Demonstration:

1. Human Skeletal system identification
2. Human Heart using models/charts
3. Brain using models/charts
3. Eye, Eye and Ear using models/charts

4 Liver, Pancreas, Stomach using model /charts

5. Reproductive System
6. Charts & Instruments – Spotters
7. Identify different body organs and systems on the human model/chart.
8. Identify different muscles and bones of the human model/chart.
9. Estimation of Hemoglobin, total Red Blood Cells and total White Blood Cells (demonstration only).

A practical observation note book of these experiments must be maintained by the student.

SKILL ENHANCEMENT – II (FOUNDATION COURSE)

23UC1SE102	FUNDAMENTALS OF FOOD SCIENCE– PRACTICUM-II

1. Food group- Grouping of foods, discussion on nutritive value.
2. Preparation of one dish each applying the different cooking methods: Moist heat methods - boiling, simmering, steaming and pressure cooking. Dry heat methods - baking.
3. Vegetables Experimental cookery using vegetables of different colours and textures. Preparation of soups and salads. Common preparation with vegetables.
4. Study of the smoking temperature of Fats.
5. Milk and milk products Experimental cookery – cream of tomato soup, cheese curry and cooking vegetables in milk. Common preparation with milk, cheese and curd.
6. Beverages Preparation of hot beverages - coffee, tea. Preparation of cold beverages- fruit drinks and milk shake.
7. Egg Experimental cookery- boiled egg, poached egg. Common preparations with egg.

SEMESTER- II

COURSE CODE – 23UC1CT201
HUMAN ANATOMY AND PHYSIOLOGY – II

Learning Objectives:

The main objective of including

1. By learning the subject the students will be aware of the various anatomical structures present in Human body.
2. The students after learning will gain knowledge about the normal functioning of various organs in Human body.
3. Only after knowing about normal functioning of the human body the students will the students will know about effect of exercise on various system.

UNIT-I- Digestive system - Mouth and its parts. Teeth - Classification, types and function. Salivary Glands – Position, types and function. Gastro Intestinal Tract - Esophagus, Stomach, Small intestine, Large intestine and Anus - Structure and function. Pancreas structure and Digestive function. Liver - structure and function. Secretion of Enzymes for Digestion in Gastro Intestinal Tract.

UNIT-II- Endocrine systems- Definition and classification. Anterior Pituitary hormones and their functions - Posterior Pituitary hormones and their actions - Thyroid hormones, Biosynthesis and functions - Parathyroid hormones, functions, Adrenal cortex hormones and their functions. Adrenal medullary hormones and their actions, Pancreas, Thymus Gland, Ovary and Testis.

UNIT-III- Nervous System-Definition and Classification. Neuron –Definition and types. Central Nervous Systems - Structure and Function of Cerebrum, Cerebellum, Pons, Hypothalamus, Medulla Oblongata and Spinal Cord. Peripheral Nervous Systems-Sensory and Motor nerves and impulses. Autonomic Nervous Systems- Sympathetic and Parasympathetic nervous systems. Cranial Nerves-Types and functions. Reflex action-Definition, Explanation and example.

UNIT-IV- Male and Female Reproductive Organs- Structure and Function of External genitalia, Ovary, Uterus and Fallopian tubes. Ovum – Definition and Structure. Male Reproductive Organs- Structure and Function of External genitalia, Epididymis, Vasdeferans, Prostate gland and Testis. Sperm - Definition and Structure.

UNIT-V Excretory system - Kidney- Structure and functions. Nephron - structure and functions. Mechanism of Urine formation. Skin- Structure and functions. Eye - Structure and functions. Ear -Structure and functions.

Reference Book:

1. Jason LaPres, Beth Kersten and Yong Tang, (2016), Gunstream's Anatomy & Physiology: With Integrated Study Guide, Sixth Edition,McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121.
2. Cinnamon L. VanPutte, Jennifer L. Regan & Andrew F. Russo, (2017), Seeley's Anatomy & Physiology, Eleventh Edition, McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121.
3. Sembulingam. K and PremaSembulinga,(2012), Essentials of Medical Physiology, Sixth Edition, Jaypee Brothers Medical Publishers (P) Ltd, 4838/24, Ansari Road, Daryaganj, New Delhi 110 002, India.
4. SurrinderH.singh, Krishna Garg, (2008), "Anatomy & Physiology for Nurses & Allied Health Sciences". CBS.
5. Clancy, John & Andrew J.McVicar (1995), "Physiology & Anatomy – A Homestatic Approach", London: Edward Arnold, A Division of holder head line PLC.

Course Outcomes

CO 1	Describe the structure and functions of Digestive system in the body
CO 2	Evaluate the role of the endocrine system in regulating the activities of other systems.
CO 3	Evaluate the role of the nervous system in regulating the activities of other systems.
CO 4	Describe the structure and functions of reproductive system in the body.
CO 5	Identify the microscopic structure, label the parts of primary organs in the body such as Kidney, Skin, eye and ear.

Mapping with Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER- II

PAPER CODE - 23UC1CT202
HUMAN NUTRITION

Learning Objectives

After studying this paper, the student should be able to:

1. Provide an integrated overview of dietary sources, physiological role, requirements of macro and micro nutrients.
2. Gain basic knowledge of the different nutrients and their role in maintaining health of the community
3. To gain information and knowledge regarding metabolism of major nutrients.

UNIT I – Carbohydrate - An Ideal Source of Energy: Meaning and Definition and classification of COH- Physiological significance of Monosaccharide (Glucose, Fructose, Galactose) - Disaccharides (Maltose, Lactose, Sucrose) - Oligosaccharides - Polysaccharides (Starch, Glycogen, Cellulose) - Requirements and Functions of carbohydrates in the body - Food sources - Digestion, absorption and metabolism - Glycemic Index, Glycemic load of Foods, and factors affecting it, Hormonal control of Blood sugar. **Dietary fibre**: Soluble and Insoluble fibres, sources of fibre, Physiological effects of dietary fibre - prebiotic - probiotic - Role of fibre in human nutrition, sources and requirements.

UNIT II - Fat (Lipids): Meaning and Definition of fat, Classification: Simple Lipid- Compound Lipid and Derived Lipids - Requirements and functions, Essential fatty acids, Omega 3, 6, 9 - deficiency, food sources and functions, Healthy and Unhealthy Fats in the diets, Dietary lipids and its relation to cardiovascular diseases.

UNIT III – Protein the Basis of Body Structure: Meaning and Definition of protein Amino acids - Indispensable and dispensable amino acids. Classification, Sources, Requirements and functions of protein. Mutual supplementation of proteins. Protein deficiency – Protein Energy Malnutrition Kwashiorkor and Marasmus - etiology, clinical features, treatment and prevention Evaluation of protein quality - PER, BV, NPU and NPR, chemical score. Protein Supplements and Novel Protein sources- Benefits and Health Concerns.

UNIT IV - Vitamins Organic Micronutrients: Fat Soluble Vitamins: Functions, Food sources, Requirements, Effects of deficiency or Toxicity (wherever applicable). **Water Soluble Vitamins:** Functions, Food sources, Requirements, Effects of deficiency. Antioxidant role of certain Vitamins in Health promotion.

UNIT V- Minerals- Inorganic Micronutrients: Macro minerals: Calcium, Phosphorous, Magnesium, Potassium, Sodium and Chloride- Distribution in the body, functions, food sources, requirements, effects of deficiency and toxicity. **Micro/Trace minerals:** Iron, Zinc, Iodine,

Selenium, Manganese, Chromium, Fluoride and Copper Distribution in the body; functions, effects of deficiency, food sources and requirements, Role of Antioxidant minerals. **Water:** As a nutrient, functions, sources, requirements. Distribution of water in the body, exchange of water in the body, composition of body fluids. Water balance, factors regulating it, dehydration, water intoxication.

Reference Books:

1. Heather Hedrick fink, Lisa A. Burgoon, Alan E. Mikesy, (2006), Practical Application in sports Nutrition", Jones and Barlett.
2. McArdle William D. et.al., (2005) "Exercise Physiology, Nutrition and Human performance", Philadelphia, lea and Febiger.
3. Mcardle , William D., Katch, Frank I and Katch, Victor L (2005) "Exercise Physiology", Philadelphia, lea and Febiger.
4. Srilakshmi B (2015), 'Nutrition Science' Fourth Edition, New Age International Publishers, New Delhi.
5. Janice Thompson, Melinda Manore, (2005),"Nutrition: An applied approach", Pearson.
6. Robert E. C. Wildman, Barry S. Miller, (2004), "Sports and Fitness Nutrition", Thompson.

E-Learning Resources:

1. http://www.merck.com/mmhe/seciz/ch155/ch155a.html
2. http://www.whereincity/medical/vitamins

COURSE OUTCOMES

CO 1	List/ define key terms related to macro nutrients, micronutrients sources, losses during processing, deficiency and RDA
CO 2	Classify micronutrients and examine/ discuss their functions, metabolism and deficiencies.
CO 3	Define and explain the relationship between nutrients and nutrient metabolism
CO4	Identify and analyze the distribution, functions, metabolism, deficiency of micronutrients
CO5	Explain and analyze the role of water and electrolytes in human health

Mapping with Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER- II

COURSE CODE – 23UC1CE201

CLINICAL EXERCISE TESTING PROCEDURES AND METHODS OF ASSESSMENT

Learning Objectives:

1. Students will know about screening, assessing fitness parameters in clinical adult popular.
2. On completion of this instruction students will be able to accurately screen, assess.
3. Students should be able to utilize laboratory testing that measures VO_2Max, Blood pressure and endurance, Range of Motion and Posture.

UNIT- I Introduction to Exercise Physiology

Definition of Terms Exercise Physiology and Sports Physiology - Focus of Exercise and Sport Physiology - Acute and Chronic Responses to Exercise - Historical Aspects of Exercise Physiology- Evolution of Exercise Physiology Tools and Techniques- Ergometers- Treadmills - Cycle Ergometers - Women in Exercise Physiology- Exercise Physiology Beyond Earth's Boundaries.

UNIT- II Assessing Cardiorespiratory Fitness

Definition of Terms cardiorespiratory Endurance – Maximum oxygen uptake (VO_2max) - General Guidelines for Exercise Testing - Procedures for Administering a Graded Exercise Test - Treadmill Maximal Exercise Tests: Balke Treadmill Protocol - Bruce Treadmill Protocol. Cycle Ergometer Maximal Exercise: Astrand Cycle Ergometer Maximal Test Protocol- Fox Cycle Ergometer Maximal Test Protocol.

UNIT- III Submaximal Exercise Test Protocols

Treadmill Submaximal Exercise Tests: Multistage Model, Single-Stage Model- Astrand-Ryhming Cycle Ergometer Submaximal Exercise Test Protocol- YMCA Cycle Ergometer Submaximal Exercise Test Protocol- Astrand-Ryhming Step Test Protocol - Queens College Step Test Protocol-9 or 12 Min Run/ walk Tests - 1.5-Mile Run/Walk Test- 1.0 -Mile Jogging Test - Rockport 1-Mile Walk Test Procedures.

UNIT- IV Blood Pressure Measurements

Blood pressure (BP) - systolic blood pressure (SBP) - diastolic blood pressure (DBP) - Blood Pressure Responses to Exercise- Accurate Blood Pressure Checks- Effects of Body Position on BP- Resting BP- Effects of Dynamic Exercise on BP- Submaximal Exercise BP- Effects of Isometric Contractions on BP- Upper-Body Isometric Exercise BP- Lower-Body Isometric

Exercise BP

UNIT V Postural Analysis and Body Alignment Assessments

Definition of Terms Posture - Range of Motion - Static and Dynamic Posture- Posture Screening and Assessment Process - Joint Range of Motion Assessments: Neck, Spine, Shoulder, Hip, Knee and Foot.

Reference Books

1. Vivian H. Heyward, Ann L. Gibson, (2014), Advanced fitness assessment and exercise prescription - Seventh edition. Human Kinetics, United States: P.O. Box 5076, Champaign.
2. Madeline P. Bayles, Ann M. Swank. (2018), ACSM's exercise testing and prescription, First edition. | Philadelphia: Wolters Kluwer.
3. Gregory B. Dwyer, Facsm Shala E. Davis, (2008), ACSM's Health-Related Physical Fitness Assessment Manual-Second Edition, United States of America, 530 Walnut Street Philadelphia, Wolters Kluwer, LIppincott Williams & Wilkins Health Philadelphia.
4. W. Larry Kenney, Jack H. Wilmore, David L. Costill, (2012), Physiology of sport and exercise - 5th ed. Human Kinetics, United States: P.O. Box 5076, Champaign.

Course Outcomes

CO 1	To understand the concepts of Exercise Physiology and Sports Physiology
CO 2	To understand the concepts of the Cardiorespiratory Fitness assessment
CO 3	To understand the application of Submaximal Exercise Test Protocols
CO4	To understand the concepts of Blood Pressure Measurements and interpretation
CO5	To understand the role of Postural Analysis and Body Alignment Assessments

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SKILL ENHANCEMENT COURSE SEC-II (NME)

23UC1SE201	HUMAN NUTRITION PRACTICUM-I

1. Estimation of calorific value of food using the Bomb Calorimeter- Demonstration
2. Estimation of moisture content of food using Infrared moisture balance- Demonstration
3. Estimation of Iron in food Estimation of calcium in food
4. Estimation of Glycemic Index
5. Estimation of RDA of Macronutrients
6. Estimation of Vitamin C by Titrimetric method
7. Estimation of glucose in blood (colorimetric estimation and use of glucometer)
8. Estimation of haemoglobin in blood
9. Determination of plasma cholesterol, Triglycerides, HDL and LDL cholesterol (with the use of the semi auto analyser)
10. Estimation of acid value in oil/fat
11. Visit to a food analytical lab

SKILL ENHANCEMENT COURSE SEC-III

23UC1SE202	**CLINICAL EXERCISE TESTING PROCEDURES AND METHODS OF ASSESSMENT PRACTICUM-II**

Estimation of maximum oxygen uptake (VO_2max) by Laboratory and field method

1. Heart Rate: Resting, Exercise, and Recovery
2. Methods for Prescribing Training Intensity
    i. HR Reserve (HRR) Method
    ii. Target heart rate (THR) Method
    iii. Ratings of Perceived Exertion Method
    iv. Talk Test Method
3. Estimation of Queens College Step Test Protocol.
4. 9 or 12 Min Run/ walk Tests
5. 1.5-Mile Run/Walk Test
6. 1.0 -Mile Jogging Test
7. Rockport 1-Mile Walk Test Procedures.
8. Åstrand-Ryhming Cycle Ergometer Test
9. YMCA Cycle Ergometer Test
10. Leg Strength Testing Procedures
11. Back Strength Testing Procedures
12. Posture Screening and Assessment Process
13. Joint Range of Motion Assessments
14. Estimation of Blood pressure
15. Estimation of Upper-Body Isometric Exercise BP
16. Estimation of Lower-Body Isometric Exercise BP

SEMESTER – III

COURSE CODE –23UC1CT301
KINESIOLOGY

Learning Objectives:

1. List and describe five career options available in the field of kinesiology.
2. Describe and critically analyze the role of physical activity and its impact on health, society and quality of life.
3. Discuss the history and broad content within the discipline of kinesiology and develop skills to enable the synthesis of concepts across disciplines.
4. Identify the skeletal and muscular structures of the human body.

UNIT I Kinesiology: Kinesiology: Meaning and Definition of kinesiology– Need and importance of kinesiology - Terminology of types of Joints movements: Flexion, extension, abduction, adduction, rotation, and circumduction. Planes: Sagittal plane, Frontal plane, transverse plane. Axis: Sagittal axis, Lateral axis, vertical axis.

UNIT II Kinematics - Planes of Motion: Sagittal plane, Frontal plane, transverse plane. Axis of Rotation, Degrees of freedom, Anatomical movements of human body, Movements at Specific Joints-Shoulder and Shoulder Girdle - Elbow and Forearm-Wrist and Hand-Trunk and Spine-Hip -Knee-Ankle Movement.

UNIT III Muscles: Structural Classification – Functions – Types of Muscle Fibres – Functional Classification – structural classification - Location, origin, insertion and action of the following muscles: Supraspinatus, Infraspinatus, Teres minor, Subscapularis, Teres major, Serratus anterior, Pectoralis major, Pectoralis minor, Deltoid, Latissimus dorsi, Biceps brachii, Coraco Brachialis, Triceps brachii

UNIT IV Muscles: Structural Classification – Functions – Types of Muscle Fibres – Functional Classification – structural classification - Location, origin, insertion and action of the following muscles: Lower Limb - iliacus, psoas major, Sartorius – vastus lateralis, vastus intermedius, vastus medialis, and rectus femoris. adductor longus, adductor brevis, adductor magnus, and gracillis semitendinosus, semimembranosus, and long and short heads of the biceps Trunk : Muscles of the Abdomen rectus abdominis, pyramidalis, external abdominal oblique, internal abdominal oblique and transversus abdominis.

UNIT V Posture – definition – static and dynamic posture – importance and benefits of good posture - causes of poor posture poor posture, compensatory posture. Vertebral alignment – development of postural curves - Standing posture – lateral view, anterior view, and posterior view. Fundamentals of gait - Meaning of gait, gait cycle divisions, Rancho Los Amigos gait terminology.

Reference book

1. Bruce Abernethy. (2005). The Biophysical Foundation of Human Movement. Human Kinetics
2. Nancy Hamilton. (2002). Kinesiology - Scientific Basis of Human Motion. New York: McGraw - Hill Companies, Inc.
3. NichdasStergiou. (2004). Innovative Analysis of Human Movement. USA: Human Kinetics.
4. Shirl, J, Hoffman. (2005). Introduction to Kinesiology. USA: Human Kinetics.
5. Thomas. (2001). Manual of Structural Kinesiology. New York: Me Graw - Hill cornparues.
6. Uppal A. (2004). Kinesiology in Physical Education and Exercise Science. Delhi: Friends publications.

Course Outcomes

After successful completion of the course the student will be able to

CO1	Analyze the Classification of Joints Based on Movement Potential
CO2.	Understand the Anatomical movements of human body
CO3.	To understand the Types of bones, Bone growth and development
CO4.	To understand the Upper and Lower body muscles Location, origin, insertion and action
CO5.	To understand the posture and common postural abnormalities

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER- III

COURSE CODE – 23UC1CT302

FUNDAMENTALS OF SPORT AND EXERCISE BIOCHEMISTRY

Learning **Objective:**

The learners will be able to

1. Understand the role of enzymes in metabolism and clinical conditions.
2. Interpret the significance of macronutrient metabolism, and thereby understand the implications of disorders resulting from these.
3. Acquire knowledge about different metabolism.

UNIT – I Biochemistry: Definition and Importance. **Organization of matter** - Matter and elements - Atoms and atomic structure - Atomic number and mass number - Atomic mass - Ions, molecules, compounds and macronutrients. **Chemical bonding** - Ionic bonds - Covalent bonds - Molecular formulae and structures - Functional groups. **Chemical reactions** - ATP and energy - Energy – ATP - Units of energy - Types of chemical reactions. **Water** - General functions of water - Water as a solvent. Metabolism – Anabolism & Catabolism.

UNIT – II Carbohydrates: Relevance of carbohydrates for sport and exercise - Types and structure of carbohydrates: Monosaccharaides, Disaccharides and polysaccharides - Metabolism of carbohydrates – Glycogenolysis – Glycolysis - Lactate metabolism - The TCA (or Krebs) cycle - Electron transport chain - Oxidative phosphorylation - Calculation of ATP generated in glucose oxidation - Fructose metabolism - Gluconeogenesis – Glycogenesis.

UNIT – III Proteins: Protein function - Amino acids - Protein structure: Primary structure - Secondary structure - Tertiary structure - Quaternary structure - Proteins as enzymes - Mechanisms of enzyme action - Classification of enzymes - Protein turnover - Amino acid metabolism - Free amino acid pool - Transamination – Deamination - Branched chain amino acids - Glucose-alanine cycle – Glutamine - The urea cycle.

UNIT – IV Lipids: Relevance of lipids for sport and exercise - Structure of lipids - Classification of lipids - Compound lipids - Derived lipids - Metabolism of lipids - Lipolysis - β-oxidation - Ketone body formation - Formation of fatty acids - Triglyceride synthesis – Cholesterol metabolism. **Water** - General functions of water - Water as a solvent. **Acid-base balance** - Acids, bases and salts - pH Scale – Buffers – Acidosis – Alkalosis.

UNIT – V Energy sources for muscular activity: Adenosine triphosphate: the energy currency - Energy continuum - Energy supply for muscle contraction - Energy systems and running speed - Energy sources and muscle. Mechanisms of fatigue - Reduced ATP - Reduced PCr - Increased P*i* - Lactate and H+. Energy production during high-intensity exercise - Energy sources used in HIE - Metabolic regulation during high-intensity exercise - Energy systems utilized in HIIT exercise - Metabolic regulation in HIIT exercise - Energy production in endurance exercise - metabolic regulation in endurance exercise

References

1. Biochemistry for Sport and Exercise Metabolism, First Edition. Don MacLaren and James Morton, 2012 John Wiley & Sons, Ltd. Published 2012 by John Wiley & Sons, Ltd.
2. The Cell: A Molecular Approach (2009) 5th ed., Cooper, G.M. and Hausman, R.E., ASM Press & Sunderland (Washington DC), Sinauer Associates, MA, ISBN: 978-0-87893- 300.
3. Molecular Biology of the Cell (2008) 5th ed., Alberts, B., Johnson, A., Lewis, J., and Enlarge, M., Garland Science (Princeton), ISBN: 0-8153-1619-4 / ISBN: 0-8153-1620-8.
4. Physical Biochemistry (2009) 2nd ed., Sheehan, D., Wiley-Blackwell (West Sussex), ISBN: 9780470856024 / ISBN: 9780470856031

Course Outcome

After successful completion of the course the students will be able to

CO1	Describe the role of enzymes and co enzymes in biological oxidation.
CO2.	Explain metabolism and regulation of carbohydrate, lipids and proteins
CO3.	Analyze the integration of carbohydrate, lipid and protein metabolism
CO4.	Comprehend the significance of recent biochemical concepts namely xenobiotics, recombinant DNA technology and Nutrigenomics.
CO5.	Discuss the structure and functions of nucleic acids

Mapping with Programme Outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER- III

COURSE CODE – 23UC1CE301

TRAINING AND PERFORMANCE

OBJECTIVES:

Provide opportunities to the graduates to learn the methods of training for performance.

LEARNING OUTCOMES:

1. To work with higher efficiency as Exercise Physiologist or Exercise Trainers.
2. To constructively apply the acquired scientific findings and methodological repertoire in practical training under various conditions.
3. To recognize the tendencies of development in their sport and consider them in their training process.

UNIT – I Definition of training, Sports performance, aerobic training, aerobic system , volume, Intensity, Steps to find intensity (MHR, RHR, HRR, Training Intensity Zone) , frequency- FITT Principle – Factors affect sports performance Training principles – over load , specificity , reversibility – influence of Gender, Initial fitness level and Genetics – components of work session – warm up , work out and cool down - Training to improve aerobic power - Interval training – long slow distance – High Intensity Continuous exercise - Training intensity and improvement in VO2 max- Endurance Training and VO2 max.

UNIT – II Definition of Anaerobic exercise, Anaerobic training , anaerobic system – Anaerobic power and capacity– Training to improve anaerobic system - - ATP – Pc System (Phosphogen system) – Anaerobic Glycolysis– Oxidative system - Methods of Anaerobic training – Explosive training, Speed training , Interval training and various methods of Resistance training - Modes of Anaerobic training – sprinting , Plyometrics , Stair Climbing , Resistance training and weight lifting – Effects of training on Anaerobic system - muscular adaptation – muscle adaptation to anaerobic training - adaptation in a Lactate Threshold.

UNIT – III Definition of strength, Hypertrophy, 1 RM (One Repetition maximum) muscular fitness, muscular strength, muscular endurance, resistance training – classification of strength training – Isometric – Isotonic – Isokinetic – factors involved in muscular adaptation – principles of resistance training- physiological effects of strength training – neural and muscular adaptation to resistance training.

UNIT – IV Definition of Optimum Training, Overtraining , Over reaching – types of overreaching (Functional and Nonfunctional overreaching - Symptoms of overtraining – effect of overtraining – Risk of overtraining syndrome – Negative effect of Over training - predicting the overtraining syndrome – Prevention of Over Training Syndrome - treating the overtraining syndrome – tapering for peak performance**.**

UNIT – V Definition of Retraining , Detraining - muscular strength, power, muscular endurance, speed, agility, flexibility and cardio respiratory endurance – Benefits of muscular strength and muscular endurance- Difference between muscular strength and Muscular endurance – Components muscular strength work - speed, Training to improve speed, agility, flexibility and cardio respiratory endurance.

Reference Books:

1. Scott K. Powers Edward T. Howley (2004) “Exercise Physiology- Theory and application to fitness and performance”, Brown and Benchmark.
2. Diek, Frank W. (1978) “Sports training principles “, London: Lepus books.
3. E.L.Fox(1979) “Sports Physiology halt: CBS College publishing.
4. Nieman , David C, ”The Exercise Health Connection” champaign L: Human kinetics.
5. .Jack. H Wilmore and David L. Costill (2004) “Physiology of Sports and Exercise”, Human kinetics.

Course Outcomes

After successful completion of the course the student will be able to

CO1	Define, meaning and Understand the basic concepts of Training and performance and training to improve aerobic power.
CO2.	Define and Understand the essentials of Anaerobic power and system.
CO3.	Define, meaning and Application of strength training and its adaptation.
CO4.	Define, meaning and Analyse the symptoms and syndrome of overtraining.
CO5.	Understand acquire deep insight into retraining.

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SKILL ENHANCEMENT COURSE –V

23UC1SE301	KINESIOLOGY- PRACTICUM-I

1. Recording of Location, origin, insertion Upper Limb Muscles
2. Recording of Location, origin, insertion Lower Limb Muscles
3. Recording of Muscles of Trunk

Practical Demonstration:

1. Demonstration of Flexion/Extension, Movements.
   i. Dorsiflexion.
   ii. Plantar flexion.
   iii. Knee flexion.
   iv. Knee extension.
   v. Hip flexion: Femoralon-pelvic rotation.
   vi. Hip flexion: Pelvicon-femoral rotation.
   vii. Hip extension.
   viii. Spinal flexion.
   ix. Spinal extension.
   x. Elbow flexion.
   xi. Elbow extension.
   xii. Shoulder flexion.
   xiii. Shoulder extension.
   xiv. Cervical flexion.
   xv. Cervical extension.
2. Demonstration of Adduction and abduction movements.
   i. Eversion.
   ii. Inversion.
   iii. Hip abduction.
   iv. Hip adduction.
   v. Lateral flexion.
   vi. Shoulder abduction.
   vii. Shoulder adduction.
   viii. Cervical lateral flexion.
3. Determination of Planes
5. Charts & Instruments - Spotters

A practical observation note book of these experiments must be maintained by the student.

SKILL ENHANCEMENT COURSE SEC- IV (ENTREPRENEURIAL SKILL)

23UC1SE302	TRAINING AND PERFORMANCE PRACTICUM-I

1. Assessment of Muscular Strength
    i. 1-Repetition Maximum (RM) Bench Press Test
    ii. 1-Repetition Maximum (RM) Leg Press Test
    iii. Maximal Handgrip Strength Test
2. Assessment of Muscular Endurance
    i. Pull-Up Tests
    ii. Push-Up Tests
    iii. Partial Curl-up Test
    iv. Prone bridge (or plank).
    v. Half-squat (or wall-sit).
3. Assessment of Muscular Power
    i. Standing Long Jump Test
    ii. Vertical Jump Test
    iii. Single-Leg Triple Hop Test
    iv. Forward Overhead Medicine Ball Throw Test
4. Assessment of Flexibility
    i. Sit and Reach Test (Trunk Flexion).
    ii. Back-Scratch Test
5. Assessment of Agility
    i. T-Test
    ii. Hexagon Test
    iii. 5-10-5 Test (Pro agility or 20-yard shuttle run)
    iv. Y-Shaped Reactive Agility Test
6. Assessment of Speed
    i. Straight-Line Sprint
    ii. Repeated Sprint Ability Test

SEMESTER – IV

COURSE CODE –23UC1CT401

CLINICAL NUTRITION AND DIETETICS

Learning Objectives

The main objectives of this course are to:

1. Obtain knowledge on role of diet in disease conditions.
2. Gain experience in planning, preparing and serving therapeutic diet.

UNIT – I Objectives of Diet Therapy: Objectives of diet therapy - Role of a dietician. Principles of diet preparation and counseling. Normal diet in the hospitals –, liquid, semi liquid, light, soft diet, bland diet and regular diet Different types of Feeding - Basic concepts of oral feeding, tube feeding, IV feeding, gastrostomy feeding.

UNIT – II Therapeutic Diets: Therapeutic diets for the following disorders- Underweight - definition, etiology, treatment Obesity - definition, etiology, treatment. Diseases of the gastro intestinal tract- ulcer, Constipation and diarrhoea. Diverticular Diseases, Crohn's Disease and Ulcerative Colitis.

UNIT – III Disease of Liver, Gall Bladder and Heart: Diseases of the liver and gall bladder (risk factors and diet therapy) jaundice, hepatitis, cirrhosis, fatty liver and Diet Therapy Diseases of the cardiovascular system (risk factors and diet therapy), atherosclerosis, arteriosclerosis, hypertension and congestive heart Failure.

UNIT – IV Diabetes Mellitus: Diabetes mellitus – Types, causes, symptoms, bio-chemical changes, insulin, hypo- glycemic drugs, types only, food exchange list, dietary management Diseases of the kidney and urinary tract - Acute and chronic nephritis, Nephrotic syndrome, Renal failure, Urinary calculi Causes and dietary treatment of kidney diseases and dialysis.

UNIT – V Diet in Allergy, Febrile Conditions, Stress & Cancer and AIDS: Diet in Allergy - Definition, classification, common food allergy, test of allergy, diet therapy. Diet in febrile conditions - Short duration -Typhoid, Long duration- Tuberculosis. Metabolic stress and cancer - Metabolic and clinical aberrations, diagnosis, complications, treatment, MNT and dietary counselling in Metabolic Stress -Surgery, Burns, Sepsis and Trauma Critical care, Cancer- General and Specific cancers, Effect of Cancer therapy on MNT, Diet in AIDS.

Reference Books:

1. Srilakshmi, B (2002) Dietetics, IVth Edition. New Age International (P) Limited, Publishers, New Delhi.
2. Joshi, S.J. (2002) Nutrition and dietetics, Tata McGraw- Hill publishing company limited, New Delhi.
3. Srilakshmi (2017) Nutrition science, New age international (P) limited, New Delhi.
4. Krause, M.V. and Hunesher, M.A. (2013) Food, Nutrition and Diet Therapy, 14th Edition, W.B. Saunders Company, Philadelphia, London.
5. Davidson S Passmore R, Brock JP (1999) Human Nutrition and Dietetics-, 10th Edition, ELBS and Churchill, Livingstone.
6. ICMR (2010) Nutrient Requirements and recommended dietary allowances for Indians.
7. Antia FP (1987) Clinical Dietetics and Nutrition, Oxford University Press, New Delhi.
8. https://www.rdehospital.nhs.uk/docs/trust/foi/foi_responses/2015/december/Enteral_feed ing_guideline~version_Jan_201411.pdf
9. https://www.kidney.org/sites/default/files/11-50-0114_docsnutrikidfail_stage1-4.pdf

Course Outcomes

After successful completion of the course the student will be able to

CO1	Gain knowledge about principles of diets therapy and different therapeutic diets.
CO2.	Develop aptitude for taking up dietetics as a profession
CO3.	Understand the pathology of diseases and apply nutritional principles to discuss dietary management.
CO4.	Gain knowledge on the etiological factor and treatment and dietary modification of obesity, underweight, disease of liver and gall bladder.
CO5.	Learn about the causes, types, biochemical changes, glycemic index o diabetes and disease of kidney.

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**S**	**M**	**S**	**M**
CO 2	**S**	**S**	**L**	**S**	**M**
CO 3	**S**	**S**	**M**	**S**	**S**
CO 4	**S**	**S**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – IV

COURSE CODE – 23UC1CT402
SPORTS BIOMECHANICS

COURSE OUTCOMES:

1. To enable the students to learn the basic concept of biomechanics.
2. Explain the basic mechanical concepts and will be able to interpret its relation to human body movements
3. To make the students to understand kinematic and kinetic concept of human movement.
4. Apply and analyze the factors of mechanical laws involved in human movement.
5. Explain the principles of movement analysis
6. To equip the students to learn the principle of aerodynamic and hydrodynamics.
7. Analyze the mechanical principles of motor skills and sports related skills along with their proper techniques and corrective measures.
8. To enable the students to acquire the skills of qualitative and quantitative of human movement.

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UNIT I Introduction Meaning, Importance and scope of Sports Biomechanics - Static and Dynamics – Kinematics and Kinetics - Vectors and Scalars - Historical development of Sports Biomechanics - branches of biomechanics - Definition and Meaning of terms: Distance, Displacement, Speed, Velocity, Acceleration, Mass, Weight. Momentum, Impulse, Torque, Newton's Law of Universal Gravity. Linear and angular kinematics – Linear and angular kinetics.

UNIT II Levers; types of levers, anatomical and mechanical levers and Mechanical Advantage – Human body levers - application of levers in sports. Equilibrium - types of equilibrium. Gravity – Definition, centre of gravity and location of centre of gravity, influence of gravity, location of human body centre of gravity - Factor affecting Center of Gravity - stability and balance.

UNIT III Motion and Force Meaning and definition of Motion. Types of Motion: Linear motion, angular motion, uniform and non-uniform motion. Principles of Newton law of Motion -Law of Inertia, Law of acceleration and Law of action and reaction. Meaning and definition of force, Sources of force -Force components, Centripetal force - Centrifugal force. Force applied at an angle –Buoyancy – Friction: static friction, kinetic friction. Aerodynamics: Water resistance - Air resistance. Mechanical loads on the human body; compression, tension and shear force.

UNIT IV Projectile and Lever Freely falling bodies - Projectiles -Equation of projectiles - factors affecting projectile trajectory; influence of air resistance - projection angle, projection speed, relative height of release. Meaning of work, power, energy, kinetic energy and potential energy. Meaning of Spin, Types of Spin, Effect of Spin on angle of rebound, Application of Spin in the Sports, Magnus Effect: Meaning and its application in sports.

UNIT V Posture – definition – static and dynamic posture – importance and benefits of good posture - causes of poor posture poor posture, compensatory posture. Vertebral alignment – development of postural curves - Standing posture – lateral view, anterior view, and posterior view. Fundamentals of gait - Meaning of gait, gait cycle divisions, Rancho Los Amigos gait terminology.

Kinematic concepts for analysing human movement - Kinematics; linear and angular kinematics distance, displacement, speed, velocity and acceleration-forms of motion, linear motion, angular motion and general motion.

References:

1. Paul Grimshaw et al. Sports & Exercise Biomechanics, Taylor & Francis Group, (2007).
2. Susan J. Hall, Basic Biomechanics, McGraw Hill Education, 2004.
3. Peter McGinnis Biomechanics of Sport and Exercise, Human Kinetics, 2005.
4. Kathryn Lutgens et al. Kinesiology (Scientific Basis of Human Motion), Brown and Bench mark, 1992.
5. Roger Bartlett. Introduction to Sports Biomechanics Analyzing Human Movement Patterns, Routledge, 2007.
6. Roger Bartlett. Introduction to Sports Biomechanics, Spon Press, 1997
7. Knudson Duane V. Fundamentals of biomechanics, Springer, 2007.
8. Tomothy et al. Applied anatomy and biomechanics in sport (2nd edition), Human Kinetics, 2009
9. Steven T. McCaw. Biomechanics for dummies, John Wiley, 2014.
10. Anthony J. Blazevich. Sports Biomechanics (2nd edition), Bloomsbury, 2012

Course Outcomes

After successful completion of the course the student will be able to

CO1	To enable the students to learn the basic concept of biomechanics
CO2.	To make the students to understand kinematic and kinetic concept of human movement.
CO3.	Apply and analyze the factors of mechanical laws involved in human movement.
CO4.	Analyze the mechanical principles of motor skills and sports related skills along with their proper techniques and corrective measures.
CO5.	To enable the students to acquire the skills of qualitative and quantitative o human movement.

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – IV

COURSE CODE – 23UC1CT401

WEIGHT MANAGEMENT

Learning Objectives:

1. A systematic understanding of the care of patients in obesity and weight management.
2. A critical awareness of current issues affecting the care of patients undertaking weight and obesity management treatments.
3. An advanced knowledge of obesity and weight management that will facilitate decision-making in unpredictable and/or complex situations.

Unit - I Health Consequences of Physical inactivity and Sedentary Behavior

Definition of Physical Inactivity- Deconditioning- Prevalence of inactivity - Exercise is Medicine- Sedentary behaviors - Health Effects of Sedentary Behavior. Weight Management: Meaning, Concept of Weight Management in the Modern Era – Factors affecting Weight Management and Values of Weight Management - Maintaining a Healthy Life Style - Barriers to Lifestyle Changes - Body Mass Index (BMI)

UNIT – II Weight-Management Strategies for Overweight and Obese Individuals: Meaning and Definition of Overweight and Obese – Types – Causes and Solution for overcoming Obesity. Myths of Spot Reduction and Weight Loss – Principles of Lifestyle Modification – Behavioral Modification - Dietary Recommendations for Weight Loss- Exercise and Weight Loss.

UNIT - III Assessing Calorie Intake and Energy Expenditure: Energy Intake- Energy Expenditure-Impact of Diet on Food Intake- Impact of Exercise and Exercise Training on Food Intake - Resting or Basal Metabolism - Metabolism and Weight loss: Factors that Influence Metabolism - Basal Metabolic Rate and Methods for Measuring BMR - How Metabolism Affects Weight - How to Increase the Metabolism - Relationship between Metabolism and Caloric Intake

UNIT - IV Planning of Weight Management: Determination of Desirable Body Weight – Daily Caloric Intake and Expenditure – Balanced Diet for Indian School Children – Weight Management Programme for Sporty Children – Role of Diet and Exercise in Weight Management – Diet Plan and Exercise Schedule for Weight Gain and Loss. Weight Management for Special Populations - Pregnant and Postpartum Women - Weight Management for seniors - Weight Management for Persons with Disabilities

UNIT – V Human Body composition: Meaning and Definition of Body composition - Essential and Storage Fat - Assessment of Underwater weighing - Assessment of Dual-energy X-ray absorptiometry (DEXA) - Assessment of Bioelectrical Impedance Analysis- Assessment of Near infrared reactance (NIR) - Air Displacement Plethysmography- Measurement of Skinfolds Thickness. Assessment of Free Mass and Lean body mass - Ideal Body Weight - Assessment of Waist-to-hip ratio.

Reference Book

1. John P. Porcari, Cedric X. Bryant, Fabio Comana,(2015), Exercise physiology, F. A. Davis Company, 1915 Arch Street, Philadelphia.
2. Wadden TA, Stunkard AJ (Eds.). Handbook of obesity treatment. New York: The Guilford Press, 2004.
3. Fairburn CG, Brownell KD (Eds.). Eating disorders and obesity: A comprehensive handbook (2nd ed). New York: The Guilford Press, 2002.
4. Hill JO. Understanding and addressing the epidemic of obesity: An energy balance perspective. Endocrine Reviews 2006; 27(7):750-761.
5. Wardlaw, Smith. Contemporary Nutrition: A Functional Approach. 2nd ed: 2012. McGraw Hill. Williams, Melvin. Nutrition for health, fitness and sports. 2004. McGraw Hill
6. Joshi, A.S. Nutrition and Dietetics. 2010. Tata McGraw Hill.

Course Outcomes

After successful completion of the course the student will be able to

CO1	To understand the Health Consequences of Physical inactivity and Sedentary Behavior
CO2.	Apply the Weight-Management Strategies for Overweight and Obese individual
CO3.	Analyze the appropriate dietary guidelines for Assessing Calorie Intake and Energy Expenditure
CO4.	Develop indigenous, value added Planning for Weight Management
CO5.	Demonstrate the skills to assess the body composition by various methods

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SKILL ENHANCEMENT COURSE - VI

23UC1SE401	CLINICAL NUTRITION AND DIETETICS PRACTICUM-I

1. Collection of blood and separation of plasma and serum
2. Estimation of blood glucose
3. Estimation of total protein
4. Estimation of serum urea
5. Estimation of serum creatinine
6. Estimation of cholesterol
7. Estimation of Hemoglobin
8. Estimation of Urine Albumin
9. Estimation of Urine sugar
10. Planning, Calculation of nutrient content, Preparation and Service of diets for:
    i. Obesity
    ii. Diabetes Mellitus
    iii. Arteriosclerosis,
    iv. Hypertension and
    v. Congestive heart Failure
    vi. AIDS

SKILL ENHANCEMENT COURSE - VII

23UC1SE402	WEIGHT MANAGEMENT PRACTICUM-II

1. Assessment of Basal Metabolic Rate
2. Assessment of Resting Metabolic Rate
3. Assessment of Body mass (Weight)
4. Assessment of Stature (Height)
5. Assessment of Body mass index (BMI)
6. Assessment of Free Mass
7. Assessment of Fat free Mass
8. Assessment of Lean body mass
9. Calculation of Ideal Body Weight
10. Assessment of Waist-to-hip ratio
11. Measurement of Skinfolds Thickness of various sites
    i. Triceps
    ii. Biceps
    iii. Subscapular
    iv. Iliac crest
    v. Supraspinale
    vi. Abdominal
    vii. Front thigh
    viii. Medial calf
    ix. Cheek
    x. Chin
    xi. Mid-axillary
    xii. Chest
12. Assessment of Percentage Body Fat
13. Assessment of body composition through bioelectrical impedance

SEMESTER – V

COURSE CODE – 23UC1CT501

SPORTS NUTRITION

Learning Objectives:

1. It explores nutrition in the enhancement of health and fitness.
2. Demonstrate knowledge of a healthy diet for physical performance.
3. Provide individual advice and guidance in the area of sports nutrition.
4. Design and run a group consultation for athletes about sports nutrition.
5. Develop knowledge on sports nutrition.

UNIT I Science of sports nutrition : Definition of sports nutrition- Need and Importance of sports nutrition- Balanced Diet-Planning Balanced Diets-Recommended Dietary Allowances (RDAs) - Dietary Reference Intakes (DRIs) – Estimated Average Requirement (EAR), Adequate Intake (AI)-Dietary Guidelines- Reference Man and Reference women-Dietary Guidelines - Food guide pyramid - MyPlate- Food Labels.

UNIT II Energy Yielding Nutrition: Carbohydrates utilized during exercise-Carbohydrates consumed before exercise-Carbohydrates consumed during exercise-Carbohydrates consumed after exercise- Fats consumed before exercise-Fats consumed during exercise-Fats consumed after exercise-Protein consumed before exercise-Protein consumed during exercise-Protein consumed after exercise- Carbohydrates loading.

UNIT III Energy Metabolism : Definition of Energy and Metabolism – Anabolic process and Catabolic process- Basal Metabolic Rate (BMR) -Resting Metabolic Rate (RMR)-Factors affecting Basal Metabolic Rate (BMR) -Energy Cost of Physical Activities-Thermic Effect of Food- Estimation of Total Energy Needs-Calculating Total Energy Requirements-Energy balance- Human body's source of chemical energy: ATP-CP System- Lactic Acid system- Aerobic system.

UNIT IV Energy Needs for Athletes: Energy needs different for team sport athletes-Daily energy needs calculation for team sport athletes-Carbohydrate needs for team sport athletes-Protein needs for team sport athletes- Fat needs for team sport athletes-Vitamin and Mineral needs for team sport athletes-Fluid recommendations for team sport athletes-Foods recommended for athletes while traveling.

UNIT V Choosing A Performance Diet Weight Management- Regulation of body weight and composition: Genetic influences-Hormonal influences-Positive energy balance-Negative energy balance-Weight loss methods for athletes-Athletes Gain Weight

Healthfully- Vegetarian Diets-Vegetarian Diets and Health-Vegetarian Diets and Athletic Performance-Other Special Eating Plans: Paleo Diet-Raw Food Diet-Detox Diet-Other Diets – LCHF (Low Carbohydrate and High Fat diet).

Reference Books:

1. Natalie Digate Muth,(2015), Sports Nutrition for Health Professionals, F. A. Davis Company, 1915 Arch Street, Philadelphia,USA.
2. Heather Hedrick fink, Lisa A. Burgoon, Alan E. Mikesy, (2006), Practical Application in sports Nutrition", Jones and Barlett.
3. Robert E.C.Wildman, Barry S. Miller, (2004), "Sports and Fitness Nutrition", Thomson.
4. Deakin , Burke(2006), 3rd, Clinical Sports Nutrition, McGraw- Hill Austria.
5. Bean, Anitha (2006), 5thed, Sports Nutrition.
6. Bourns, Fred (ed), Essentials of Sports Nutrition, 2nd Ed (2002), John and Wiley.
7. Benardot, Don (2000), Advanced Sports Nutrition, Human Kinetics.
8. Burke, Louise (2007), Practical Sports Nutrition, Human Kinetics.
9. Gleeson, Jeukendrup (2004), Sports Nutrition: an introduction to energy production and performance, Human Kinetics.

Course Outcomes

After successful completion of the course the student will be able to

CO1	To understand the Need and Importance of sports nutrition
CO2.	Identify the energy yielding nutrition and their requirement before, during and after training.
CO3.	Analyzing and calculating energy requirement
CO4.	Apply the nutritional knowledge for preparing diet planning for various sports
CO5.	Demonstrate skills to plan and prepare appropriate and sustainable diets for body composition and weight management.

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – V

COURSE CODE – 23UC1CT502

STRENGTH TRAINING AND CONDITIONING FOR FITNESS

Learning Objectives:

1. This is designed to give opportunity to participate in many different activities to learn the immediate and long term benefits of physical activity
2. To develop personal strength training programme.
3. To Interpret and apply scientific knowledge and literature relating to strength training.
4. Understand the importance of organizations admin distraction and leadership and their importance in the development of a safe and effective training programs.

UNIT – I- Meaning and Definition of Strength training and conditioning-Benefits of resistance training-Principles of Resistance Training: Progressive overload- Specificity-Variation-Individualization and Detraining-Resistance Training Program Design: Exercise Selection-Exercise order and Workout Structure-Intensity-Training Volume-Rest Intervals-Repetition Velocity-Frequency.

UNIT – II- Competitive forms of Resistance Training- Resistance Training Modalities: Body Weight-Manual or Partner Resistance-Free Weights: Advantages-Disadvantages - Machines: Advantages-Disadvantages - Free Weights versus Machines-Medicine Balls, Stability Balls, Bosu Balls, and Other Balance Devices-Elastic Bands, Tubing, Chains, and springs.

UNIT – III- The SAID Principle: Mechanical specificity-Neuromuscular specificity-Metabolic specificity-Progressive Adaptations from Resistance Training: Stabilization-Muscular endurance-Muscular hypertrophy-Strength-Power-Resistance Training Systems: The Single-Set System-The Multiple-Set System-The Pyramid System-The Superset System-Drop-Sets-The Circuit-Training System-The Peripheral Heart Action System-The Split-Routine System-Vertical Loading and Horizontal Loading.

UNIT - IV Cardiorespiratory Fitness: Benefits of Cardiorespiratory Fitness-Cardiorespiratory Fitness Training: Warm-Up Phase-Conditioning phase-Cool-down phase-General Guidelines for Cardiorespiratory Training: Frequency-Intensity-Time-Type-Methods for Prescribing Exercise Intensity.

UNIT – V Warm-up and cool-down- Physiology of Warming Up- Flexibility- Flexibility and Injury Prevention- Factors Affecting Flexibility- Types of Stretching: Static Stretching- Dynamic Stretching- Proprioceptive Neuromuscular Facilitation Stretching - Flexibility Training Guidelines - The Cool down

Reference Book

1. Micheal A. Clark, Scott C. Lucett, and Brian G. Sutton,(2012), NASM Essentials of Personal Fitness Training, Fourth Edition, Lippincott Williams & Wilkins, a Wolters Kluwer business, Two Commerce Square, 2001Market Street, Philadelphia, PA 19103 USA.
2. Nicholas Ratamess, (2012), ACSM's Foundations of Strength Training and Conditioning, Lippincott Williams & Wilkins.
3. Thomas R. Baechle, and Roger W. Earl, (2008), Essentials of Strength Training and Conditioning, Human Kinetics, P.O. Box 5076, Champaign, USA.

Course Outcomes

After successful completion of the course the student will be able to

CO1	To understand the benefits of strength training
CO2.	identify the different modalities of weight training to prepare for competition
CO3.	Analyze the neuromuscular adaptation to strength training
CO4.	To understand the effect of strength training on Cardiorespiratory Fitness
CO5.	To understand the Physiology of Warming Up and cool down

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER- V

COURSE CODE – 23UC1CT503
RESEARCH METHODOLOGY AND STATISTICS

LEARNING OBJECTIVES

After completing this subject we will be able to understand about

- Learning research methodology will be able to understand and comprehend the basics in research and applying them in Exercise Physiology and Nutrition
- Need of Statistics for analyzing the data
- How to analysis the problem using statistics tools and to interpretation the result.

Unit I-Introduction

Definition of research – Meaning, Need, Important of research in Exercise Physiology and Nutrition, Qualities of good research, classification of research – Basic Research, Action Research, Applied Research, Philosophical Research, and Historical Research**.**

Unit II-Methods of Research

Experimental Research – Comparative and Analytical Research – Descriptive Research Methods–Need,Importance and Tools of Survey, Case Study, Interview Technique.

Sampling - Need For Sampling; Advantages – Disadvantages; Sampling Method, Probaility and Non-Probability Sampling Method,Random Sampling Design- Simple Random Sampling; Stratified Sampling-Proportionate Sampling-Cluster Sampling-MultistageSampling, Systematic Sampling, Sequential Sampling.

Unit III – Basic Definitions

Meaning and definition of Statistics , Raw Score , Attribute, Variable – Type of Variable , Data – Type of Data , Population , sample, Parameter , Statistic , Frequency distribution , Construction of frequency distribution.

Unit IV – Measures of Central tendency and Variability

Meaning, Types of Central tendency – Mean, Median, Mode – Calculation, Merits and Demerits of Central tendency. Meaning, Types of Variability – Range, Mean deviation, Quartile deviation and Standard deviation – Calculation .Merits and demerits of Variability.

Unit V– Graphs and Testing of Hypothesis

Graphical representation in Statistics Line diagram, Bar diagram, Histogram, Frequency curve, Frequency Polygon, Pie diagram. Advantages of graphs. Meaning of Correlation ,

Pearson product moment correlation , Rank order correlation , Chi – square test , Independent of attribute , Equal Occurance test , Test of significance – Hypothesis , Types of Error , Acceptance region , Rejection region , Level of Significance , 't' test – Independent and Dependent 't' test.

TEXT BOOK

1. Conover, W.J. Practical Nonparametric statistics, 2nd edition. New York; John wiley& sons, 1980.
2. Gibbons,J.D., and Chakraborti. S., Nonparametric Statistical Inference, 3d ed., New York, Marcel Dekker. 1992.
3. Kraft, Charles H. and Van Eeden. Constance A Nonparametric Introduction to Statistics. New York: Macmillian, 1968.
4. Author's Guide: "Research Methods Applied to Health Physical Education and Recreation", Washington, D.C., 1991.
5. Best J.W., "Research in Education", Prentice Hall, New Delhi 1982.
6. Clarke H. David, "Research Processes in Physical Education, Recreation and Health", Prentice Hall Inc, Englewood Cliffs, New Jersey, 1985.
7. Kamlesh M.L., "Methodology of Research in Physical Education and Recreation", AHPER, Washington D.C., 1973

REFERENCE BOOK

1. Owen, D.B. Handbook of Statiscal Tables. Reading, Mass; Addison- Wesley, 1962.
2. Siegel, Sidney. Nonparametric statistics for the behavioral Sciences. New York : McGraw-Hill, 1956.
3. VarmaJ.Prakash ; Sports Statistics Copyright 2000 by Venus Publication.

SEMESTER – V

COURSE CODE – 23UC1CT504

ERGOGENIC AIDS

Learning Objectives:

1. Provide students to the basics of sports nutrition and the efficacy of nutritional ergogenics.
2. Gain in depth knowledge on one nutritional ergogenic aids.
3. To evaluate an athlete's diet and make valuable nutritional recommendations that will impact his/ her sports performance.

UNIT – I Introduction to Ergogenic aids

Definition of Ergogenic aids – Types of Ergogenic aids - Dietary supplements – Weight-Loss Supplements - Health Supplements - Herbal Supplements - Antioxidants – self management education – Phytochemical rich foods – Anthocyanidins – ascorbic acid – Beta carotene – ellagic acid – Flavonols – Flavanones – Flavones – Isoflavons – Lutein – Lycopene – Organosulfur compounds .

UNIT –II Common Performance enhancing Substances

Potential Benefits, Risks, and Side Effects of Amino Acids, Beta-alanine, Beta-Hydroxy Beta-Methyl butyrate (HMB) – Creatine – Multivitamins - Omega-3 Fatty Acids – Protein - Ribose – L-Carnitine – Chromium - Sodium bicarbonate - Amino Acids- Whey and Casein-Glutamine - Coenzyme Q_{10} - Ginseng and Ephedrine – Diuretics- caffeine

UNIT – III Regulation of anti-doping in sport: WADA-IOC- Doping agency – History of the anti-doping movement – Definition of Doping - Purpose, Scope of the World Anti-Doping Program and the Code - Blood Doping in sports - Effects of Blood Doping - Erythropoietin - Effect of Exogenous administration of erythropoietin - Oxygen Supplementation.

UNIT - IV Illegal Performance enhancing Substances: Potential Benefits, Risks, and Side Effects of Anabolic steroids – Dehydroepiandrosterone (DHEA) – Androstenedione - Human growth hormone (HGH). Amphetamines – β-Blockers- Stimulants- Signs and Symptoms of Ergogenic Aid Abuse. 19 – nonandrostenedione and 19 norandrostenediol – – Corticotrophins- Beta-2 agonists.

UNIT- V Gene doping: History of gene doping in sport- Action and use of gene doping in sport- Narcotics - action and use of narcotics in sport – Cannabinoids: Cannabinoids in sport- Glucocorticoids: Clinical uses, side effects and mode of action- Physiological and pharmacological effects- Alcohol- Alcohol use in sport.

Reference Book

1. Bell, D., Jacobs, I., and Zameenik J. (1998), effects of caffeine, ephedrine and their combination on time to exhaustion during high intensity exercise. Europeon Journal of Applied Physiology, 427-433.
2. Website http / www. Webmd.com/ fitness-exercise/human-growth-hormone hgh.
3. Jerry E. Graham and Lawrence L. Sprite (1996), Caffeine and Exercise performance. Gastorade Sports science Institute,9(i) Retrieved from http./www.gssiweb.org/Articles /Sse-60-caffeine and exercise performance.
4. Pharmochological ergogenic aids (n.d.) Retrieved Nov.30, 2015 from http/www.getfit.net/body/ physiology/ ergogenic/ pharmachological.htm.
5. Whitney.E. and Rolfes, S. 2013. Supplements as Ergogenic aids, understanding nutrition (14thed), Belmont, CA; Thomson/ Wadsworth.

Course Outcomes

After successful completion of the course the student will be able to

CO1	To understand the various types of Ergogenic aids
CO2.	Identify nutrition-related Common Performance-enhancing Substances
CO3.	To understand the Regulation of anti-doping in sport
CO4.	To understand the concepts of Illegal Performance-enhancing Substances
CO5.	To understand the concepts of gene doping in sport

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – V

COURSE CODE – 23UC1CE501
NUTRITION THROUGH LIFECYCLE

Learning Objectives

The learners will be able to

1. Understand the role of nutrition in the growth and development through the lifecycle
2. Gain insight into the principles of effective meal planning.
3. Understand the nutritional needs of various age groups.
4. Acquire skills to plan diets for various age groups across the lifecycle.

Unit-I- Introduction to meal planning - Balanced diet, food groups, Food Guide Pyramid (ICMR), Food plate, RDA, factors affecting RDA. Principles of meal planning – steps involved in planning a diet. **Nutrition for Adult -** Food and nutrient requirements for adult man and women, RDA, nutritional guidelines, changes in consumption pattern- physical, mental and social changes influencing meal pattern.

Unit-II Nutrition during pregnancy- Physiological changes in pregnancy, RDA, nutritional guidelines, nutritional needs, effect of nutritional status on pregnancy outcome, optimal weight gain and its components, nutrition related problems in pregnancy and ways to control them, complications in pregnancy. **Nutrition during lactation-** Physiology of lactation, RDA and nutritional needs of a nursing mother, nutritional guidelines, composition of breast milk and advantages, disadvantages of bottle feeding

Unit-III Nutrition during infancy- Growth and development, growth standards, food and nutrient requirements, breast feeding, comparison of human milk with cow's milk, weaning and supplementary foods, weaning problems and complications. Characteristics of low birth weight infant, small for date babies, pre-term babies- Feeding of preterm infants.

Unit-IV Nutrition for Pre-schoolers and School Age Children: Nutrition in preschool age – Growth and development, nutritional requirements, factors affecting nutritional status, nutrition and cognitive development, food requirement, low cost supplementary foods, nutrition related problems among the preschool children, meal planning for the preschool child. **Nutrition in the school age children** – Growth pattern in school children, nutritional and food requirement, packed lunch – factors to be considered, nutritional problems, meal plan for the school children.

Unit-V Nutrition in Adolescence and Elderly: Nutrition in adolescence - growth and development, body composition, puberty, secondary sexual characteristics, psychological changes, nutritional requirements, nutritional problems, malnutrition due to early marriage, food habits and meal plan. Eating disorders-Binge eating, anorexia nervosa, bulimia nervosa. **Nutrition in elderly:** definition of geriatrics, changes in body composition, physiological changes, theories of aging, psychological and socio- economic factors in relation to food intake, menopausal and post-menopausal women- hormonal changes, nutritional requirement, food modification in old age. Nutrition related problems.

Reference Book:

1. Srilakshmi B. (2011) Dietetics, sixth edition, New age Publishing Press, New Delhi.
2. Gopalan,C., Ramanathan, P.V. Balasubramanian, S.C. (2001) Nutritive value of Indian foods, NIN, Hyderabad.
3. Longvah T, Ananthan R, Bhaskar K, Venkaiah K. (2017) Indian Food Composition Tables, National Institute of Nutrition.
4. Abraham S, Nutrition through Lifecycle. (2016) 1st edition, New age international publishers, New Delhi.
5. Stacy N, William's Basic Nutrition and Diet Therapy. (2005) 12th edition, Elseivier publications, United Kingdom.
6. Whitney EN and Rolfes SR, Understanding Nutrition. (2002) 9th edition West/Wordsworth, London.
7. Groff JL, Gropper SS, Advanced Nutrition and Human Metabolism.(2000) 3rd edition, West / Wadsworth, United Kingdom.
8. Cataldo, DeBruyne and Whitney, Nutrition and Diet therapy– Principles and Practice.(1999) 5th edition, West/ Wadsworth, London.
9. Swaminathan, M., (2012), Advanced Textbook on Food and Nutrition, Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd., Bangalore.
10. Shubhangini, A., Joshi (2002): Nutrition and Dietetics, 2nd edition, Tata McGraw-Hill Publishing Company Limited, New Delhi.
11. Krishnasamy, K. and Sesikeran, B., (2013), Dietary Guidelines for Indians, National Institute of Nutrition, ICMR, Hyderabad.

E-Learning Resources

1. http://vikaspedia.in/health/nutrition/dietary-guidelines-1/dietary-guideline-1
2. https://www.nhp.gov.in/healthlyliving/healthy-diet
3. https://motherchildnutrition.org/india/complementary-feeding-guidelines.html
4. http://vikaspedia.in/health/nutrition/dietary-guidelines-1/diet-for-children-and-adolescents
5. https://motherchildnutrition.org/india/complementary-feeding-guidelines.html
6. https://sol.du.ac.in/mod/book/view.php?id=1422&chapterid=1288

Course Outcomes

After successful completion of the course the student will be able to

CO1	Explain the physiological basis for nutritional needs through the human lifecycle
CO2.	Identify nutrition related concerns and deficiency disorders at every stage of lifecycle
CO3.	Discuss appropriate dietary guidelines for various age groups
CO4.	Develop indigenous, value added and low cost complementary feeds
CO5.	Demonstrate skills to plan and prepare appropriate and sustainable diets for deficiency diseases

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – V

COURSE CODE – 23UC1CE502
SPORTS AND EXERCISE PSYCHOLOGY

Learning Objective:

This paper aims at imparting and understanding about sports psychology and its relation to different sports

1. Historical development and scope
2. Understanding personality, motivation, emotion and its relationship with performance

UNIT 1: Basics of Sport & Exercise Psychology

Introduction (Meaning, Definition, Historical Development need and scope of Exercise and sports psychology, History of Sports Psychology in India) - Relationship of Sports Psychology with other Sports Sciences. Methods of Psychology (Introspection method, Observation method, Experimental method, Case study method. Questionnaire method, Interview method, Survey method)- Importance of Sport Psychology for Athletes, Coaches and other related to Sport Setting

UNIT II: Personality and Performance

Personality and Performance (Meaning, Definition and Structure of Personality)-Personality theories [Psychoanalysis, Humanistic, Trait Theories and models] - Constitutional theories (Sheldon, Trait) and Social Learning (Bandura) - Personality and Performance in Sports (Ice Berg Profile by Morgan)

UNIT III: Motivation and Performance

Motivation & Goal Setting (Meaning, Definition and Structure of Motivation [Need, Drive, Motive and Motivation Types] - Theories of motivation [Abraham Maslow, Need Achievement by McClelland] Self-Determination model - Techniques for Developing Motivation, Goal Setting –Locke GST. Motivation-Performance Relationship.

UNIT IV: Emotion and Performance

Meaning and Definition of Emotion - Meaning, Definition of Anxiety, Types of Anxiety-Meaning, Definition and Nature of Arousal and Stress, Theories [Drive theory, Inverted – U theory & IZOF]-Emotion Performance Relationship.

UNIT V: Motor Learning and Motor **control:**

Meaning and Definition of Motor Learning and Motor control – Neuroanatomy: cerebellum, basal ganglia, supplementary motor cortex, premotor cortex, and motor cortex. Peripheral Motor System- General Motor Control Theories: Closed-loop Theory- Open-loop Theory.

Reference Book

1. Ciccarelli, S. K & Meyer, G.E (2008*). Psychology (South Asian Edition).* New Delhi: Pearson
2. Glassman,W.E.(2000).*Approaches to Psychology(3rd Ed.)* Buckingham: Open University Press.
3. Passer, M.W., Smith, R.E., Holt, N. and Bremner, A. (2008). *Psychology: The Science of Mind and Behaviour.*McGraw-Hill Education.UK
4. Weinberg, R. S., & Gould, D. (1995). *Foundations of sport and exercise psychology* (Vol. 4). Champaign, IL: Human Kinetics.

Course Outcomes

After successful completion of the course the student will be able to

CO1	To understand the concepts of Basics of Sport & Exercise Psychology
CO2.	Analyze the Personality traits of sports Performance enhancement
CO3.	Analyze the Motivation for sports Performance enhancement
CO4.	Gain knowledge on Emotion and sports Performance enhancement
CO5.	To understand the concepts of Motor Learning and Motor control

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – V

COURSE CODE – 23UC1VE501

VALUE EDUCATION

Course Objectives

1. To incorporate human values in educational system.
2. To imbibe deeper understanding of the need and importance of value-based living.
3. To develop an honourable character.
4. To make the students understand how values lead to success.
5. To make the student realize that all the problems can be solved by one's innate goodness

Unit I: Truth Doesn't Change with Time

1. Universal and Ethical Values
2. Integrity
3. Honesty

Unit II: Living with Values Leads to Success

1. Ethics – Conscience and Loyalty
2. Characteristic Features of an Honourable Person
3. If by Rudyard Kipling

Unit III: Development of Character

1. Character – a Learnt Behaviour
2. Reputation and Character
3. Honourable Character Building

Unit IV: Effect of Thought on Character

1. Man is the Master of Thought
2. Thoughts Crystallize into Habits
3. Good Thoughts and Actions Produce Good Results

Unit V: How to conquer your Problem

1. God is with you to Solve Your Problems
2. You are Greater Than Your Problem
3. Every Human Being has the Built-in Potential to Solve All his Problems

Course Outcomes

1. The students understand the importance of value-based living.
2. Students become aware of the Universal Value System.
3. Students learn how success is directly value based
4. Students develop an honorable character.
5. Students learn to face all the problems courageously

Text Books:

1. Khera, Shiv, Living with Honour, Macmillan Publishers India limited, Chennai, 2003. (Chapters1: Principles of Honour, Chapter 2: Foundation for Success, Chapter 4: Character and Reputation)
2. Peale, Norman Vincent, The Positive way to Change Your Life, Cedar Books (Chapters 3: The Concept That Conquers problems)
3. Alen, James, As a Man Thinketh , Finger print Publishing , 2017 (Chapter 1: Thought and Character, Chapter 2: Effect of Thought on Circumstances).

Supplementary Readings

1. Nagarajan. A Text Book on Professional Ethics and Human Values. New Age International limited Publishers, 2006.
2. Kalam, Abdul. My journey –Transforming Dreams into Actions. Rupa Publications, 2013

SEMESTER – VI

COURSE CODE – 23UC1CT601

APPLIED EXERCISE PHYSIOLOGY

Learning Objectives:

1. To develop the knowledge, understanding on the functioning of different systems of the body and to have in depth knowledge on the effect of different training modalities on these systems

UNIT –I Cardiovascular System – Structure and functions of heart- Heart rate stroke volume – cardiac output- blood pressure – system of circulation - cardiac muscle – Arterial - Venous Oxygen Difference (a-v O_2 diff) –- blood flow—Availability of nutrients – Acute Response to Cardiovascular Exercise- chronic adaptations to Cardiovascular Exercise.

UNIT –II Respiratory system – structure and functions of Respiratory system – Mechanics of Breathing – Pulmonary Ventilation- Lung Volumes and Capacities- Diffusion of Gases– Respiratory muscles – homeostasis – PH – oxygen Debt – Oxygen Deficit - acute and chronic effect of training on Respiratory system.

UNIT –III- Muscular system – types of muscle – Microscopic Structure of Skeletal Muscle - types of muscle fibre – Sliding-Filament Theory of Muscle Contraction Definition of – Hyperplasia -Hypertrophy - muscle tone - MET – Posture – Body coordination –muscle spindle – Golgi tendon - Skeletal Muscle Characteristics and Adaptations.

UNIT –IV- Nervous System – Structure and functions of Neuron – sympathetic and parasympathetic nervous system – Action Potentials –All-or-None -Law- Depolarization - Repolarization – Refractory Period – Reflexes- spinal card – brain - Motor Control Functions of the Brain- motor unit – Neural Adaptations to Training.

UNIT –V- Neuroendocrinology- Hormones: Regulation and Action of Hypothalamus and the Pituitary Gland - Thyroid Gland, Parathyroid Gland, Adrenal Gland, Pancreas and Testes and Ovaries – Exercise and hormones.

Reference Books:

1. William D. Mcardle, Frank I. Katch, Victor L. Katch, (2005), “Essentials of exercise physiology “, Lippincott Williams and Wilkins.
2. Victor L. Katch, Frank. I. Katch, William D. Mcardle, (2003), “Essentials of exercise physiology “, Williams and Wilkins.
3. Lorry G. Shaver, (1981) “Essentials of exercise physiology” Delhi: Surjeeth Publications.
4. William E.Garrett J.R., Donald T. Kirendall, (2000), Exercise and sports science”, Lippincott Williams and Wilkins.
5. McArdle William D. (1998), “Essentials of exercise physiology” Malveern, Pennsylvania: Lea and Febiger.
6. Roger M. Enoka, (2002), “Neuromechanics of human movement”, Human Kinetics.
7. Fox, Edward L. and Mathews Donald K. (1981), The Physiological basis for Exercise and Sports”, Kerper Boulevard, Dubuue: Wm. C. Brown Communications, Inc.
8. Amrit Kumar R. Moses, (1995), “Introduction to Exercise Physiology”, poompugarpathipagam.

Course Outcomes

After successful completion of the course the student will be able to

CO1	To understand the acute response to Cardiovascular Exercise and chronic adaptations to Cardiovascular Exercise
CO2.	Identify the acute and chronic effects of training on the Respiratory
CO3.	Gain knowledge on Skeletal Muscle Characteristics and Adaptations due to various training.
CO4.	Gain knowledge on Neural Adaptations due to various training.
CO5.	To understand the training effects on hormone

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER- VI

COURSE CODE – 23UC1CT602
CLINICAL EXERCISE PHYSIOLOGY

Learning Objectives:

1. To understand the relationship between exercise and Overweight versus Obesity
2. To understand knowledge of various factors that must be considered in planning and implementing detailed exercise programme on diseased populations.
3. Students will be able to define terminology related to exercise for special populations.
4. Will be able to explain general principles of exercise prescription for special populations.
5. Able to identify the important differences between children and adult.

UNIT - I- Overweight versus Obesity- Estimation of Body Fatness Using Body Mass Index-Use of Body Mass Index in the Clinical Setting - **Fat Cell Size and Number:** Hypertrophy versus Hyperplasia - Specific Health Risks of Excessive Body Fat- Importance of Body-Fat Distribution Pattern- Influence of Genetics Versus Environmental Factors.

UNIT-II- Meaning and Definition of Exercise and ageing- Theories of ageing: Biological theories-Psychological theories-Sociological theories- Impact of Ageing on Major Physiological Systems and Performance: Cardiovascular and respiratory systems-Musculoskeletal system-Nervous system-Endocrine system -Exercise guidelines for older people.

UNIT-III- Meaning and Definition of Arthritis- Types of Arthritis: osteoarthritis and rheumatoid arthritis- Epidemiology-Pathophysiology-Exercise for Osteoarthritis and Rheumatoid Arthritis: Aerobic activity-Flexibility exercise-Proprioceptive exercise-Strength training for osteoarthritis and rheumatoid arthritis.

UNIT – IV- Meaning and Definition of Osteoporosis and Osteopenia- Risk factors for osteoporosis and osteopenia-Assessment of osteoporosis-Physical Activity and Bone Health: Exercise guidelines -Jumping-Walking-Resistance training- Asthma-Diagnosis and Causes- Prevention of Asthma- Exercise-Induced Asthma.

UNIT – V- Relative Energy Diet (RED-S) - Physiology of the Exercising Female: Definition of menstrual cycles-Regulation of Menstrual Cycle – Menstrual disorders for female athletes. The menopause-Cause for Menopause-Physical activity guidelines for the

postmenopausal female- Pregnancy-Changes in Physiological Systems-Physical activity guidelines for the pregnant female-Special Considerations.

Reference Books:

1. John P. Buckley, (2008), Exercise Physiology in Special Populations, Advances in Sport and Exercise Science, Churchill Livingstone/Elsevier.
2. Sembulingam. K and Prema Sembulingam, (2012), Essentials of Medical Physiology, Jaypee Brothers Medical Publishers (P) Ltd, Ansari Road, Daryaganj, New Delhi.
3. Longenbaker, Susannah Nelson, (2017), Mader's Understanding, Human Anatomy & Physiology, McGraw-Hill Education, 2 Penn Plaza, New York.
4. Scott J. Power and Edward Howley, (2009), Exercise Physiology Theory and Application to Fitness and Performance, McGraw-Hill Higher Education, Boston Burr Ridge, IL Dubuque, IA New York.

Course Outcomes

After successful completion of the course the student will be able to

CO1	To understand the physiology of Overweight and Obesity
CO2.	To understand the aging in the body system and Exercise guidelines for older people.
CO3.	Gain knowledge of Strength training for osteoarthritis and rheumatoid
CO4.	Gain knowledge of Strength training for Osteoporosis and Osteopenia.
CO5.	To understand Menstrual disorders for female athletes

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – VI

COURSE CODE –23UC1CE60I

NUTRITION FOR HEALTH, FITNESS AND SPORT

Learning Objective:

1. To enable the students to understand the nutritional problems of the community and gain skills in planning, executing and evaluating community nutrition services and planning.
2. The students will be proficient in planning menus with macro and micronutrients for various sports.

Unit I Meal Planning and Preparation: Principles of meal planning-Planning and preparation of nutritionally adequate diets for Adult man - Adult woman- Adolescent - School going child - Preschooler- Nutrition for Active Pregnant woman and Lactating woman- Special Nutritional Concerns: Vegetarian diets-The types of vegetarian:Flexitarian-Lacto-Ovo-Vegetarian-Lacto-Vegetarian-Ovo-Vegetarian-Vegan-Other Styles (Fruitarians)-Nutrition Challenges for Vegetarians.

Unit II Energy and Sports Performance: Dietary Carbohydrate and Sports Performance-Dietary Fat and Sports Performance-Dietary Protein and Sports Performance-Vitamins and Sports Performance-Minerals and Sports Performance-The Pre-competition Meal-Liquid Meals-Planning and preparation of Energy dense recipes- High fibre recipes- Low fat recipes- Low sodium recipes- Antioxidants, Exercise and free radicals, Role of antioxidants in preventing damage and recovery time.

Unit III Current Trends in Nutrition: Nutrigenetics – Nutrigenomics - Immunonutrition Nutrition - Immunity Interactions - Antioxidants and Immune Function - Physiological Regulation of Feeding. Appetite and Satiety - Psychology and Nutrition - Nutrition and Sleep - Update on Nutritional Objectives and Recommended Intakes - New Evidence on the Mediterranean Diet

Unit IV - Water Balance and imbalance: Euhydration, Hypohydration, and Hyperhydration-Thermoregulation-Hyponatremia-Dehydration-Rehydration- Fluid balance in sports and exercise, importance, symptoms and prevention of dehydration-Age-Related Fluid Needs -Sports Drink – Hypotonic, Isotonic and Hypertonic drink for hydration/ energy and recovery drink-Other Types of Drinks: Energy Drinks-Oral Rehydration Solutions (ORS)-Sports Waters-Vitamin Waters-Coconut Water-Alcohol-Tea, Coffee and Cola.

Unit V- Paralympic sports: Classification of disabilities - Physiology and metabolism-Physiological responses to exercise-Energy expenditure-Thermoregulation-Body

composition-Bone density-Dietary issues for athletes with disabilities: Current dietary intakes-Fiber, timing of food intake and bowel control-Fluid intake-Body composition management-Nutritional supplements-Eating difficulties and behaviors observed in some athletes with disabilities

Reference Books

1. Louise Burke and Vicki Deakin, (2010), Clinical Sports Nutrition, the McGraw-Hill Companies, Sydney New York.
2. Glenn Cardwell, (2012), Gold Medal Nutrition, Fifth Edition, Human Kinetics, 57A Price Avenue, Lower Mitcham, Australia.
3. Natalie DigateMuth, (2015), Sports Nutrition for Health Professionals, F. A. Davis Company, 1915 Arch Street, Philadelphia, USA.
4. Corinne H. Robinson, Emma S. Weigley Donna H. Mueller, Basic Nutrition and Diet Therapy 7 ed, Macmillon Publishing Company
5. L. Anderson Dibble P. R. Turkki H. S. Michael H. J. Ryribergen J. B, Nutrition in Health and Disease 17th ed , Lippincott Company, Philadelphia
6. Sumati R. Mudambi and M. V. Rajagopal , Fundamentals of Food & Nutrition, New Age International (P) Ltd. Bombay.

Course Outcomes

After successful completion of the course the student will be able to

CO1	Explain the physiological basis for nutritional needs through the human lifecycle
CO2.	Identify nutrition related concerns and deficiency disorders at every stage of lifecycle
CO3.	Discuss appropriate dietary guidelines for various age groups
CO4.	Develop indigenous, value added and low cost complementary feeds
CO5.	Demonstrate skills to plan and prepare appropriate and sustainable diets for deficiency diseases

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – VI

COURSE CODE–23UC1CE602

INTRODUCTION TO SPORTS INJURY AND REHABILITATION

Learning Objectives:

1. Develop a complete regime of treatment for athletic injuries including prevention, immediate and ongoing care, and follow-up.
2. Learn a rehabilitation plan, which will incorporate principles of coaching, protective equipment design and modification, conditioning techniques.
3. Determine and organize the therapy supplies required for a team during training, home competition, and travel.
4. Recognize trends/injury patterns within a team situation and on an individual basis.
5. Deal with emergency situationsKnow the limits of basic first aid

UNIT – I Meaning and definition and importance of Sports injury – Prevention of sports injuries – classification of injuries. Open injuries: Abrasion, Laceration, Incision, Puncture, Avulsion. Closed injuries: Sprain, strain, Subluxation, dislocation, fracture, contusion, Muscle cramp; its first aid and treatments.

UNIT – II Principles of injury prevention – warm – up & cool down – stretching – static, dynamic, ballistic, PNF stretching – protective equipments & shoes. Principles of rehabilitation – muscle conditioning – flexibility – proprioceptive sports skills – cardiovascular fitness – progression & stages of rehabilitation – return to sports.

Unit – III Introduction to First Aid- Definition and meaning First Aid– Principles – First aid Kit. First Aid for Bleeding, Epilepsy, Shock, Drowning, Heart attack, Heat stroke, Snake bite. Types of Dressing and bandages- Cardio Pulmonary Resuscitation. Electric shock, burning, blisters

UNIT – IV Definition and Principles of therapeutic exercises. Coordination exercise, Balance training exercise, Strengthening exercise, Mobilization exercise, Gait training, Gym ball exercise. Injuries: acute, sub-acute, and chronic. Advantages and Disadvantages of PRICER therapy, Aquatic therapy.

UNIT – V Physiotherapy: Definition and Guiding principles. Hydrotherapy: Cryotherapy, Ice pack, Ice wrap, Ice massage, Ice towel. Thermo therapy: - Hot bag, Contrast bath,

Whirlpool bath. Electro therapy: Short wave diathermy, Infrared therapy, Ultrasound therapy. Wax therapy, Traction Unit.

Reference Book

1. Christopher M. (1993). Norris Sports Injuries Diagnosis and Management for Physiotherapists, East Kilbride: Thomson Litho Ltd.
2. ClearеMaxwell.,& Hudson. (1998). The Complete Book of Massage. London: Dorling Kindersley Ltd.
3. James, A. Gould.,& George J. Davies. (1985). Physical Therapy. Toronto: C.V. Mosby Company.
4. Morris, B. Mellin (1989). Sports Injuries and Athletic Problems. New Delhi: Surjeet Publication.
5. Steven Roy., & Richard Irvin. (1983). Sports Medicine. New Jersey: Prentice - Hall Inc.
6. The Encyclopedia of Sports Medicine. (1998). The Olympic Book of Sports Medicine. Australia: Tittel Blackwell scientific publications.

Course Outcomes

After successful completion of the course the student will be able to

CO1	To know and understand the science, methods, techniques and instruments on which physiotherapy is based.
CO2.	To know and understand the methods, procedures and actions expected in clinical contexts, as well as to employ physiotherapy as an educational tool for promoting and maintaining health.
CO3.	To participate in the areas of the promotion, prevention, protection and recovery of health.
CO4.	To learn in the development of physiotherapy protocols based on scientific evidence that promotes research in physiotherapy.
CO5.	To understand the importance of upgrading knowledge, skills and attitudes Familiarise themselves with First Aid regulations of 2002

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**S**	**M**	**S**	**M**
CO 2	**S**	**S**	**L**	**S**	**M**
CO 3	**S**	**S**	**M**	**S**	**S**
CO 4	**S**	**S**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER – VI

COURSE CODE – 23UC1CP601
PROJECT: THESIS (P)

Scope: This project report deals with the interpretation of data collected for the research work. The topic which was selected by the student in 5th semester will be concluded in 6th semester. Each group of minimum 5 students formed in 5th semester will be presenting a thesis along with PPTs.

Each group will be under the supervision of a faculty allotted to them and under their guidance they will complete their research work, which will be submitted in the form of thesis.

Project: Based on their field experience and data/information collected, each group of minimum 5 students will jointly analyze quantitative and qualitative aspects from different sports related arenas for data collection.

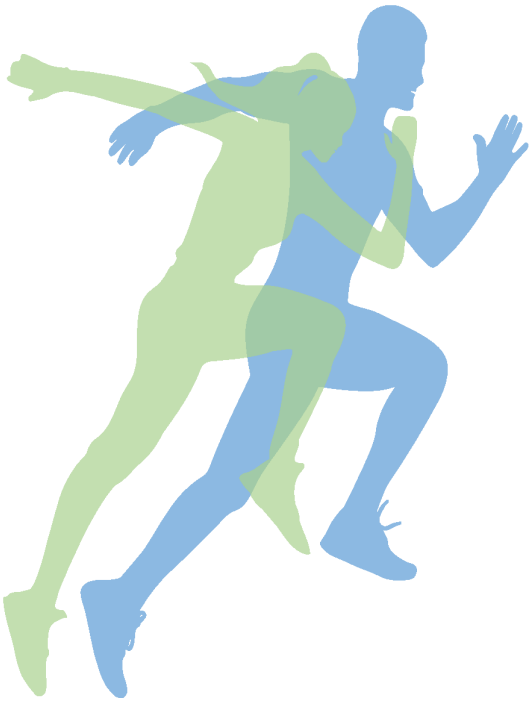
The students will master the art of writing the theory part of the project Report under the following chapters:

1. Title Page
2. Acknowledgement
3. Abstract
4. Table of Contents
5. Introduction
6. Review of related literature
7. Procedure and methodology
8. Results & discussion
9. Discussions, summary and conclusions
10. Bibliography / References.

Examination: The examiner will give marks on the basis of documentation/presentation of research work, data analysis technique, explanation and understanding of results and conclusions, future recommendations.

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI- 600 127



SYLLABUS

M.Sc., EXERCISE PHYSIOLOGY AND NUTRITION

(REGULAR-2023-2024)

DEPARTMENT OF EXERCISE PHYSIOLOGY AND NUTRITION

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI - 600 127

DESCRIPTION OF THE DEPARTMENT

The Department of Exercise Physiology and Nutrition (EPN) examines the physiological responses and adaptations of the human organism to physical activity. Considerable emphasis is given toward understanding how the body functions during exercise and adapts to long-term training. Subjects related to neuromuscular physiology, bioenergetics, cardiorespiratory physiology, neuroendocrinology, clinical nutrition and sports nutrition will be taught. In addition, the physiological effects of factors such as age, gender, body composition, and the environment on human performance will be imparted, along with various sports training. Opportunities for research and applied, practical experiences are the core of the instructional methods for both undergraduate and post graduate students.

MISSION OF THE DEPARTMENT

The Department of Exercise Physiology and Nutrition seeks to promote the health of individuals and communities through research, teaching, and service activities in exercise physiology, human nutrition and the application of these sciences in academic, Sports, clinical, public health, and industry settings

REGULATIONS

The Choice Based Credit System (CBCS) and Learning Outcomes Based Curriculum Framework (LOCF) for two years M.Sc. Degree programme in Exercise Physiology and Nutrition will be implemented from the academic year 2023-2024.

1. ELIGIBITLITY FOR ADMISSION

1.1 A Candidate shall be admitted to the degree of M.Sc., Exercise Physiology and Nutrition only if he/she produces satisfactory evidence to the effect that he/she has completed B.Sc. in Exercise Physiology and Nutrition/Sports Science/ Physiology / Home Sciences / Food Science & Nutrition Dietics/ Biotechnology / Zoology / Microbiology / Biochemistry/ Sports Coaching/Physical Education and Sports / BPT / or any undergraduate **science Degree** recognized by the syndicate of Tamil Nadu Physical Education & Sports University and an equivalent there in 10+2+3 or 10+2+4 pattern from a recognized university with a minimum of 50% marks in aggregate.

1.2 Reservation as per university / State Government rules, from time to time at par with the UGC norms and regulations of the Government of Tamilnadu. The total number of seats for PG is 20 (Twenty). Period of completion is not more than six years from the date of first admission.

2. COURSE OF STUDY

2.1 The normal duration of the M.Sc., Exercise Physiology and Nutrition Programme shall be four semester (Two years).

2.2 Each academic year shall comprise of two semester's viz. **ODD** and **EVEN** semesters. Odd semesters shall be from July to November and Even Semesters shall be from December to May.

2.3 There shall be not less than 90 working days which shall comprise 450 teaching/Practical Activity clock hours for each semester.

2.4 Time = N+2 years for the completion of programme.

3. CHOICE BASED CREDIT SYSTEM (CBCS) AND LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)

The Choice Based Credit System (CBCS) and Learning Outcomes Based Curriculum Framework (LOCF) in M.Sc., programme would have the following five components and the minimum credit requirements for each component to be completed in two years are:

3.1 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

3.2 **Core course:** Are course that are basic to the subject of the degree. This is a course which is to be compulsorily studied by a student as a core requirement to the completion of the program.

3.3 **Elective Courses:** This is a course that is supportive to the discipline of study, provides an expanded scope, enables exposure to some other domains or nurtures proficiency/skills. Elective papers can be of two types: Discipline Specific Elective (DSE) and Generic Elective (GE).

3.4 **Discipline Specific Elective (DSE):** These courses are inter disciplinary in nature and considered similar to core course. And, the students have to choose one course from the option provided for them.

3.5 **Generic Elective (GE):** These courses add generic proficiency to the students. Students have to choose generic elective courses in consultation with the head of the

department from the Generic Elective courses offered by other Division of study in Sports Science or from other Departments in university.

CREDIT ABSTRACT

Semester – Credit Subject	I	II	III	IV	Total Credit
Core course	12	12	12	12	48
Elective (Discipline Centric)	3	3	6	3	15
Generic Elective (GE)	3	3	-	-	06
Core - Practicum (Skill Enhancement Course)	2	2	2	2	08
Ability Enhancement Course (AECC)-Soft Skill	2	2	2	2	08
Thesis with Viva-Voce	-	-	-	3	03
Internship	-	-	2	-	02
Field Work / Extension Activity	-	-	-	1	01
Grand Total	**22**	**22**	**24**	**23**	**91**

4. COURSE WEIGHT

4.1 Courses have been designed with weightage of two /four credits, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise lectures/tutorials/laboratory/field work/outreach activities/project work/vocational training/viva/seminars etc. or a combination of some of these.

4.2 It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

5. ASSESSMENT AND EVALUATION

Post Graduate degree programme M.Sc., Exercise Physiology and Nutrition (Two Years), determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

SEMESTER	CREDITS	TOTAL MARKS
I	22	600
II	22	600
III	24	650
IV	23	650
Grant Total	**91**	**2500**

5.1 Each course will be assessed on the basis of 100 marks. The marks would be divided between internal and external assessment.

5.2 There shall be one end semester external examination for each course in every semester consisting of 75% (75 marks) weight in theory and 75% (75 marks) in practical courses.

5.3 Each Theory course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	Marks
Test Paper – I & Test Paper - II	10
Seminars	3
Assignments	2
Model Examination	10
Total	25

5.4 Each Practical Course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of practicum	Marks
Internal Viva	10
Lab Record	5
Lab Performance	10
Total	25

5.5 The minimum passing standard will be 50% for the external and internal component of each theory course, i.e. 38 marks out of 75 (External - 50% of 75 marks) and 12 marks out of 25. In practical minimum passing standard will be 50% for the external exam and internal assessment for each practical course.

6. ATTENDANCE

6.1 Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course.

6.2 Students must have 75% of attendance in each course for appearing in the examination.

6.3 Students who have 74% to 70% of attendance shall apply for condonation in the prescribed form with the prescribed fee.

6.4 Students who have 69% to 65% of attendance shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

6.5 Students who have below 64% to 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Carry over to the next semester.

6.6 Students who have below 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Re do the course

7. END SEMESTER EXAMINAITION (ESE)

7.1 The ESE will consist of à written examination of three hours duration for a maximum score of 75. The following procedure will be followed for evaluation.

Pattern	Total No. of Question	Number of Question to be Answered	Marks for each Question	Total Marks
MCQ	10	10	1	10
Short Answer	5	5	2	10
Short Essay / Problem	8	5	5	25
Essay / Problem Type	5	3	10	30
Total				**75**

7.2 Distribution of 25 Marks for Semester End Practical Examination weightage on the following:

Components of External Evaluation of practicum	Marks
Lab Experiment	10
Lab Performance	5
Viva-voce	5
Lab Record	5
Total	**25**

7.3 A candidate who has secured a minimum of 50 marks in all courses prescribed in the programme and earned a minimum of the credits will be considered to have passed the Master's Degree Programme.

7.4 A Student will be issued, hall ticket only if one produces "**No Dues**" certificates from the concerned department, the laboratory, the Registrar's Office, the Library and Hostel.

8. GRADING SYSTEM

A ten point rating is used for the evaluation of the performance of the student to provide a letter grade for each course and overall grade for the Master's Programme. The letter grade assigned is given below:

Letter	Grade	Grade Point	Range of Marks
O	Outstanding	10	91-100
A+	Excellent	9.0	81-90
A	Very Good	8.5	71-80
B+	Good	8.0	61-70
B	Above Average	7.5	51-60
C	Pass	7.0	50
RA	Reappear	6.5	0-49
AB	Absent	6.0	ABSENT

9. INTERNSHIP AND FIELD TRAINING

Internship and field training is an important component of Exercise Physiology and Nutrition that provides students with the opportunity to gain applied practical experience in the field of Exercise Physiology and Nutrition. It allows a student to employ what is learned in class in a supervised environment, which is critical in order to further develop professional skills and assure quality practice. The students will undergo Internship training / Clinical practice / Field training in TNPESU campus/ Sports Development Authority of TamilNadu (SDAT) coaching Centres / Sports Authority of India (Various coaching Centres of SAI) / Government Medical College/ Private Medical College and Hospitals other sporting centers / Academies shall be evaluated through internal assessment only. At the end of Internship/field training, the student shall submit a certificate from the organization where he /she has undergone training and a brief report. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three member Departmental Committee constituted by the Head of the Department.

***** *Internship will be carried out during the summer vacation of the first year and marks should be sent to the University by the Department and the same will be included in the Third Semester Marks Statement.*

10. THESIS

The topic of thesis will be allocated in third Semester and candidate will work for one semesters and submit a written thesis in 4th semester. The student will be awarded grade for the total number of credits earned in dissertation in III and IV semesters of study at the end of the IV semester.

PROGRAMME OUTCOMES (POs):

By the end of the program, the students will be able to

PO1	**Sports Science knowledge**: Apply the knowledge of Exercise Physiology and Nutrition fundamentals, and a science specialization to the solution of complex science problems.
PO2	**Problem analysis:** Identify, formulate, review research literature, and analyze complex science problems reaching substantiated conclusions using first principles of Research and statistics in Exercise Physiology and Nutrition.
PO3	**Design/development of solutions:** Design solutions for complex problems and design, plan that meet the specified needs with appropriate consideration for the public health , fitness, safety, counselling, cultural, societal, and environmental considerations
PO4	**Environment and sustainability:** Understand the impact of the professional Exercise Physiology and Nutrition solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO5	**Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Exercise Physiology and Nutrition.

PROGRAMME SPECIFIC OUTCOMES (PSOs):

By the end of the program, the students will be able to

PSO1	Apply the principles and practices of discipline along with the basic Exercise Physiology and Nutrition sciences to solve the complex Exercise Physiology and Nutrition problems concerning the issues of environment, safety, economics, culture and society etc.
PSO2	Acquire and apply the new knowledge with professional responsibility and ethics towards the advancement of academic and research pursuits in Exercise Physiology and Nutrition and allied disciplines in the societal contexts.
PSO3	Design, develop and modify the training, menu planning, to analyze these by applying the various techniques and mechanism. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PSO4	Demonstrate and interpret the application of Exercise Physiology and Nutrition concepts. Communicate effectively on complex Exercise Physiology and Nutrition activities with the Sports persons, Fitness enthusiast, community and with society at large, such as, being able to comprehend and plan, prescribe ,write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PSO5	Demonstrate knowledge and understanding of the Exercise Physiology and Nutrition and apply these and function effectively as an individual and in multidisciplinary settings. Integrate advanced scientific and professional skills in the context of Exercise Physiology and Nutrition.

SEMESTER I

Course code	Course Title	Hours/ Week			C	Marks		
		L	T	P		CIA	ESE	Total
23PC1CT101	Bioenergetics and Muscular Physiology	4	1	-	4	25	75	100
23PC1CT102	Cardiovascular and Respiratory Physiology	4	1	-	4	25	75	100
23PC1CT103	Advanced Human Nutrition	4	1	-	4	25	75	100
ELECTIVE - DISCIPLINE CENTRIC - I CHOOSE ANY ONE								
23PC1CE001	Exercise and Sports Biochemistry	3	1	-	3	25	75	100
23PC1CE002	Exercise Science and Functional Assessment							
23PC1CE003	Clinical Sports Nutrition							
23PC1CE004	Nutrition and Immune Function In Athletes							
GENERIC ELECTIVE								
	Interdepartmental Elective – II (Generic)	3		-	3	25	75	100
PRACTICUM								
23PC1SE101	Cardiovascular and Respiratory Physiology Practicum - I	-		4	2	25	75	100
23PC1AE101	Communication Skill I	4		-	2	-	-	-
		22	**4**	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER II

Course code	Course Title	Hours/ Week			C	Marks		
		L	T	P		CIA	ESE	Total
23PC1CT201	Environmental Exercise Physiology	4	1	-	4	25	75	100
23PC1CT202	Exercise and Sports Nutrition	4	1	-	4	25	75	100
23PC1CT203	Research Methods in Exercise Physiology and Nutrition	4	1	-	4	25	75	100
ELECTIVE- DISCIPLINE CENTRIC - III CHOOSE ANY ONE								
23PC1CE005	Strength Training and Conditioning for Fitness	3	1	-	3	25	75	100
23PC1CE006	Exercise Rehabilitation and Injury Management							
23PC1CE007	Renal Physiology							
23PC1CE008	Training and Performance							
GENERIC ELECTIVE								
	Interdepartmental Elective – IV (Generic)	3	-	-	3	25	75	100
PRACTICUM								
23PC1SE201	Exercise and Sports Nutrition Practicum - II	-	-	4	2	25	75	100
23PC1AE201	Computer Application in Exercise Physiology and Nutrition	4	-	-	2	-	-	-
		22	**4**	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available in the Department, in consultation with HOD.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER III

Course code	Course Title	Hours / Week			C	Marks		
		L	T	P		CIA	ESE	Total
23PC1CT301	Clinical Exercise Physiology - I	4	-	-	4	25	75	100
23PC1CT302	Neurophysiology	4	1	-	4	25	75	100
23PC1CT303	Statistics in Exercise Physiology and Nutrition	4	-	-	4	25	75	100
23PC1CT304	Exercise and Sports for Women	4	-	-	3	25	75	100
ELECTIVE- DISCIPLINE CENTRIC – III CHOOSE ANY ONE								
23PC1CE001	Exercise and Sports Biochemistry	3	-	-	3	25	75	100
23PC1CE002	Exercise Science and Functional Assessment							
23PC1CE003	Clinical Sports Nutrition							
23PC1CE004	Nutrition and Immune Function In Athletes							
PRACTICUM								
23PC1SE301	Clinical Exercise Physiology Practicum - III	-	-	4	2	25	75	100
23PC1AE301	Life Skills Management	2	-	-	2	-	-	-
23PC1IT301	Multispecialty Hospitals / Sports Academies/Fitness centers-Training Internship - Report and Viva-voce	-	-	4	2	50	-	50
		21	**1**	**8**	**24**	**200**	**450**	**650**

Note:

1. *Internship will be carried out during the summer vacation of the first year and marks shall be sent to the COE of the University by the Department and the same will be included in the Third Semester Marks Statement.
2. *15 days training in multi-specialty hospital/ Sports Academies/Fitness center to qualify for the degree and submit a mini project.

SEMESTER – IV

Course code	Course Title	Hours/ Week			C	Marks		
		L	T	P		CIA	ESE	Total
23PC1CT401	Clinical Exercise Physiology -II	4	1	-	4	25	75	100
23PC1CT402	Endocrine Physiology	4	1	-	4	25	75	100
23PC1CT403	Ergogenic Aids and Sports Performance	4	-	-	4	25	75	100
ELECTIVE - DISCIPLINE CENTRIC – VI CHOOSE ANY ONE								
23PC1CE005	Strength Training and Conditioning for Fitness	3	-	-	3	25	75	100
23PC1CE006	Exercise Rehabilitation and Injury Management							
23PC1CE007	Renal Physiology							
23PC1CE008	Training and Performance							
23PC1TH403	Thesis with Viva -Voce	-	-	4	3	25	75	100
PRACTICUM								
23PC1SE401	Clinical Exercise Physiology Practicum - IV	4	1	-	2	25	75	100
23PC1AE401	Yogic Science	2	-	-	2	-	-	-
23PC1EA404	Extension Activity- (Field visit)	-		2	1	50	-	50
		21	**3**	**6**	**23**	**200**	**450**	**650**

SEMESTER- I

COURSE CODE – 23PC1CT101

BIOENERGETICS AND MUSCULAR PHYSIOLOGY

Learning Objective (LO):

By the end of the course, the student will be able to

1. Explain mechanisms of Bioenergetics system and Muscular systems that for physiological adaptations to physical activity and exercise.
2. Demonstrate and practice procedures to measure Energy Expenditure, metabolic responses to sub-maximal and maximal exercise.
3. Assess physiological responses to resistance exercise and provide recommendations on methods that prompt adaptations to training

Unit I Metabolism and Energy : Definition of Bioenergetics, Metabolism and Energy- Energy Sources- Biologic work in human- Factors that affect the rate of Bioenergetics - ATP-Creatine Phosphate (CrP) Energy System – Anaerobic Glycolysis Energy System- Glycolysis and the Formation of Lactate- Cori cycle- Oxidative system - Krebs cycle - Electron Transport System – EPOC (Excess Post Exercise Oxygen Consumption) – Energy release from carbohydrate - Energy release from Fat - Energy release from Protein.

Unit II - Metabolic Adaptations to Anaerobic and Aerobic Training: Adaptations in the ATP-PCr System- Adaptations in the Glycolytic System-Other Adaptations to Anaerobic and Aerobic Trainings. Measuring Energy Use during Exercise: Direct Calorimetry - Indirect Calorimetry - Respiratory Quotient (RQ) - Respiratory Exchange Ratio - Energy Expenditure at Rest and during exercise- Factor that affect Energy Expenditure- Exercise- Physiological basis of Fatigue - Fatigue and its Causes and types, Fatigue and Recovery

Unit III- Muscle Physiology: Classification of Muscles- Structure and Function of Skeletal Muscle - Characteristics of Muscle Tissue - Microscopic Structure of a Myofibril – Sarcotubular System - Sliding Filament Mechanism of Muscle Contraction - All-or-None Principle. Physiological and Biochemical properties of Skeletal Muscle Fiber – Types of Muscle fiber - Assessment of Muscle Fiber Type.

Unit IV – Neuromuscular Physiology: Neuromuscular Junction – motor unit - Neuromuscular Transmission - Muscle Spindles and Golgi Tendon Organs - Length Tension Relationship – Force velocity relationship - Refractory Period - Muscle Tone - Action Potential – mechanism of

Remodeling of Muscle Functions – mechanism of Muscle Hypertrophy and Atrophy-Hyperplasia-Rigor Mortis**.**

Unit V - Neuromuscular Adaptations, to Resistance Training: Define Muscular Strength, Muscular Power, Muscular Endurance - Types of Resistance Training - Resistance Training Guidelines - Resistance Training Systems - Basic Adaptations to resistance Training: Acute Adaptations- Chronic Adaptations- Factors that Influence Adaptations to Resistance Training-Overtraining-Detraining-Neuromuscular Adaptation to Endurance Exercise - Designing Resistance Training Programs.

Reference Books:

1. Jack H. Wilmore and David L. Costill, (1994), Physiology of sport and exercise, Human Kinetics, Champaign, United States.
2. Victor L. Katch, William D. McArdle, Frank I. Katch, (2011), Essentials of Exercise Ehysiology-4th ed, Lippincott Williams & Wilkins, a Wolters Kluwer business, Philadelphia.
3. Scott K. Powers, Edward T. Howley, (2018), Exercise Physiology: Theory and Application to Fitness and Performance, Tenth Edition, McGraw-Hill Education, 2 Penn Plaza, New York.
4. Edward T. Howley and Dixie L. Thompson, (2012), Fitness professional's handbook - 6th ed, Human Kinetics, Champaign, United States.
5. Werner W. K. Hoeger, Sharon A. Hoeger, Cherie I. Hoeger, Amber L. Fawson, (2018), Principles and Labs for Fitness & Wellness, Fourteenth Edition, Cengage Learning, 20 Channel Center Street, Boston, United States of America.
6. Barbara A. Bushman, (2017), complete guide to fitness & health. | American College of Sports Medicine's complete guide to fitness and health, Second edition, Champaign, IL: Human Kinetics, United States.
7. Vivian H. Heyward, Ann L. Gibson, (2014), Advanced fitness assessment and exercise prescription - Seventh edition, Champaign, IL: Human Kinetics, United States.
8. Jared W. Coburn and Moh H. Malek, editors, (2012), NSCA's essentials of personal training - 2nd ed, Champaign, IL: Human Kinetics, United States of America.
9. Sharon A. Plowman, (2003), Exercise Physiology for Health, Fitness, and Performance - Second Edition, Pearson Education, Inc.

Course Outcomes

On successful completion of the course, the students should be able to:

CO 1	To understand the bioenergetics, biologic work in human organs and energy systems in the body.
CO 2	To understand the metabolic adaptations to anaerobic, aerobic training and their role in the body.
CO 3	Apply the concept and structure, functions of muscle and mechanism of muscle Contraction.
CO 4	Anlyse the Neuromuscular Transmission, Muscle Hypertrophy and Muscle Atrophy
CO 5	To understand and acquire the Neuromuscular Adaptations to Resistance Training

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER- I

COURSE CODE – 23PC1CT102

CARDIOVASCULAR AND RESPIRATORY PHYSIOLOGY

Learning Objectives:

1. Explain types of circulations - coronary arteries- valves of the heart and chambers of heart for physiological adaptations to physical activity and exercise
2. Discus the mechanism of bioelectricity and cardiac mechanics
3. Explain practice procedures of Cardiac electro physiology.
4. Understand the concept of cardiac adaptations in response to aerobic training
5. Understand the concept of Functional anatomy of the Bronchopulmonary system
6. Explain practice procedures and mechanism of inspiration and expiration
7. Understand the concept of lung volumes and capacities
8. Explain practice procedures of Lung function test

UNII - I - Basic Cardiac Anatomy: Definition, Structure and functions of Heart – size shape and location of heart – types of circulations - coronary arteries- valves of the heart – chambers of heart-cardiac physiology concepts — conducting system of the heart — cardiac cycle —- redistribution of blood – heart rate variability – importance of sleeping on heart rate. Blood distribution during rest and exercise

UNII - II – Electrocardiogram: Definition, Cardio dynamics – Cardiac electro physiology and mechanics-action potential cardiac output – blood pressure –Factors affecting stroke volume – factorsaffecting cardiac output – measuring blood pressure – blood pressure and venous return. Cardiac adaptations in response to aerobic training. Cardiac tissue and bioelectricity – cardiac mechanics.

UNII - III Functional anatomy of the Bronchopulmonary system: Definition and Anatomy of the respiratory system — Internal and external respiration — respiration — mechanism of inspiration and expiration - alveolar ventilation – Dead space – diffusion and transport of gasses – lung volumes and capacities– O2 – Haemoglobin – Dissociation curve in difference circumstances- Response of the Respiratory System to Exercise-Respiratory Training Adaptations..

UNII – IV Cardiovascular Responses to Exercise: Cardiovascular Responses to Aerobic Exercise - Cardiovascular Responses to Static Exercise - Male-Female Cardiovascular Differences during Exercise - Cardiovascular Responses of Children and Adolescents to Exercise - Cardiovascular Responses of Older Adults to Exercise – Hypertrophy of heart due to

short term and long term exercise on short distance and long distance runners -Cardiovascular Adaptations to Aerobic Endurance Training - Cardiovascular Adaptations to Dynamic Resistance Training.

UNII – V Cardiopulmonary Measurements: Definition, Blood Pressure Responses to Exercise- Accurate Blood Pressure Checks- Measurement of Heart Rate- Rating of Perceived Exertion - cardiorespiratory endurance test – laboratory tests– direct Method Assessment O_2 and CO_2 through gas analyser by using standard protocol and indirect Method - Harvard step test —field test- 12 minutes run and walk test — Queens college Step test, Beep test and YO -YO Test – Lung function test.

Reference Books:

1. Jack H. Wilmore and David L. Costill, (1994), Physiology of sport and exercise, Human Kinetics, Champaign, United States.
2. Victor L. Katch, William D. McArdle, Frank I. Katch, (2011), Essentials of Exercise Ehysiology-4th ed, Lippincott Williams & Wilkins, a Wolters Kluwer business, Philadelphia.
3. Scott K. Powers, Edward T. Howley, (2018), Exercise Physiology: Theory and Application to Fitness and Performance, Tenth Edition, McGraw-Hill Education, 2 Penn Plaza, New York.
4. Irwin S. Techlin JS. Cardipulmonary physical therapy: a guide to practice. St. Louis, Mo, Mosby Co., 2004.2.
5. William D.Mcardle, Frank I. Katch, Victor L. Katch, (2005), “Essentials of exercise physiology”, Lippincott Williams and Wilkins.
6. Mcardle, William D, Frank I. Katch, Victor L. Katch, (2005) “Essentials of Exercise Physiology”, Philadelphia: Lea and Febiger.
7. G. Gregory Haff, Charles Dumke, (2019). Laboratory manual for exercise physiology / Second Edition, Human Kinetics, P.O. Box 5076, Champaign, IL, USA.
8. Sharon A. Plowman, Denise L. Smith.(2014), Exercise physiology for health, fitness, and performance - 4th ed. Lippincott Williams & Wilkins, a Wolters Kluwer business, 2001 Market Street, Philadelphia.

Course Outcomes

On successful completion of the course, the students should be able to:

CO No	Course outcomes
CO 1	To understand the types of circulations, structure valves, and chambers of the heart.
CO 2	Analyze the Electrocardiogram – Cardio dynamics, Cardiac electrophysiology, and mechanics.
CO 3	To understand the structure, and functions of lungs and the mechanism of inspiration and
CO 4	Describe the Cardiorespiratory system and respiratory adaptation to training
CO 5	To understand the Cardiorespiratory assessment test direct and indirect methods

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

SEMESTER- I

COURSE CODE – 23PC1CT103
ADVANCED HUMAN NUTRITION

Learning Objectives:

1. To recognize the properties and composition of macronutrients
2. To understand the digestion and absorption of macronutrients and the role of macronutrients in metabolism, energy, production, control and distribution
3. To identify factors affecting intake, utilization and micro exertion of micronutrients and be aware of macro and micro nutrient research.

UNIT-I Carbohydrate: Definition, composition, structural features of CHO- structure of Aldoses and ketoses , classification- monosaccharides and its classification based on structure, disaccharides, oligosaccharides and polysaccharides- structure of starch and Inulin - functions of carbohydrates in the body, food sources, digestion and mechanism of absorption – monosaccharide transport and cellular uptake- Glucose transport – Secondary active transport- maintenance of blood glucose level- Glycemic response , Glycaemic index, glycaemic load - Dietary fiber - Definition, types, sources, RDA, physiological effects of dietary fiber. Carbohydrates of physiological significance - Therapeutic use of glucose, sucrose, galactose, fructose, Carbohydrate awareness, and lifestyle diseases.

UNIT – II Protein: Definition, structural elements of protein, Classification- based on structure, based on composition, based on functions, functions, Food sources, Requirements and RDA. Catalyst – messenger proteins – importance of protein messenger- Immuno protectors- protein transporters- Buffer- fluid balance- Digestion and absorption and metabolism of proteins. Amino acids- classification of amino acids- essential and nonessential – complete and incomplete proteins - Toxic proteins in foods of vegetable and animal origin and processing and cooking methods for detoxification. Nitrogen Balance- Positive and Negative

UNIT – III Lipids: Definition, structure of a fat, wax, steroid, glycerophospholipids – sphingophospholipid – sphingoglycolipid - Classification of lipids - simple, compound and derived lipids- saturated and unsaturated fatty acid – structure and functions of fatty acid – Lipoproteins – CM, VLDL, LDL, IDL HDL – importance of Lipoproteins - properties of lipoprotein – derived lipids – cholesterol function – cholesterol level- lipid profile test- Lipid digestion and absorption and transport of lipids - Composition and function of serum lipoproteins, Storage of lipids- Adipose tissue – structure of White adipose tissue(WAT) & Brown adipose tissue(BAT) –

sources – Nutritional significance of fatty acids – SFA, MUFA,PUFA functions and deficiency - Nutritional Requirements and dietary guidelines.

UNIT – IV Vitamins – Definition, 13 essential vitamins – structure- classification – Fat Soluble: Vitamin A, E, K and D and Water Soluble vitamins: Vitamin B complex and Vitamin C - sources – utilization – storage – excretion – functions – bioavailability –, deficiency, toxicity – absorption – transport - requirements and RDA - assessment of status and alteration in requirements in various clinical and metabolic disorders.

UNIT – V Minerals: Definition – Types - Macro and Micro minerals -, structure, sources, absorption, transport, utilization, storage, excretion, functions, bioavailability, requirements and RDA, deficiency, toxicity, assessment of status and alteration in requirements in various clinical and metabolic disorders.

Reference Books:

1. Betsy B. Holli Judith A. Beto,Krause's Food & the Nutrition Care Process, 13th edition,Saunders Elsevier,2011.
2. Maurice Edward Shils, Moshe Shike, Lippincott Williams & Wilkins, Modern Nutrition in Health and Disease, Mc Graw Hill,2006.
3. Martha H. Stipanuk,Biochemical, Physiological, and Molecular Aspects of Human,2012.
4. Krause's Food & the Nutrition Care Process (Krause's Food & Nutrition Therapy), 13ed, Mahan ,2011.
5. Sareen S.Gropper and Jack L.Smith (2009), Advanced Nutrition and Human Metabolism, Wadsworth, Cengage Learning, USA.
6. Heather Hedrick fink, Lisa A.Burgoon, Alan E.Mikesky, (2006), "Practical Application in Sports Nutrition", Jones and Bartlett.
7. Betsy B. Holli Judith A. Beto,Krause's Food & the Nutrition Care Process, 13th edition,Saunders Elsevier,2011.
8. Maurice Edward Shils, Moshe Shike, Lippincott Williams & Wilkins, Modern Nutrition in Health and Disease, Mc Graw Hill,2006.
9. McArdle William D. et.al. (2005) "Exercise Physiology, Nutrition and Human Performance", Philadelphia: lea and Febiger.
10. Mcardle, William D.,Katch, Frank I and Katch, Victor L(2005) "Exercise Physiology", Philadelphia ,lea and Febiger.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO1	Illustrate sources, requirements, role and deficiency of macro and micro nutrient
CO2	Explain beneficial effects of macro and micro nutrient on human health.
CO3	Application of Various training methods of Altitude training.
CO4	Explain the functions, deficiency or toxicity of macro and micronutrients
CO5	Evaluate the role of macronutrients, micronutrients in health and disease.

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SKILL ENHANCEMENT COURSE SEC -I

23PC1SE101	CARDIOVASCULAR AND RESPIRATORY PHYSIOLOGY PRACTICUM - I

Each student is expected to practice measurement on 15 volunteers and determine Pre and Post Training/Exercise variation (To be carried out as project and on sports persons).

1. Measurement of heart rate various sites during rest and after exercise
2. Blood Pressure Measurements during and after exercise.
3. Electrocardiogram (ECG) Test
4. Heart rate response recording during sporting activities. At least three different sports are to be covered by each student.
5. VO_2 Max Measurements by Queens' step college Steps Test.
6. VO_2 Max Measurements by Astrand-Rhyming Step Test.
7. Harvard Step Test
8. Cooper 1.5-Mile Run/Walk Test
9. Cooper 12-Minute Run/Walk Test
10. Rockport Fitness Walking Test
11. Yo-Yo Intermittent Recovery Test
12. Determination of Physiological adaptation with training through Submaximal Exercise on Treadmill / Bicycle ergometer.
13. Determination of Physiological adaptation with training through Maximal Exercise on Treadmill / Bicycle ergometer.
14. Lung volumes and capacities Test.
15. Rating of Perceived Exertion
16. VO_2Max Assessment by Direct Method

SEMESTER- I

ABILITY ENHANCEMENT COURSE (AEC)-I

COURSE CODE – 23PC1AE101

COMMUNICATION SKILL

Learning Objectives:

1. To impart advanced training in standard pronunciation, word stress and intonation
2. To train students in the correct use of English in a formal way
3. To improve the learners' vocabulary by familiarizing them with the ways of word formation
4. To develop communication skills by providing theoretical knowledge of the mechanism of effective communication
5. Speak English with an unaffected accent using stress and intonation
6. Use acceptable English in academic writing
7. Use English language in a more meaningful way with an enriched word power
8. Communicate in a professional way using various communication strategies

Unit – I- Communication Skills: Role of communication in Present Days- Importance of Communication - Communication Barriers - Types of Communications: Verbal communication: Oral -Story telling- Crucial conversation – Face to Face Communication- Telephone communication, Aral- Listening and Hearing, Non - Verbal Communication: Facial Expressions- Body Language-Posture- Eye Contact, Written Communication: Journals- E-Mails- Blogs - Text Messages, Visual Communications: Signs- Symbols- Pictures.

Unit – II- Components of Communication – Context - Encoder- Encoding - Message - Medium - Receiver – Feedback- Level of Communication – Intrapersonal – Intrapersonal- Group and Public communication, Characteristics of Communication, Memorandum: Purpose- Format- Business Memo and Agenda, Basic Skills for Communications- Listening- Speaking- Reading and Writing.

Unit – III- Interview Skills: Preparing for Interview- -Personal interview - Technical interview - Group Discussion- Body language- Pronunciation- Speaking - Presentation skills: Preparation – The Subject – The Audience – The place- The time- Length of Talk and Structure of Presentation.

Unit – IV- Phonetics: Elements of English Language – Phonology- Morphology – Lexis – Syntax- Grammar, The Different Speech Organs and Their Role- The Individual Sounds- Vowel- Pure

Vowel- Semi Vowel- Diphthongs- Classification of Diphthongs - Monotones- Consonants- Manner of Articulation- Place of Articulation.

Unit – V- Strong and weak Forms of Words- Stress- Word Stress- Primary Stress- Secondary Stress- Sentence Stress, Rhyme and Rhythm- Rhythm- Intonation- Raise - Fall - Raise Fall intonation.

Reference Books

1. Second Edition of "Communication Skills" Published by Carrier Skill Library.
2. Effective Communication Skills – A Book of MTD Training.
3. The Language Sound of Language by Michael Dobrovolsky and Francis katamba.

Course Outcomes

On successful completion of the course, the students should be able to:

CO1	Understand and acquire knowledge on basic skills for communications
CO2	Explain the basic concepts of Speak English with an unaffected accent using stress and intonation
CO3	Describe the application of various interview skills.
CO4	Analyse the elements of English language
CO5	Explain the strong and weak forms of words

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- II

SEMESTER- II

COURSE CODE – 23PC1CT201

ENVIRONMENTAL EXERCISE PHYSIOLOGY

Learning Objectives:

1. The course focuses on learning about the various forms of environmental stress and how the resulting human organism responds physiologically to them.
2. Students will study how physical performance is affected by environmental stress such as heat, cold and high altitude and underwater environments.

Learning outcomes:

1. Students who successfully complete the paper will develop an understanding of the physiological adaptations that have evolved them to survive, adapt, participate and to train in various sports activities.

Unit – I Different Terms In Environmental Physiology: Definition of Environmental Physiology , Homeostasis - Functions of Homeostasis – Definition of thermoregulation - Goal of Thermoregulation - metabolism –heat stress–- Fundamental principles involved in thermoregulation – Conduction – Convection - Radiation – Evaporation – Hypothalamus and heat losing mechanism- Homeostasis and Temperature Control- role of endocrine glands in regulating body temperature – temperature regulation during exercise .

Unit – II Hot And Cold Climate: Definition of Acclimatization , Acclimation , Adaptation - Acclimatization to heat – Acclimatization to heat exposure – the heat equation – heat training – heat related illness – How to beat the heat – heat stress – signs and symptoms of mild and moderate stress – contributing factors of heat stress – dehydration and symptoms of dehydration – Heat Exhaustion - signs and symptoms of heat exhaustion- Algorithm for management of heat stroke and heat exhaustion- heat cramps- causes of heat cramps – Heat stroke - Heat stress injuries – precaution to be taken to avoid heat illness – safety consideration to prevent heat injuries. Temperature regulation in cold environment – acclimatization to cold – fine motor activity – facilitation of metabolic heat production - precaution to be taken in cold environment.

Unit – III Altitude: Definition of Barometric presence, High Altitude – different Altitudes – Different Air Pressure (PSI) at different Altitudes – Oxygen levels at altitude - The environmental differences between High altitude and sea level – immediate physiological changes at high altitude - Acclimatization - in respiratory system – in cardiovascular system – long term adaptation - time of acclimatization – acute and chronic mountain sickness - the importance of training at altitude- aerobic process – anaerobic process – Exercise and sports

performance at Altitude –Altitude training – Intermittent Hypoxic Training – Altitude exposure technique – Live High- Train High , Live Low- Train High , Live High Train Low – Artificial Training - Hypoxic training methods for improving endurance exercise performance

Unit – IV Under Water Environment: Definition of underwater environment - Marine Eco System - underwater pressure - General characteristics of underwater environment-– SCUBA diving – Different depth at sea level and Atmosphere – Nitrogen Narcosis – Oxygen Toxicity – Carbon dioxide Toxicity – Nitrogen and Volume of Nitrogen at Different levels – Decompression Sickness – Bends, compressed air sickness , Caissons disease , Divers Paralysis and Dysbarism - treatment - Nitrogen Elimination and Decompression - PADI Dive table - physiology of underwater diving – physiological response to water immersion –exposure – breath hold limitations – Ambient pressure changes – breathing under pressure .

Unit – V Factors affecting physiological performance: Environmental factors in exercise and sports performance skeletal system – muscular system –cardiovascular system – respiratory system –Bio-energetic system – lactate tolerance – maximum aerobic capacity – hormonal difference.

Reference Books:

1. Stephen S. Cheung., (2010), Advanced environmental exercise physiology , United States: Human Kinetics, P.O. Box 5076 Champaign, IL 61825-5076
2. William D. Mcardle, Frank I. Katch, Victor L. Katch, (2005), “Essentials of exercise physiology “, Lippincott Williams and Wilkins.
3. Victor L. Katch, Frank. I. K atch, William D. Mcardle, (2003), “Essentials of exercise physiology “, Williams and Wilkins.
4. Lorry G. Shaver (1981) “Essentials of exercise physiology” Delhi: SurjeethPuplications.
5. William E.Garrett J.R., Donald T. Kirendall, (2000), Exercise and sports science”, Lippincott Williams and Wilkins.
6. McArdle William D. (1998) “Essentials of exercise physiology” Malveern, Pennsylvania: Lea and Febiger.
7. Roger M. Enoka, (2002), “Neuromechanics of human movement”, Human Kinetics. P.O. Box 5076 Champaign, IL, United States.

Course Outcomes

On successful completion of the course, the students should be able to:

CO1	Understand the basic concepts of Thermoregulation and role of endocrine glands in regulating body temperature
CO2	Understand the essential and environmental features and requirements of hot and cold climate
CO3	Application of Various training methods of Altitude training.
CO4	Analyse the physiological response of under water, SCUBA Diving, Decompression Sickness.
CO5	Understand acquire deep insight into Factors Affecting Performance, factors influencing body temperature and common cold injuries.

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- II

COURSE CODE – 23PC1CT202

EXERCISE AND SPORTS NUTRITION

Learning Objectives:

1. To impart knowledge on sports specific nutrition and hydration guidelines- in power/strength, weight class-combat and racket sport athletes.
2. To help students understand the role or ergogenic aids- their dose, safety and efficacy to enhance sports performance.
3. To enable the students to understand the characteristics, physiology and body composition needs of different power/strength sports.

Unit I: Sports nutrition: Definition of Nutrition, Sports Nutrition- Principles of Sports Nutrition - Basic training and nutrition principles - Basic nutrition standards and guidelines - Basic sports nutrition guidelines. Measuring nutritional status of athletes: Clinical and research perspectives - Dietary measurement - Techniques for measuring dietary intakes: Diet records- 24-hour recall- Food frequency questionnaires- Diet history- Clinical examination and medical history- Biochemical analysis- Anthropometric assessment

Unit II: Carbohydrates as a Source of Energy for Exercise: Use of Muscle Glycogen - Use of blood glucose - Muscle Glycogen -Time Course of Glycogen Depletion- Carbohydrate Loading – Super compensation - Carbohydrate Ingestion during Exercise-Carbohydrate Intake at Rest-Practical Measures for Glycogen Modulation. Fat Reserves: Fat as Fuel for Muscle - Fatty Acid Uptake by Muscle-Strategies to improve Fatty Acid Oxidation-Physical Training-Medium Chain Triacylglycerol (MCT) Ingestion. Protein Reserves: Plasma Proteins/Amino Acids- Muscle Protein- Visceral Protein- Protein Intake.

Unit III: Biology of protein and amino acid requirements: Body protein mass-Protein synthesis, degradation, and turnover- Protein Utilization in Athletic Performance- Protein requirements for Endurance Athletes - Protein requirements for Strength Athletes – Protein essential and in recovery from exercise - Benefits and Risks of a High-Protein Diet-Nitrogen Balance.

Unit IV: Dietary Planning Adapted to Different Sports: Nutrition for Running events: Fuelling and hydration strategy for running -Core menu plans for running events. Nutrition for Jumping and Throwing Events: Fuelling and hydration strategy and Core menu plans for Jumping and Throwing events - Nutrition for Swimming: Fuelling and hydration strategy for swimming-Preparing for a competition- Core menu plans for swimming. Nutrition for Cycling: Fuelling and

hydration strategy for Cycling- Nutrition for Team and Racket Sports: Fuelling and hydration strategy for team and racket sports- Core menu plan for team and racket sports

Unit V: Nutrient Timing and Recovery Nutrition: Eating before training -Eating during training- Recovery nutrition-Nutrition, exercise and immunity. Composition of Body Fluids: Intracellular Fluid - Extracellular Fluid - Fluid guidelines - Fluid need before exercise - Fluid need during exercise - Fluid need after exercise, Dehydration, Rehydration - Effects of dehydration and overhydration - Heat cramps, Sports drinks - Types of sports drinks - Energy drinks, Fluid and Electrolyte balance before, during and after training- Strategies to delay fatigue- Effects of hyperthermia and dehydration on performance.

Reference Books:

1. Heather Hedrick fink, Lisa A.Burgoon, Alan E.Mikesky, (2006), “Practical Application in Sports Nutrition”, Jones and Bartlett.
2. Janice Thompson, Melinda Manore, (2005), “Nutrition: An Applied Approach”, Pearson.
3. Robert E.C.Wildman, Barry S. Miller, (2004), “Sports and Fitness Nutrition”, Thomson.
4. William D.Mcardle, Frank I.Katch, Victor L.Katch, (2000), “Essentials of Exercise Physiology”, Lippincott Williams and Wilkins.
5. McArdle William D. et.al. (2005) “Exercise Physiology, Nutrition and Human Performance”, Philadelphia: lea and Febiger.
6. Fred Brouns& Cerestar Cargill (2002) Essentials of sports nutrition.-2nd ed, John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England.
7. Louise Burke, Vicki Deakin,(2011), Clinical sports nutrition -4th ed, McGraw-Hill Australia Pty Ltd Level 2, 82 Waterloo Road, North Ryde NSW.
8. Dan Benardot ,(2006), Advanced sports nutrition, Human Kinetics,P.O. Box 5076 Champaign, United States of America.

Course Outcomes

On successful completion of the course, the students should be able to:

CO1	Understand the basic concepts and analyze the different methods for assessing nutritional status
CO2	Identifying the requirement of carbohydrate and fat diet before, during, and after training
CO3	Understand the biology of protein and amino acid requirements before, during, and after training
CO4	Applying and developing a fuelling and hydration strategy for Adapting to different sports
CO5	Understand the composition of body fluids and fluid needs before exercise, fluid needs during exercise, fluid needs after exercise

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- II

COURSE CODE – 23PC1CT203

RESEARCH METHODOLOGY

Learning Objective:

1. Learning research methodology will be able to understand and comprehend the basics in research and applying them in Exercise Physiology and Nutrition
2. Providing researchers with a framework for designing, conducting, and analyzing research.
3. Formulating a research problem review of related literature, and drafting the research problem and its ethical considerations.

Unit I-Introduction: Definition of research – Meaning, Need, Important of research in Exercise Physiology and Nutrition, Qualities of good research, classification of research – Basic Research, Action Research, Applied Research, Philosophical Research, and Historical Research**.**

Unit II-Methods of Research: Experimental Research – Comparative and Analytical Research – Descriptive Research Methods–Need,Importance and Tools of Survey, Case Study, Interview Technique.

Unit III-Research Design: Experimental Design – Single Group Design – Reverse Group Design, Repeated Measures Design – Static Group Design, Equated Group Design, Random Group Design, Rotated Group Design, Static Group - Comparison Design.

Unit IV-Concept of Sampling: Sampling - Need For Sampling; Advantages – Disadvantages; Determining the Sample Size;Types of Sampling-Probability Sampling Method,Non-Probability Sampling Method,Random Sampling Design- Simple Random Sampling; Complex Random Sampling Design - Stratified Sampling-Proportionate Sampling-Cluster Sampling-MultistageSampling, Systematic Sampling, Sequential Sampling.

Unit V-Resarch proposal and Research Report: Research format, Research proposal, Style of writing research, Objectives of the Study , The significance of the problem, Hypothesis, Delimitations, Limitations Review of Related Literature, Methodology, Results and Discussions, Method of writing Abstract

References Book:

1. Author's Guide: "Research Methods Applied to Health Physical Education and Recreation", Washington, D.C., 1991.
2. Best J.W., "Research in Education", Prentice Hall, New Delhi 1982.
3. Clarke H. David, "Research Processes in Physical Education, Recreation and Health", Prentice Hall Inc, Englewood Cliffs, New Jersey, 1985.
4. Kamlesh M.L., "Methodology of Research in Physical Education and Recreation", AHPER, Washington D.C., 1973.

Course Outcomes

On successful completion of the course, the students should be able to:

CO1	Understand the basic concepts of Research and criteria of selecting a research problem
CO2	Choosing the appropriate research methodology include quantitative research, Qualitative Research Methodology, mixed-method research, experimental research, and case study research
CO3	Select the appropriate research design required for a particular research problem
CO4	Develop the ability to find out sampling size and sampling methods while working on a research project work.
CO5	Develop the ability to prepare the research project.

Mapping with Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SKILL ENHANCEMENT COURSE SEC -II

23PC1SE201	EXERCISE AND SPORTS NUTRITION PRACTICUM - II

Each student is expected to practice measurement on 15 volunteers and determine Pre and Post Training/Exercise variation (To be carried out as project and on sports persons).

1. Assessment of Nutritional status using various method:
    i. Diet records-
    ii. 24-hour recall
    iii. Food frequency questionnaires
    iv. Diet history
    v. Clinical examination
2. Anthropometric assessment:
    i. Body Mass,
    ii. Stature,
    iii. Body Mass Index,
    iv. Using Girth/Circumference to Estimate % BF,
    v. Waist-Hip Ratio (WHR)
3. Body composition analysis
    i. Skinfold calliper.
    ii. Bioelectrical impedance
4. RDA Calculation for Macro nutrition.
5. Core menu and Planning Diet for different Sports.
6. Assessment of Fluid balance
7. Preparation of Sports Drinks

SEMESTER- II

ABILITY ENHANCEMENT COURSE (AEC)-II

COURSE CODE – 23PC1AE201

COMPUTER APPLICATION IN EXERCISE PHYSIOLOGY AND NUTRITION

Learning Objectives:

1. To learn data collection methods and computer use
1. Importance of computers, Basics of scientific computing, Algo-rithms and Flowcharts
2. Data acquisition and data processing; Modeling (mathematical, IT based, biomechanical, physiological) and Simulation (interactive, animation etc.)
3. Practice of literature search and review writing
4. Prepare diagram/figures using computer software-MS Excel, MS Word, MS PowerPoint
5. Use of analysis system

Unit-I- Definition of Computers – Types of Computers – Microcomputer – Mini Computers, Mainframe Computers and Super Computers – Binary number system – Bits and Bytes – Hardware Input – Output – The arithmetic / Logic Unit – Control Unit. Computer Memory – Auxiliary Storage. The Punched Card – Magnetic & Tape – Disk oriented data entry system; Out-put devices.

Unit-II- MS-Word – Creating documents – Formatting, Editing, Deleting, Background and copying, Spelling check and Thesaurus – Ms-Excel-Opening – Saving – Editing File – Basic Mathematical Problems – Addition, Subtraction, Multiplication, Division – Ms Power Point – Opening – Creating Saving – Deleting Slides / Templates – Slide Show – Important Feature of Power point Presentation.

Unit-III- Background online designing - Scanning – Animation - slide sounds**,** Impact and non-impact printers-mobile devices to asses physiological parameters, Internet explorer – Different types of connections – Modem types - Network types, types of internet communications - e-mail - Text chatting **-** video chatting and calling.

Unit-IV- Benefits and uses of biochips, heart rate monitor for team sports and individual events - Monitoring of 24h ECG - Caloric expenditure- workload- blood pressure – Circadian rhythms – methods of record sleeping stages- physiological monitoring devices.

Unit-V- Role of computer in Exercise Physiology and Research- Assessment of Physiological parameters – Latest computer technology – Software involving interpreting variables in exercise physiology – Role of Nutrition software to boost the human longevity.

PRACTICUM

Each student shall practice, various software available in Exercise Physiology and nutrition and to determine the Pre and Post Training/Exercise data.

Reference Books:

1. Abraham Silberchatz, Henry F. Korth and S.Sundarshan, (2002), "Data Z Base System concepts", 4th Edition, McGraw Hill.
2. Michael Halvorson, Michael.J Young. Microsoft Office XP Inside Out (paperback), Microsoft press.
3. ITL Education Solutions Limited, (2005)," Introduction to Information Technology", Pearson Education (India).

Course Outcomes

On successful completion of the course, the students should be able to:

CO1	Understand the basic concepts of computers and different types of computer
CO2	Understand the essentials of MS-Word, MS-Excel and MS-power point presentation
CO3	Application of Various software in online and asses physiological parameters.
CO4	Analyse the physiological response of with help of computer
CO5	Understand acquire deep insight into Software involving interpreting variables in exercise physiology.

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- III

SEMESTER- III

COURSE CODE – 23PC1CT401

CLINICAL EXERCISE PHYSIOLOGY- I

Learning Objectives:

Upon successful completion of this course, students will be able to:

1. Understand the epidemiology and Prevalence of diseases, disorders, and conditions with special attention to cardiovascular, metabolic pulmonary, orthopedic, immunological, and neurological conditions.
2. To understand the physiology, pathophysiology and complications related to clinical diseases, disorders, and conditions.
3. To understand the clinical signs, symptoms and risk factors, diagnostic and laboratory evaluations graded exercise testing, and treatment.

Unit – I Stroke: Definition of stroke and Clinical Exercise Physiology - Epidemiology and Pathophysiology- Risk Factors for Stroke - Functional Consequences of Stroke - Comorbidity, Secondary Conditions, and Associated Conditions - Acute Responses to Exercise - Exercise Testing and Screening Criteria- Exercise Prescription. **Cerebral Palsy: Definition of Cerebral Palsy -** Epidemiology and Pathophysiology - Physical Examination - Exercise Testing- Exercise Prescription.

Unit –II Spinal Cord Dysfunction: Definition of Spinal cord, Dysfunction - **-** Epidemiology and Pathophysiology: Spinal Cord Injury- Spina Bifida - Acute Responses to Exercise- Exercise Testing: Aerobic Exercise Test Protocols - Fitness Testing- Functional Testing - Exercise Prescription. **Low back pain (LBP)** : **Definition of Low back pain (LBP)** - Epidemiology - Risk Factors - Types - Problems - Pain - Neurobiological Factors and Pain- Functional Assessment- Exercise for Acute Low Back Pain - Exercise for Chronic Low Back Pain.

UNIT – III Arthritis: Definition of arthritis Osteoarthritis, Rheumatoid Arthritis, and Fibromyalgia - Epidemiology and Pathophysiology - Common Signs and Symptoms - Clinical Exercise Physiology - Physical Examination- Exercise Prescription and Programming. **Osteopenia and Osteoporosis** - Definition of **Osteopenia and Osteoporosis -**Classification of Osteoporosis – Prevalence: Epidemiology and Pathophysiology - Bone Physiology - Risk Factors for Osteoporosis - Physical Examination - Diagnostic Techniques - Exercise, Fitness, and Functional Testing - Exercise Prescription - Dietary Modifications and Calcium Supplements.

UNIT - IV Hematologic Disorders: Definition of Hematology, anemia Epidemiology and Pathophysiology- The Role of Iron - Causes of Iron Deficiency - Prevalence of Iron Deficiency in Athletes - Effect of Anemia on Exercise Performance - Effect of Reduced Iron Status without Anemia on Exercise Performance - Iron Supplements - Dietary Prescription and Counselling- Exercise Prescription. **Cancer:** Definition of. Cancer - Pathophysiology - Epidemiology - Etiology and Risk Factors - Common Signs and Symptoms - Screening and Diagnosis - Effects of Cancer/Treatments on Physical Functioning and Health - Exercise Prescription and Programming

UNIT – V Renal Diseases: Definition of disease, renal disease Etiology of Renal Disease- Classification of Renal Disease - Dietary Treatment of Renal Disease-Dialysis - Diet during Dialysis-Diet after Kidney Transplant - Dietary Treatment of Renal Stones - Exercise Testing - Exercise Prescription. **Gastrointestinal Problems**-Dyspepsia-Esophagitis - Hiatal Hernia - Peptic Ulcers - Diverticulosis/Diverticulitis-Inflammatory Bowel Disease-Cirrhosis –Hepatitis – Pancreatitis – Residue - Controlled Diets - High-Fiber Diet - Low-Residue Diet.

Reference Books:

1. ACSM, (2010), ACSM's Resources for Clinical Exercise Physiology Musculoskeletal, Neuromuscular, Neoplastic, Immunologic, and Hematologic Conditions-Second Edition, Lippincott Williams & Wilkins, 530 Walnut Street, Philadelphia.
2. Louise Burke, Vicki Deakin, (2010), Clinical sports nutrition-4th ed, McGraw-Hill Australia Pty Ltd, Level 2, 82 Waterloo Road, North Ryde NSW.
3. ACSM, (2009), ACSM's Guidelines for Exercise Testing and Prescription- 8th ed, Lippincott Williams & Wilkins, 530 Walnut Street, Philadelphia.
4. Jack H. Wilmore and David L. Costill, (1994), Physiology of sport and exercise, Human Kinetics, Champaign, United States.
5. Victor L. Katch, William D. McArdle, Frank I. Katch, (2011), Essentials of Exercise Ehysiology-4th ed, Lippincott Williams & Wilkins, a Wolters Kluwer business, Philadelphia.
6. Scott K. Powers, Edward T. Howley, (2018), Exercise Physiology: Theory and Application to Fitness and Performance, Tenth Edition, McGraw-Hill Education, 2 Penn Plaza, New York.
7. Barbara Bushman, (2017), ACSM's complete guide to fitness & health, Second edition. | Champaign, IL: Human Kinetics, United States.
8. Micheal A. Clark, Scott C. Lucett, Erin McGill, Ian Montel, and Brian Sutton, (2018) NASM Essentials Of Personal Fitness Training, Jones & Bartlett Learning, 5 Wall Street, Burlington.

Course Outcomes:

On successful completion of the course, the students should be able to:

CO1	Understand the exercise responses to the disease and related diet, the prescription of exercise specific to the disease, and the benefits of physical activity and exercise training on the disease.
CO2	Evaluation of the Contribution of Exercise Testing to diagnosis and Prognosis for different Chronic and Acute Conditions
CO3	Application of exercise prescription for arthritis, osteopenia and osteoporosis
CO4	Understand acquire deep insight into effect of anemia on exercise performance
CO5	Understand acquire deep insight into exercise and dietary treatment of renal disease

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- III

COURSE CODE – 23PC1CT302

NEUROPHYSIOLOGY

Learning Objectives:

1. Explain process degeneration and regeneration of neurons
2. Discus the mechanism of Ascending and Descending tracts of spinal cord
3. Explain procedures of Higher function of Brain.
4. Understand the influence of exercise on sleep
5. Understand the concept of Hypothalamus and body‘s Homeostasis
6. Explain practice procedures and mechanism of inspiration and expiration
7. Understand the concept of lung volumes and capacities
8. Explain practice procedures of Lung function test

UNIT – I - Definition of Neurophysiology – structure and functions of neuron – degeneration and regeneration – receptors – reflex – Action potential – Depolarization – Repolarization – Synapse- Synaptic transmission – Neurotransmitters. Cutaneous and deep visceral sensation – Ascending and Descending tracts of spinal cord- Motor unit – organization of motor and sensory functions of CNS and Spinal cord.

UNIT – II- Functions of Brain stem – cerebellum – Basal Ganglia - Hypothalamus – Thalamus- cerebral cortex. Higher function of Brain – Arousal – sleep , learning memory, speech – EEG – conditioned reflex – neural basis for instinctual and Behavior emotion – control of posture – equilibrium – muscle tone. Effects of exercise on sleep- arousal – learning- memory- action potentials.

UNIT – III Diencephalon function – Hypothalamus and body‘s Homeostasis- the control of body temperature – appetite – defecation – micturition - heart rate-Sleeping- arterial Blood Pressure – Anterolateral system conducting afferent pain and temperature interacts with the thalamus.

UNIT - IV

Brain imaging techniques – CT (Computerised Tomography) – MRI (Magnetic Resonance Image) - Use of CT and MRI for identifying deep brain structure, acute pain, hemorrhage, tumors, and edema. Effect of Exercise on Nervous System.

NIT – V - Neural Adaptation to Exercise Training - Nerve Cells - Neural Communication - Higher Brain Centers - Descending Corticospinal Tracts - Motor Units Recruitment - Electromyographic Changes - Firing Rate – Synchronization - Inhibitory Mechanisms - Neural Adaptation to Running - Neural Adaptation to Concurrent Training- Exercise Enhances Brain Health.

Reference Books

1. Johnson and WU. Foundations of Cellular Neyrophysiology.
2. Hille, Ionic Chennals of Excitable Membranes, 3rd edition, SinauerAssociates, Inc.
3. Levitan and Kaczmarek, The neuron, Oxford University press.
4. William D.Mcardle, Frank I. Katch, Victor L. Katch, (2005), "Essentials of exercise physiology", Lippincott Williams and Wilkins.

Course outcome:

On successful completion of the course, the students should be able to:

CO1	Describe the degeneration and regeneration and spinal tracts.
CO2	Describe the Higher functions of Brain
CO3	Explain the Hypothalamus and body's Homeostasis
CO4	Classify different types of Brain imaging techniques
CO5	Describe the Exercise pattern for nervous systems

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- III

COURSE CODE – 23PC1CT303

STATISTICS IN EXERCISE PHYSIOLOGY

Learning Objectives:

After completing this subject we will be able to understand about

1. The basic concepts of statistics, need of statistics and central tendency & dispersion,
2. Sampling, hypothesis testing, data analysis using descriptive statistics.
3. How to analysis the problem using SPSS software.

UNIT - I Basic Definitions and Measures of Central Tendency: Meaning, Definition and Importance: Raw Score, Class Intervals -Continuous and Discrete Series, Construction of Frequency Tables, Measures of Central Tendency: Mean Median and Mode - Meaning, Definition, Importance, Advantages and Disadvantages. Calculation of Mean, Median and Mode.

UNIT - II Measures of Variability- Range, Quartile Deviation, Mean/Average Deviation, Standard Deviation-Meaning, Definition and use. The Normal Curve: Meaning, Principles, Laws, Properties and Uses. Divergence from Normality-Skewness and Kurtosis. Scoring Scales-Sigma scale, Z Scale, T Scale.

UNIT - III Correlation- Pearson Product Moment Correlation, Spearman Rank Order Correlation, Phi Correlation, Biserial Correlation Partial and Multiple Correlation. Regression Lines.

UNIT - IV Testing of Hypothesis - Procedure, Types of Hypothesis, Level of Significance, One Tailed and Two Tailed Test, Degrees of Freedom, Test of Significance for Difference of Means- t Test -Independence and Dependence Test, Z-Test, One Way Analysis of Variance.

UNIT - V Non Parametric: Chi Square Test – Equal Occurrence Test, Independence of Attributes, Contingency Coefficient; Graphical Representation – Line Diagram, Bar Diagram-Multiple Bar Diagram, , Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, and Pie Diagram – introduction of SPSS Package.

Reference Books

1. Berg, “Essential of Research Methods in health Physical education”, Lippincott William and Wilkins Publisher.
2. Rothstein, Anne L. (2006), “Research Design and Statistics for Physical Education, Englewood Cliffs, and New Jersey: prentice Hall Inc.
3. Blum, J.R., and Fattu, N.A. 1954. Nonparametric methods.Rev.Educ.Res. 24, 467-487.

4. Conover, W.J. Practical Nonparametric statistics, 2nd edition. New York; John wiley& sons, 1980.
5. Gibbons, J.D., and Chakraborti. S., Nonparametric Statistical Inference, 3d ed., New York, Marcel Dekker. 1992.
6. Clarke, David H. Clarke, Harrison H. Research Process in Physical education, New Jersey: Prentice Hall Inc.1984.
7. Jerry R. Thomas, Jack K. Nelson and Stephen J. Silverman., Research methods in Physical Activity (5th Ed), New York: Human Kinetics, 2005.
8. Kraft, Charles H. and Van Eeden. Constance A Nonparametric Introduction to Statistics. New York: Macmillian, 1968.
9. Owen, D.B. Handbook of Statiscal Tables. Reading, Mass; Addison- Wesley, 1962.
10. Siegel, Sidney. Nonparametric statistics for the behavioural Sciences. New York: McGraw-Hill, 1956.
11. VarmaJ.Prakash; Sports Statistics Copyright 2000 by Venus Publication.

COURSE OUTCOMES

On successful completion of the course, the students should be able to:

CO	Course Outcome
CO1	Understand the basic concepts of statistics, measure of central tendency, merits and demerits of central tendency.
CO2	Understand the essential measures of dispersion and checking the normality of the data
CO3	Measuring the relationship in the sample data using various correlation techniques.
CO4	Analyse the data using inferential statistical technique using estimation and testing of hypothesis.
CO5	Understand acquire deep insight into Non parametric statistics and Various types of Graphical Representation.

MAPPING WITH PROGRAMME OUTCOMES:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- III

COURSE CODE – 23PC1CT304

EXERCISE AND SPORTS FOR WOMEN

Course Objectives:

1. To understand the difference between male and female.
2. To understand physiology of menstruation, pregnancy, hormonal disorders and actions.
3. To apply and analyse the knowledge of hormonal actions, osteoporosis and its pathophysiology.

Unit I: Structural and Physiological differences between male and female: Body size, skeletal difference, Q - angle, strength difference, gender affects metabolism , Men and Women BMR formula, male and female predominant metabolic traits- Bone mass – Muscle mass difference after resistance training – Fat mass- Healthy body Composition, Body fat percentage for men and women age wise- Heart – Blood Volume – RBC- male and female respiratory system, male and female vocal cords difference – respiratory volumes and capacities difference – Difference in Gonadal hormones and Sports performance.

Unit-II Structure of the Uterus Menstruation: Definition of Menarche, Primary Amenorrhea, secondary, Dysfunctional Uterine Bleeding Amenorrhea, Menorrhagia, Metorrhagia, Oligomenorrhea, Anovulation/ anovulatory, Dysmenorrhea – Characteristics of normal menstruation – associated symptoms of menstruation- Menstrual cycle – Phases in menstrual cycle- hormones involved in menstrual cycle- Physiology of menstrual cycle – Exercise during menstrual cycles – Balance your menstrual cycle and fitness – Nutrition and training strategies during menstrual cycle - RED (Female athlete triad): Disordered eating , coaches role in recognizing disordered eating, Signs and symptoms of disordered eating- Amenorrhea – osteoporosis, Prevention strategies- menstrual cycle and Physical performance.

Unit III: Pregnancy: Gametes, formation of new individual- Definition of Pregnancy — Process of Fertilization- Fertilization and implantation – three types of embryo during the process og gastrulation - Physiological changes during pregnancy, Hematological changes, RBC and Hemoglobin, leucocytes and Immune system, Total Plasma Protein, Blood Coagulation Factor- Metabolic Changes, protein metabolism, carbohydrate metabolism, fat metabolism, Iron metabolism- Weight gain- Calcium metabolism and Locomotor system- changes in Respiratory system- Cardiovascular changes in heart, cardiac output, Blood pressure- Distribution of blood flow — Uterine Blood flow, Pulmonary blood flow, renal blood

flow- Changes in Urinary System- kidney, ureter, Bladder- Changes in AlimentarySystem- liver and gall bladder- Changes in Nervous system- Changes in Endocrine System- Placental hormone, pituitary hormone, Thyroid function- plasma volume Lactation — Process of Lactation, Physiology of Lactation- Pregnancy and Exercise- Indications and Contraindications to exercise during Pregnancy - Guidelines for exercise during and after pregnancy- Pregnancy and Nutrition

Unit- IV Causes of Endocrine disorders: Definition, Types of Endocrine Disorders - Adrenal insufficiency, Cushing's disease, Gigantism, Hyperthyroidism - Physiological changes during Peri menopause- Menopause and Post menopause , sources of estrogen at post menopause, Neurological effect of estrogen - Osteoporosis and its pathophysiology- The Potential Mechanisms of Exercise in the Prevention of Osteoporosis- Anemia, Iron deficiency anemia.

Unit V: Hormone Mechanism: Definition of hormone, General Principles of Hormone action, Mechanism of hormone action, Mode of hormone action, Four main types of receptors based on characteristics, Types of receptors- internal and external, hormones binding with receptors- Gonadal Hormones- Androgen, Estrogen, Progesteron - Women and weight training – hormonal responses to exercise - Mascularization due to exercise, Hormonal effects on fluid and electrolyte balance during exercise – aldosterone – renin- ADH - Doping and performance – women participation in contact and non-contact sports.

Reference Books:

1. Mary Lloyd Ireland, Aurelia Nattiv, (2002), ―The Female Athlete‖, Saunders
2. Kate Woolf- May, Steve Bird, Polly Davey, Jane Fallows, (2006), Exercise Prescription Physiological Foundations‖, Churchill living tone.
3. William D.Mcardle, Frank I.Katch, Victor L.Katch, (2000), ―Essentials Of Exercise Physiology‖, Lippincott Williams and Wilkins
4. Victor L.Katch, Frank.I. Katch, William D.McArdle, (1996), ―Exercise physiology‖, Williams and Wilkins.
5. William E.Garrett J.R., Donald T.Kirendall, (2000), ―Exercise and sports science‖, Lippincott Williams and Wilkins.
6. Greg McLatchie, Mark harries, Clyde Williams, John king, (2003), ―ABC of sports medicines‖, BMJ Books
7. Barbara Bushman, J.C.Young (2005), Action Plan for Menopause, Human Kinetics.
8. Peter J.Maud and Carl Foster (1995), Physiological Assessment of Human Fitness,Champaing, IL:Human Kinetics.

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	Understand the basic concepts of male and female characteristics
CO2	Understand the physiology of menstruation and Phases of menstruation.
CO3	Application of knowledge about pregnancy and physiological changes during pregnancy.
CO4	Analyse the Causes and types of Endocrine disorders and analyse osteoporosis and its pathophysiology.
CO5	Understand acquire the knowledge of General Principles , Mechanism and Mode of hormone action, Hormonal effects on fluid and electrolyte balance during exercise

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SKILL ENHANCEMENT COURSE – SEC- III

23PC1SE301	CLINICAL EXERCISE PHYSIOLOGY PRACTICUM - III

PRACTICUM

Each student is expected to practice measurement on 15 volunteers and determine Pre and Post Training/Exercise variation (To be carried out as project and on sports persons).

1. Estimation of Blood Profile
2. Measurement of blood hemoglobin (Hemometer)
3. Estimation of Hemoglobin, total Red Blood Cells and total White Blood Cells (demonstration only)
4. Measurement of Pain through visual analog scale (VAS)
5. Back Pain Functional Scale (BPFS)
6. Bone mineral density (BMD).
7. Bone density is measured with Dual-Energy X-ray Absorptiometry (DEXA)
8. Planning, Calculation of nutrient content, Preparation and Service of diets for:
    i. Osteopenia and Osteoporosis
    ii. Hematologic Disorders
    iii. Cancer
    iv. Renal Diseases
    v. Gastrointestinal Problems
9. 6 mile briskwalk Test
10. Calculating a day's energy intake and energy expenditure and evaluating the state of energy balance.
11. To perform calorie calculation using Harris Benedict equation.

SEMESTER- III

ABILITY ENHANCEMENT COURSE (AEC)-III

COURSE CODE – 23PC1AE301

LIFE SKILLS MANAGEMENT

Unit I: Introduction: Soft Skills - Concepts and Definition- Need and importance of Soft Skills – Developing Soft Skills – Implications on Youth Development .

Unit II: Behavioral Skills : Attitude, Lateral Thinking , Emotional Intelligence, Leadership, Team Building and Interpersonal Skills.

Unit III Social Skills and Negotiation Skills: Self Awareness and Empathy , Influencing, - Effective Communication –Oral Presentation Skills – Interviewing – Delegating.

Unit IV: Thinking Skills: Critical Thinking and Creative Thinking – Problem Solving and Decision Making skills.

Unit V: Coping Skills : Coping with stress and Emotions – Conflict Resolution – Negotiating - Time and Stress Management Skills.

Reference Books

1. G. Ravindran, S P Benjamin, Elango and R. Arokiam (2007) - Success through Soft Skills, ICT
2. Kamin M (2013) Soft Skills Revolution: A Guide for Connecting with Compassion for Trainers, Teams, and Leaders. ISBN: 978-1-118-10037-0

Course Outcomes

On successful completion of the course, the students should be able to:

CO	Course Outcome
CO1	Understand the basic concepts, Need and importance of Soft Skills
CO2	Understand the essential of Behavioral Skills
CO3	Application of Various Social Skills and Negotiation Skills training.
CO4	Analyse the Thinking Skills
CO5	Understand acquire deep insight into Coping with stress and Emotions.

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	S	L	M	S	M
CO 2	S	M	L	S	M
CO 3	S	M	M	S	S
CO 4	S	M	M	S	M
CO 5	S	S	M	S	S

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- IV

SEMESTER- IV

COURSE CODE – 23PC1CT401

CLINICAL EXERCISE PHYSIOLOGY- II

Learning Objectives:

1. To understand the exercise and diet prescription for specific disease, disorder, and the benefits of diet, physical activity and exercise training on the disease.
2. To understand the Legal and Ethical Considerations of aerobic training, strength training and flexibility training and diet on specific disease, disorder.

UNIT – I overweight and obesity: Definition of overweight and obesity - Assessment of overweight and obesity- Etiology of Obesity - Health Problems Associated with Excessive Weight and Obesity -Prevalence of obesity - Factors that contribute to obesity - Physiological aspect of obesity -Types of obesity - Dietary Modification of obesity - Exercise Testing -Exercise prescription for obesity.

UNIT – II Diabetes Mellitus: Definition of Diabetes Mellitus – Prevalence of Diabetes Mellitus – Etiology of Diabetes Mellitus – Diabetes Prevention -Types of Diabetes Mellitus – Symptoms, Diagnosis, and Treatment of Diabetes - complications of Diabetes Mellitus – Healthy Approaches to Managing Diabetes -Exercise and Diabetic Diet prescription for Diabetes Mellitus.

UNIT – III Cardiovascular disease (CVD): Definition of Cardiovascular disease (CVD)-Types of Cardiovascular Disease - Pathophysiology of Coronary Artery Disease - Risk factors for Cardiovascular disease (CVD)- Sign and symptoms of Cardiovascular disease (CVD)- Cardiovascular Disease Prevention: Dietary Management - Exercise prescription for Cardiovascular disease (CVD.

UNIT – IV Hypertension: Definition of Hypertension - Pathophysiology of Hypertension- Prevalence of Hypertension - Risk factors for Hypertension - Regulation of blood pressure- Causes of Hypertension-Classification of hypertension - complications of Hypertension - Prevention of Hypertension: Dietary Management -Exercise prescription for Hypertension.

UNIT – V Pulmonary Diseases and Disorders: Definition of Pulmonary Diseases and Disorders - Restrictive Lung Diseases – Chronic Obstructive Pulmonary Disease: Chronic Bronchitis – Emphysema- Cystic Fibrosis- Asthma- Diagnosis and Causes - Prevention/Relief of Asthma- Exercise-Induced Asthma- Testing and Evaluation - Pulmonary Rehabilitation and Exercise Prescription.

Reference Books:

1. ACSM, (2010), ACSM's Resources for Clinical Exercise Physiology Musculoskeletal, Neuromuscular, Neoplastic, Immunologic, and Hematologic Conditions-Second Edition, Lippincott Williams & Wilkins, 530 Walnut Street, Philadelphia.
2. Louise Burke, Vicki Deakin, (2010), Clinical sports Nutrition-4th ed, McGraw-Hill Australia Pty Ltd, Level 2, 82 Waterloo Road, North Ryde NSW.
3. ACSM, (2009), ACSM's Guidelines for Exercise Testing and Prescription- 8th ed, Lippincott Williams & Wilkins, 530 Walnut Street, Philadelphia.
4. Jack H. Wilmore and David L. Costill, (1994), Physiology of sport and exercise, Human Kinetics, Champaign, United States.
5. Victor L. Katch, William D. McArdle, Frank I. Katch, (2011), Essentials of Exercise Ehysiology-4th ed, Lippincott Williams & Wilkins, a Wolters Kluwer business, Philadelphia.
6. Scott K. Powers, Edward T. Howley, (2018), Exercise Physiology: Theory and Application to Fitness and Performance, Tenth Edition, McGraw-Hill Education, 2 Penn Plaza, New York.
7. Barbara Bushman, (2017), ACSM's complete guide to fitness & health, Second edition. | Champaign, IL: Human Kinetics, United States.
8. Micheal A. Clark, Scott C. Lucett, Erin McGill, Ian Montel, and Brian Sutton, (2018) NASM Essentials Of Personal Fitness Training, Jones & Bartlett Learning, 5 Wall Street, Burlington.

Course Outcomes (COs)

By the end of the course, the student will be able to

CO1	To understand the epidemiology and prevention related to clinical disorders conditions with special attention to metabolic conditions.
CO2	To understand the clinical considerations including signs, symptoms and risk factors, diagnostic and laboratory evaluations graded exercise testing, and treatment.
CO3	To understand the physiology, pathophysiology and complications related to these same important clinical diseases and conditions.
CO4	To understand the rehabilitation exercise considerations that need to be made with regard to these same conditions including the risks of exercise with disease, the exercise responses to the disease.
CO5	The prescription of exercise specific to the disease, and the benefits of physical activity and exercise training on the disease

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	S	L	M	S	M
CO 2	S	M	L	S	M
CO 3	S	M	M	S	S
CO 4	S	M	M	S	M
CO 5	S	S	M	S	S

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- IV

COURSE CODE – 23PC1CT402

ENDOCRINE PHYSIOLOGY

Learning Objective (LO):

By the end of the course, the student will be able to

1. Explain process Principles of Endocrinology
2. Discus the mechanism of Negative feedback loop and Positive feedback loop
3. Understand functions of Secretions of Anterior Pituitary.
4. Understand functions of Secretions of posterior Pituitary
5. Understand the concept of Functional anatomy of the thyroid gland
6. Explain about Adrenal gland -Adrenal Cortex and medulla
7. Understand the Islets of Langerhans, beta, alpha, delta cells

UNIT I: Meaning and Definition of Endocrinology- Endocrine and Exocrine Gland - Classes of Hormones, Cascades - Neuroendocrine interactions – Endocrine glands and endocrine tissues - Chemical classification of hormones and their synthesis – Types of Hormones and its Class - Regulation of hormone secretion. Negative feedback loop and Positive feedback loop- Cyclic variations of hormones secretion.

UNIT II: Hypothalamus and Pituitary – Secretions of Anterior Pituitary – Posterior pituitary hormones. Control and release of Tropic and Non hormones, hormones with direct effects on nonendocrine target tissues - Releasing and inhibitory hormones of the hypothalamus. Hypothalamus and Posterior Pituitary - Hormones of the posterior pituitary, Secretion and function of anti-diuretic hormone (ADH) and oxytocin - Signals generating stimuli for ADH (AVP) secretion - The major actions of ADH. Target cells, intracellular mechanism – Exercise adaptation on Pituitary glands

UNIT III: Thyroid Gland - Functional anatomy of the thyroid gland - thyroid hormones (TH).Role of thymoglobulin. - Transport of TH by the blood. – Peripheral metabolism of TH. – TH receptors and action of TH on target cells. – Role of TH in normal body growth and development of CNS. - Effect on basal metabolic rate. - Cardiovascular system. - Respiration - GIT. –nervous system. - Other endocrine glands. - Carbohydrate, lipid and protein metabolism. - Regulation of TH secretion and synthesis - Exercise adaptation on Thyroid glands

UNIT IV: Adrenal gland -Adrenal Cortex – Glucocorticoids. - Transport of glucocorticoids in blood. – Metabolic actions of cortisol, principal target tissues. Mineral corticoids. – Adrenal steroids with mineral corticoid activity. - Transport of aldosterone in the blood. - Target cells and

cellular mechanism of aldosterone action. - Effect of aldosterone in tubular epithelium of the kidney, on extracellular fluid volume, and blood pressure. - Regulation of aldosterone secretion. Renin-angiotensin system, plasma potassium and sodium levels, ACTH. Adrenal Medulla. - Catecholamines, functions of Catecholamines and storage. Mechanism of the secretion and degradation of catecholamines - Exercise adaptation on Thyroid glands

UNIT V: Pancreas. – Islets of Langerhans, beta, alpha, delta, and PP cells. Secretion of pancreatic hormones. Neural and hormonal control of insulin secretion. - Insulin receptor and mechanism of cellular action. – Effect of insulin on carbohydrate, lipid, and protein metabolism in the liver, muscle, and adipose tissue- glucagon. Secretion and action of glucagon, effect of glucagon, role on metabolic process. Gonadal hormones - types- secretions and its actions. Effects of exercise on gnadal hormones - Exercise adaptation on Pancreas.

Reference Books

1. Degroot LJ, Jameson JL (eds): Endocrinology, 5th ed. Philadelphia,Elsevier, 2006
2. Gereben B et al: Cellular and molecular basis of deiodinase-regulated thyroid hormone signaling. Endocr Rev 29:898, 2008
3. Golden SH et al: Clinical review: Prevalence and incidence of endocrine and metabolic disorders in the United States: A comprehensive review. J ClinEndocrinolMetab 94:1853, 2009
4. Hammes A et al: Role of endocytosis in cellular uptake of sex steroids. Cell 122:751, 2005

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	Describe the Principles of Endocrinology.
CO2	Describe the functions of Anterior and posterior Pituitary
CO3	Thyroid Gland and its secretions and action
CO4	Classify different functions of adrenal cortex and medulla
CO5	Describe the Effect of insulin on carbohydrate, lipid, and protein metabolism

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- IV

COURSE CODE – 23PC1CT403

ERGOGENIC AIDS AND SPORTS PERFORMANCE

Learning Objectives

1. To understand the importance of supplements and ill effects of ergogenic aids
2. To apply the knowledge and to describe the ill effects of ergogenic aids to athletics
3. To educate the athletics about the use of doping substances will harm the important system and further will decline the performance.
4. To gain understanding of the various supplements and drugs used in sports and the nodal bodies for controlling doping

Unit: 1 Introduction to Ergogenic aids - History and development of Ergogenic aids - types of Ergogenic aids - World Anti-Doping Agency (WADA) and National Anti- Doping Agency (NADA) – International Olympic Committee (IOC) - Doping agency - Doping in sports - Blood Doping in sport – effects of blood doping - Erythropoietin – effects of exogenous administration of erythropoietin.

Unit: II Diuretics - Target organ for Diuretic Action - Narcotic Analgesics & Athletic performance - mechanism of Action - Non-steroidal Anti - inflammatory Drugs & Corticosteroids, Narcoleptics: Beta-Adrenergic Antagonists - Beta-Blockers **–** Ephedrine- Cocaine- Marijuana.

Unit: III Prohibited Performance enhancing Substances: Action and side effects of Anabolic Steroids - health risk of steroid abuse - Effects of Anabolic Steroids abuse - Action and side effects of Testosterone Precursors (Prohormones) - Action and side effects of Androstenedione - Action and side effects of Dehydroepiandrosterone (DHEA) - 19- nonandrostenedione and 19-norandrostenediol – Action and side effects of human Chorionic Gonadotropin (HCG) - Action and side effects of Human Growth Hormone - Amphetamines -Beta-2-Agonists.

.**Unit: IV Common Performance enhancing Substances:** Definition of Dietary Supplements - Weight-Loss Supplements - Health Supplements - Potential Benefits, Risks, and Side Effects: Creatine - Branched chain amino acids (BCAA)- Whey and Casein- Arginine - Beta-alanine - Caffeine - Glycerol - Bicarbonate-antioxidants - Liquid meal supplements - Sports drinks- Sports Gels - Energy bars - Beetroot juice- Vitamin D.

Unit: V Supplements under consideration: Glutamine - Ribose - Colostrum - Beta-Hydroxy-Beta Methyl butyrate (HMB) - L-Carnitine – Chromium- Coenzyme Q10 - Ginseng – Pyruvate - Vitamin Supplement- Omega-3 fatty Acids - Medium-Chain Triglycerides – calcium - Iron Supplement- - Nitrate- Probiotics.

Reference Books

1. Michael S. Beatrice, Charles E. Yesalis, (2002), "Performance Enhancing Substances in Sport and Exercise", Human kinetics.
2. Melinda Manore, Janice Thompson, (2000), "Sport Nutrition for Health and Performance", Human kinetics.
3. Anita Bean,(2014), Food *for* Fitness, How to eat for maximum performance-4th edition, Bloomsbury Publishing Plc, 50 Bedford Square, London.
4. Cardwell, Glenn, (2012), Gold medal nutrition, Human Kinetics, P.O. Box 5076, Champaign, USA.
5. G. Gregory Haff, N. Travis Triplett, (2016), Essentials of strength training and conditioning / National Strength and Conditioning Association, Fourth edition. Human Kinetics, P.O. Box 5076, Champaign, USA.
6. Williams, Melvin H. | Rawson, Eric S. | Branch, J. David, (2017), Nutrition For Health, Fitness And Sport: Eleventh Edition, McGraw-Hill Education, 2 Penn Plaza, New York, USA.
7. Hayley Daries, (2012) Nutrition for Sport and Exercise**-** A Practical Guide, John Wiley & Sons, Ltd, The Atrium, Southern Gate, Chichester, West Sussex,PO19 8SQ, UK

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	Understand the evolution of ergogenic aids or drugs among athletes and government regulations
CO2	To understand the different types of metabolite and botanical ergogenic supplements
CO3	Understand the Prohibited Performance enhancing Substances
CO4	Understand the different types of Common Performance enhancing Substances
CO5	Understand the different types of micronutrient Supplements

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

SEMESTER- IV

COURSE CODE - 23PC1TH403

MASTER'S THESIS

Learning Objectives:

- To enable the students to develop skills and competencies for conducting rigorous, theoretically correct and practically relevant research in Exercise Physiology and Nutrition

Learning Outcome:

- By completing the Master's thesis, students will demonstrate their academic ability, i.e. their ability to think critically, write according to academic standards, and conduct independent research that is critical, methodical, and systematic.
- A student admitted to M.Sc. Exercise Physiology and Nutrition shall submit a thesis at the end of IV Semester and must submit his/her Synopsis and get it approved by the Head of Department on the recommendation of Department Research Committee (DRC).
- The beginning of the process of Thesis will start in the beginning of III Semester in form of preparation and submission of synopsis, facing and getting final approval from the DRC.
- The thesis must be submitted not less than one week before the beginning of the IV Semester end Examination.
- The candidate has to face the Viva-Voce examination conducted by DRC.

Structure of the Thesis:

1. Title Page
2. Certificate
3. Abstract (200-250 words)
4. Acknowledgements
5. Table of Contents
6. List of Figures, Tables, Illustrations,

Chapter 1: Introduction

Chapter 2: Review of Literature

Chapter 3: Methods

Chapter 4: Results and Discussion

Chapter 5: Summary and Conclusion

- References

SKILL ENHANCEMENT COURSE – SEC IV

23PC1SE301	CLINICAL EXERCISE PHYSIOLOGY- II PRACTICUM - IV

Each student is expected to practice measurement on 15 volunteers and determine Pre and Post Training/Exercise variation (To be carried out as project and on sports persons).

1. Informed Consent
2. Medical History
3. Physical Activity Readiness Questionnaire (PAR-Q)
4. To measure Blood Pressure by using Sphygmomanometer
5. Estimation of mean arterial Blood Pressure
6. Lipid Profile Analyses
7. To measure vital capacity and total lung capacity using spirometer
8. Assess a Patient's Nutritional Status
9. Identify patients' nutritional problems and apply the most accurate treatments and diets in each case
10. Know food compositions, identify their utilities and add them to the diets of patients who need them
11. Identify the benefits of the Mediterranean diet, DASH diet
12. Planning, Calculation of nutrient content, Preparation and Service of diets for:
    i. Overweight and obesity
    ii. Diabetes Mellitus
    iii. Hypertension
    iv. Cardiovascular disease
13. To find WHR of minimum 20 subjects

ABILITY ENHANCEMENT COURSE (AEC) - IV

COURSE CODE – 23PC1AE401

YOGA EDUCATION

Learning objectives

Students will be able to:

1. The Students will acquire knowledge and understanding of YOGA.
2. Students become proficient in the knowledge, skill and practical of yoga and tactical efficiency, rules of the game and training related to yoga

UNIT I- Yoga: Meaning and Definition. Origin of Yoga, Historical development of yoga in India - Hatha yoga texts. Systems of Yoga: Karma yoga - Jnana yoga - Bhakthi yoga - Raja yoga. Eight limbs of yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi. International Yoga Day -Yogic Diet.

UNIT II- Schools of yoga - Effect of yoga on various systems of the body: Muscular system - Circulatory system - Endocrine system - Respiratory system - Nervous system - Digestive system - Yoga for Physical Fitness, Yoga for Health and Wellness. Yoga for Diseases.

UNIT III Loosening the joints - Suryanamaskar (Bihar school of yoga). Meaning of Asana Classification - differences between asanas and physical exercises - Techniques and benefits. Standing Asana: Vrkshasana –Trikonasana - Padhahastasana. Seated Asanas: Siddhasana – Padmasana - Paschimottanasana. Inverted asanas: Sarvangasana - Halasana. Prone position: Mayurasana - Sirsasanana. Back bend asanas: Bujangasana –Salabhasana – Dhanurasana - Ushtrasana. Supine position: Navasana, Suptavajrasana, Twisting: Vakrasana, Ardhamatsyendrasana, and Kukutasana.

UNIT IV Pranayama: Meaning and Definition – Concept of Pranayama – Nadis – Ida nadi – Pingala Nadi – Sushumna nadi – Controlling of breath: Puraka – Kumbhaka – Rechaka – Guidelines for practicing Pranayama – Benefits of Pranayama – Types of Pranayama: Nadi Suddhi – Nadi Shodhana – Surya Bhedana – Kapalabhati – Bhastrika – Sitkari – Sitali – Bhramari – Ujjayi. Bandhas: Meaning and Definition – Types: Jallandra – Uddiyana – Mula.

UNIT V Meditation: Meaning and Definition – Concept of meditation – Types of meditation – Physiological benefits of meditation – yoga and competition – Principles of yogic Diet –

Integration of Yoga with modern education – yoga institutions in India and Abroad – General Yogic Schedule.

Text Book

1. George Feuerstein. (1975).Text Book of Yoga. London: Motilal Bansaridass Publishers (P) Ltd.
2. Gore. (1990). Anatomy and Physiology of Yogac Practices. Lonavala: Kanchan Prkashan.
3. Iyengar, B. K. S. (2000). Light on Yoga. New Delhi: Harper Collins Publishers.
4. Swami Satyananda Saraswathi. (1984). Kundalini and Tantra. Bihar: Yoga Publications Trust.
5. Swami Kuvalayananda. (1998). Asanas. Lonavla: Kaivalyadhama. Publication.

Course Outcome

After successful completion of the course the students will be able to

CO1	Understand the basic Concepts of Yoga
CO2.	Apply the principles of Yoga to live healthy and active life style.
CO3.	Promote the awareness of health through yoga
CO4.	Analyze the techniques and of body posture to bring out healthy change.
CO5.	Able to execute loosening exercise, Asanas and Pranayama.

Mapping with Programme Outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

DISCIPLINE SPECIFIC ELECTIVE (DSE)

ODD SEMESTER I & III

Subject Code	Name of the Paper
23PC1DSE001	Exercise and Nutritional Biochemistry
23PC1DSE002	Exercise Science and Functional Assessment
23PC1DSE003	Clinical Sports Nutrition
23PC1DSE004	Nutrition and Immune Function In Athletes

COURSE CODE – 23PC1CE001

EXERCISE AND SPORTS BIOCHEMISTRY

Learning Objectives:

1. To produce an advanced understanding of the core principles and topics of Biochemistry and their experimental basis and to enable students to acquire a specialized knowledge and understanding of selected aspects by means of Lecture.
2. Demonstrate a thorough knowledge of experimental approaches to solving problems of a chemical nature and have an ability to extend that knowledge to the solution of new problems.
3. To demonstrate technical meaning of fundamental Laboratory Skill, use proper laboratory safely in practices and demonstrate proficiency in using computers to solve chemical problems

UNIT – I Sports Biochemistry: Definition and Importance. Composition of plasma. Energy and Calorie (Kilocalorie) - Definition .Free Energy- Definition and its units. Mitochondria-Structureand function. ATP, ADP, AMP and Creatine Phosphate-Definition and its formation and breakdown. Role of Oxygen in Energy metabolism. Catabolism and Anabolism–Definition and its Process.

UNIT – II- Role of Glucose in Carbohydrate Metabolism: Transport of Glucose through the Cell Membrane. Glycogenesis—the Process of Glycogen Formation. Glycogenolysis-Breakdown of Stored Glycogen. Role of Insulin, Epinephrine and Glucagon in glucose transport and metabolism. Glycolysis and the Formation of Pyruvic Acid. Citric Acid Cycle (Krebs cycle). ETS (Oxidative Phosphorylation).Anaerobic Glycolysis (Lactic acid System) Lactic metabolism (CORI Cycle).Pentose Phosphate Pathway (Phosphogluconate Pathway).Gluconeogenesis. Role of Carbohydrate (Breakdown of Glucose) In Energy Metabolism.

UNIT – III Lipid: Basic Chemical Structure of Triglycerides. Lipoproteins-Classification, Importance, Functions and normal values. Fat Deposit in adipocytes. Triglycerides for Energy. Hydrolysis of Triglycerides. Synthesis and Breakdown of Fatty acid and Triglycerides- Beta Oxidation of Fattyacids. Formation and Uses of Phospholipids. Formation and Uses of Cholesterol. Factors That Affect Plasma Cholesterol Concentration—Feedback Control of Body Cholesterol.

UNIT – IV- Basic Chemical Structure of Amino Acids: Transport and Storage of Amino Acids. Functional Roles of the Plasma Proteins. Essential and Nonessential Amino Acids. Use of

Proteins for Energy- Transamination.- Deamination, Urea Formation by the Liver and Oxidation of Deaminated Amino Acids Ketogenesis-Definition. Hormonal Regulation of Protein Metabolism. Effect of Starvation on Protein Degradation.

UNIT – V Acid-base balance: Causes of Alteration in Acid-Base Balance- Volatile acids and Non-volatile acids. Role of different Buffer System in Acid-Base Balance by acid-base Buffer System- Bicarbonate buffer system, Phosphate buffer system and Protein buffer system .Acid-Base Balance by Respiratory Mechanism - Regulation of Acid-Base Balance by Renal Mechanism.

Reference Books

1. Lorry G.Shaver(1981) "Essentials Of Exercise Physiology" Surjeeth Publications, Delhi
2. Mcardle (2000) "Essentials of Exercise Physiology" 3rd edition, lippincoptwillams and Wilkins publisher.
3. Sharon, (2003) "Exercise Physiology for Health Fitness and Performance" LippincoptWillams and Wilkins Publisher.
4. Clerk, D.H (1975.) "Exercise Physiology" Prentice – Hall, Inc., Englewood Cliffs, New Jersey.
5. Michael j.Gibney, Ian A. Macdonald and Helen M.Roche (2007), Nutrition *and Metabolism*. Publisher. Blackwell Science, Oxford. Pg 126-127,135, 137,277.

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	Describe the Biochemistry their role in energy production during exercise
CO2	Explain the chemical structure and functions of carbohydrates.
CO3	Using the knowledge of lipid structure and function, explain how it plays a role in Signalling pathways
CO4	Describe the various levels of structural organisation of amino acids and the role of proteins in biological system
CO5	Applying the knowledge of acid base balance sequencing in research and diagnosis

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**

CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

COURSE CODE – 23PC1CE002

EXERCISE SCIENCE AND FUNCTIONAL ASSESSMENT

Course Objectives:

1. To feel comfortable selecting and performing appropriate fitness assessments, including all related equipment manipulation, calculations, conversions, data collection/summary, and interpretation of results.
2. To explain the anatomy, physiology, and biomechanics underlying various fitness assessments.

Learning Out Come:

1. To consider scope of practice when selecting fitness assessments and interpreting data from assessments.
2. To appreciate the historical development of modern fitness assessments, especially with regard to trends and technology.
3. To appreciate the value of the methods section of a scientific publication.
4. To appreciate how and why fitness assessments are used in various settings: fitness industry, sports, clinical, and even basic sciences.

UNIT – I Diagnostic testing: Pretesting Guidelines and procedure – Laboratory and Field testing – Cardiovascular and Pulmonary assessment – Treadmill and Ergometers – Metabolic measurement equipment – pulmonary function equipment – Electrocardiograph equipment – pulse oximeter – Blood pressure assessment.

UNIT – II Musculoskeletal Function assessment: Electromyography equipment – force platforms - Pressure Sensitive Insoles –Isokinetic Dynamometers. Magnetic Resonance Imaging – Magnetic Resonance Spectroscopy – Muscle Biopsy Equipment Computer Tomography – Isometric Strength Tests - Isometric Handgrip Strength Test-YMCA Bench Press Protocol.

UNIT – III Energy Balance Assessment: - Measuring energy intake – Measuring energy expenditure - Whole room indirect calorimeter – Double Labeled Water – other Assessment Instruments – Heart rate monitor – pedometer Accelerometers.

UNIT – IV Measuring Body Composition: Densitometry- Dual Energy x- ray Absorptiometry – Bio- Electrical Impedance – Skinfold assessments– Anthropometric measurements.

UNIT V Blood collection and analysis: General equipment – Common blood measures – routine check-up – haemoglobin- urine analysis- urea, uric acid and lipid profile- Blood Lactate Measurement at Rest - Lactate Analyzer Test - Blood Lactate after Anaerobic Exercise.

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	Describe the Preliminary Health Evaluation
CO2	Understand the different methods of clinical assessment
CO3	Understand the different methods of assessment of components of Health Related physical fitness
CO4	Understand thedifferent methods of assessment of different components of physical fitness
CO5	Understand the different methods of assessment of VO_2 Max Test Protocol

Mapping With Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

COURSE CODE – 23PC1DSE003

CLINICAL SPORTS NUTRITION

Learning Objectives:

Focuses on the components of the fitness associated with optional health

1. Learners will explore the associations among physical activity, health and hypothetic disease, health screening, principles of assessment.
2. Describe and discuss the relationship between physical activity and health across the lifespan.
3. To understand the nutritional requirements and considerations for athletes with clinical conditions, special conditions and special dietary need

Unit I: Nutritional Genomics: Genetic Fundamentals - Genetics and Genomics: Nutritional Genomics, Nutrigenetics, and Nutrigenomics - Modes of Inheritance: Mendelian inheritance, mitochondrial inheritance, and epigenetic inheritance- Genetics and Nutrition Therapy- Nutrigenomic Influences on Health and Disease- Epigenetic Influences on Health and Disease- Nutritional Genomics and Chronic Disease.

Unit II: Disordered eating in athletes: Disordered eating categories/classifications- Prevalence of disordered eating among athletes- Etiology of disordered eating among athletes- Performance and health consequences disordered eating- Prevention of disordered eating among athletes- Management of disordered eating among athletes, Female Athlete Triad- Prevention and treatment of the Female Athlete Triad.

Unit III: Bone, exercise and nutrition: Definitions of sports osteopenia and osteoporosis- Exercise effect on bone in athletes and healthy people- Calcium intake and bone mineral changes at various life stages- Effect of calcium intake during childhood and adolescence on bone mineral density- Effect of calcium intake on BMD during the premenopausal years, early postmenopausal and later postmenopausal years on BMD- Effects of amenorrhea on bone mass- Stress fractures in athletes with menstrual disturbances.

Unit IV: Iron- Stages of iron depletion- Iron Depletion in Athletes- Sport Anaemia- Causes of iron deficiency in athletes- Assessment of iron status of an athlete: Serum ferritin- Serum transferrin- Red blood cell- Hemoglobin and haematocrit- Hepcidin- Clinical symptoms- Dietary intervention for iron depletion and iron deficiency.

Unit V: Gut Health : Definition of Gut Health – sign of poor Gut Health – signs of good Gut health – Gut Health and Its importance – Brain –Gut connection – Gut Health and Skin Health –

Gut microbiome – Gut Health and Depression – Gut Health and Emotional Wellbeing – Best Probiotics for Gut Health – Gut Health Diet – IBD , IBS – signs and symptoms – food to avoid.

Reference Book:

1. Louise Burke and Vicki Deakin, (2010), Clinical sports nutrition, 4th ed., McGraw-Hill Australia Pty Ltd

COURSE OUTCOME:

On successful completion of the course, the students should be able to:

CO1	Understand the Nutritional Genomics
CO2	Explain the Disordered eating in athletes
CO3	Understand the knowledge of Bone, exercise and nutrition
CO4	Describe the Sport Anaemia and Causes of iron deficiency in athletes
CO5	Applying the knowledge of nutritional requirements for athletes with Gut Health and Its Importance

MAPPING WITH PROGRAMME OUTCOMES:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

COURSE CODE – 23PC1DSE003

NUTRITION AND IMMUNE FUNCTION IN SPORTS AND EXERCISE

Course Objectives:

1. To know about the adequate intake of iron, zinc and vitamins for the maintenance of micronutrients.
2. To know about the athlete exercising in carbohydrate-depleted state and IMMUNE function.

Learning Objectives:

1. Students will apply the concept of nutritional intervention to immune system of the athlete in various sports.
2. They will also insist the athlete to maintain the IMMUNE system for better performance.

UNIT – I Immune system: Meaning and Definition of Immune system – Functions of the immune system- Components – Leukocytes – Definition and Types of Neutrophils – Eosinophils – Bosophils – Monocytes - Lymphocytes - function and characteristic - Factors Affecting Immune Function.

UNIT – II Immune response – mechanism of general response – Clonal selection and immunological memory – cellular immune response –Humoral fluid response – Antigen – Antibody reactions – Complement – Disorders of the immune mechanism.

UNIT – III Effect of exercise on the immune system – Acute effect of exercise on immune function – Chronic effect of exercise on immune function – Guidelines for the athlete to reduce the risk of infection – nutritional counter and measures.

UNIT – IV Nutritional Manipulation - immune depression in athletes –nutritional influence on immune function in athletes – Role of carbohydrate, protein and fat in immune function – pre and post exercise.

UNIT – V- Immune function and nutrition of elite athletes -Nutritional influence – role of vitamins and minerals in immune function – Effect of Dietary deficiency and excess - Dietary Sources – RDA – Fluid Concentration.

Text Book

1. Asker Jeukendrup and Michael Gleeson (2004) “Sports nutrition” Human Kinetics, inc
2. Nieman, D.C., and B.K. Pederson (2000) “Nutrition and Exercise Immunology”. CRC press: Boca Raton, FL.

Reference Book

Journal of sports sciences ISSN 0264 – 04147x online copyright 2004 Taylor & Francis Ltd

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	To understand the functions of the immune system and Factors Affecting Immune Function.
CO2	Analyzing the Disorders of the Immune Mechanism.
CO3	Gain knowledge on the Effect of Exercise on the immune system
CO4	Gain knowledge on the nutritional influence on immune function in athletes
CO5	Understand the Immune Function and Nutritional needs of athletes

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

DISCIPLINE SPECIFIC ELECTIVE (DSE)

EVEN SEMESTER II & IV

Subject Code	Name of the Paper
PEN18DSE005	Strength Training and Conditioning for Fitness
PEN18DSE006	Exercise Rehabilitation and Injury Management
PEN18DSE007	Renal Physiology
PEN18DSE008	Training And Performance

COURSE CODE – UEN23CE005

STRENGTH AND CONDITIONING FOR FITNESS

Learning Objectives:

1. This is designed to give opportunity to participate in many different activities to learn the immediate and long term benefits of physical activity
2. To develop personal strength training programme.
3. To Interpret and apply scientific knowledge and literature relating to strength training.
4. Understand the importance of organizations admin distraction and leadership and their importance in the development of a safe and effective training programs.

UNIT – I Introduction to Wellness and Lifestyle Management : Definition and Meaning of Wellness - Dimensions of Wellness: Physical Wellness, Emotional Wellness, Mental Wellness, Social Wellness, Environmental Wellness, Occupational Wellness, and Spiritual Wellness – Wellness issues for diverse populations – Behaviours that contribute to wellness – Wellness and Health – Wellness and Physical Activity – Wellness through Life style management – Self-Planning for Healthy- Lifestyles Wellness in the digital age

UNIT II Introduction to Fitness and Lifestyle Management : Definition and Meaning of Fitness - Physical Activity and Exercise for Health and Fitness - Physical Activity and Exercise Recommendations for Promoting General Health, Fitness, and Weight Management- **Components of physical fitness : Health Related fitness components** - Cardiorespiratory endurance, Muscular strength, Muscular endurance, Flexibility, Body composition - **Skill (Neuromuscular) Related Components of Fitness** – Speed, Power, Agility, Balance, Coordination, Reaction and movement time.

UNIT – III Introduction Meaning and Definition of Strength training and conditioning- Brief History of Strength Training and Conditioning - Strength and Conditioning Today - Benefits of resistance training - **SAID Principle:** Mechanical specificity-Neuromuscular specificity-Metabolic specificity-Progressive Adaptations from Resistance Training: Stabilization-Muscular endurance-Muscular hypertrophy-Strength-Power-Resistance Training Program Design: Exercise Selection-Exercise order and Workout Structure-Intensity-Training Volume-Rest Intervals-Repetition Velocity-Frequency.

Unit IV Principles of Physical Training: FITT-VP principle - Physical activity pyramid - Designing Exercise Program - Guidelines for Training - ACSM Exercise Recommendations for Fitness Development in Healthy Adults - Health and fitness benefits of different amounts of physical activity and exercise - Choosing a Fitness Center. **Developing a Personal Fitness Plan**: Set Goals - Select Activities - Set a Target Frequency, Intensity, and Time (Duration) for

Each Activity - Set Up a System of Mini-Goals and Rewards - Include Lifestyle Physical Activity and Strategies to Reduce Sedentary Time in Your Program - Importance of Reducing Sedentary Time - Develop Tools for Monitoring Progress - Make a Commitment - Exercise Guidelines for Life Stages - Exercise Guidelines for People with Special Health Concerns

UNIT – V Warm-up and cool down: Definition of Warm-up and cool down - Physiology of Warming Up- Flexibility- Flexibility and Injury Prevention- Factors Affecting Flexibility- Types of Stretching: Static Stretching- Dynamic Stretching- Proprioceptive Neuromuscular Facilitation Stretching - Flexibility Training Guidelines - The Cool down

Reference Book

1. Micheal A. Clark, Scott C. Lucett, and Brian G. Sutton,(2012), NASM Essentials of Personal Fitness Training, Fourth Edition, Lippincott Williams & Wilkins, a Wolters Kluwer business, Two Commerce Square, 2001Market Street, Philadelphia, USA.
2. Nicholas Ratamess, (2012), ACSM's Foundations of Strength Training and Conditioning, Lippincott Williams & Wilkins.
3. Thomas R. Baechle, and Roger W. Earl, (2008), Essentials of Strength Training and Conditioning, Human Kinetics, P.O. Box 5076, Champaign, USA.

Course Outcomes

After successful completion of the course the student will be able to

CO1	Explain the physiological basis for Strength training and conditioning
CO2.	Identify Competitive forms of Resistance Training
CO3.	Discuss appropriate SAID Principle for various age groups
CO4.	Discuss appropriate Cardiorespiratory Fitness for various age groups
CO5.	Demonstrate the skills plan and prepare appropriate and sustainable Warming Up and Flexibility various age groups

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

COURSE CODE – 23PC1DSE006

EXERCISE REHABILITATION AND INJURY MANAGEMENT

Learning Objective:

1. Understanding injuries and rehabilitation in sports
2. Concept of first aid, hydrotherapy, thermotherapy and different electrotherapeutic modalities.
3. Critically analyse current exercise guidelines, scientific papers and reviews to prescribe suitable exercise programmes for people with a variety of chronic conditions.
4. Critically analyse the relationship between physical activity and exercise on health outcomes in a diverse range of participant groups and appreciate the importance of equality.
5. Demonstrate a thorough understanding of the pathophysiology, symptoms, and diagnosis of a range of chronic conditions.
6. Demonstrate competency in assessing and monitoring the health and wellbeing of a client through appropriate evidence-based testing and exercise prescription/lifestyle intervention,
7. Demonstrating professionalism by practising key personal qualities such as compassion, empathy, flexibility, equality, diversity and understanding.
8. On successful completion of this module students will be able to comprehensively and systematically appraise the standard principles and stages of the rehabilitation process.
9. On successful completion of this module students will be able to comprehensively evaluate the composition of the rehabilitation team and how the individuals interact to allow the athlete to return to performance.
10. On successful completion of this module students will be able to comprehensively express how tissues respond to injury and how their recovery can be optimised through rehabilitation and training principles.

Unit I- Principles of Exercise Rehabilitation – Introduction - Physical Stress Theory - Mechanotransduction Hypothesis - Mobility and Stability – The Influence of pain on movement and motor control – Rehabilitation Considerations : Motor Skill Learning - Re-loading Rehabilitation - Generate a Needs Analysis - Building Chronic Capacity - Load Management : Identifying Load – Monitor Load – Progressing Load - Role of mental skills and confidence in exercising regularly - Barriers and motivators for exercise - Exercise participation and well-being - Counselling for exercise behaviour change - self-determination theory in exercise contexts - environment for exercise behaviour change – The rehabilitation team, and rehab planning - Current trends in research, critical assessment of research and future research directions

Unit II- Injury and Repair - Introduction to Injury of Traumatic Injury – Stages of Soft Tissue Repair : Inflammatory phase, Repair phase, Remodeling phase - Supporting Soft Tissue Repair - Injury Evaluation – Supporting Healing in the Inflammatory Phase – PRICE, POLICE Protocol - Supporting the Repair Phase - Supporting the Remodeling Phase - Introduction to Injury Prevention : Adapting tasks, Modifying environments, Building capacity, Restoring variation, Developing adaptability, Improving reactions.

Unit III-Exercise Rehabilitation for Non-Communicable (Chronic) Diseases : Non-Communicable Diseases - Global Incidence of NCDs - People at risk - Risk factors : Modifiable behavioural risk factors, Metabolic risk factors - Socioeconomic impact - Prevention and control - NCDs and Physical Inactivity - Physical Activity Interventions - Physical activity – a powerful investment in people, health, the economy and sustainability – Guiding principles for a population based approach to physical activity – A framework for action – Implementation of National policy and action plan – Introduction of policies that support physical activity - Reorient services and funding to prioritize physical activity - Develop partnerships for action.

Unit IV- Training for injury prevention: injury risk factors for team sports players: Intrinsic injury risk factors-Extrinsic injury risk factors- Specific Strength and Neuromuscular Training for Injury Prevention-Risk factors and injury mechanisms for common sites of injury in team sports: Ankle complex- Knee-Hip-Lumbar spine-Shoulder complex. Functional Biomechanics - Posture and Position - Anatomical Variation of Form and Technique - Movement Screens - Corrective Exercise - Positions of Ease of the Path of Least Resistance - Functional Evaluation - Complex Movement.

Unit V- Functional Program Design: Fundamental Principles of Training: Overload, Progression, Recovery, Variation, Periodization, Individualization - Client Appraisal: Goals, Activities of daily living, Painful movements and injury history, Attitudes, perceptions and beliefs regarding exercise - Functional Evaluation: Primary patterns, Secondary patterns, Travel patterns, Pain patterns - Functional Program Design: General warm-up, Dynamic stretch, Movement preparation, Main program, Cool-down - Pre-Session Appraisal (PSA) - Functional Platform. Pain Rehabilitation - Manage Emotion - Define Pain – Prevention of Pain - Engage Pain Patterns - Intelligent Variation in Rehabilitation – Corrective Exercise - Mapping Drills - Inhibition Exercises - Activation Exercises.

References Book:

1. Carolyn Kisner& Lynn Allen Colby, (2004) Therapeutic Exercise: Foundation & Techniques, New Delhi.

2. Freddie H. Fu, David A. Stone, (2001) Sports Injuries: Mechanism, Prevention, Treatment, Lippincott Williams & Wilkins.
3. Jayant Joshi, PrakashKotwal; B.I. Churchill Livingstone (2008) *Essential of orthopedics & Applied Physiotherapy,* New Delhi.
4. Peggy A. ouglum,(2001)*Therapeutic Exercise of Athletic Injuries*, , Athletic Training Education Series.
5. Stevan Roy and Richard Irvin (2001) *Sports Medicine: Prevention, Evaluation, Management & Rehabilitation*; New Jersey.
6. Paul Gamble, (2010), Strength and Conditioning for Team Sports, Sport-specific physical preparation for high performance, Routledge, 270 Madison Avenue, New York.
7. Mueller MJ, Maluf KS. Tissue adaptation to physical stress: a proposed "Physical Stress Theory" to guide physical therapist practice, education, and research. Physical therapy. 2002 Apr 1; 82(4):383-403.
8. Stassen OM, Ristori T, Sahlgren CM. Notch in mechanotransduction–from molecular mechanosensitivity to tissue mechanostasis. Journal of cell science. 2020 Dec 15; 133(24):jcs250738.
9. Du H, Bartleson JM, Butenko S, Alonso V, Liu WF, Winer DA, Butte MJ. Tuning immunity through tissue mechanotransduction. Nature Reviews Immunology. 2022 Aug 16:1-5.
10. Khan KM, Scott A. Mechanotherapy: how physical therapists' prescription of exercise promotes tissue repair. British journal of sports medicine. 2009 Apr; 43(4):247-52.
11. Frost HM. Wolff's Law and bone's structural adaptations to mechanical usage: an overview for clinicians. The Angle Orthodontist. 1994 Jun; 64(3):175-88.
12. Petty NJ. Principles of Exercise Rehabilitation. Physical Examination, in Neuromusculoskeletal examination and assessment: a handbook for therapists. Elsevier Health Sciences; 2011 Jan 27.
13. Gabbett TJ. The training—injury prevention paradox: should athletes be training smarter *and* harder? British Journal of Sports Medicine 2016; 50:273-80.

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	Describe the Principles of Exercise Rehabilitation
CO2	Explain the different types of sports Injury and Repair.
CO3	Using the knowledge of Exercise Rehabilitation for Non-Communicable (Chronic) Diseases
CO4	Describe the various Training for injury prevention
CO5	Applying the Functional Program Design

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

COURSE CODE – 23PC1DSE007

RENAL PHYSIOLOGY

Learning Objectives

1. Describe the gross anatomy of the kidney and its coverings.
2. Trace the blood supply through the kidney
3. Describe the anatomy of a nephron
4. List several kidney functions that help maintain body homeostasis
5. Identify the nephron parts responsible for filtration, reabsorption, and secretion, and describe mechanisms underlying each of these functional processes.
6. Explain the role of aldosterone and of atrial natriuretic peptide in sodium and water balance
7. Describe the mechanisms responsible for the medullary osmotic gradient
8. Explain formation of dilute versus concentrated urine.

UNIT I: Physiological Anatomy of the Kidney-Structure of the kidney. Cortex.Medulla. – Nephron-functional unit of the kidney. Cortical and juxtamedullary nephrons. – Anatomy of the nephron. Glomerulus.Tubule. – Bowman's capsule. Proximal tubule.Loop of Henle.Distal tubule.Collecting duct. – Kidney blood vessels. Afferent and efferent arterioles.Peritubullar capillary network.Vasa recta.Juxtaglomerular apparatus. - Principles of urine formation.

UNITE II: Glomerular Filtration. Glomerular filtration membrane. - Net filtration pressure. – Glomerular filtrate. Composition. Glomerular filtration rate. – Clearance. Definition. Calculation. Inulin clearance. Creatinine clearance. PAH clearance. – Renal plasma flow. Filtration fraction. – Physiological control of glomerular filtration and renal blood flow. Nervous regulation. Humoral regulation. Autoregulation. Tubuloglomerular feedback. Myogenic autoregulation.

UNIT III: Excretion of Water. Reabsorption of water in tubular segments. – Excreting excess water by forming a dilute urine. – Conserving water by excreting a concentrated urine. Obligatory urine volume. Osmotic stratification of renal medulla .Counter current multiplier system (loop of Henle).Role of distal tubule and collecting duct. Contribution of urea.Recirculation of urea. Counter current exchange system (vasa recta). - Mechanism of water reabsorption. Role of antidiuretic hormone (ADH).Diabetesinsipidus.–Water diuresis. Osmotic diuresis.

UNIT IV: Excretion of Sodium, Chloride, Potassium and Other Ions. Reabsorption of sodium in tubular segments. Mechanisms of sodium reabsorption. Reabsorption of sodium in late distal tubule and in collecting duct. Role of aldosterone. – Excretion of potassium. Reabsorption of potassium. Secretion of potassium. Principal cells. Intercalated cells.

Regulation of potassium secretion. Excretion of chloride. – Excretion of calcium. Regulation of calcium reabsorption. – Excretion of phosphate. - Excretion of magnesium.

UNIT V: Acid-Base Balance and Kidney. Plasmatic pH. Acidosis, alkalosis. Sources of hydrogenions.-Acid-base buffer systems. Bicarbonate buffer system - The role of kidney in the acid-base regulation. Secretion of hydrogen ions. Filtration and reabsorption of bicarbonate ions. Generation of new bicarbonate ions.–Renal response to acidosis. Tubular buffers. The role of ammonium ion and ammonia. Renal response to alkalosis. Respiratory acidosis and alkalosis. Metabolic acidosis and alkalosis. Micturition. Ureter Ureterorenal reflex. – Bladder. Detrusor muscle.Innervationofthebladder.Internalsphincter.Externalsphincter

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	Describe the Physiological Anatomy of the Kidney
CO2	Explain the chemical structure and functions of carbohydrates.
CO3	Using the knowledge of lipid structure and function, explain how it plays a role in Signalling pathways
CO4	Describe the various levels of structural organisation of amino acids and the role of proteins in biological system
CO5	Applying the knowledge of acid base balance sequencing in research and diagnosis

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

COURSE CODE – 23PC1DSE008

TRAINING AND PERFORMANCE

Learning Objectives

1. Provide opportunities to the graduates to learn the methods of training for performance.
2. To work with higher efficiency as Exercise Physiologist or Exercise Trainers.
3. To constructively apply the acquired scientific findings and methodological repertoire in practical training under various conditions.

UNIT – I Introduction to Training

Definition and meaning of training and Sports Training, importance of Sports Training - Training principles: over load, specificity, progression - reversibility – volume, Intensity, Frequency. Macro cycles - Mesocycles – Microcycles - Periodization- General Preparation phase (off-season), Specific preparation phase (preseason), Competitive phase (in-season), Transition phase (active rest) – Overtraining - Detraining - Retaining Exercise and Training as Stressors.

UNIT – II Competitive forms of Resistance Training: Definition of Strength- Factors Determining Strength- Types of Strength: Maximum Strength- Explosive Strength –- Strength Endurance – Types of Muscle Contraction: Isotonic, Dynamic or Concentric Contraction- Isotonic, Dynamic or Eccentric, Contraction Advantages and Disadvantages of Isotonic Method- Isometric or Static Contraction, Advantages and Disadvantages of isometric Method- Isokinetic Contraction - Methods of Strength Development. Bodybuilding - Weightlifting - Powerlifting - Strength Competitions - Competitive Lifting Modes and Performance

UNIT – II Aerobic Training: Basic Physiology of Cardiorespiratory Endurance Exercise - The Cardiorespiratory System - The Cardiorespiratory System at Rest and During Exercise - Energy Production - Exercise and the Three Energy Systems - Benefits of Cardiorespiratory Endurance Exercise -Different Training Program for Aerobic Endurance. Long Slow Distance – Interval Training – Circuit Training – Fartlek High Intensity Interval. Factors Influence the Aerobic Performance- VO_2 Max - Lactate Threshold. Influence of Altitude and Resistance Training in Aerobic Performance.

UNIT – III Speed, Agility and Plyometric Training

Definition of Speed - Types of Speed - Acceleration, change of Direction, Reaction of Agility, Maximum Velocity or Speed, Speed Endurance Training- Methods to Increase the All Types of Speed - Physics of Sprinting, Change of Direction and Agility. Plyometrics - Physiology of Plyometric Exercise – Phases of Stretch Shortening Cycle- Components of Plyometric Training - Program Design for Plyometric –Plyometric Drills for Upper Body and Lower Body.

UNIT - IV Introduction to Core Training and Functional Training

Definition of Core Strength and Stability – Origin, Insertion and function of Rectus abdominis, Erector spinae group, External oblique, Internal oblique, Quadratus lomborum, Iliopsoas, Transverse abdominis, Multifidus muscles - Factors that Affect the Core-Benefits of a Strong Core -Training Core Strength- Core-Stabilization Training. Definition of Functional Training.

UNIT – V Age- and Sex-Related Differences

Definition of Strength- Factors Determining Strength- Types of Strength: Maximum Strength- Explosive Strength –- Strength Endurance – Types of Muscle Contraction: Isotonic, Dynamic or Concentric Contraction- Isotonic, Dynamic or Eccentric, Contraction Advantages and Disadvantages of Isotonic Method- Isometric or Static Contraction, Advantages and Disadvantages of isometric Method- Isokinetic Contraction- Methods of Strength Development.

Reference Books

1. Scott K. Powers Edward T. Howley (2004) “Exercise Physiology- Theory and application to fitness and performance”, Brown and Benchmark.
2. Diek, Frank W. (1978) “Sports training principles “, London: Lepus books.
3. Nieman, David C,”The Exercise Health Connection” champaign L: Human kinetics.
4. Jack. H Wilmore and David L. Costill (2004) “Physiology of Sports and Exercise”, Human kinetics.
5. Gregory Huff G and Travis Triplett, (2016), Essentials of Strength Training and Conditioning; Fourth Edition, National Strength and Conditioning Association, United States: Human Kinetics P.O. Box 5076, Champaign, IL.

Course Outcomes

After successful completion of the course the student will be able to

CO1	Explain the physiological basis General Training Principles
CO2.	Understand the aerobic training methods
CO3.	Discuss Training to improve Speed and Agility
CO4.	To understand Core Training and Functional Training
CO5.	Understand the Age and Gender differences and their Implications for Resistance Training

Mapping with Programme Outcomes:

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strong 3 ; M-Medium 2 ; L-Low 1**

UEN23SE102	TRAINING AND PERFORMANCE – PRACTICUM-II

1. Assessment of Muscular Strength
    i. 1-Repetition Maximum (RM) Bench Press Test
    ii. 1-Repetition Maximum (RM) Leg Press Test
    iii. Maximal Handgrip Strength Test
2. Assessment of Muscular Endurance
    i. Pull-Up Tests
    ii. Push-Up Tests
    iii. Partial Curl-up Test
    iv. Prone bridge (or plank).
    v. Half-squat (or wall-sit).
3. Assessment of Muscular Power
    i. Standing Long Jump Test
    ii. Vertical Jump Test
    iii. Single-Leg Triple Hop Test
    iv. Forward Overhead Medicine Ball Throw Test
4. Assessment of Flexibility
    i. Sit and Reach Test (Trunk Flexion).
    ii. Back-Scratch Test
5. Assessment of Agility
    i. T-Test
    ii. Hexagon Test
    iii. 5-10-5 Test (Pro agility or 20-yard shuttle run)
    iv. Y-Shaped Reactive Agility Test
6. Assessment of Speed
    i. Straight-Line Sprint
    ii. Repeated Sprint Ability Test

GENERIC ELECTIVE (GE)

Subject code	Name of the Paper/ Components
PEN18GE001	Essentials of Exercise Physiology
PEN18GE002	Essentials of Sports Nutrition

COURSE CODE – 23PC1GE001

ESSENTIALS OF EXERCISE PHYSIOLOGY

Learning Objectives

1. Exercise Physiology is an evaluation of acute response and chronic adaptations of the body to the stresses of exercise.
2. Demonstrate the sound fundamental knowledge and understanding of the principles of Exercise physiology as they relate to responses and adaptations to physical activity and exercise.
3. To learn the changes in human body systems due to exercise in an integrated manner.

Unit- I- Definition of Exercise Physiology and Sports Physiology- Structure and functions of heart - cardiac cycle - Blood pressure - cardiac output - Heart Rate - Stroke volume - Acute Response to Cardiovascular Exercise – Physiological adaptation to training on Cardiovascular - Structure and Functions of respiratory system – mechanism of Breathing - Lung volumes and capacities - Respiratory Adaptations to Training.

Unit- II- Types of Muscles- Structure and functions of skeletal muscle - Muscles fiber types- Mechanism of Muscles contraction- Sliding filament theory- structure of Neuron - central neurons- brain and spinal cord-peripheral neurons - Automatic Ns- Motor unit- Action potential- depolarisation- Reflex are - proprioceptors- Physiological adaptation to training on Muscular and Neuron System.

Unit- III- Energy Metabolism - ATP- PC System - Glycolytic and Oxidative system- Oxygen debt and deficit- Aerobic and anaerobic training and their effects on Aerobic and Anaerobic System - Physiological Responses to Exercise in the Heat - Heat-Related Disorders- Physiological Responses to Exercise in the cold.

Unit- IV Endocrine Glands and Their Hormones: Pituitary gland Thyroid Gland - Parathyroid Glands - Adrenal Gland and Adrenal cortex and Pancreas - Physiological adaptation to training on Endocrine System - Menstrual Cycle- Physiological changes during pregnancy - Guidelines for Exercise during and after pregnancy.

Unit- V- Immunity- definition and classification- physiology of sleep- Cardiac rhythm- obesity- Exercise perception for obesity- Diabetes mellitus- Exercise Perception- Hyper tension- Exercise Perception- Coronary Heart Disease- Exercise Prescription- Pulmonary Disease- Exercise Prescription.

Reference Books

1. William D.Mcardle, Frank I.Katch, Victor L.Katch, (2005), “Essentials of exercise physiology”, Lippincott Williams and Wilkins.
2. Victor L.Katch, Frank.I. Katch, William D.Mcardle, (2003), “Exercise physiology”, Williams and Wilkins.
3. Lorry G.Shaver (1981) “Essentials of Exercise Physiology” Delhi: Surjeeth Publications.
4. William E.Garrett J.R., Donald T.Kirendall, (2000), “Exercise and sports science”, Lippincott Williams and Wilkins.
5. McArdle William D. (1998) “Essentials of Exercise Physiology” Malveern, Pennsylvania: Lea and Febiger.
6. Berger Richard A. (2003) “Applied Exercise Physiology” United States of America, Lea and Febiger, Philadelphia.

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	Demonstrate an understanding of the structure, function, cardiorespiratory system to include ventilation, gas transport and exchangeand cardiac output during rest and exercise
CO2	Understand the concepts involved in Mechanism of Muscles contraction and Physiological adaptation to training on Muscular and Neuron System.
CO3	Using the knowledge Energy Metabolism, explain how it plays a role in aerobic and anaerobic sports
CO4	Describe the various Endocrine Glands and the role in biological system
CO5	Understand the concepts of Exercise Prescription for special population

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

COURSE CODE – 23PC1GE002

ESSENTIALS OF SPORTS NUTRITION

Learning Objectives:

1. It explores nutrition in the enhancement of health and fitness.
2. It includes the nutrient requirements of attainment and maintenance of health, disease prevention and sports performance
3. The appropriate use of dietary supplements, popular diets and caused and treatment of eating disorders and obesity will be studied.
4. Provide individual advice and guidance in the area of sports nutrition.
5. Design and run a group consultation for athletes about sports nutrition.
6. Develop knowledge on sports nutrition.

Unit- I- Sports Nutrition - Basic Sports Nutrition Guidelines- Principles of Good Eating: Variety- Balance- Moderation Assessment of Nutritional status- carbohydrate diets for training - carbohydrate Utilization during Exercise - Muscles and Liver Glycogen- carbohydrate loading- Glycemic Index- Carbohydrate intake before, during and after exercise- Carbohydrate Recommendations for Athletes.

Unit- II- Proteins and Amino Acids - Protein essential for before, during after Exercise- Protein Recommendations for Athletes - Lipids and Physical Activity**-** Athlete conditioning and metabolizing fat - Medium-Chain Triglycerides (MCTs) - Omega-3 fatty Acids - Fats as a Source of Energy during Exercise- Fat Recommendations for Athletes.

Unit- III- Nutrient Timing and Recovery Nutrition: Eating before training- Eating during training- Recovery nutrition- Phytonutrients- Antioxidants- Salt - Water Loss, Intake, Balance, and Imbalance- Hypohydration, euhydration, and hyperhydration- fluids and electrolytes consumed before, during, and after exercise- Energy drinks- Sports drinks guide.

Unit- IV- Nutritional need for Special population- Nutrition need for young and ageing athletics- Athletics with diabetes- Glucose monitoring during exercise- Preventing and managing Hypoglycemia- Physical activity for people type with II diabetes.

Unit- V- Dietary guideline for eating right- Food Plate - Functional food pyramid- Planning Diets for aerobic and anaerobic sports- Planning for vegetarian athlete and vegan athlete, overweight and obesity, Hyper tension, Coronary Heart Disease and Lung disease.

Reference Books

1. SareenS.Gropper and Jack L.Smith (2009), Advanced Nutrition and Human Metabolism, Wadsworth, Cengage Learning, USA.
2. Heather Hedrick fink, Lisa A.Burgoon, Alan E.Mikesky, (2006), “Practical Application in Sports Nutrition”, Jones and Bartlett.
3. McArdle William D. et.al. (2005) “Exercise Physiology, Nutrition and Human Performance”, Philadelphia :lea and Febiger.
4. Mcardle, William D.,Katch, Frank I and Katch, Victor L(2005) ”Exercise Physiology”, Philadelphia ,lea and Febiger.

Course Outcome:

On successful completion of the course, the students should be able to:

CO1	Describe contemporary dietary guidelines and demonstrate an ability to use these guidelines to provide general nutrition advice for achieving or maintaining a healthy body weigh and sports performance
CO2	Using the knowledge of Proteins , lipid and function, explain how it plays a role in maintain good health.
CO3	Describe how nutrition influences human development, exercise performance, recovery and physiological adaptations
CO4	Understand the Nutrition need for young and ageing athletics
CO5	Understand the Dietary guideline for eating right and Planning Diets for aerobic and anaerobic sports

Mapping With Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**
CO 1	**S**	**L**	**M**	**S**	**M**
CO 2	**S**	**M**	**L**	**S**	**M**
CO 3	**S**	**M**	**M**	**S**	**S**
CO 4	**S**	**M**	**M**	**S**	**M**
CO 5	**S**	**S**	**M**	**S**	**S**

***S-Strongly correlated 3 ; M- Moderately correlated 2 ; L-Low 1**

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TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI- 600 127

CURRICULUM

B.Sc., SPORTS BIOMECHANICS AND KINESIOLOGY

(REGULAR 2023-2024)

DESCRIPTION OF THE DEPARTMENT

The Department of Sports Biomechanics and Kinesiology has been offering the following programme:

1. BSc., Sports Biomechanics and Kinesiology (Regular Three Years Programme) since 2019-2020 academic year.
2. MSc., Sports Biomechanics and Kinesiology (Regular Two Years Programme) since 2008-2009 academic year.
3. PhD Sports Biomechanics and Kinesiology (Regular Three Years / Part time -4 years Programme) since 2015.

VISION OF THE DEPARTMENT

The Department of Sports Biomechanics and Kinesiology aims to produce skilled sports biomechanics and kinesiology professionals with holistic approach to promote and serve in the domains of sports performance analysis, human gait and posture, fitness and exercise prescription, strength and conditioning, sports science, biomechanics and kinesiology R&D, equipment design and development, ergonomics, rehabilitation, prehabilitation, clinical biomechanics, academics, research and consultancy services in biomechanics.

OBJECTIVES OF BSc SPORTS BIOMECHANICS AND KINESIOLOGY UNDER GRADUATE PROGRAMME:

1. To gain knowledge on anatomy and physiology, kinesiology, biomechanics, motor skills, techniques of human movement and sports skills, research and statistics, and biomechanical instrumentation and measurement in 2D and 3D with inverse dynamics, EMG, force plate, Isokinetic Dynamometry etc.,
2. To apply the principles of mechanics on the human movement and sports skills to enhance the performance and reduce the risk of injury.
3. To analysis the sports skill technique/performance qualitatively and quantitatively using the biomechanical instrumentation and measurement.
4. To gain knowledge in the area of gait analysis and analysis the normal gait and pathological gait.
5. To assess the human body posture and prescribe corrective exercise to correct postural deviations.

6. To create a platform for students to engage in sports biomechanics research and pursue higher research degrees.
7. To produce an efficient sports biomechanist to work in research laboratories, sports academies, national teams, and faculty in academic institutions.
8. To produce sports performance analyst to work with sports teams/sports clubs/research labs as sports performance analyst.

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REGULATIONS

The Choice Based Credit System (CBCS) and Learning Based Outcome Curriculum Framework (LBOCF) for three years B.Sc. Degree programme in Sports Biomechanics and Kinesiology will be implemented from the academic year 2023-2024.

1. ELIGIBITLITY FOR ADMISSION

1.1 A candidate shall be admitted to the degree B.Sc. in Sports Biomechanics and Kinesiology Only if he/she produces satisfactory evidence to the effect that he/she has successfully completed Plus Two (XII Std in any science group / +2 with Maths / Statistics / Computer application / Physical Education), under SB/CBSE/CSE recognized by the syndicate of TNPESU.

1.2 Eligible for admissions and reservation of seats shall be according to the rules framed by the governing body of this University in this regard, from time to time at par with the UGC norms and regulations of the Government of Tamil Nadu. The total Number of Seats for UG is 30.

2. COURSE OF STUDY

2.1 The normal duration of the B.Sc., Sports Biomechanics and Kinesiology Programme shall be **SIX** semesters **(THREE years).** The maximum duration of the course is **6 years** from the date of joining.

2.2 There shall be **two semesters in an academic year**, the **ODD and EVEN** semesters. **Odd semesters** shall be from **July to November** and **Even Semesters** shall be from **December to May**.

2.3 Each semester will have a **minimum of 90 working days** and **each day will have six working hours.** Teaching is organized into a modular pattern of

credit courses. Credit is normally related to the number of hours a teacher teaches a particular subject.

3. CHOICE BASED CREDIT SYSTEM (CBCS) and LEARNING BASED OUTCOME CURRICULUM FRAMEWORK (LBOCF)

The Tamil Nadu Physical Education and Sports University follows the **Choice Based Credit System (CBCS) and Learning Based Outcome Curriculum Framework (LBOCF).** One credit is equal to one teaching hour per week during the semester. The CBCS in B.Sc., Sports Biomechanics and Kinesiology Degree Programme would have five components and the total credit requirements for all components in three years is 145 credits.

3.1 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

3.2 **Core course:** Are course that are basic to the subject of the degree. This is a course which is to be compulsorily studied by a student as a core requirement to the completion of the program.

3.3 **Elective Courses:** This is a course that is supportive to the discipline of study, provides an expanded scope, enables exposure to some other domains or nurtures proficiency/skills.

3.3.1 **Discipline Specific Elective (DSE):** These courses are inter disciplinary in nature and considered similar to core course. And, the students have to choose one course from the option provided for them.

3.4 **Skill Enhancement Courses (SEC)** (minimum 4 for regular courses): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work. The main purpose of these courses is to provide students life-skills in hands-on mode so as to increase their employability.

3.5 **Ability Enhancement Courses (AEC):** The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). “AEC” courses are the courses based upon the content that leads to Knowledge enhancement; i. Environmental Science and ii.

English/Hindi/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.

3.6 **Ability Enhancement Compulsory Courses (AECC):** Environmental Science, English Communication/Hindi Communication/ Modern Indian Languages (MIL) Communication.

The following are the components:

Course Components	Types of Courses	No. of Courses	Credits	Total Credits
Part – I	Language / Special English	4	3	12
Part – II	English	4	3	12
Part – III	Core Courses	15	4	60
	Core Elective Courses	5	3	15
	Core Practicum	11	2	22
	Internship	1	2	2
	Group project	1	4	4
Part – IV	Skill Enhancement Courses	4	2	8
	Ability Enhancement Courses	2	2	4
Part – V	Environmental Studies	1	2	2
	Value Education	1	2	2
	Extension Activity (Swachh Bharath)	1	2	2
Total Credits				**145**

CGPA- CUMULATIVE GRADE POINT AVERAGE: A CGPA credit course has been classified into the **Three Components (Part I to Part III).** The marks earned in the CGPA courses will be calculated for overall percentage of marks.

NON- CGPA: The students can earn additional credits by the way of choosing Non-CGPA compulsory credit course such as ability enhancement courses, skill

enhancement courses and Extension activities **(Part -IV and V).** The marks scored in the NON-CGPA courses will not be accounted in overall percentage calculation.

4. COURSE WEIGHT

4.1 Courses have been designed with weightage of **two / three / four credits**, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise **lectures / tutorials / laboratory/ field work / outreach activities / project work / vocational training / viva / seminars etc. or a combination of some of these.**

4.2 It determines the number of hours of instructions required per week.
Theory: Each theory hour per week is considered as **1 credit.**
Practical: Each two practical hours per week is considered as **1 credit.**

5. CREDIT DISTRIBUTION

The Credit distribution for the six semesters are given below:

SEMESTER	CREDITS	TOTAL MARKS
I	23	**900**
II	23	**800**
III	23	**800**
IV	25	**900**
V	26	**900**
VI	25	**900**
	145	**5200**

6. ASSESSMENT AND EVALUATION

6.1 Each course will be assessed on the basis of 100 marks. The marks would be divided between internal and external assessment.

6.2 There shall be one end semester external examination for each course in every semester consisting of 75% (75 marks) weight in theory and 75% (75 marks) in practical courses.

6.3 Each Theory course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	Marks
Attendance	**5**
Assignments /Seminars /quiz etc	**5**
Test Paper – I & Test Paper - II	**5**
Model Examination	**10**
Total	**25**

6.4 Each Practical Course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Practicum	Marks
Attendance	**5**
Internal Viva	**5**
Rough Record	**5**
Lab Performance	**10**
Total	**25**

6.5 The minimum passing standard will be 40% for the external and internal component of each theory course, i.e. 30 marks out of 75 (external - 40% of 75 marks) and 10 marks out of 25 (internal - 40% of 25 marks). In practical minimum passing standard will be 40% for the external exam and internal assessment for each practical course (30/10).

7. ATTENDANCE

7.1 Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course.

7.2 Students must have 75% of attendance in each course for appearing in the examination.

7.3 Students who have 74% to 70% of attendance shall apply for condonation in the prescribed form with the prescribed fee.

7.4 Students who have 69% to 65% of attendance shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

7.5 Students who have below 64% to 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Carry over to the next semester.

7.6 Students who have below 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Re do the course.

7.7 A student cannot claim condonation as his/her right and the condonation is at the discretion of the Head of the Department. A student can avail condonation / carry over only once during his course of study.

8. END SEMESTER EXAMINATION (ESE)

8.1 The ESE will consist of à written examination of three hours duration for a maximum score of 75. The following procedure will be followed for evaluation.

8.2 A candidate who has secured a minimum of 40 marks in all courses prescribed in the programme and earned a minimum of the credits will be considered to have passed the Bachelor's Degree Programme.

Pattern	Total No. of Question	Number of Question to be Answered	Marks for each Question	Total Marks
MCQ	10	10	1	**10**
Short Answer	5	5	2	**10**
Short Essay / Problem Type	8	5	5	**25**
Essay / Problem Type	5	3	10	**30**
Total				**75**

8.3 Distribution of 25 Marks for Semester End Practical Examination weightage on the following:

Components of External Evaluation of practicum	Marks
Lab Experiment / Field Experiment	10
Lab Performance / Demonstration	5
Viva-voce	5
Lab Record	5
.Total	25

8.4 A Student will be issued, hall ticket only if one produces "**No Dues**" certificates from the concerned department, the laboratory, the Registrar's Office, the Library and Hostel.

9. GRADING SYSTEM

A ten-point rating is used for the evaluation of the performance of the student to provide a letter grade for each course and overall grade for the Under Graduate Programme. The letter grade assigned is given below:

Letter	Grade	Grade Point	Range of Marks
O	Outstanding	10	91-100
A+	Excellent	9.0	81-90
A	Very Good	8.5	71-80
B+	Good	8.0	61-70
B	Above Average	7.5	51-60
C+	`Average	7.0	41-50
C	Pass	6.5	40
RA	Reappear	6.0 & below	0-39
AB	Absent	-	ABSENT

9. INTERNSHIP AND FIELD TRAINING

Internship and field training is an important component of Sports biomechanics and Kinesiology that provides students with the opportunity to gain applied practical experience in the field of Sports biomechanics and Kinesiology. It allows a student to employ what is learned in class in a supervised environment, which is critical in order to further develop professional skills and assure quality practice. The students will undergo Internship training /Field training/ Clinical practice in TNPESU campus/ Sports Development Authority of Tamil Nadu (SDAT) coaching Centres / Sports Authority of India (Various coaching Centres of SAI) / Government Medical College/ other sporting centers shall be evaluated through internal assessment only. At the end of Internship/field training, the student shall submit a certificate from the organization where he /she has undergone training and a brief report. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally.

PROGRAMME OUTCOMES (POs):

After successful completion of three-year degree program in Sports Biomechanics and Kinesiology should be able to:

PO1	Demonstrate and an understanding of major concepts in all disciplines of Sports biomechanics and Kinesiology
PO2	Solve the problem and also think methodically, independently and draw a logical conclusion. Employ critical thinking and the scientific knowledge to design, carry out, record, demonstrate, plan, and analyze.
PO3	The graduates will display professional and ethical behavior. The graduates will be able to communicate professionally.
PO4	Create an awareness of the impact of Sports biomechanics and Kinesiology on the environment, society, and development outside the scientific community.
PO5	After completion of graduation, they would be able to apply the acquired concepts and principles to study different branches of Sports biomechanics and Kinesiology in their future career. When a student pursues for postgraduate studies, he or she can make use of all the applications, field or laboratory which he or she has gained knowledge. This B.Sc. Programme will also help students to enhance their employability for jobs in different sectors.

PROGRAM SPECIFIC OUTCOMES (PSOs):

PSO1	Identify and list out common structure and functions of various systems of human body and movement patterns.
PSO2	Understanding and analysis of the human movement (Kinesiology) in Qualitative and quantitative method
PSO3	Understanding the basic concepts of biomechanics, mathematics in biomechanics and computer applications
PSO4	Identification of key performance indicators in each sport and sports performance analysis
PSO5	Understanding Sports talent identification, kinathropometry, posture and gait
PSO6	Understanding technique of various sports and games and analyzing kinematics and kinetics of human movement through 3D motion capture, EMG, Force plate, IKD
PSO7	Understanding Sports talent Identification and Sports performance analysis and reporting
PSO8	Learn to use the advanced tools in biomechanics and identification of strength and weakness of athlete and prescription of remedial measures.
PS09	Gaining hands on experience in collecting valid data and writing scientific research papers
PS10	Design a sports specific biomechanical assessment for performance enhancement and recovery from injury

SEMESTER- I

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	23UF1LT101	Tamil I / Special English I	3	3	25	75	100
Part-II	23UF1LE102	English I	3	3	25	75	100
Part-III	23UF1CT103	Human anatomy and Physiology - I	4	4	25	75	100
	23UF1CT104	Fundamentals of fitness and exercise prescription	4	4	25	75	100
	23UF1CE105	Test, measurement and evaluation	3	3	25	75	100
	23UF1SE101	Human anatomy and Physiology - Practicum	4	2	25	75	100
	23UF1SE102	Test, measurement and evaluation - Practicum	4	2	25	75	100
Part-IV	23UF1AE101	Soft Skills Development (AEC)	2	2	50	50	100
			27	**23**	**225**	**575**	**800**
Remark: Soft skill I - 2 hours handled by English: Totally 3+2=5							

SEMESTER- II

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	23UF1LT201	Tamil II / Special English II	3	3	25	75	100
Part-II	23UF1LE202	English II	3	3	25	75	100
Part-III	23UF1CT203	Human Anatomy and Physiology – II	4	4	25	75	100
	23UF1CT204	Physics for Biomechanics	4	4	25	75	100
	23UF1CE205	Mathematics for Biomechanics	3	3	25	75	100
	23UF1SE201	Human Anatomy and Physiology - Practicum-II	4	2	25	75	100
	23UF1SE202	Physics for Biomechanics Practicum	4	2	25	75	100
Part-IV	Naan Mudhalvan (SEC)	Microsoft Office fundamentals	2	2	50	50	100
			27	**23**	**225**	**575**	**800**

Note:

1. *Naan Muthalvan - Skill course - external 50 marks will be assessed by industry and internal will be conducted by the respective course teacher.

SEMESTER- III

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	23UF1LT301	Tamil III / Special English III	3	3	25	75	100
Part-II	23UF1LE302	English III	3	3	25	75	100
Part-III	23UF1CT303	Kinesiology	4	4	25	75	100
	23UF1CT304	Basic Biomechanics	4	4	25	75	100
	23UF1CE305	Dynamics of Motor Skill Acquisition	3	3	25	75	100
	23UF1SE301	Kinesiology Practicum	4	2	25	75	100
	23UF1SE301	Basic Biomechanics Practicum	4	2	25	75	100
Part-IV	23UF1AE101	Soft Skills Development – II (AEC)	2	2	25	75	100
			28	**23**	**200**	**600**	**800**
Remark :Soft skill I - 2 hours handled by English: Totally 3+2=5							

SEMESTER- IV

Parts	Course Code	Course	Hours / Week)		Marks		
			L/T/P	C	CIA	ESE	Total
Part-I	23UF1LT401	Tamil IV / Special English IV	3	3	25	75	100
Part-II	23UF1LE402	English IV	3	3	25	75	100
Part-III	23UF1CT403	Human gait, posture and corrective exercise	4	4	25	75	100
	23UF1CT404	Physiology of exercise and ergogenic aids	4	4	25	75	100
	23UF1CE404	Science of Sports Training and Strength and conditioning	3	3	25	75	100
	23UF1SE401	Human gait, posture and corrective exercise Practicum - I	4	2	25	75	100
	23UF1SE404	Physiology of exercise Practicum - II	4	2	25	75	100
Part-IV	Naan Mudhalvan	Python Programming (IITM & GUVI) MOOC (SEC)	2	2	50	50	100
Part-V	23UF1ES301	Environmental studies	2	2	25	75	100
			30	**25**	**250**	**650**	**900**

Note:

1. *Naan Muthalvan - Skill course - external 50 marks will be assessed by industry and internal will be conducted by the respective course teacher.
2. A minimum of four weeks Internship will be carried out during the summer vacation after the **second year.** Viva Voce will be conducted by the internal examiners of the Department and marks shall be sent to the COE of University for its inclusion in the **Fifth Semester Marks Statement.**

SEMESTER- V

Parts	Course Code	Course	Hours / Week)		Marks		
			L/TP	C	CIA	ESE	Total
Part-III	23UF1CT501	Applied Biomechanics	4	4	25	75	100
	23UF1T502	Research Methodology and Statistics in Sports Science	4	4	25	75	100
	23UF1CT503	Biomechanics of track events	4	4	25	75	100
	23UF1CT504	Biomechanics of field events	4	4	25	75	100
	23UF1SE501	Applied biomechanics Practicum	4	2	25	75	100
	23UF1SE502	Biomechanics of track and field events Practicum	4	2	25	75	100
	23UF1CI501	Internship	4	2	100	-	100
Part-IV	23UF1SEC501	SPSS (SEC)	2	2	50	50	100
Part-V	23UF1VE501	Value Education	2	2	25	75	100
			32	**26**	**325**	**575**	**900**

SEMESTER- VI

Parts	Course Code	Course	Hours / Week)		Marks		
			L/TP	C	CIA	ESE	Total
Part-III	23UF1CT601	Sports performance analysis	4	4	25	75	100
	23UF1CT602	Biomechanics of sports and games - I	4	4	25	75	100
	23UF1CT603	Biomechanics of sports and games - II	4	4	25	75	100
	23UF1CE601	Biomechanics of yoga	3	3	25	75	100
	23UF1SE601	Group project	4	4	25	75	100
	23UF1SE602	Open Sim / Visual3D - practicum	4	2	25	75	100
Part-IV	23UF1SEC601	MATLAB (SEC)	4	2	50	50	100
Part-V	23UF1EA601	Swachh Bharath	-	2	-	-	-
			27	**25**	**200**	**500**	**700**

***L (Lecture), T (Tutorial), P (Practical), C (Credits), CIA (Continuous Internal Assessment), ESE (End Semester Exam)**

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI-600 127

MSc., SPORTS BIOMECHANICS AND KINESIOLOGY

CBCS CURRICULUM – 2023-2024

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY
DEPT. OF EXERCISE PHYSIOLOGY AND BIOMECHNANICS
MELAKKOTTAIYUR POST
CHENNAI - 600 127
M.Sc., SPORTS BIOMECHANICS AND KINESIOLOGY
(Two years Regular Programme)

CHOICE BASED CREDIT SYSTEM (CBCS)

DESCRIPTION OF THE DEPARTMENT

The Department of Sports Biomechanics and Kinesiology has been offering the following programme:

1. BSc., Sports Biomechanics and Kinesiology (Regular Three Years Programme) since 2019-2020 academic year.
2. MSc., Sports Biomechanics and Kinesiology (Regular Two Years Programme) since 2008-2009 academic year.
3. PhD Sports Biomechanics and Kinesiology (Regular Three Years / Part time -4 years Programme) since 2015.

VISION OF THE DEPARTMENT

The Department of Sports Biomechanics and Kinesiology aims to produce skilled sports biomechanics and kinesiology professionals with holistic approach to promote and serve in the domains of sports performance analysis, human gait and posture, fitness and exercise prescription, strength and conditioning, sports science, biomechanics and kinesiology R&D, equipment design and development, ergonomics, rehabilitation, prehabilitation, clinical biomechanics, academics, research and consultancy services in biomechanics.

OBJECTIVES OF SPORTS BIOMECHANICS AND KINESIOLOGY POST GRADUATE PROGRAMME:

1. To gain knowledge on anatomy and physiology, kinesiology, biomechanics, motor skills, techniques of human movement and sports skills, research and statistics, and biomechanical instrumentation and measurement in 2D and 3D with inverse dynamics, EMG, force plate, Isokinetic Dynamometry etc.,
2. To apply the principles of mechanics on the human movement and sports skills to enhance the performance and reduce the risk of injury.
3. To analyse the sports skill technique/performance qualitatively and quantitatively using the biomechanical instrumentation and measurement.
4. To gain knowledge in the area of gait analysis and analyse the normal gait and pathological gait.

5. To assess the human body posture and prescribe corrective exercise to correct postural deviations.
6. To create a platform for students to engage in sports biomechanics research and pursue higher research degrees.
7. To produce an efficient sports biomechanist to work in research laboratories, sports academies, national teams, and faculty in academic institutions.
8. To produce sports performance analyst to work with sports teams/sports clubs/research labs as sports performance analyst.
9. To initiate the skill acquisition in data analytics, simulation and modelling, equipment design and development and industrial collaboration in sports.

REGULATIONS:

The MSc Programme was started in 2008. The CBCS for the two years M.Sc. Degree programme was implemented from the academic year 2009-2010 revised in 2018-19. The Choice Based Credit System (CBCS) and Learning Based Outcome Curriculum Framework (LBOCF) is implemented from the year 2023-2024.

1. ELIGIBITLITY FOR ADMISSION:

A Candidate shall be admitted to the degree of Master of Science in **SPORTS BIOMECHANICS AND KINESIOLOGY** only if he/she produces satisfactory evidence to the effect that he/she has successfully completed **ANY SCIENCE / PHYSICAL EDUCATION / ENGINEERING / PHYSIOTHERAPY DEGREE (UG)** recognized by the syndicate of this university. The total strength of the programme is 20.

2. COURSE OF STUDY:

The normal duration of the M.Sc., Programme shall be 4 semesters (Two Academic Years). Maximum duration of the course of the course is 4 years.

3. SEMESTERS:

An Academic year is apportioned into two semesters.

Odd Semester - July to November

Even Semester - December to April

In each semester, the courses are taught for **18 weeks** with each week having **5 working days and 6 hours a day (30 hours a week).** For Co-curricular activities and thesis, the candidates will be working extra hours in lab, library and pertaining field of study. **There shall be not less than 90 working days** which shall comprise **540 teaching / Practical Activity clock hours for each semester.**

4. CHOICE BASED CREDIT SYSTEM (CBCS) AND LEARNING BASED OUTCOME CUURICULUM FRAMEWORK (LBOCF)

The CBCS and LBOCF in M.Sc., programme would have the following components and the minimum credit requirements for each component to be completed in two years are:

3.1 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

3.2 **Core course:** Are course that are basic to the subject of the degree. This is a course which is to be compulsorily studied by a student as a core requirement to the completion of the program.

3.3 **Elective Courses:** This is a course that is supportive to the discipline of study, provides an expanded scope, enables exposure to some other domains or nurtures proficiency/skills. Elective papers can be of two types: Discipline Specific Elective (DSE) and Generic Elective (GE).

3.4 **Discipline Specific Elective (DSE):** These courses are inter disciplinary in nature and considered similar to core course. And, the students have to choose one course from the option provided for them.

3.5 **Generic Elective (GE):** These courses add generic proficiency to the students. Students have to choose generic elective courses in consultation with the head of the department from the Generic Elective courses offered by other Division of study in Sports Science or from other Departments in university.

CREDIT ABSTRACT

Semester – Credit Subject	I	II	III	IV	Total Credit
Core course	12	12	12	12	48
Elective (Discipline Specific)	4	4	4	4	16
Generic Elective (GE)	-	4	4	-	08
Core - Practicum	4	4	4	4	16
Ability Enhancement Course (AECC)	2	-	2	-	04
Skill Enhancement Course	-	2	-	-	02
Thesis with Viva-Voce	-	-	-	10	10
Field Work / Extension Activity / Internship	2	2	2	-	06
Grand Total	**24**	**28**	**28**	**30**	**110**

	Core CGPA	Credits details	Total Credits
PART-I	1. Core Theory	12 core papers x 4 credits	48 credits
	2. Department Specific Electives	4 DSE papers x 4 credits	16 credits
	3. Generic Electives	2 GE papers x 4 credits	08 credits
	4. Thesis	1 x 10 credits	10 credits
PART- II	5. Core practical	8 Core practical x 2 credits	16 credits
Non- CGPA			
PART-III A	**Ability Enhancement Course (AEC) - 04 credits**		
	1. Communication skills	02 credits	02 credits
	2. Personality development	02 credits	02 credits
	Skill Enhancement Course (SEC) - 02 credits		
	3. Microsoft office skills	02 credits	02 credits
PART-III B	**Co –Curricular Activities - 06 credits**		
	1. SWACHH BHARAT	02 credits	02 credits
	2. MOOC	02 credits	02 credits
	3. Internship	02 credits	02 credits
Total Credits			**110 credits**

CGPA- CUMULATIVE GRADE POINT AVERAGE: A CGPA credit course has been classified into the five components and enlisted in part I and part II. The marks earned in the CGPA courses will be calculated for overall percentage of marks.

NON- CGPA: The students can earn additional credits by the way of choosing non-CGPA compulsory credit course such as ability enhancement courses, skill enhancement courses and co-curricular activities enlisted in part-III. The marks scored in the NON-CGPA courses will not be accounted in overall percentage calculation.

4. COURSE WEIGHT

4.1 Courses have been designed with weightage of **two / four** credits, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise lectures/tutorials/laboratory/field work/outreach activities/project work/vocational training/viva/seminars etc. or a combination of some of these.

4.2 It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

5. ASSESSMENT AND EVALUATION

Post Graduate degree programme M.Sc., Sports Biomechanics and Kinesiology (Two Years), determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

SEMESTER	CREDITS	TOTAL MARKS
I	24	800
II	28	800
III	28	800
IV	30	700
Grant Total	**110**	**3100**

5.1 Each course will be assessed on the basis of 100 marks. The marks would be divided between internal and external assessment.

5.2 There shall be one end semester external examination for each course in every semester consisting of 75% (75 marks) weight in theory and 75% (75 marks) in practical courses.

5.3 Each Theory course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	Marks
Attendance	5
Assignments /Seminars /quizzes etc	5
Test Paper – I & Test Paper - II	5
Model Examination	10
Total	25

5.4 Each Practical Course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of practicum	**Marks**
Attendance	5
Internal Viva	5
Rough Record	5
Lab Performance	10
Total	**25**

5.5 The minimum passing standard will be 50% for the external and internal component of each theory course, i.e. 38 marks out of 75 (external - 50% of 75 marks) and 12.5 marks out of 25 (internal - 50% of 25 marks). In practical minimum passing standard will be 50% for the external exam and internal assessment for each practical course (75/25).

6 ATTENDANCE

6.4 Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course.

6.5 Students must have 75% of attendance in each course for appearing in the examination.

6.6 Students who have 74% to 70% of attendance shall apply for condonation in the prescribed form with the prescribed fee.

6.7 Students who have 69% to 65% of attendance shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

6.8 Students who have below 64% to 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students, Carry over to the next semester.

6.9 Students who have below 60% of attendance are not eligible to appear for the examination. It is further clarified that the students, Re do the course.

6.10 **A student cannot claim condonation as his right and the condonation is at the discretion of the Head of the Department. A student can avail condonation / carry over only once during his course of study.**

7. END SEMESTER EXAMINATION (ESE)

7.1 The ESE will consist of à written examination of three hours duration for a maximum score of 75. The following procedure will be followed for evaluation.

Pattern	Total No. of Question	Number of Question to be Answered	Marks for each Question	Total Marks
MCQ	10	10	1	10
Short Answer	5	5	2	10
Short Essay / Problem	8	5	5	25
Essay / Problem Type	5	3	10	30
Total				75

7.2 Distribution of 25 Marks for Semester End Practical Examination weightage on the following:

Components of External Evaluation of practicum	Marks
Lab Experiment	10
Lab Performance	5
Viva-voce	5
Lab Record	5
Total	25

7.3 A candidate who has secured a minimum of 50 marks in all courses prescribed in the programme and earned a minimum of the credits will be considered to have passed the Master's Degree Programme.

7.4 A Student will be issued, hall ticket only if one produces "**No Dues**" certificates from the concerned department, the laboratory, the Registrar's Office, the Library and Hostel.

8. GRADING SYSTEM

A ten-point rating is used for the evaluation of the performance of the student to provide a letter grade for each course and overall grade for the Master's Programme. The letter grade assigned is given below:

Letter	Grade	Grade Point	Range of Marks
O	Outstanding	10	91-100
A+	Excellent	9.0	81-90
A	Very Good	8.5	71-80
B+	Good	8.0	61-70
B	Above Average	7.5	51-60
C	Pass	7.0	50
RA	Reappear	6.5	0-49
AB	Absent	6.0	ABSENT

9. INTERNSHIP AND FIELD TRAINING

Internship and field training is an important component of Sports Biomechanics and Kinesiology that provides students with the opportunity to gain applied practical experience in the field of Sports Biomechanics and Kinesiology. It allows a student to employ what is learned in class in a supervised environment, which is critical in order to further develop professional skills and assure quality practice. The students will undergo Internship training / Clinical practice / Field training in TNPESU campus/ Sports Development Authority of Tamil Nadu (SDAT) coaching Centres / Sports Authority of India (Various coaching Centres of SAI) / Government Medical College/ Private Medical College and Hospitals other sporting centers shall be evaluated through internal assessment only. At the end of Internship/field training, the student shall submit a certificate from the organization where he /she has undergone training and a brief report. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three member Departmental Committee constituted by the Head of the Department.

***** *Internship will be carried out during the summer vacation of the first year and marks should be sent to the University by the Department and the same will be included in the Third Semester Marks Statement.*

10. THESIS

The topic of thesis will be allocated and proposal should be submitted in third Semester and candidate will work for one semester and submit a written thesis in 4th semester. The student will be awarded grade for the total number of credits earned in dissertation in III and IV semesters of study at the end of the IV semester.

11. CO CURRICULAR ACTIVITIES:

1. **SWACHH BHARAT**

   A student has to serve for 15 days in village and produce a report signed by village administration officer to acquire the two credits.

2. **MOOC**

   A student has to enroll the listed MOOC course and submit the completion certificate to the department to acquire the two credits.

3. **INTERNSHIP**

   A student has to attend the internship programme for a period of two weeks in the summer vacation of first year. He/she will be visiting the established sports biomechanics laboratories to gain hands on experience and submit the internship report in the department at the start of third semester to acquire two credits.

PROGRAMME OUTCOMES (POs):

After successful completion of three-year degree program in Sports Biomechanics and Kinesiology should be able to:

PO1	Demonstrate and an understanding of major concepts in all disciplines of Sports biomechanics and Kinesiology
PO2	Solve the problem and also think methodically, independently and draw a logical conclusion. Employ critical thinking and the scientific knowledge to design, carry out, record, demonstrate, plan, and analyze.
PO3	The graduates will display professional and ethical behavior. The graduates will be able to communicate professionally.
PO4	Create an awareness of the impact of Sports biomechanics and Kinesiology on the environment, society, and development outside the scientific community.
PO5	After completion of graduation, they would be able to apply the acquired concepts and principles to study different branches of Sports biomechanics and Kinesiology in their future career. When a student pursues for postgraduate studies, he or she can make use of all the applications, field or laboratory which he or she has gained knowledge. This B.Sc. Programme will also help students to enhance their employability for jobs in different sectors.

PROGRAM SPECIFIC OUTCOMES (PSOs):

PSO1	Identify and list out common structure and functions of various systems of human body and movement patterns.
PSO2	Understanding and analyse the human movement (Kinesiology) in Qualitative and quantitative method
PSO3	Understanding the basic concepts of biomechanics, mathematics in biomechanics and computer applications
PSO4	Identification of key performance indicators in each sport and sports performance analysis
PSO5	Understanding Sports talent identification, kinathropometry, posture and gait
PSO6	Understanding and analyzing kinematics and kinetics of human movement through 3D motion capture, EMG, Force plate, IKD
PSO7	Understanding Sports talent Identification and Sports performance analysis and reporting
PSO8	Learn to use the advanced tools in biomechanics and identification of strength and weakness of athlete and prescription of remedial measures.
PS09	Gaining hands on experience in collecting valid data and writing scientific research papers
PS10	Design a sports specific periodization for performance enhancement and recovery from injury

Semester - I							
Part –I	**Course Code**	**Name of the Course**	**Lecture**	**Credit**	**Internal**	**External**	**Total**
Core Theory	23PF1CT 101	Applied Anatomy and Physiology	4	4	25	75	100
	23PF1CT 102	Physics for Biomechanics	4	4	25	75	100
	23PF1CT 103	Test, Measurement and Evaluation	4	4	25	75	100
DSE	**Student will choose any one course from the pool of subjects offered by department**		4	4	25	75	100
					25	75	100
Part –II Core Practical	23PF1CP101	Anatomy and physiology practicum	3	2	25	75	100
	23PF1CP102	Test, Measurement and Evaluation	3	2	25	75	100
Total	**CGPA**			**20 C**			**700**
Part – III A NON CGPA	Ability Enhancement Course (AEC) 23PF1 AEC001	Communicative skills	2	2	25	75	100
PART – III B NON CGPA	Co-curricular / Extension Activities	SWACHH BHARAT		2	-	-	-
Grand Total			**24**	**24 C**			**800**

Semester-II							
Part -I	**Course Code**	**Name of the Course**	**Lecture**	**Credit**	**Internal**	**External**	**Total**
Core Theory	23PF1CT201	Kinesiology	4	4	25	75	100
	23PF1CT202	Basic biomechanics	4	4	25	75	100
	23PF1CT203	Human gait, Posture and Corrective exercise	4	4	25	75	100
DSE	**Student will choose any one course from the pool of subject offered by department**		4	4	25	75	100
Generic Elective	**Student will choose any one course from the pool of subject offered by other department**		4	4	25	75	100
Part –II Core Practical	23PF1CP201	Kinesiology	3	2	25	75	100
	23PF1CP202	Basic Biomechanics	3	2	25	75	100
Total				**24 C**			**700**
Part – III A NON CGPA	Skill Enhancement Course (SEC) 23PF1SEC001	Microsoft office skills	2	2	25	75	100
PART III B NON CGPA	Co-curricular / Extension Activities	MOOC - Python	-	2	-	-	-
Grand Total			24	**28 C**			**800**

Semester – III							
Part -I	**Course Code**	**Name of the Course**	**Lecture**	**Credit**	**Internal**	**External**	**Total**
Core Theory	23PF1CT 301	Applied Biomechanics	4	4	25	75	100
	23PF1CT 302	Mechanics of Track and field events	4	4	25	75	100
	23PF1CT 303	Research Methods and Statistical Process in Sports sciences	4	4	25	75	100
DSE	**Student will choose any one course from the pool of subject offered by department**		4	4	25	75	100
Generic Elective	**Student will choose any one course from the pool of subject offered by other department**		4	4	25	75	100
Part –II Core Practical	23PF1CP301	Applied Biomechanics	3	2	25	75	100
	23PF1CP302	Track and field events Practicum	3	2	25	75	100
Total (CGPA)				**24 C**			**700**
PART-III A NON CGPA	Ability Enhancement Course (AEC) 23PF1AEC002	Personality Development	2	2 C	25	75	100
PART-III B NON CGPA	Co-curricular / Extension activities	Internship	-	2 C	-	-	-
Grand Total			28	**28 C**			**800**

S.NO	PRACTICAL	CONTENT
1	**Applied Biomechanics**	1. 3D mocap
		2. EMG / Force Plate
		3. Isokinetic dynamometry
2	**Track and field events**	1. Sprints (100/200/400)
		2. Hurdles (100/110/400)
		3. Middle distance (800/1500)/ Long distance (5k/10k)
		4. Shot put / Discus / Javelin / Hammer throw
		5. High Jump / Pole vault
		6. Long Jump / Triple jump

Semester – IV							
Part -I	**Course Code**	**Name of the Course**	**Lecture**	**Credit**	**Internal**	**External**	**Total**
Core Theory	23PF1CT 401	Mechanics Sports and games - I	4	4	25	75	100
	23PF1CT 402	Mechanics of Sports and Games skills – II	4	4	25	75	100
	23PF1CT 403	Sports Performance Analysis	4	4	25	75	100
DSE	**Student will choose any one course from the pool of subject offered by department**		4	4	25	75	100
Thesis				10	25	75	100
Part –II Core Practical	23PF1CP 401	Field events - Practicum	3	2	25	75	100
	23PF1CP 402	Sports and games -II	3	2	25	75	100
Total	**CGPA**		22	**30 C**	-	-	**700**

S.NO	PRACTICAL	CONTENT
1	**Sports and Games -I**	1. Badminton / Tennis / Table tennis
		2. Basketball / Volleyball / Kabaddi
		3. Hockey / Football / Cricket
2	**Sports and games II**	1. Boxing / Fencing / Wrestling
		2. Gymnastics / Weight Lifting / Swimming
		3. Golf / Squash / Archery

DEPARTMENT SPECIFIC ELECTIVES:

A student can choose any one of the department specific electives subject enlisted in the odd semester and even semester according to his/her choice.

Sl. No	Odd Semester DSE		Sl. No	Even Semester DSE	
	Course code	**Course name**		**Course code**	**Course name**
1.	23PF1DSE101	Foundations of fitness, exercise prescription, strength and conditioning	1.	23PF1 DSE 201	Mathematics in Biomechanics
2.	23PF1DSE102	Psychology of Sports Performance	2.	23PF1DSE 202	Modeling and Simulation
3.	23PF1DSE 103	Sports Physiology and Ergogenic aids	3.	23PF1DSE 203	Kinanthropometry and Podiatry
4.	23PF1DSE 104	Biomechanics of Yoga	4.	23PF1DSE 204	Sports Technology

GENERIC ELECTIVE:

The Department of sports biomechanics and kinesiology offers one generic elective subject each in odd semester and even semester for the students of other departments.

Sl. No	Odd Semester DSE			Even Semester DSE	
	Course code	**Course name**		**Course code**	**Course name**
1.	23PF1GE 101	Human gait and posture		23PF1GE 201	Sports Biomechanics

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI – 600 127

REGULATIONS FOR

BACHELOR OF BUSINESS ADMINISTRATION

(SPECIALISATION IN SPORTS MANAGEMENT)

UNDER CHOICE BASED CREDIT SYSTEM (CBCS)

2023-2024 ONWARDS

DEPARTMENT OF SPORTS MANAGEMENT AND SPORTS PSYCHOLOGY & SOCIOLOGY

Regulations for Bachelor of Business Administration (B.B.A) With Specialisation in Sports Management (Regular Mode) under Choice Based Credit System (CBCS) from the Academic Year 2023-2024 Onwards:

The Choice Based Credit System (CBCS) and Learning Outcomes Based Curriculum Framework (LOCF) for the three years B.B.A Degree Programme with a specialisation in Sports Management (Regular Mode) is implemented from the Academic Year 2023-2024.

1. ELIGIBILITY FOR ADMISSION:

A pass in the Higher Secondary Examination (Academic or Vocational Stream)/Intermediate Examinations/Pre-degree Examinations/Pre-University Examinations or any other Board under 10+2/10+3/11+1/11+2 pattern conducted by Government of Tamil Nadu (or) Other States (or) Union Territories (or) an examination accepted as equivalent thereof by the Syndicate of this University shall be eligible for admission to the B.B.A Degree Programme with Specialisation in Sports Management.

2. ADMISSION CRITERIA:

The admission will be purely based on the marks obtained by the candidates in the +2 / H.Sc examination. State Government Reservation Policy is implemented for admission.

3. DURATION OF THE PROGRAMME:

The normal duration of the B.B.A (Specialisation in Sports Management) Degree Programme shall be three years consisting of six semesters. A student who is unable to complete the program for whatever reasons within the minimum duration (three years) prescribed for the programme, may be allowed two years period of time beyond the normal period to clear the backlog for qualifying for the Degree. In exceptional cases like major accidents or child birth, an extension of one more year shall be considered beyond maximum span of time. During the extended period, the student shall be considered as a Private Candidate and is not eligible for Ranking and Distinction.

4. SEMESTERS:

An academic year is apportioned into two semesters:

Odd Semester – July to November

Even Semester - December to April

In each semester, the classes are conducted for 18 weeks (90 days) with 5 working days per week.

5. PROGRAM OUTCOMES:

PO1: Problem Solving Skill: Problem analysis: Identify, review, formulate and analyse the problem or reformation to provide conclusions applying analytic thought to body of knowledge.

PO2: Decision Making Skill: Ability to inquire, identifying problems, logical flaws, analyse data from various sources, interpret and draw valid conclusions.

PO3: Ethical Value: Demonstrate moral/ethical values in carrying out his duties in his profession.

PO4: Communication Skill: Effectively communicate thoughts, ideas or any complex information orally or written using appropriate media clearly and concisely

PO5: Individual and Team Leadership Skill: Demonstrate ability to work effectively individually and within the group.

PO6: Employability Skill: Become empowered individuals to be employed in various positions in industry, academia and research.

PO7: Entrepreneurial Skill: Equipped with skills and competencies to become a global entrepreneur.

PO8: Contribution to Society: Strive towards becoming a global influencer and motivating future generation towards building a legacy that contributes to overall growth of humankind.

6. PROGRAM SPECIFIC OUTCOMES:

PSO1 – Acquire academic excellence in management education with an aptitude for entrepreneurship/ higher studies.

PSO 2 – Students to build proficiency in key business functional areas.

PSO3 – Learn how to effectively manage people and build strong interpersonal & leadership skills.

PSO 4 – Enhance critical thinking and analytical skills in terms of decision making.

PSO 5 – Integrate technological advancements in business for sustainable business and contribution to economic growth.

PO – PSO MAPPING

	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
PSO 1	Y	Y	Y	Y	Y	Y	Y	Y
PSO 2	Y	Y	Y	Y	Y	Y	Y	Y
PSO3	Y	Y		Y	Y	Y	Y	
PSO 4	Y	Y	Y	Y	Y	Y	Y	Y
PSO 5	Y	Y	Y	Y	Y	Y	Y	Y

7. CHOICE BASED CREDIT SYSTEM (CBCS):

The Tamil Nadu Physical Education and Sports University follows the **Choice Based Credit System (CBCS)** and Learning Outcomes Based Curriculum Framework (LOCF). One credit is equal to one teaching hour per week during the semester. The CBCS in B.B.A (Specialisation in Sports Management) Degree Programme would have five components and the total credit requirements for all components in three years is 140 credits. The following are the components:

Course Components	Types of Courses	No. of Courses	Credits	Total Credits
Part – I	Language / Special English/Hindi	4	3	12
Part – II	English	4	3	12
Part – III	Core Courses	14	4	56
	Core Elective Courses	8	3	24
	Summer Internship	1	2	2
	Project work	1	4	4
Part – IV	Skill Enhancement Courses (Non-Major Electives)	7	2	14
	Skill Enhancement Courses (Entrepreneurial Skill)	1	1	1
	Ability Enhancement Courses	4	2	8
Part – V	Value Education	1	2	2
	Environmental Studies	1	2	2
	Extension Activity	1	1	1

	Professional Competency Skill	1	2	2
Total Credits				**140**

CREDIT ABSTRACT

Type of Courses	**Semester**						**Total Credits**
	I	**II**	**III**	**IV**	**V**	**VI**	
	Credits						
Language / Special English/Hindi	1	1	1	1	-	-	**12**
English	1	1	1	1	-	-	**1** **2**
Core Courses	2	2	2	2	4	2	**56**
Core Elective Courses	1	1	1	1	2	2	**24**
Summer Internship	-	-	-	-	1	-	**2**
Project work	-	-	-	-	-	1	**4**
Skill Enhancement Courses (Non-Major Electives)	2	2	1	2	-	-	**14**
Skill Enhancement Courses (Entrepreneurial Skill)	-	-	1	-	-	-	**1**
Ability Enhancement Courses	1	1	1	1	-	-	**8**
Value Education	-	-	-	-	1	-	**2**
Environmental Studies	-	-	-	1	-	-	**2**
Extension Activity	-	-	-	-	-	1	**1**
Professional Competency Skill	-	-	-	-	-	1	**2**
Grant Total	**8**	**8**	**8**	**9**	**8**	**7**	**140**

8. COURSE WEIGHTAGE:

Courses are designed with weightage of One / Two / Three / Four credits depending upon the content, duration and specialization.

9. CREDIT DISTRIBUTION:

The Credit distribution for the six semesters are given below:

SEMESTER	CREDITS	TOTAL MARKS
I	23	800
II	23	800
III	22	800
IV	25	900

V	26	800
VI	21	600
GRAND TOTAL	**140**	**4700**

5. DETAILS OF STUDY AND CREDIT DISTRIBUTION:

First Year – First Semester

Part	Course Components	Course Code	Name of the Course	LH	Int	Ext	Total Marks	Credits
I	Language	23UE1LT101	Tamil / Special English	3	25	75	100	3
II	English	23UE1LE101	English	3	25	75	100	3
III	Core Course -I	23UE1CT101	Management Concepts	4	25	75	100	4
	Core Course -II	23UE1CT102	Financial and Management Accounting	4	25	75	100	4
	Core Elective -1	To be chosen from Elective List		3	25	75	100	3
III	Skill Enhancement Course -1	23UE1SE101	Business Economics	2	25	75	100	2
	Skill Enhancement Course -2	23UE1SE102	Business Mathematics and Statistics	2	25	75	100	2
	Ability Enhancement Course -1	23UE1AE101	Soft Skills – I (Presentation Skills)	2	50	50	100	2
Total							800	23

First Year – Second Semester

Part	Course Components	Course Code	Name of the Course	LH	Int	Ext	Total Marks	Credits
I	Language	23UE1LT201	Tamil / Special English	3	25	75	100	3
II	English	23UE1LE201	English	3	25	75	100	3
III	Core Course -III	23UE1CT201	Organisational Behaviour	4	25	75	100	4

	Core Course -IV	**23UE1CT202**	**Production and Operations Management**	**4**	**25**	**75**	**100**	**4**
	Core Elective -II	**To be chosen from Elective List**		**3**	**25**	**75**	**100**	**3**
III	**Skill Enhancement Course -III**	**23UE1SE201**	**Business Communication**	**2**	**25**	**75**	**100**	**2**
	Skill Enhancement Course -IV	**23UE1SE202**	***Sports First Aid (Practical)***	**2**	**25**	**75**	**100**	**2**
	Ability Enhancement Course -II	**23UE1AE201**	**Naan Mudhalvan Scheme - I**	**2**	**25**	**75**	**100**	**2**
Total							**800**	**23**

Second Year – Third Semester

Part	Course Components	Course Code	Name of the Course	LH	Int	Ext	Total Marks	Credits
I	**Language**	**23UE1LT301**	**Tamil / Special English**	**3**	**25**	**75**	**100**	**3**
II	**English**	**23UE1LE301**	**English**	**3**	**25**	**75**	**100**	**3**
III	**Core Course -V**	**23UE1CT301**	**Legal Systems in Business**	**4**	**25**	**75**	**100**	**4**
	Core Course -VI	**23UE1CT302**	**Marketing Management**	**4**	**25**	**75**	**100**	**4**
	Core Elective - III	**To be chosen from Elective List**		**3**	**25**	**75**	**100**	**3**
III	**Skill Enhancement Course -V**	**23UE1SE301**	**E-Commerce**	**2**	**25**	**75**	**100**	**2**
	Skill Enhancement Course -VI	**23UE1SE302**	**Entreprenerial Development**	**1**	**25**	**75**	**100**	**1**
	Ability Enhancement Course -III	**23UE1AE301**	**Soft Skills – II (Written Skills)**	**2**	**50**	**50**	**100**	**2**
Total							**800**	**22**

Second Year – Fourth Semester

Part	Course Components	Course Code	Name of the Course	LH	Int	Ext	Total Marks	Credits
I	Language	23UE1LT401	Tamil / Special English	3	25	75	100	3
II	English	23UE1LE401	English	3	25	75	100	3
III	Core Course - VII	23UE1CT401	Operations Research	4	25	75	100	4
	Core Course - VIII	23UE1CT402	Human Resource Management	4	25	75	100	4
	Core Elective - IV	To be chosen from Elective List		3	25	75	100	3
III	Skill Enhancement Course -VII	23UE1SE401	Total Quality Management	2	25	75	100	2
	Skill Enhancement Course -VIII	23UE1SE402	Customer Relationship Management	*2*	*25*	*75*	*100*	*2*
	Ability Enhancement Course -IV	23UE1AE401	Naan Mudhalvan Scheme - II	2	25	75	100	2
IV	Environmental Studies	23UE1ES401	Environmental Studies	2	25	75	100	2
Total							900	25

Note: A minimum of four weeks Internship will be carried out during the summer vacation after the second year. Viva Voce will be conducted by the internal examiners of the Department and marks shall be sent to the University for its inclusion in the Fifth Semester Marks Statement.

Third Year – Fifth Semester

Part	Course Components	Course Code	Name of the Course	LH	Int	Ext	Total Marks	Credits
III	Core Course -IX	23UE1CT501	Research Methods in Business	4	25	75	100	4
	Core Course -X	23UE1CT502	Financial Management	4	25	75	100	4
	Core Course -XI	23UE1CT503	Business Environment	4	25	75	100	4
	Core Course - XII	23UE1CT504	Management Information System	4	25	75	100	4

	Core Elective -V	**To be chosen from Elective List**		**3**	**25**	**75**	**100**	**3**
	Core Elective - VI	**To be chosen from Elective List**		**3**	**25**	**75**	**100**	**3**
	Internship	**23UE1CI501**	**Internship Report**	**2**	**100**	**-**	**100**	**2**
IV	**Value Education**	**23UE1VE501**	**Value Education**	**2**	**25**	**75**	**100**	**2**
Total							**800**	**26**

Third Year – Sixth Semester

Part	Course Components	Course Code	Name of the Course	LH	Int	Ext	Total Marks	Credits
III	**Core Course - XIII**	**23UE1CT601**	**Retail Management**	**4**	**25**	**75**	**100**	**4**
	Core Course - XIV	**23UE1CT602**	**Services Marketing**	**4**	**25**	**75**	**100**	**4**
	Core Elective - VII	**To be chosen from Elective List**		**3**	**25**	**75**	**100**	**3**
	Core Elective - VIII	**To be chosen from Elective List**		**3**	**25**	**75**	**100**	**3**
	Project	**23UE1CP601**	**Project Report**	**4**	**25**	**75**	**100**	**4**
IV	**Professional Competency skills**	**23UE1PC601**	**Employability Skills**	**2**	**50**	**50**	**100**	**2**
	Extension Activity	**23UE1EA601**	**Extension Activity (NCC/NSS/Red Cross, etc)**	**1**	**-**	**-**	**-**	**1**
Total							**600**	**21**

6. LIST OF CORE ELECTIVE COURSES:

The following are the core elective courses offered for the students:

Code	Name of the Subject	LH	Int	Ext	Total Marks	Credits
23UE1CE001	Sports Organisation and Administration	3	25	75	100	3

23UE1CE002	Principles Sports Management	3	25	75	100	3
23UE1CE003	Sports Facility Management	3	25	75	100	3
23UE1CE004	Sports Marketing	3	25	75	100	3
23UE1CE005	Sports Psychology	3	25	75	100	3
23UE1CE006	Sports Event Management	3	25	75	100	3
23UE1CE007	Schemes For Sports Development	3	25	75	100	3
23UE1CE008	Sports Media Management	3	25	75	100	3
23UE1CE009	Sports Tourism	3	25	75	100	3
23UE1CE010	Sports Finance	3	25	75	100	3
23UE1CE011	Sports Human Resource Management	3	25	75	100	3
23UE1CE012	Advertising in Sports	3	25	75	100	3

7. ASSESSMENT:

Assessment of a student's attainment will consist of Continuous Internal Assessment (CIA) and End Semester Examinations (ESE). The ratio between CIA and ESE will normally be 25:75.

a) Continuous Internal Assessment (CIA)

	Exam/Test	Marks
Internal Marks 25 marks (Minimum Passing marks :10)	First Internal Exam	5
	Second Internal Exam	5
	Model Exam	10
	Assignment	3
	Seminar	2
	Total Marks	**25**

b) End Semester Examinations (ESE)

Except in the case of project-work/ internship and exclusively practical/field placement courses/Soft skills Based/ Sports based, the ESE will consist of a written examination of three hours duration for a maximum score of 75. The minimum passing marks for End Semester Examinations is 40% (30 marks out of 75).

7. PATTERN OF QUESTION PAPER AND EVALUATION:

The following procedure will be followed for evaluation:

a) The Question paper pattern under CBCS will include four sections carrying 1 mark, 2 marks, 5 marks and10 marks questions respectively.

b) Single valuation will be done by the Examiners duly appointed by the University. The answer scripts are valued either by internal or external examiners.

c) A student is required to secure a minimum of 40% marks in each course in the End Semester Examinations, i.e. 30 marks out of 75 and a total of 40 marks out of 100 including Internal Assessment.

8. ATTENDANCE REQUIREMENT FOR APPEARING SEMESTER EXAMINATIONS:

I. Students must have 75% of attendance in each semester to appear for the examination.

II. Students who have attendance between 70% and 74% shall apply for condonation in the prescribed form with the prescribed fee.

III. Students who have attendance between 65% and 69% shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

IV. Students who have attendance between 60% and 64% shall carry over the examinations in the ensuing Semester.

V. Students who have attendance below 60% are not eligible to appear for the examination. They shall re-do the semester(s) and therefore, they shall not move to the ensuing semester.

VI. A student can avail condonation only once during the course of study.

VII. Hall tickets will be issued to the eligible candidates only if they produce 'No Dues Certificate' from the Department, the Registrar's Office, the Library and the Hostel Warden at the time of issue of "Hall Ticket" for the Semester Examinations.

9. SYLLABUS:

A detailed syllabus for the Courses of B.B.A Programme with specialisation in Sports Management is given below:

SEMESTER- I - PAPER CODE – 23UE1CT101
Part III – Core Course I - MANAGEMENT CONCEPTS

Sub.code&Name	**23UE1CT101**	**MANAGEMENT CONCEPTS**	
Course Objectives			
C1	To explore thoughts of management		
C2	To know the planning for sports events and sports Industry		
C3	To identify the techniques of direction		
C4	To know the leadership skills and controlling techniques		
C5	To measure the management in the sports context		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Unit-I: Evolution of Management Thought** Definition; Nature; and Purpose of Management; Managerial Functions at Different Organizational Levels; Evolution of Management Thoughts – Traditional, Medieval and Modern Levels of Management.	13	C1
II	**Unit-II: Planning and Organizing** Planning; Types of Plan; the Purpose of Planning for Sport Events, Steps in Planning. Formal and Informal Organizations in the Sports Industry; The Process of Organizing; Organizational Structure.	12	C2
III	**Unit-III: Directing** Direction - Nature and Purpose - Importance of Direction - Written vs. Oral Directives - Techniques of Direction.	11	C3
IV	**Unit-IV: Leading for Sport** Defining Leadership; Different Types of Leadership - Controlling; Control Process, Modern Control Techniques.	11	C4
V	**Unit-V: Management in the Sports context**	13	C5

	Management and Society; The Concept of Social Responsibility; - Sports Academies; Obligation of the State to the Community - Inculcating a Sporting Lifestyle.		
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding the concepts of Management. Managerial Functions at Different Organizational Levels, Evolution of Management Thoughts	PO1, PO 5, PO 6.
CO2	Have familiarize planning in sports organisations and Industry	PO 1, PO 2, PO 4.
CO3	Have better knowledge about directing	PO 3, PO5, PO7, PO 8
CO4	Learned Leadership and Controlling	PO 1, PO 3, PO 4.
CO5	Gathered social responsibility, sporting lifestyle	PO 2, PO 6, PO 7, PO 8.

Reading List	
1.	Principles & Practice of Management: M.D. Kakade
2.	Paradigm Shift in Sports Management in India: Shail Kapri

References Books	
1.	Principles and Practice of Management – Heinz Weihrich & Harold Koontz.
2.	Principles of Management by Moshal
3.	Principles of Management: Tripathi & Reddy
4.	Management Principles and Practices: Chunawala and Shreenivasan

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test,Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- I - PAPER CODE – 23UE1CT102
Part III – Core Course II – FINANCIAL AND MANAGEMENT ACCOUNTING

Sub.code&Name	**23UE1CT102**	**FINANCIAL AND MANAGEMENT ACCOUNTING**	
Course Objectives			
C1	To understand basic concepts of Management accounting		
C2	To analyse Final accounts		
C3	To evaluate ratio analysis		
C4	To explore marginal costing & Absorption costing		
C5	To measure the budgetary control		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Management Accounting: Nature and Scope** Meaning Functions and Scope of Management Accounting; The Management Accountant; Limitations of Management Accounting; Tools of Management Accounting.	14	C1
II	**Preparation of Trial Balance :** Trading and Profit & Loss Account; Manufacturing Account; Balance Sheet; Adjustment Entries.	12	C2
III	**Ratio Analysis** Analysis of Financial Statements - Comparative Statement, Common Size Statement, Trend Analysis, Ratio Analysis– Liquidity, Profitability, Turnover Ratios – Interpretation of Ratios – Application to Decision Making	11	C3
IV	**Marginal Costing** Marginal Costing; Absorption Costing; Difference between Absorption Costing and Marginal Costing; Segregation of Semi-Variable Costs; Profit Planning.	13	C4
V	**Budgets and Budgetary Control** Definition and Objectives; Meaning of Budget; Types of Budgets; Budgetary Control.	10	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding the concepts of Management. Accounting.	PO1, PO 2, PO 6, PO 7.
CO2	Analyse the trading, profit &loss account and balance sheet	PO 4, PO 5, PO 8.
CO3	Evaluate Ratio analysis	PO 2, PO5, PO 8
CO4	Understanding the concepts Marginal costing	PO 1, PO 3, PO 4, PO 8.
CO5	Gathered budgetary control	PO 2, PO 6, PO 7.

Reading List	
1.	Accounting Management - Bhattacharya S.K.and Dearden I.
2.	Accounting for Management-Test and Cases -Bhattacharya S.K. and Reardon J

References Books	
1.	Management Accounting - R.P. Rustogi.
2.	Cost and Management Accounting by M.E. Thukaram Rao, New age International Publication
3.	Cost and Management Accounting - Saxena & Vashist.
4.	Management Principles and Practices: Chunawala and Shreenivasan

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments, Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions

Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Simple problems, Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	2	3				3	2	
CO 2				3	2			3
CO 3		2			3			2
CO 4	1		3	2				1
CO 5		3				3	2	

3-Strong 2-Medium 1-Low

SEMESTER- I - PAPER CODE – 23UE1SE101

Part III – Skill Enhancement Course – I - BUSINESS ECONOMICS

Sub.code&Name	**23UE1SE101**	**BUSINESS ECONOMICS**	
Course Objectives			
C1	To know the basic concepts of Business Economics		
C2	To explore law of demand		
C3	To understand cost concepts		
C4	To enumerate market structure of business firms		
C5	To measure production function and profit theories		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Introduction to Business Economics** Meaning, Nature, Functions and Scope of Business Economics; Factors Influencing Business Decisions; Micro and Macro Economic Concepts.	6	C1
II	**Demand Analysis and Estimation** The Law of Demand: Price-Demand Relationship, The Demand Function, Elasticity of Demand in Sports Context, Demand Forecasting.	7	C2
III	**Cost Concepts** Cost- Definition, Types- Fixed, Variable, Total, Average, Marginal and other costs. Break Even Analysis –Pricing Methods.	6	C3
IV	**Market structure and objectives of business firms** Objectives of Business Firms, Profit Maximization; The Market Structure; Features of Perfect Competition, Monopoly, Oligopoly and Duopoly and Its Features.	6	C4
V	**Production Functions and Profit Theories:**	5	C5

	Production Function – Factor Productivity and Returns to Scale – National Income, Computation and Limitations.		
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding the concepts of Business Economics.	PO 2, PO 6, PO 7
CO2	Know the law of demand, elasticity and functions	PO1, PO 4, PO 5, PO 8.
CO3	Evaluate cost concepts.	PO 2, PO5, PO7, PO 8
CO4	Understanding the market structure of business firms	PO 1, PO 3, PO 4,PO 8.
CO5	Gathered production function and profit theories	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Business Economics by Dr.S.Sankaran
2.	Business Economics by Dr.J.P.Mishra

References Books	
1.	Economics by Samuelson
2.	Business Economics by Adhikari.
3.	Managerial Economics by P. Maheshwari.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments, Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment

Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- I - PAPER CODE – 23UE1SE102
Part III – Skill Enhancement Course – II - BUSINESS MATHEMATICS AND STATISTICS

Sub.code&Name	**23UE1SE102**	**BUSINESS MATHEMATICS AND STATISTICS**	
Course Objectives			
C1	To understand basic concepts of Management accounting		
C2	To analyse Final accounts		
C3	To evaluate ratio analysis		
C4	To explore marginal costing & Absorption costing		
C5	To measure the budgetary control		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Probability** Introduction – Basic Concepts in Probability. Baye's Theorem; - Theory of Distributions – Binomial, Poisson and Normal. Decision Theory.	7	C1
II	**Differentiation and Integration** Basic Concepts of differentiation and integration – Concepts of Marginal, average and total cost – Economic Order Quantity.	6	C2
III	**Statistics: Nature and Scope** Statistics in Business and Management – Data, Variable, Random Variable, Population, Sample, Random Sample; Descriptive Statistics; Inferential Statistics.	7	C3
IV	**Graphical Representation and Histogram.** Classification of Data; Frequency Distribution; Mean, Median and Mode; Time Series Analysis; Trend Analysis	5	C4
V	**Regression and Correlation Analysis**	5	C5

	Correlation Analysis, Spearman's Rank Correlation; The Scatter Diagram; The Linear Regression Equation.		
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding the concepts probability, bayes theorem	PO1, PO 3, PO 6, PO 7
CO2	Analyse the integration, EOQ	PO 4, PO 5, PO 8.
CO3	Evaluate data, variable, population.	PO 2, PO5, PO7, PO 8
CO4	Understanding the frequency distribution	PO 1, PO 3, PO 4.
CO5	Measured correlation, regression, scatter diagram	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Statistics for Management Eighth Edition By Pearson
2.	Statistics for Management Seventh Edition, Kindle Edition

References Books	
1.	Business Statistics-by Hooda
2.	Fundamental of Statistics-by S.C. Gupta
3.	Statistical Methods - by Sancheti – Kapoor

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments, Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions

Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Simple problems, Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3		2			3	2	
CO 2				3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- I - PAPER CODE – 23UE1AE101

Part – III – Ability Enhancement Course – I - SOFT SKILLS – I (Présentation Skills)

OBJECTIVES:

To enrich the Presentation skill of the students.

LEARNING OUTCOMES:

Students will be able to communicate their ideas through different modes and medium. They will be able to make memorable presentations professionally. Students will understand different strategies to adopt while communicating with different personalities with different goals.

BRIEF CONTENTS

Self Introduction – News Reading – Story Telling - Group Discussions - Talk Shows and Role Plays - Personal Interview - Movie Reviews, Article Reviews, Book Review and Speech in General Occasions.

Evaluation:

The performance of the students for this course will be evaluated for a total of 100 marks, of which 50 marks for internal (Evaluation of the student by the Faculty In-charge of the program) and 50 marks for external (Viva Voce Examination duly conducted by an external Examiner). Students have to appear for the Viva voce Examination in the presence of Panel of Examiner and secure a minimum of 40% of marks in the two components to clear the course. A student who fails in the Viva voce examination will have to redo the same during the subsequent year.

SEMESTER- II - PAPER CODE – 23UE1CT201
Part III – Core Course III - ORGANISATIONAL BEHAVIOR

Sub.code&Name	**23UE1CT201**	**ORGANISATIONAL BEHAVIOR**	
Course Objectives			
C1	To know the basic concepts of Business Economics		
C2	To explore law of demand		
C3	To understand cost concepts		
C4	To enumerate market structure of business firms		
C5	To measure production function and profit theories		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Definition of OB – Various Disciplines contributing to OB – Harwthrone Experiment - Need And importance Of Organizational Behavior.	13	C1
II	Personality – Types – Factors Affecting Personality – Perception – Learning - Types of Learning Styles – Learning Process & Theories.	12	C2
III	Values and Attitudes – Characteristics – Components – Group Dynamics – Types Of Groups – Conflict Management – Nature and Types.	11	C3
IV	Leadership – Meaning – Importance– Leadership Styles – Leaders Vs Managers; Motivation – Theories – Importance – Types – Motivation at Work.	11	C4
V	Organizational Structure and Design – Organization Climate – Job Satisfaction – Organization Development, culture, Change – Current Trend in OB	13	C5
	Total	**60**	
Course Outcomes			

Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding the concepts Organisational behaviour	PO1, PO 5, PO 6.
CO2	Know the factors of personality, perception and learning.	PO 1, PO 2, PO 4.
CO3	Enumerate values, attitudes and group dynamics.	PO 3, PO5, PO7, PO 8
CO4	Get the information on leadership and motivation	PO 1, PO 3, PO 4.
CO5	Gathered organization structure, design, climate and change.	PO 2, PO 6, PO 7, PO 8.

Reading List	
1.	Fred Luthans, Organisational Behavior, McGraw Hill Book Co.
2.	C.B.Gupta, Organisational behaviour, S.Chand Publication.

References Books	
1.	Stephen Robbins, Organisational Behavior, Prentice Hall of India
2.	Udai Pareek, Understanding Organisational Behavior, Oxford University Press
3.	L.M.Prasad, Organisational Behavior, Sultan Chand & Sons

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments, Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,

Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, behaviour in sports organisation.
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- II - PAPER CODE – 23UE1CT202
Part III – Core Course IV - PRODUCTION & OPERATIONS MANAGEMENT

Sub.code&Name	**23UE1CT202**	**PRODUCTION & OPERATIONS MANAGEMENT**	
Course Objectives			
C1	To understand production and operations management		
C2	To know manufacturing system		
C3	To intends production planning and control of sports goods		
C4	To explore project analysis and evaluation		
C5	To measure pre-production and post-production of sports event consumer		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Production and Operations Management** Objectives, Scope and Functions of Production and Operations Management.	9	C1
II	**Manufacturing systems –** Need, Steps in Process Design and Process Selection; Differences between Continuous and Intermittent Production Systems.	12	C2
III	**Production Planning and Control of sports goods** Elements of Production Planning; Strategy of Production Planning; Production Control; Input / Output Control; Elements of Automation; Computer-Aided Design (CAD); Computer-Aided Manufacturing (CAM); Flexible Manufacturing System (FMS); Computer-Integrated, Manufacturing System (CIMS).	14	C3
IV	**Project Analysis and Evaluation** Definition - Characteristics of a Project; Life Cycle of a Project; The Project Planning Process; Constructing Networks; PERT and CPM	13	C4

V	**Event Staging** Nature of Events; Pre-production processes; Post-production processes; Understanding the Sport Event Consumer.	12	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding production and operations management	PO1, PO 3, PO 6, PO 7
CO2	Gathered manufacturing system and process	PO 4, PO 5, PO 8.
CO3	Evaluate production planning and control	PO 2, PO5, PO7, PO 8
CO4	Understanding Project analysis and evaluation	PO 1, PO 3, PO 4.
CO5	Measured pre and post production sports event consumer	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Production and Operations Management – Dr, B.S. Gole.

References Books	
1.	Production and Operations Management– K. Aahwathappa and K. Sridhara Bhat.
2.	Manufacturing automation – Morris Cohen – Tata McGraw Hill.
3.	Management and Technology Management – L.C. Jhamb.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments, Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions

Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- II - PAPER CODE – 23UE1SE201
Part – III – SKILL ENHANCEMENT COURSE – III - BUSINESS COMMUNICATION

Sub.code&Name	**23UE1SE201**	**BUSINESS COMMUNICATION**	
Course Objectives			
C1	To understand needs and forms of communication		
C2	To know types, inter and intrapersonal communication		
C3	To practice different types of letters and report writing		
C4	To explore public relations in sports		
C5	To measure sports media in India.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Need for Communication; Forms of Communication, Self-Development and Communication: Factors Affecting Communication; Essentials of Communication.	6	C1
II	Types of Corporate Communication - Barriers - Effective Communication Skills; Humour in Communication; Interpersonal and Intrapersonal Communication; Understanding Audience Psychology.	7	C2
III	Essentials of a Business Letter; Parts; Forms and Types of Business Letters; Writing a Good Business Letter. Internal Communication - Circulars and Memos; Office Notes; Report writing - Essentials of Good Report Writing.	6	C3
IV	Definition of Public Relations; Benefits of PR in Sport; Tools-Media; Press Release; one on ones; Press Conferences.	6	C4
V	Media as a Vehicle; Media as a Dashboard; Evolving nature of Sports Media in India; Opportunities in Sports Journalism.	5	C5
	Total	**30**	
Course Outcomes			

Course Outcomes	On completion of this course, students will	Program Outcomes
CO1	Understanding forms of communication	PO 2, PO 6, PO 7
CO2	Gathered types and barriers of communication	PO1, PO 4, PO 5, PO 8.
CO3	Practiced different types of letters and report writing	PO 2, PO5, PO7, PO 8
CO4	Understanding Public relation and media communication	PO 1, PO 3, PO 4,PO 8.
CO5	Measured sports media in India.	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	The Significance of Sponsorship as a Marketing Tool in Sports Events – Oladunni Roselyn Abiodun

References Books	
1.	Effective communication- Urmila Rai and S.M. Rai (Himalaya Publishing House).
2.	Business Communication-Doctor and Doctor (Sheth Publishers Pvt. Ltd.)
3.	Public Relations – A Case Based Approach – Jery Hendrix & Darrell C. Haynes.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments, Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,

Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- II - PAPER CODE – 23UE1SE202
Part – III – Skill Enhancement Course – IV – SPORTS FIRST AID

Sub.code&Name	**23UE1SE202**	**SPORTS FIRST AID**	
Course Objectives			
C1	To understand sports first aid		
C2	To know the types of injuries further clinical measures		
C3	To practice therapy, massage.		
C4	To explore casualty, bandage process.		
C5	To know emergency first aid measures like heart attack, stroke etc.,		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Sports first aid - sports first aider – aims and principles of first aid – functions of first aider - responding to an emergency - assess a situation quickly (drabc) – basic first aid inspection for consciousness (avpu) – priority of casulaties - responsiblities of first aider – recovery position.	6	C1
II	Sports injuries – types of injuries – definition, causes, clinical features, management and prevention of soft tissue injuries: skin injuries – strain – sprain – contusion – cramp tendon injuries – bursitis. Bone injuries: fracture – subluxation - dislocation.	7	C2
III	Principles of injury management - warm up - cool down - stretching - types of stretching – principles of stretching. Price technique - immobilization - splinting - handling & transfer - cryotherapy: methods of application (ice packs, ice towel, ice immersion, ice cube massage, excitatory cold, vapocoolant spray.	6	C3
IV	Techniques and equipment - removing clothing in lower body injuries - removing clothing in upper body injuries - removing headgear - casualty handling - first aid bag and supplies - sterile	6	C4

	dressings – bandages – types of bandages – taping – importance of taping.		
V	Emergency first aid - action in an emergency - cpr for an adult - cpr for a child - heart attack - stroke - choking adult – asthma - anaphylactic shock – snake bite – epilepsy – fracture and dislocation – sprain and strain.	5	C5
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding sports first aid	PO 2, PO 6, PO 7
CO2	Gathered types of injuries further clinical measures	PO1, PO 4, PO 5, PO 8.
CO3	Practiced different types of therapy, massage.	PO 2, PO5, PO7, PO 8
CO4	Explored casualty, bandage process.	PO 1, PO 3, PO 4,PO 8.
CO5	Knew emergency first aid measures like heart attack, stroke etc.,	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	The Significance of Sponsorship as a Marketing Tool in Sports Events – Oladunni Roselyn Abiodun

References Books	
1.	Effective communication- Urmila Rai and S.M. Rai (Himalaya Publishing House).
2.	Business Communication-Doctor and Doctor (Sheth Publishers Pvt. Ltd.)
3.	Public Relations – A Case Based Approach – Jery Hendrix & Darrell C. Haynes.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments, Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks

	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- II - PAPER CODE – 23UE1AE201

Part III- Ability Enhancement Course- II – NAN MUDHALVAN SCHEME -I

A Course offered by Naan Mudhalvan Scheme for second semester BBA has to be chosen by the students while second semester. The students can refer to the website https://naanmudhalvan.tn.gov.in/ for further details.

SEMESTER- III - PAPER CODE – 23UE1CT301
Part III – Core Course V - LEGAL SYSTEM IN BUSINESS

Sub.code&Name	**23UE1CT301**	**LEGAL SYSTEM IN BUSINESS**	
Course Objectives			
C1	To understand contract act		
C2	To know sale of goods act		
C3	To intends Negotiable Instruments act		
C4	To explore laws in business organisation		
C5	To measure application of laws in sports		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**The Contract Act** Definition of Contract; Essential Elements of a Valid Contract; Types of Contracts; Offer and Acceptance; Consideration; Void Agreements; Performance and Discharge of Contract.	13	C1
II	**The Sale of Goods Act, 1930** Contract of Sale; Kinds of Goods; The Price; Document of Title to Goods; Conditions and Warranties, Transfer of Title; Transfer of Property; Unpaid Seller.	12	C2
III	**The Negotiable Instruments Act, 1881** Definition - Characteristics of Negotiable Instruments; Promissory Note - Bill of Exchange – Cheque – Definition, Distinction between a Cheque and a Bill of Exchange - Parties to Negotiable Instruments.	11	C3
IV	**Laws pertaining to Business Organizations:** Business Organizations - Types of Companies according to the Mode of Incorporation, Types of	11	C4

	Registered Companies - Partnership Firms - Formation and Dissolution of a Partnership Firm		
V	**Application of law in sports: Case Studies in India and Abroad:** IPL Controversies; - **Agreements & protection of Intellectual property within the sports industry:** Footage limitation rights with Indian News Television- Terrestrial Vs Broadcast Rights in Sports – Image Rights of Athletes.	13	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding the essential elements of valid contract act	PO1, PO 5, PO 6.
CO2	Gathered sale of goods act	PO 1, PO 2, PO 4.
CO3	Evaluate Negotiable Instrument act	PO 3, PO5, PO7, PO 8
CO4	Understanding law to business organisation	PO 1, PO 3, PO 4.
CO5	Measured application of law in sports, case studies in India and Abroad	PO 2, PO 6, PO 7, PO 8.

Reading List	
1.	http://www.legalserviceindia.com/article/
2.	http://www.freebookcentre.net/Law/Law-Books.html 2
References Books	
1.	N.D. Kapoor-Elements of Mercantile Law - S. Chand & Co.
2.	K.R. Bulchandani - “Business Law for Management”-Himalaya Publishing House.
3.	M.C. Kutchal - “Mercantile Law”-Vikas Publishing

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments, Seminars, etc.,	25 Marks

External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- III - PAPER CODE – 23UE1CT302
Part – III – Core Course – VI - MARKETING MANAGEMENT

Sub.code&Name	**23UE1CT302**	**MARKETING MANAGEMENT**	
Course Objectives			
C1	To understand marketing concept		
C2	To know types, inter and intrapersonal communication		
C3	To practice different types of letters and report writing		
C4	To explore public relations in sports		
C5	To measure sports media in India.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Fundamentals of Marketing** The Marketing Concept: Marketing Concept vs. Production Concept - Service Concept - Understanding Consumer Behaviour: The Buyer - The Buying Process - Customer Relationship Management.	9	C1
II	Positioning: Elements of Positioning; Marketing Environment: Economic, Technological, Socio-cultural, Demographic and Political-Legal Environment; Product Life Cycle and Product Lines.	12	C2
III	Branding of Products - Promotion Mix Strategies - Pricing Mechanism - Methods – Objectives - Factors affecting Pricing Decisions - Distribution Strategy: Nature and Types of Distribution Channels – Retailing – Wholesaling - Logistics.	14	C3
IV	Selection of the Salesperson; Methods of Training; Objectives of Salespersons' Performance Evaluation; Need, Importance and Scope of Marketing Research - Research Proposal.	13	C4
V	Significance of sponsorship in Sports – Sponsor - Categories of Sponsorship - Benefits to Sponsors - Presentation Making - Sports Sponsorship as a	12	C5

	Marketing Tool. Meaning and Significance of ethics in sports - Ethical analysis. Issues in Event Marketing.		
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding concepts of marketing	PO1, PO 5, PO 6.
CO2	Gathered types and barriers of communication	PO 1, PO 2, PO 4.
CO3	Practiced different types of letters and report writing	PO 3, PO5, PO7, PO 8
CO4	Understanding Public relation and media communication	PO 1, PO 3, PO 4.
CO5	Measured sports media in India.	PO 2, PO 6, PO 7, PO 8.

Reading List	
1.	The Significance of Sponsorship as a Marketing Tool in Sports Events – Oladunni Roselyn Abiodun

References Books	
1.	Effective communication- Urmila Rai and S.M. Rai (Himalaya Publishing House).
2.	Business Communication-Doctor and Doctor (Sheth Publishers Pvt. Ltd.)
3.	Public Relations – A Case Based Approach – Jery Hendrix & Darrell C. Haynes.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test,Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions

Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- III - PAPER CODE – 23UE1SE301

Part III – Skill Enhancement Course – V - E-COMMERCE

Sub.code&Name	**23UE1SE301**	**E – COMMERCE**	
Course Objectives			
C1	To study the fundamental of and strategic of E- Commerce in business		
C2	To understand the uses of business application in E-Commerce		
C3	To learn the Structure, Architecture, Applications & Business Models, search engines		
C4	To study E-Commerce Payments and Computer security classification		
C5	To study the Issues in E-Commerce, Intelligent Agents, capabilities Cyber laws, contracts and warranties		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Fundamental of E-Commerce**: Traditional commerce and E commerce – Internet and WWW – role of WWW – value chains – strategic business and Industry value chains – role of E commerce. Driving forces – benefits and limitations of e-commerce.	7	C1
II	**Business Applications in E-Commerce:** Retailing in E-commerce – market research on internet customers – e-commerce for service sector – Advertising in e-commerce – B2B ecommerce.	5	C2
III	**E-Commerce Infrastructure** Intranet, Internet & Extranet – Structure, Architecture, Applications & Business Models, search engines	5	C3
IV	**E-Commerce Payments and Security** Computer security classification – copy right and Intellectual property – electronic commerce threats - strategies for marketing – sales and promotion E-Payments and Internet fraud. Principles of e-fund transfer, credit and debit card usage, E-check and unified payment systems.	6	C4
V	**Issues in E-Commerce**	7	C5

	Intelligent Agents - Definition and capabilities – limitation of agents – security –Legal, Ethics and Privacy issues – Protection needs and methodology - Consumer protection, Cyber laws, contracts and warranties. Taxation and Encryption Policies.		
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the fundamental of and strategic of E-Commerce in business	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Understand the uses of business application in E-Commerce	PO4,PO6, PO8
CO3	Learn the Structure, Architecture, Applications & Business Models, search engines	PO2,PO3,PO5, PO7
CO4	Learn E-Commerce Payments and Computer security classification	PO4,PO6, PO7, PO8
CO5	Understand the Issues in E-Commerce, Intelligent Agents, capabilities Cyber laws, contracts and warranties	PO1,PO2,PO3,PO4, PO5, PO7

References Books	
1.	Efraim Turban et al., 'Electronic Commerce – A managerial perspective', Pearson Education Asia
2.	Kalakota et al, 'Frontiers of Electronic Commerce', Addison Wesley.
3.	Sandeep Krishnamurthy, 'E-Commerce Management – Text and Cases', Thomson Learning.
4.	Greenstein Firsman, 'Electronic Commerce', Tata McGraw Hill.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test,Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,

Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

SEMESTER-III - PAPER CODE – 23UE1SE302
Part – III – SKILL ENHANCEMENT COURSE- VI - ENTREPRENEURIAL DEVELOPMENT

Sub.code&Name	**23UE1SE302**	**ENTREPRENEURIAL DEVELOPMENT**	
Course Objectives			
C1	To understand the concept of Entrepreneurship.		
C2	To learn about the role played by government and non-government agencies		
C3	To learn about Business idea generation technique and Marketing Feasibility		
C4	To learn about the method and technique of Project Appraisal and Business Plan		
C5	To learn about the strategies of starting an enterprise.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Introduction - Understanding the meaning of Entrepreneurship - Characteristics of an Entrepreneur - Classification of the Entrepreneurs - Factors influencing Entrepreneurship.	3	C1
II	Entrepreneurial growth - Role played by government and Non-Government agencies - EDP's, TIIC, SIDBI, PIPDIC, IDBI, IFCI, ETC. Problems and prospects of Women Entrepreneurs.	3	C2
III	Business idea generation Techniques - Identification of Business Opportunities - Marketing Feasibility - Financial Feasibility - Technical - Legal - Managerial and Vocational Feasibility	4	C3
IV	Project Appraisal - Methods - Techniques - Preparation of Business Plan - Content of a Business Plan - Project Report.	2	C4
V	How to start an enterprise? - Franchising and Acquisition - Product Strategies - Pricing	3	C5

	Strategies - Distribution Strategies - Promotional Strategies – Successful entrepreneurs.		
	Total	**15**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concept of Entrepreneurship.	PO 2, PO 6, PO 7
CO2	Learn about the role played by government and non-government agencies	PO1, PO 4, PO 5, PO 8.
CO3	Learn about Business idea generation technique and Marketing Feasibility	PO 2, PO5, PO7, PO 8
CO4	Learn about the method and technique of Project Appraisal and Business Plan	PO 1, PO 3, PO 4,PO 8.
CO5	Learn about the strategies of starting an enterprise.	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Jayshree Suresh - Entrepreneurial Development.

References Books	
1.	Jayshree Suresh - Entrepreneurial Development.
2.	Khanka - Entrepreneurial Development.
3.	Saini - Entrepreneurship : Theory & Practice.
4.	Gupta CB - Entrepreneurial Development.
5.	Vasant Desai - Dynamics of Entrepreneurial Development and Management.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test,Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment

Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- III - PAPER CODE – 23UE1AE301
Part – IV – Ability Enhancement Course – III - SOFT SKILLS – II -
(WRITTEN SKILLS)

OBJECTIVES:

To develop Written Communication skill of the students.

LEARNING OUTCOMES:

Students will develop written communication skills that reflect an understanding of the power of language to shape thought and experience. They will learn to write logically, with clarity, and with originality. To demonstrate a strategy for using communication skills over an extended period of time

BRIEF CONTENTS

Preparing the detailed Resume with a covering letter. Preparing Agenda & minutes of the meeting. Preparing tenders and quotations. Abstract / Summary writing, Articles writing in Journals and Magazines. Daily report - Weekly Report - Monthly report - Quarterly Report and Annual Report. Preparing a Business Plan/Proposals.

Evaluation:

The performance of the students for this course will be evaluated for a total of 100 marks, of which 50 marks for internal (Evaluation of the student by the Faculty In-charge of the program) and 50 marks for external (Viva Voce Examination duly conducted by an external Examiner). Students have to appear for the Viva voce Examination in the presence of Panel of Examiner and secure a minimum of 40% of marks in the two components to clear the course. A student who fails in the Viva voce examination will have to redo the same during the subsequent year.

SEMESTER- IV - PAPER CODE – 23UE1CT401
Part III – Core Course VII - OPERATIONS RESEARCH

Sub.code&Name	**23UE1CT401**	**OPERATIONS RESEARCH**	
Course Objectives			
C1	To understand operations research		
C2	To know Linear Programming		
C3	To analyse transportation model		
C4	To explore Replacement models		
C5	To measure Network analysis		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Introduction to Operations Research, basic definition, scope, objectives and limitations of Operations Research.	13	C1
II	Linear Programming Problem, Formulation of LPP – Graphical Method – Simplex Method (simple problems only)	12	C2
III	Transportation Model – Initial Basic Feasible Solution – NWCR method – Vogel's Approximation method – LCM - Assignment problems.	11	C3
IV	Replacement Models, Single replacement and group replacement problems - Sequencing problem	11	C4
V	Network Analysis – Rules for constructing a network diagram –Merits and demerits of CPM & PERT.	13	C5
	Total	**60**	
Course Outcomes			
Course Outcomes	On completion of this course, students will	**Program Outcomes**	

CO1	Understanding operation research	PO1, PO 5, PO 6.
CO2	Gathered LPP, graphical and simplex method	PO 1, PO 2, PO 4.
CO3	Evaluate transportation model	PO 3, PO5, PO7, PO 8
CO4	Understanding replacement models	PO 1, PO 3, PO 4.
CO5	Measured Network analysis	PO 2, PO 6, PO 7, PO 8.

Reading List	
1.	Hamdy A. Taha, Operations Research – An Introduction
2.	Dharani Venkatakrishnan, Operations Research, Principles and Problems.
References Books	
1.	N.D.Kapoor, Mercantile Law – Sultan & Sons
2.	S.D. Sharma, Operations Research
3.	Gupta & Manmohan, Problems in Operations Research, Methods and Solutions.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Problems, Finish a procedure in many steps, Differentiate between various yideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons

Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- IV - PAPER CODE – 23UE1CT402
Part – III – Core Course – VIII - HUMAN RESOURCE MANAGEMENT

Sub.code&Name	**23UE1CT402**	**HUMAN RESOURCE MANAGEMENT**	
Course Objectives			
C1	To understand the concept and objectives of Human Resource management.		
C2	To understand the concept of HR Planning, Job Analysis, Job Description, Job Specification, Job Evaluation and Recruitment.		
C3	To understand the concept of Induction, training and development.		
C4	To learn about the Performance Appraisal and Career Development Programs.		
C5	To understand about the Labour Welfare Measures,Wage and Salary Administration		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Introduction to Human Resource Management** Definitions, Objectives, Scope and Importance of HRM; Problems of HRD and Challenges for the Future.	9	C1
II	**Human Resource Planning** HR Planning; Guidelines for making Effective HR Planning - Job Analysis - Job Description - Job Specification - Job Evaluation: Definitions, Objectives, Principles, Advantages, Limitations and Methods of Job Evaluation; Recruitment - Sources of Recruitment.	12	C2
III	**Induction, Training, Development and Orientation** Induction - Steps; Content and Types of Induction Program; Training and Development; Training versus Development; Training Needs and Objectives.; Steps in the Training Program; Training Techniques; Evaluation of Training Programs	14	C3
IV	**Performance Appraisal**	12	C4

	Meaning and Scope of Performance Appraisal; Purpose and Need of Performance Appraisal; Methods and Techniques of Performance Appraisal; Potential Appraisal; Career Development; Functions and Significance.		
V	**Labour Welfare Measures and Wage and Salary Administration** Statutory and Non-Statutory Labour Welfare Measures - Indian Factories Act 1948, Sec 42-49. Wage and Salary Administration; Methods of Wage Payment; Incentive Wage Plans; Concept of Variable Compensation; Fringe Benefits.	13	C5
	Total	**60**	

Course Outcomes

Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding concepts of human resource management	PO1, PO 5, PO 6.
CO2	Understand the concept of HR Planning, Job Analysis, Job Description, Job Specification, Job Evaluation and Recruitment.	PO 1, PO 2, PO 4.
CO3	Understand the concept of Induction, training and development.	PO 3, PO5, PO7, PO 8
CO4	Learned about the Performance Appraisal and Career Development Programs.	PO 1, PO 3, PO 4.
CO5	Understand about the Labour Welfare Measures, Wage and Salary Administration	PO 2, PO 6, PO 7, PO 8.

Reading List

1.	Performance Management by M. Armstrong.

References Books

1.	Performance Management by LOWE.
2.	Performance Management by M. Armstrong.
3.	Performance Management by T.V. Rao.
4.	Principles of personnel management by Edwin. B. Flippo

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- IV - PAPER CODE – 23UE1SE401
Part – III – Skill Enhancement Course – VII - TOTAL QUALITY MANAGEMENT

Sub.code&Name	**23UE1SE401**	**TOTAL QUALITY MANAGEMENT**	
Course Objectives			
C1	To understand the concept of Total Quality Management.		
C2	To learn about the Management of process quality.		
C3	To understand the concept of Productivity and Quality.		
C4	To understand the concept of Quality Process.		
C5	To learn about the importance of ISO 9000.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Introduction to Total Quality Management – Evolution, TQM Framework, Barriers to TQM, Quality in 21st century.	6	C1
II	Management of process quality – Continuous Process Improvement; PDCA Cycle; Customer focus and satisfaction – Bench marking.	7	C2
III	Productivity and Quality – Strategic Quality Planning. FMEA; Cost of Quality.	6	C3
IV	Concept of Quality process – Quality improvement tools – Understanding process variation, Managing for quality- Japanese Management, 5S – Kaizen Principle.	6	C4
V	ISO 9000 Overview- Important steps in ISO Registration- ISO in Indian Companies. Criteria for Quality programs, Universal Standards of Quality.	5	C5
	Total	**30**	
Course Outcomes			
Course Outcomes	On completion of this course, students will	**Program Outcomes**	

CO1	Understand the concept of Total Quality Management.	PO 2, PO 6, PO 7
CO2	Learn about the Management of process quality.	PO1, PO 4, PO 5, PO 8.
CO3	Understand the concept of Productivity and Quality	PO 2, PO5, PO7, PO 8
CO4	Understand the concept of Quality Process.	PO 1, PO 3, PO 4,PO 8.
CO5	Learn about the importance of ISO 9000.	PO 2, PO 4, PO 6, PO 7.

Reading List		
1.	Vincent K. Omachonu & Joel E. Ross, Principles of Total Quality.	
References Books		
1.	Vincent K. Omachonu & Joel E. Ross, Principles of Total Quality.	
2.	Ron Collard, Total Quality.	
3.	Townsend & Gebhardt, Commit to Quality	
4.	John Bark, Essence of TQM.	
5.	Willborn & Cheng, Global Management of Quality Assurance Systems	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	

Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- IV - PAPER CODE – 23UE1SE402
Part – III – SKILL ENHANCEMENT COURSE – VIII
CUSTOMER RELATIONSHIP MANAGEMENT

Sub.code&Name	**23UE1SE402**	**CUSTOMER RELATIONSHIP MANAGEMENT**	
Course Objectives			
C1	To understand the concept of Customer relationship management.		
C2	To learn about the customer loyalty, lifetime and satisfaction.		
C3	To understand the concept of CRM plan, strategy and development.		
C4	To understand the concept of marketing strategy, initiative and campaign.		
C5	To learn about the CRM planning and implementation.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Evolution of Customer Relationship CRM-Definition, Emergence of CRM Practice, Factors responsible for CRM growth, CRM process, framework of CRM, Benefits of CRM, Types of CRM, Scope of CRM, Customer Profitability, Features Trends in CRM , CRM and Cost-Benefit Analysis, CRM and Relationship Marketing.	6	C1
II	CRM Concepts Customer Value, Customer Expectation, Customer Satisfaction, Customer Centricity, Customer Acquisition, Customer Retention, Customer Loyalty, Customer Lifetime Value. Customer Experience Management, Customer Profitability, Enterprise Marketing Management, Customer Satisfaction Measurements, Web based Customer Support.	7	C2
III	Planning for CRM Steps in Planning-Building Customer Centricity, Setting CRM Objectives, Defining Data Requirements, Planning Desired Outputs, Relevant issues while planning the Outputs, Elements of CRM plan, CRM Strategy: The Strategy Development Process, Customer Strategy Grid.	6	C3

IV	CRM and Marketing Strategy CRM Marketing Initiatives, Sales Force Automation, Campaign Management, Call Centres. Practice of CRM: CRM in Consumer Markets, CRM in Services Sector, CRM in Mass Markets, CRM in Manufacturing Sector.	6	C4
V	CRM Planning and Implementation Issues and Problems in implementing CRM, Information Technology tools in CRM, Challenges of CRM Implementation. CRM Implementation Roadmap, Road Map (RM) Performance: Measuring CRM performance, CRM Metrics.	5	C5
	Total	**30**	

Course Outcomes

Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concept of Customer relationship management.	PO 2, PO 6, PO 7
CO2	Learn about the customer loyalty, lifetime and satisfaction.	PO1, PO 4, PO 5, PO 8.
CO3	Understand the concept of CRM plan, strategy and development.	PO 2, PO5, PO7, PO 8
CO4	Understand the concept of marketing strategy, initiative and campaign.	PO 1, PO 3, PO 4,PO 8.
CO5	Learn about the CRM planning and implementation.	PO 2, PO 4, PO 6, PO 7.

Reading List

1.	Vincent K. Omachonu & Joel E. Ross, Principles of Total Quality.

References Books

1.	Jagdish N.Sheth, Atul Parvatiyar & G.Shainesh, "Customer Relationship Management", Emerging Concepts, Tools and Application", 2010, TMH.
2.	Dilip Soman & Sara N-Marandi," Managing Customer Value" 1st edition, 2014, Cambridge.

3.	Alok Kumar Rai, "Customer Relationship Management: Concepts and Cases", 2008, PHI.	
4.	Ken Burnett, the Handbook of Key "Customer Relationship Management", 2010, PearsonEducation.	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- IV - PAPER CODE – 23UE1AE401
Part III- Ability Enhancement Course- IV – NAN MUDHALVAN SCHEME -II

A Course offered by Naan Mudhalvan Scheme for fourth semester BBA has to be chosen by the students. while fourth semester. The students can refer to the website https://naanmudhalvan.tn.gov.in/ for further details.

SEMESTER- IV - PAPER CODE – 23UE1ES401
Part IV- ENVIRONMENTAL STUDIES

Sub.code&Name	**23UE1ES401**	**ENVIRONMENTAL STUDIES**	
Course Objectives			
C1	To understand basic concepts of environment and sustainability		
C2	To know renewable and non-renewable resources		
C3	To intends biodiversity and conservation		
C4	To explore environmental pollution		
C5	To measure human community and population		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Introduction to Environmental Studies Multidisciplinary nature of environmental studies; Scope and importance; concept of sustainability and sustainable development. Ecosystem - Structure and function of ecosystem.	6	C1
II	Natural Resources : Renewable and Non – renewable Resources - Deforestation : Causes and impacts due to mining, dam building on environment, case studies.	7	C2
III	Biodiversity and Conservation Levels of biological diversity: genetics, species and ecosystem diversity; Threats to biodiversity: Habitat loss, poaching of wildlife, man- wildlife conflicts, biological invasions; Conservations of biodiversity.	6	C3
IV	Environmental Pollution: types, causes, effects and Control measures of urban and industrial waste • Pollution case studies. Environmental Policies & Practices - Environment Protection Act, Air (Prevention & Control of Pollution) Act; Water (Prevention and Control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act.	6	C4

	Kyoto protocols and Convention on Biological Diversity		
V	Human Communities and the Environment - Human population growth, impacts on environment, human health and welfare. Disaster management: floods, earthquake, cyclone and landslides. Environmental ethics; Field Work - Visit to an area to document environmental assets: river / forest/ flora/ fauna etc - Visit to a local polluted site – Urban / Rural/ Industrial/ Agricultural etc.	5	C5
	Total	**30**	

Course Outcomes

Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding the concepts of environment and sustainability	PO 2, PO 6, PO 7
CO2	Analyse renewable and non-renewable resources	PO1, PO 4, PO 5, PO 8.
CO3	Evaluate biodiversity and conservation	PO 2, PO5, PO7, PO 8
CO4	Understanding Environmental Pollution	PO 1, PO 3, PO 4,PO 8.
CO5	Measured Human Communities and the Environment	PO 2, PO 4, PO 6, PO 7.

Reading List

1.	Pepper,I.L.,Gerba,C.P & Brusseau,M.L.2011.Environmental and Pollution Science. Academic Press.
2.	Singh,J.S.,Singh,S.P and Gupta,S.R.2014.Ecology,Environmental Science and Conservation. S.Chand Publishing, New Delhi.

References Books

1.	Gadgil , M.,& Guha, R. 1993.This Fissured Land: An Ecological History of India. Univ.of California Press.
2.	Glesson, B. and Low, N.(eds.)1999. Global Ethics and Environment, London, Routledge.

3.	Groom, Martha J., Gary K.Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates,2006.	
4.	McCully,P.1996.Rivers no more :the environmental effects of dams(pp.29-64).Zed books.	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- V - PAPER CODE – 23UE1CT501
Part – III – Core Course – IX - RESEARCH METHODS IN BUSINESS

Sub.code&Name	**23UE1CT501**	**RESEARCH METHODS IN BUSINESS**	
Course Objectives			
C1	To understand the concept of Research		
C2	To learn about the Hypothesis and methods of Sampling		
C3	To learn about the process of Data Collection and Questionnaire design.		
C4	To learn about Analysis and processing of Data		
C5	To learn about the mechanism of report writing		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Research – Types - Research Process - Problems in Research – Significance of Research in Social Sciences – Identification of problem; Research Design – Factors affecting Research Design – Review of Literature.	9	C1
II	Hypothesis - Types, Testing – Sampling Design: Censes Method and Sampling Method – Principles of Sampling – Methods of Sampling –Probability and Non-Probability Sampling Methods – Selection of a sample – Size – Criteria of Good Sample Design. Scaling Techniques: Meaning, Types of Scale - Scale Construction Techniques.	12	C2
III	Data Collection: Types – Sources of Data –Data Collection Methods – Observation – Survey – Questionnaire – Interview Schedule - Constructing Questionnaire – Format of Good Questionnaire – Differences between Schedule and Questionnaire – Pilot Study	14	C3
IV	Analysis and Processing of Data – Editing – Coding and Tabulation. Tests of Significance – Parametric Tests –Chi Square, and T-Test. Non-Parametric Tests - Introduction to ANOVA – One Way –Two Way –Correlation and Regression.	13	C4

V	Report Writing –Layout of report – Mechanics of writing Research Report –Norms for using tables – Charts and Diagrams – Appendix – Index and Bibliography.	12	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concept of Research	PO 2, PO 6, PO 7
CO2	Learn about the Hypothesis and methods of Sampling	PO1, PO 4, PO 5, PO 8.
CO3	Learn about the process of Data Collection and Questionnaire design.	PO 2, PO5, PO7, PO 8
CO4	Learn about Analysis and processing of Data	PO 1, PO 3, PO 4,PO 8.
CO5	Learn about the mechanism of report writing	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	William C E mory, Business Research Methods, Richard D Irwin, NJ

References Books	
1.	William C E mory, Business Research Methods, Richard D Irwin, NJ
2.	Donald R Cooper, Business Research Methods 7th Ed, McGraw Hill, 2001
3.	Krishnaswami OR, Methodology of Research for Social Science, Himalaya, Mumbai, 2001
4.	Anderson J. et.al, Thesis and Assignment writing, Wiley Eastern

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- V - PAPER CODE – 23UE1CT502
Part – III – Core Course – X - FINANCIAL MANAGEMENT

Sub.code&Name	**23UE1CT502**	**FINANCIAL MANAGEMENT**	
Course Objectives			
C1	To understand the overall framework of financial		
C2	To know types of investment, process and techniques		
C3	To determinants of Capital Structure		
C4	To understand the Long-Term Financing		
C5	To study the Capital Management and its factors		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Aims and objectives of Financial Management** Definition; Financial Functions; Role of a Financial Manager: Profit Maximization vs. Wealth Maximization; Financial analysis and Control.	10	C1
II	**Investment Decisions** Investment Decisions; Types of Investment Decisions; Capital Budgeting Process and techniques.	12	C2
III	**Capital Structure Decisions** Capital Structure; Relevance of Capital Structure: Capital Structure Theories; Determinants of Capital Structure.	13	C3
IV	**Instruments of Long-term Finance** Sources of Long-Term Finance; Rights Issue of Equity Shares; Preference Shares; Debentures; Fixed Deposits from Public; Lease Financing; Factors affecting Long-Term Funds.	13	C4
V	**Working Capital Management**	12	C5

	Working Capital Management; Factors Influencing Working Capital; Sources of Working Capital; Financing of Current Assets; Short-Term vs. Long-Term Financing; - Inventory Management Techniques.		
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course	**Program Outcomes**
CO1	Understanding Aims and objectives of Financial Management	PO 2, PO 6, PO 7
CO2	Proper understanding in Investment Decisions in business	PO1, PO 4, PO 5, PO 8.
CO3	Understand the theories and Capital Structure in financial management	PO 2, PO5, PO7, PO 8
CO4	Understanding understand the Long-Term Financing	PO 1, PO 3, PO 4,PO 8.
CO5	Understand the Capital Management and its factors	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Financial Management – Text, problems and cases M.Y.Khan and P.K Jain

References Books	
1.	Financial Management – Text, problems and cases M.Y.Khan and P.K Jain,
2.	Financial Management – Prasanna Chandra, Tata McGraw Hill.
3.	Financial Management – I.M. Pandey
4.	Financial Management – Rastogi.
5.	Financial Management – P.V. Kulkarni.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks

	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain.	
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

SEMESTER- V - PAPER CODE – 23UE1CT503
Part III – Core Course XI - BUSINESS ENVIRONMENT

Sub.code&Name	**23UE1CT503**	**BUSINESS ENVIRONMENT**	
Course Objectives			
C1	To know the basic concepts of Business Environment		
C2	To explore factors of environment		
C3	To understand socio-cultural environment		
C4	To enumerate technological environment		
C5	To gain knowledge of multinational corporations		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Nature of Business Environment:** Components of Environment, Micro Environment; Macro Environment; Environmental Scanning; Industry - Industrial Policy.	14	C1
II	**Business Environment in India:** Political Environment – Legal Environment – Economic Environment; Insurance: Overview, Types and Regulations of the Insurance Industry.	12	C2
III	**Socio-Cultural Environment** Role of business in society, environmental pollution, corruption, use of mass media, consumerism, changing lifestyle patterns.	11	C3
IV	**Technological Environment** Technological Change, Product and Process – Technological Factors Affecting business all over the world**.**	13	C4
V	**Management of Multinational Corporations**: The International Monetary Fund (IMF); The General Agreement on Trade and Tariffs (GATT); The World Trade Organization (WTO): The United Nations Conference on Trade and Development (UNCTAD), Managing World Trade.	10	C5
	Total	**60**	
Course Outcomes			

Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding the concepts Business environment	PO1, PO 2, PO 6, PO 7.
CO2	Know the factors of legal, political, economic, insurance policy	PO 4, PO 5, PO 8.
CO3	Enumerate environmental pollution, changing lifestyle patterns.	PO 2, PO5, PO 8
CO4	Get the information on technological change	PO 1, PO 3, PO 4, PO 8.
CO5	Gathered IMF, GATT, WTO, UNCTAD	PO 2, PO 6, PO 7.

Reading List	
1.	Business Environment by Raj Agarwal.
2.	Principles & Practice of Management – M.D. Kakade.

References Books	
1.	Business Environment by K Aswathappa
2.	Business Environment by K Aswathappa

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,

Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, behaviour in sports organisation.
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	2	3				3	2	
CO 2				3	2			3
CO 3		2			3			2
CO 4	1		3	2				1
CO 5		3				3	2	

3-Strong 2-Medium 1-Low

SEMESTER- V - PAPER CODE – 23UE1CT504
Part – III – Core Course – XII - MANAGEMENT INFORMATION SYSTEM

Sub.code&Name	**23UE1CT504**	**MANAGEMENT INFORMATION SYSTEM**	
Course Objectives			
C1	To understand the concept of Information System.		
C2	To explore the components of Computer System Resources.		
C3	To learn about the Application of Information System to functional Business Areas		
C4	To understand the concept of Planning and development of Information system.		
C5	To learn about Enterprise Resource Planning and its modules.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Information system**: Concepts of systems – Strategic uses of Information Technology. Business perspective on information systems – Dimensions of information systems - Contemporary Approaches to Information Systems.	13	C1
II	**Computer System Resources**: Computer Hardware and Computer software – File and DBMS – Internet and Office Communications	12	C2
III	**Application of Information System to functional Business Areas**: Operational Information System – Tactical and Strategic Information system. Major types – ESS – DSS – MIS – TPS – Introduction to BPO & KPO	14	C3
IV	**Planning and development of Information system**: Systems as planned organizational change – Business process reengineering & process improvement – Overview of Systems Development – System analysis – Systems design.	12	C4
V	**Enterprise Resource Planning** – Introduction – Related Technologies – ERP Modules –Benefits of ERP ; ethical issues of Information Systems.	10	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concept of Information System.	PO1, PO 5, PO 6.
CO2	Explore the components of Computer System Resources	PO 1, PO 2, PO 4.
CO3	Learn about the Application of Information System to functional Business Areas	PO 3, PO5, PO7, PO 8
CO4	Understand the concept of Planning and development of Information system.	PO 1, PO 3, PO 4.
CO5	Learn about Enterprise Resource Planning and its modules.	PO 2, PO 6, PO 7, PO 8.

Reading List	
1.	Kenneth C. Laudon & Jane P.Laudon – Management Information Systems-Managing the Digital Form-Eighth Edition, Eastern Economy Edition

References Books	
1.	Kenneth C. Laudon & Jane P.Laudon – Management Information Systems-Managing the Digital Form-Eighth Edition, Eastern Economy Edition
2.	Alexis Leon, Enterprise Resource Planning – Tata McGraw Hill Publishing Co. Ltd., New Delhi – 2005
3.	Raymond Meleod, JR Information Systems – Mac Millan Publishing Co. ltd – 4th Edition.
4.	Gerald V.Post David L. Anderson, Management Information System-Solving Business Problems with Information Technology – Tata McGraw Hill Publishing Co. ltd, New Delhi
5.	Gordan B.Davis Margrette H.Olsan, Management Information System, Conceptual Foundations, Structure & Development – Second Edition – Tata McGraw Hill Co. Ltd, New Delhi

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks

	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- V- PAPER CODE – 23UE1CI501
Part – III - INTERNSHIP– INTERNSHIP REPORT

OBJECTIVES:

To offer the opportunity to the students to gain experience about the working and functioning of the sports organization throughout the program.

LEARNING OUTCOMES:

On successful completion of the course students will have a complete understanding about the sports organizations and pave way for their final Project work in the same concern.

Internship

At the end of fourth Semester, each student shall undertake Internship for a minimum of 4 weeks. It is mandatory for the students to seek written approval from the Faculty Guide and the Head of the Department about the topic and the Organization before commencing the Internship. The Internship must be carried out compulsorily in any Sports Organization or Sports Related Organizations only. It can be a Corporate Entity / NGO / SME / Government Undertaking / Cooperative Sector / Sports Academies. On Successful completion of the Internship, the student shall submit a structured report based on the work done during this period in a prescribed format provided. A report of the same should be submitted to the Department on or before the last working day of the fifth semester.

Viva-Voce Examination

The performance of the students for the Internship will be evaluated for a total of 100 marks, by Internal Examiners only. The Viva-voce will be conducted by a panel consisting of the Faculty guide in the presence of the Head of the Department.

Students have to secure minimum 40% of marks to get a pass in the Internship. Students who fail in the Internship or who were absent for the Viva or who fail to submit the report before the due date will have to redo the Internship during the subsequent year and attend the Viva-Voce during the subsequent academic year.

SEMESTER- V - PAPER CODE – 23UE1VE501

Part IV- VALUE EDUCATION

Sub.code&Name	**23UE1VE501**	**VALUE EDUCATION**	
Course Objectives			
C1	To understand the relevance of human values of education		
C2	To study family values, life and society		
C3	To explore the ethical values and leadership qualities		
C4	To understand the Concept of social values.		
C5	To study globalization, environmental issues		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Value Education - Definition - relevance to present day - Concept of Human Values - self introspection - Self esteem	5	C1
II	Family values - Components, structure and responsibilities of family - Neutralization of anger - Adjustability - Threats of family life - Status of women in family and society - Caring for needy and elderly - Time allotment for sharing ideas and concerns.	7	C2
III	Ethical values - Professional ethics - Mass media ethics - Advertising ethics - Influence of ethics on family life - psychology of children and youth - Leadership qualities - Personality development.	6	C3
IV	Social values - Faith, service and secularism - Social sense and commitment - Students and Politics - Social awareness, Consumer awareness, Consumer rights and responsibilities - Redressal Mechanisms.	7	C4
V	Effect of international affairs on values of life/ Issue of Globalization - Modern warfare - Terrorism. Environmental issues - mutual respect of different cultures, religions and their beliefs.	5	C5
	Total	**30**	

Course Outcomes		
Course Outcomes	Gain a conceptual understanding of the various retail concepts. To understand the current trends in retailing, newer ways to sell and communicate with greater emphasis on environment and social responsibility of retail sector.	**Program Outcomes**
CO1	Understand the relevance of human values of education	PO1, PO 5, PO 6.
CO2	The study values, life and society	PO 1, PO 2, PO 4.
CO3	Explore the ethical values and leadership qualities	PO 3, PO5, PO7, PO 8
CO4	Understand the Concept of social values	PO 1, PO 3, PO 4.
CO5	Understand globalization, environmental issues	PO 2, PO 6, PO 7, PO 8.

Reading List	
1.	T. Anchukandam and J. Kuttainimathathil (Ed) Grow Free Live Free, Krisitu Jyoti Publications, Bangalore (1995)
2.	M.M.Mascaronhas Centre for Research Education Science and Training for Family Life Promotion - Family Life Education, Bangalore, 1993.
References Books	
1.	Mani Jacob (Ed) Resource Book for Value Education, Institute for Value Education, New Delhi 2002.
2.	DBNI, NCERT, SCERT, Dharma Bharti National Institute of Peace and Value Education, Secunderabad, 2002.
3.	Daniel and Selvamony - Value Education Today, (Madras Christian College, Tambaram and ALACHE, New Delhi, 1990).
4.	S. Ignacimuthu - Values for Life - Better Yourself Books, Mumbai, 1991.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks

	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain.	
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- VI - PAPER CODE – 23UE1CT601
Part – III – Core Course – XIII - RETAIL MANAGEMENT

Sub.code&Name	**23UE1CT601**	**RETAIL MANAGEMENT**	
Course Objectives			
C1	To understand the importance Characteristics and Functions of a Retailer,		
C2	To study the retailing strategy and planning process		
C3	To explore the merchandise management in retailing		
C4	To understand the Concept and considerations in setting Retail prices		
C5	To study the retail management and its challenges		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**INTRODUCTION TO RETAILING**: Functions of a Retailer, Characteristics of Retailing, Categorizing Retailers-Types of retailers-Multichannel Retailing, The rise of Consumerism and the rise of retailer. Social and Economic Significance of retailing.	13	C1
II	**RETAILING STRATEGY:** Retail Market Strategy, Target Market and Retail Format-Building Sustainable Competitive Advantage - Growth strategies - The strategic Retailing Planning Process-Retail locations.	12	C2
III	**MERCHANDISE MANAGEMENT: T**he Buying organization, Merchandise Category, - Merchandise Planning Systems - Merchandise procurement: Merchandise Sourcing.	14	C3
IV	**RETAIL PRICING:** Concept and considerations in setting Retail prices, Pricing Strategies, Pricing Techniques, The Internet and Price Competition.	12	C4

V	**STORE MANAGEMENT**: Forecasting Sales, Setting Inventory and Product Availability Levels; Supply chain Management and Logistics- Challenges to Retail development in India.	10	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	Gain a conceptual understanding of the various retail concepts. To understand the current trends in retailing, newer ways to sell and communicate with greater emphasis on environment and social responsibility of retail sector.	**Program Outcomes**
CO1	Understand the importance Characteristics and Functions of a Retailer,	PO1, PO 5, PO 6.
CO2	The retailing strategy and planning process	PO 1, PO 2, PO 4.
CO3	Explore the merchandise management in retailing	PO 3, PO5, PO7, PO 8
CO4	Understand the Concept and considerations in setting Retail prices	PO 1, PO 3, PO 4.
CO5	Understand the retail management and its challenges	PO 2, PO 6, PO 7, PO 8.

Reading List	
1.	Chetan Bajaj,Rajnish tuli, Nidi Varma Srivastava , “Retail Management”, Oxford University Press, Second Edition, 2010.

References Books	
1.	Chetan Bajaj,Rajnish tuli, Nidi Varma Srivastava , “Retail Management”, Oxford University Press, Second Edition, 2010.
2.	Swapna Pradhan, “Retailing Management Text and cases”, McGrawHill,3rd edition, 2009.
	Barry Berman, Joel R.Evans, “Retail Management A Strategic Approach”, Pearson Education, Inc,Tenth edition, 2010.
	Michael Levy, Barton A Weitz and Ajay Pandit, “Retail Management”, Tata McGraw Hill,Sixth Edition, 2008.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain.	
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- VI - PAPER CODE – 23UE1CT602
Part – III – Core Course – XIV – SERVICES MARKETING

Sub.code& Name	**23UE1CT602**	**Services Marketing**	
Course Objectives			
CO1	To recall the basic concepts of Services Marketing.		
CO2	To know the Marketing Mix in Service Marketing.		
CO3	To examine effectiveness of Service Marketing.		
CO4	To discuss on delivering Quality Service.		
CO5	To analyze the Marketing of Services.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Marketing Services: Introduction growth of the service sector. The concept of service. Characteristics of service - classification of service designing of the service, blueprinting using technology, developing human resources, building service aspirations.	15	CO1
II	Marketing Mix in Service Marketing: The seven Ps: product decision, pricing strategies and tactics, promotion of service and distribution methods for services. Additional dimension in services marketing- people, physical evidence and process.	15	CO2
III	Effective Management of Service Marketing: Marketing demand and supply through capacity planning and segmentation - internal marketing of services - external versus internal Orientation of service strategy.	15	CO3
IV	Delivering Quality Service: Causes of service - quality gaps. The customer expectations versus perceived service gap. Factors and techniques to resolve this gap. Customer relationship management. Gaps in services - quality standards, factors and solutions – the service performance gap - key factors and strategies for closing the gap. External communication to the customers- the promise versus delivery gap - developing appropriate and effective communication about service quality.	15	CO4
V	Marketing of Service With Special Reference To:1. Financial services, 2. Health services, 3. Hospitality services including travel, hotels and tourism, 4. Professional service, 5. Public utility service, 6. Educational services.	15	CO5

	Total	**75**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	
CO1	To define and understand the concepts of Services Marketing.	PO1, PO 5, PO 6.
CO2	To Examine and apply Marketing Mix in Service Marketing.	PO 1, PO 2, PO 4.
CO3	To analyze and design various strategies in the field of Services Marketing.	PO 3, PO5, PO7, PO 8
CO4	To evaluate the role of delivering Quality Service.	PO 1, PO 3, PO 4.
CO5	To design the tools of Marketing	PO 2, PO 6, PO 7, PO 8.

Reading List	
1.	Reddy P.N. (2011)– Services Marketing – Himalaya Publication
2.	Christopher Lovelock ,Jochen Wirtz (2016)– Services Marketing – World Scientific Publisher

References Books	
1.	Dr. B. Balaji, Services Marketing and Management, S. Chand & Co, New Delhi.
2.	S.M. Jha, Services marketing, Himalaya Publishers, India
3.	Baron, Services Marketing, Second Edition. Palgrave Macmillan
4.	Dr. L. Natarajan Services Marketing, Margham Publications, Chennai.
5.	Thakur.G.S. Sandhu supreet & Dogra Babzan, Services marketing, kalyanni Publishers, Ludhianna.

Methods of Evaluation

Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment

Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview
Application (K3)	Suggest idea/concept with examples, Suggest formulae, Solve problems, Observe, Explain
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, Map knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or offbeat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3				2	1		
CO 2	3	2		3				
CO 3			3		3		3	2
CO 4	1	3		2				
CO 5		2				3	3	1

3-Strong 2-Medium 1-Low

SEMESTER- VI - PAPER CODE – 23UE1CP601
Part – III – Core Project - PROJECT REPORT

OBJECTIVES:

To offer the opportunity to the students to gain expertise on a diverse range of topics, including theoretical, simulation and experimental studies learned throughout the program.

LEARNING OUTCOMES:

On successful completion of the course, students will be able to undertake problem identification, formulation and providing suitable solution with a sound technical knowledge of their selected project title.

Project Work

Project Work is an integral part of BBA curriculum. The project work is very important for all BBA students as it enables them to gain their management skills. The project work has to be carried out by the students during the sixth semester. On Successful completion of the Project, the student shall submit a well-structured Project report based on work done during this period in a prescribed format provided.

Viva-Voce Examination

The performance of the students for the project work will be evaluated for a total of 100 marks, by both internal and external Examiners. The Viva-voce will be conducted by a panel consisting of the Faculty guide, an External Examiner in the presence of the Head of the Department.

Students have to secure minimum 40% of marks in the two components to get a pass in the project work. Students who fail in the project work or who were absent for the Viva or who fail to submit the project report before the due date will have to redo the project work during the subsequent year and attend the Viva-Voce during the subsequent academic year.

SEMESTER- VI - PAPER CODE – 23UE1PC601
Part – IV – PRFESSIONAL COMPETENCY SKILL – EMPLOYABILITY SKILL

Sub.code& Name	**23UE1PC601**	**EMPLOYABILITY SKILL**

Course Objectives	
1	To understand the characteristics, style, traits of leaders, and theories of leadership.
2	To learn more about self-leadership and developing team-building skills through case studies and examples.
3	To understand how to form, manage and lead the team.
4	To understand the measures of conflict in a team
5	To explore team roles & processes in developing and managing a team

SYLLABUS

UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Leadership Theories:** Nature of leadership theories & models of leadership - attributes of effective leaders - traits of leadership - interpersonal competence & leadership	5	C1
II	**Leadership Styles:** Leadership qualities -styles of leadership -attitudes-role models & new leadership - cultural differences and diversity in leadership - leader behaviour leadership in different countries- leadership ethics & social responsibility.	7	C2
III	**Leadership Skills:** Leadership skills - Leadership & management - transactional & transformational in leadership -Strength based leadership in practice - Tasks & Relationship approach in leadership - influence tactics of leaders- motivation and coaching skills. Establishing constructive climate- listening to out group members- communication and conflict resolution skills.	7	C3
IV	**Team Work:** Working in group & teams - characteristics of effective team- types- team development: Tuckman's team development stages- Belbin team roles - Ginnett - team effectiveness leadership model.	5	C4

V	**Exploring team roles & processes:** mapping the stages of group development -Building: and developing teams-overcoming resistance coping and conflict and Ego-leading a team managing meetings.	6	C5
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Critical understanding of theories and concepts of leadership and teamwork in organizations	PO4, PO5, PO6, PO7
CO2	Critical awareness of the importance of teamwork and development of the skills for building effective teams	PO4, PO5, PO6, PO7
CO3	Understanding of the techniques and practical understanding of how to apply theories and concepts to improve leadership skills.	PO2, PO4, PO5, PO6, PO7
CO4	Development of skills in effective leadership and professional communication	PO4, PO5, PO6, PO7
CO5	Demonstrate effective written communication skills for plans, strategies and outcomes.	PO4, PO6, PO7

Reading List	
1.	Uday Kumar Haldar, Leadership and Team Building,
2.	D.K. Tripathy, Team Building and Leadership with Texts and Cases, Himalaya Publishing House, 2014
3.	International Journal on Leadership, Publishing India Group
4.	International Journal of Organizational Leadership, CIKD

References Books	
1.	Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition.
2.	Mehra, S. K. (2012) Business Etiquette A Guide For The Indian Professional. Noula: HarperCollins
3.	Pachter, B. (2013). The Essentials of Business Etiquette: How to Greet, Eat, and Tweet Your Way to Success (1) edition New York: McGraw-Hill Education.

4.	Past, K. (2008). Indian Business Etiquette: 1 (First edition). Ahmedabad Jaico Publishing House.
5.	Travis, R. (2013). Tech Eliquette: OMG, 2 Edition, RLT Publishing.
6.	Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition.

Methods of Evaluation

Internal Evaluation	Assignments, Seminars, etc.,	50 Marks
External Evaluation	End Semester Examination	50 Marks
	Total	100 Marks

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				3		3		
CO 2	3			3		3		
CO 3		2		3		3		
CO 4				3	2	3	1	
CO 5			2	3		3		

3-Strong 2-Medium 1-Low

ELECTIVE- PAPER CODE – 23UE1CE001
Part – III - SPORTS ORGANISATION AND ADMINISTRATION

Sub.code&Name	**23UE1CE0011**	**SPORTS ORGANISATION AND ADMINISTRATION**	
Course Objectives			
C1	To learn about the context of different sports federation and organization.		
C2	To learn about the legal status and environmental indicator of sports organization.		
C3	To understand the concept of sports organisations and their environment.		
C4	To learn about the sports technology and their usage in sports organisation		
C5	To learn about the strategic approaches of different Olympic Sports Organisation.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Social Context for Modern Sports: Need for New Structure in Sports Today. National Olympic Committees – National Federations – Governmental and Quasi – Governmental Organizations.	10	C1
II	Origin and Operations of Sports Organizations – Defining the Legal Status – Social Profile of the Sports Organization – Choosing a type of Organization: Environmental Indicators – Power and Authority – Delegation of Responsibilities – Organizational Charts.	10	C2
III	Sports Organizations and their Environment: The nature of the Organizational Environment – International Sports Environment: IOC and International Federations – National Sports Environment – Controlling Environmental Uncertainty.	9	C3
IV	Sports Organizations and Technology: Technology – Research on technology and Organizations – Critiques of the Technology Imperatives – Micro-Electronic Technologies –	9	C4

	Relationship Between technology and Organizational Structure.		
V	Cases of Strategic Approaches by some Olympic Sports Organizations: IOC - FIFA –ICC - WADA – IOA – BCCI - Measuring the Performance of Olympic Sports Organizations.	7	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Learn about the context of different sports federation and organization.	PO1, PO 3, PO 6, PO 7
CO2	Learn about the legal status and environmental indicator of sports organization.	PO 4, PO 5, PO 8.
CO3	Understand the concept of sports organisations and their environment.	PO 2, PO5, PO7, PO 8
CO4	Learn about the sports technology and their usage in sports organization	PO 1, PO 3, PO 4.
CO5	Learn about the strategic approaches of different Olympic Sports Organisation.	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Ruben Acosta Hernandez, Managing Sports Organizations, Human Kinetics.

References Books	
1.	Ruben Acosta Hernandez, Managing Sports Organizations, Human Kinetics.
2.	Trevor Slack, Milena M. Parent, Understanding Sports Organizations
3.	Jean – Loup Chappelet and Emmanuel Bayle, Strategic and Performance Management of Olympic Sports Organization.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3		2			3	2	
CO 2				3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

ELECTIVE - PAPER CODE – 23UE1CE002
Part – III - PRINCIPLES OF SPORTS MANAGEMENT

Sub.code&Name	**23UE1CE002**	**PRINCIPLES OF SPORTS MANAGEMENT**	
Course Objectives			
C1	To understand sports management		
C2	To know sports environment		
C3	To intends planning in sports organisations		
C4	To explore controlling in sports organisations		
C5	To measure management of national level leagues		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Defining Sports and Sports Management – Nature and Scope of the Sports Industry – Unique Aspects of the Sports Management – Sports Management Competencies – Future Challenges and Opportunities for Sports Managers.	10	C1
II	Basics of Sports Management – Managing in the Sports Environment – Managing People and Administrative Units – Management Functions in sports – Motivating Abilities: Fundamentals.	10	C2
III	Planning in Sports Organizations: Planning Process – preparing the Organization for Planning – Long Term Planning – Creating a Medium-Term National Plan.	9	C3
IV	Controlling in Sports Organizations: Fundamentals of Budgeting – Preparing Budget – Allocating Resources - Control as Measurement and as Accountability – Financing and Budgeting Operations.	9	C4
V	Management of National Level Leagues: Indian Premier League (IPL), Pro Kabaddi, Indian Super	7	C5

	League (ISL), Hockey India League (HIL), etc – Challenges and Opportunities in India.		
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding sports management	PO1, PO 3, PO 6, PO 7
CO2	Gathered sports environment	PO 4, PO 5, PO 8.
CO3	Evaluate planning in sports organisations	PO 2, PO5, PO7, PO 8
CO4	Understanding controlling in sports organisations	PO 1, PO 3, PO 4.
CO5	Measured management of national level leagues	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Production and Operations Management – Dr, B.S. Gole.

References Books	
1.	Production and Operations Management– K. Aahwathappa and K. Sridhara Bhat.
2.	Manufacturing automation – Morris Cohen – Tata McGraw Hill.
3.	Management and Technology Management – L.C. Jhamb.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions

Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3		2			3	2	
CO 2				3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

ELECTIVE - PAPER CODE – 23UE1CE003
Part – III - SPORTS FACILITY MANAGEMENT

Sub.code&Name	**23UE1CE003**	**SPORTS FACILITY MANAGEMENT**	
Course Objectives			
C1	To understand the constituents and the function of Facility Management		
C2	To study the fundamental of Facility Planning		
C3	To determinants of Facility Design and Construction		
C4	To understand Facility Systems in sports		
C5	To study the sports Facility Marketing		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Facility Management**: Meaning – The Facility Manager – Constituents – Managerial Functions – Computer Aided Facility Management.	10	C1
II	**Facility Planning**: Fundamentals – Planning for Existing and Future Facilities – Facility Site and Design: Site Location – site Cost – Site Selection.	10	C2
III	Facility Design and Construction – Construction Planning and Elements – Project cost – Completion and Analysis.	9	C3
IV	**Facility Systems**: Heating, Ventilation and Air-Conditioning – Energy Systems – Interior and Exterior Systems – Space Management – Facility Repair Management: Maintenance and Repair Program – Basic Maintenance.	9	C4
V	**Facility Marketing -** Sales – Financial Concepts – Revenue and Expenses – Budgeting – New Facility Financing – Selling of a Facility – Sports Facility Jobs – Employment Management – Training – Risk Management and Insurance.	7	C5
	Total	**45**	
Course Outcomes			
Course Outcomes	On completion of this course, students will	**Program Outcomes**	
CO1	Understand the constituents and the function of Facility Management	PO1, PO 3, PO 6, PO 7	

CO2	Proper understanding the fundamental of Facility Planning	PO 4, PO 5, PO 8.
CO3	Determinants of Facility Design and Construction	PO 2, PO5, PO7, PO 8
CO4	Maintaining Facility Systems in sports	PO 1, PO 3, PO 4.
CO5	Understand the sports Facility Marketing	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Gil Fried, Managing Sports Facilities, Human Kinetics
References Books	
1.	Gil Fried, Managing Sports Facilities, Human Kinetics
Methods of Evaluation	
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc., 25 Marks
External Evaluation	End Semester Examination 75 Marks
	Total 100 Marks
Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain.
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3		2			3	2	
CO 2				3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

ELECTIVE - PAPER CODE – 23UE1CE004
Part – III - SPORTS MARKETING

Sub.code&Name	**23UE1CE004**	**SPORTS MARKETING**	
Course Objectives			
C1	To understand the concept of Sports Marketing.		
C2	To understand the perspective in Sports Consumer Behaviour.		
C3	To learn about the Sports products.		
C4	To learn about the pricing strategies and promotions.		
C5	To learn about the marketing concept of International Sports Events.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Sports marketing**: Definition – Marketing Myopia in Sport – Uniqueness of Sports Marketing – Model of the Sports Industry – Implementation of Sports Marketing Programme.	10	C1
II	**Perspectives in Sports Consumer Behaviour**: Environmental Factors – Individual Factors – Decision Making for Sports Involvement.	10	C2
III	**The Sports Product**: Its Core and Extensions – Key Issues in Sports Product Strategy – Managing Sports Brands: Benefits and Development of Brand Equity. Sales Approaches Used in Sports – Selling Sports to the Community.	9	C3
IV	**Pricing Strategies**: The Basics of Pricing – Core Issues – Special Pricing Factors – Advertising Media for Sports – Promotional Concepts; Sponsorship: Definition – Growth of Sponsorship – Evaluating and Ensuring Sponsorship Effectiveness – Selling the Sponsorship.	9	C4
V	**Place/Product Distribution**: Placing Core Products and their Extensions – The Facility – Marketing Channels – Marketing of International Sports Events: Olympic, World Cup Football,	7	C5

	World Cup Cricket, NBA Tournaments, Wimbledon Tennis, F1Races, etc.		
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concept of Sports Marketing	PO1, PO 3, PO 6, PO 7
CO2	Understand the perspective in Sports Consumer Behaviour.	PO 4, PO 5, PO 8.
CO3	Learn about the Sports products.	PO 2, PO5, PO7, PO 8
CO4	Learn about the pricing strategies and promotions.	PO 1, PO 3, PO 4.
CO5	Learn about marketing concept of International Sports Events.	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Bernard J Mullin, Stephen Hardy, William A Sutton, Sport Marketing, Human Kinetics.

References Books	
1.	Bernard J Mullin, Stephen Hardy, William A Sutton, Sport Marketing, Human Kinetics

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions

Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3		2			3	2	
CO 2				3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

ELECTIVE - PAPER CODE – 23UE1CE005
Part III – SPORTS PSYCHOLOGY

Sub.code&Name	**23UE1CE005**	**SPORTS PSYCHOLOGY**	
Course Objectives			
C1	To understand the importance of Sport Psychology		
C2	To explore characteristics and cognitive process in sports		
C3	To determine the Influence of emotions on performance		
C4	To understand the Personality in Sport and its Concept		
C5	To study the Psychological Preparation and Competition		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Introduction to Sport Psychology: Meaning and scope, Importance, relationship with other sport sciences, development of sport psychology in India and worldwide.- sports psychology for physical educators, coaches and athletes – ethics in sports psychology.	10	C1
II	Cognition – characteristics and cognitive process in sports – sensation and perception – Attention - strategies to develop attention – Reaction Time, Movement Time, Reflex time, Response Time	10	C2
III	Influence of emotions on performance - Motivation in Sport: definition, (drive, need and motives, instinct, attitude, achievement motivation,)	9	C3
IV	Personality in Sport: Concept and definition, Modern perspective, (trait, humanistic, social cognitive and biological)**,** Dynamics of personality in sport – Sports and Personality.	9	C4
V	Psychological Preparation and Competition: (arousal regulation, imagery, self-confidence, goal setting, concentration.), short term psychological preparation (upcoming competition).	7	C5
	Total	**45**	
Course Outcomes			

Course Outcomes	On completion of this course, students will.	Program Outcomes
CO1	Understand the importance of Sport Psychology	PO1, PO 3, PO 6, PO 7
CO2	Explore characteristics and cognitive process in sports	PO 4, PO 5, PO 8.
CO3	Determine the Influence of emotions on performance	PO 2, PO5, PO7, PO 8
CO4	Understand the Personality in Sport and its Concept	PO 1, PO 3, PO 4.
CO5	Understand the concept of Psychological Preparation and Competition	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Robert C. Eklund, Gershon Tenenbaum (2014) Encyclopedia of Sports & Exercise Psychology, Sage Publications, Los Angles.

References Books	
1.	Robert C. Eklund, Gershon Tenenbaum (2014) Encyclopedia of Sports & Exercise Psychology, Sage Publications, Los Angles.
2.	Weinberg RS and Gould D (2003). Foundations of Sport and Exercise Psychology. Human Kinetics.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain.

Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3		2			3	2	
CO 2				3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

ELECTIVE - PAPER CODE – 23UE1CE006
Part III – SPORTS EVENT MANAGEMENT

Sub.code&Name	**23UE1CE006**	**SPORTS EVENT MANAGEMENT**	
Course Objectives			
C1	To understand the sports event management		
C2	To study the sports event planning & legal issues		
C3	To explore the strategy of sports event marketing		
C4	To understand the operational systems of event management		
C5	To study the measure of safety & event evaluation		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**EVENT CONTEXT** History & Evolution – Types of events – Meetings, Incentives Conferences, Events (MICE) – Types of Meeting, Trade Shows, Conventions, Exhibitions-Structure of event industry	10	C1
II	**EVENT PLANNING & LEGAL ISSUES** Conceptualizing the event – Host, sponsor, Media, Guest, Participants, Spectators – Crew – Design of concept – Theme and content development – Visualization – Event objectives – Initial planning – Budgeting – Event design and budget checklist – Preparation of functional sheets – Timing – Contracts and Agreements – Insurance, Regulation, Licence and Permits – Negotiation.	10	C2
III	**EVENT MARKETING** Role of Strategic Marketing Planning - Pricing – Marketing Communication Methods & budget – Elements of marketing communication – Managing Marketing Communication – Role of Internet – Sponsorship – Event sponsorship – Strategy – Managing Sponsorships – Measuring & Evaluating sponsorship.	9	C3
IV	**EVENT OPERATION** Site Selection – Types of location – Venue Requirements – Room, Stage, Audi-Visual, Lighting, Performers, Decors, Caterer, Photography & Videography – Protocols – Guest list – Guest demographics – Children at event – Invitation – Media	9	C4

	– Freelance Event Operation – Road show - Food & Beverage – Entertainment – Event Logistics		
V	**SAFETY & EVENT EVALUATION** Risk assessment – Safety officer, Medical Manager – Venue, Structural safety – Food safety – Occupational safety – Fire Prevention – Sanitary facilities – Vehicle traffic – Waste Management. Event Impact – Event Evaluation Process – Service Quality - Customer Satisfaction.	7	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will.	**Program Outcomes**
CO1	Understand the sports event management concept	PO1, PO 3, PO 6, PO 7
CO2	Understand the sports event planning & legal issues	PO 4, PO 5, PO 8.
CO3	Explore the strategy of sports event marketing	PO 2, PO5, PO7, PO 8
CO4	Understand the operational systems of event management	PO 1, PO 3, PO 4.
CO5	Determined the measure of safety & event evaluation	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Lynn Van Der Wagen, Event Management for Tourism, Cultural Business & Sporting Events, 4th Edition, Pearson Publications, 2014.
References Books	
1.	Lynn Van Der Wagen, Event Management for Tourism, Cultural Business & Sporting Events, 4th Edition, Pearson Publications, 2014.
2.	Lynn Van Der Wagen, & Brenda R. Carlos, Successful Event Management.
3.	Judy Allen, Event Planning 2nd Edition, Wiley & Sons, Canada, 2014.
4.	G.A.J. Bowdin, Events Management, Elseiver Butterworth

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, short summary or overview, Group discussions

Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain.
Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3		2			3	2	
CO 2				3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

ELECTIVE- PAPER CODE – 23UE1CE007
Part – III –SCHEMES FOR SPORTS DEVELOPMENT

SUB CODE&NAME	**23UE1CE007**	**Schemes For Sports Development**	
Course Objectives			
C1	To understand the concepts, principles, and theories of sports development in the context of sports management.		
C2	To explore different Government Initiatives schemes and programs aimed at promoting sports development.		
C3	To equip students with the knowledge and skills necessary to identify funding opportunities, develop effective fundraising strategies, and manage financial resources in the context of sports development.		
C4	To understanding the detail on Infrastructure Development Schemes in Sports.		
C5	To understands the significant, role and key principle and model of Talent Identification and Development Schemes.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Introduction to Sports Development** Definition, scope and importance of sports development- Historical overview and evolution of sports development: Objectives and benefits of sports development- Importance of sports development in society- Key principles of sports development. Outcomes of sports schemes.	8	C1
II	**Government Initiatives for Sports Development Schemes** Schemes for Development- National-level sports schemes and policies- State-level sports development programs: Objective, and Significance of sports development schemes - Implementation and Evaluation of sports development schemes. Overview of different types of sports development schemes in India**.**	9	C2

III	**Funding Strategies and Resource for Sports Development** Government grants and funding schemes for sports development- Corporate sponsorships and private investments in sports. Fundraising strategies for sports initiatives- Practical aspects of implementing sports development schemes. Fundraising and crowdfunding for sports initiatives- Community-based sports initiatives. School sports and educational institutions in grassroots development.	8	C3
IV	**Infrastructure Development Schemes in Sports** Introduction to Infrastructure Development in Sports- Importance and significance of sports infrastructure- Overview of infrastructure development schemes. Sports Infrastructure Planning and Needs Assessment- Conducting needs assessments for sports facilities. Identifying facility requirements for different sports- Maintenance and management of sports infrastructure.	9	C4
V	**Talent Identification and Development Schemes** Introduction to Talent Identification and Development- Definition and significance of talent identification and development. Role of talent identification and development in athlete progression. Key principles and models of talent identification- Talent Identification Frameworks and Models- Long-term athlete development models. Talent identification in specific sports disciplines. Gender-specific considerations in talent identification and development Schemes.	11	C5
	Total	**45**	
Course Outcomes			
Course Outcomes	On completion of this course, students will	**Program Outcomes**	

CO1	Understand the concepts, principles, and theories of sports development in the context of sports management.	PO1, PO2, PO3, PO5, PO6, PO7
CO2	Understand the different Government Initiatives schemes and programs for promoting sports development	PO4, PO6, PO8
CO3	Understanding of funding strategies and available resources for sports development initiatives. It explores various funding models, sources of funding, and financial management practices specific to sports development programs.	PO2, PO3, PO5, PO7
CO4	It will help in understanding the detail on Infrastructure Development Schemes in Sports.	PO4, PO6, PO7, PO8
CO5	It understands the significant, role and key principle and model of Talent Identification and Development Schemes.	PO1, PO2, PO3, PO4, PO5, PO7

References Books

1.	Sports Governance, Development, and Corporate Responsibility" by Graham Cuskelly and Kathy Babiak
2.	Sports Development: Policy, Process and Practice" by Kevin Hylton
3.	Managing Sport Development: An International Approach" by Emma Sherry and Shirl Hoffman
4	Sports Development: Policy, Process, and Practice" by Peter Bramham and Paul Roberts

Methods of Evaluation

Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment

Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions

Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

ELECTIVE - PAPER CODE – 23UE1CE008

Part – III– SPORTS MEDIA MANAGEMENT

Sub.code&Name	**23UE1CE008**	**SPORTS MEDIA MANAGEMENT**	
Course Objectives			
C1	To understand basic concepts of sports media		
C2	To know sports channels and communication		
C3	To study the different sports channels		
C4	To explore sports journalism		
C5	To understand sports media career		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	Sports Media- Definition of Media - Introduction to different Sports Media – Impact of Sports Media – future of media.	6	C1
II	SPORTS CHANNELS: Introduction to Sport Communication - Careers in Sport Related Fields - Sport Publishing- Electronic-New Media. - Popular Sports Channels Operating in India.	7	C2
III	COMPREHENSIVE STUDY ON DIFFERENT SPORTS CHANNELS: Profile - Top Management- Functional Departments - Work Culture- Career Opportunities- Telecast rights for major Sporting Events- Program Mix- Advertising Opportunities.	6	C3
IV	SPORTS JOURNALISM: Introduction- Scope- News - Value of Sports- Essential Qualification of Sports Writer -Presenter.	6	C4
V	SPORTS MEDIA CAREER: Careers in sports communication- Sports multimedia reporter - Sports broadcast producer/director - Sports team communication manager.	5	C5
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understanding the concepts of basic concepts of sports media	PO 2, PO 6, PO 7
CO2	know sports channels and communication	PO1, PO 4, PO 5, PO 8.
CO3	Evaluate the different sports channels	PO 2, PO5, PO7, PO 8
CO4	Understanding sports journalism	PO 1, PO 3, PO 4,PO 8.
CO5	Measured sports media career	PO 2, PO 4, PO 6, PO 7.

Reading List	
1.	Sports Journalism – Philip Andrews (Sage Publication).

References Books	
1.	Hall, Nichols, Moynahan, and Taylor (2007). Media Relations in Sport – 2 nd Ed. Morgantown, WV: Fitness Information Technology.
2.	Managing Sporting Media – Jerry Solomon (Human kinetics).

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,

Analyze (K4)	Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		3				3	2	
CO 2	3			3	2			3
CO 3		2			3		1	2
CO 4	2		3	2				1
CO 5		3		2		3	2	

3-Strong 2-Medium 1-Low

ELECTIVE - PAPER CODE – 23UE1CE009

Part – III– SPORTS TOURISM

Sub.code&Name	**23UE1CE009**	**SPORTS TOURISM**	
Course Objectives			
C1	To understand sports tourism scheme, infra and participants.		
C2	To know Active and passive Sports in the Holiday, Tourism Development		
C3	To explore Sports Activity Holidays, Major Sports Facilities and Events as an attraction for visitors		
C4	To analyse Environmental Impact of Sport Tourism and health Impact of Sport Tourism		
C5	To measure the Present Status and Future Prospects, policies		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Sports and Tourism:** The Nature of Sport, Tourism and Sports Tourism - Classification Scheme for Sports Tourism - The Infrastructure of Sports, Tourism and Sports Tourism - The Characteristics of Participants.	8	C1
II	**Sports in the Development of Tourism:** The influence of increased Sports Participation and Sports Tourism - Active and Passive Sports in the Holiday - active and Passive Sports during Non-holiday time Major Events used to stimulate Sports Development	9	C2
III	**The Economic Impact of Sport Tourism**: Sports and Tourism as Economic Activities - Sports Activity Holidays - Major Sports Facilities and Events as an attraction for visitors - The Socio-cultural impact of Sport Tourism: Conceptual Background to Socio-	10	C3

	cultural Impacts - Positive Impacts and Negative Impacts.		
IV	**The Environmental Impact of Sport Tourism:** Concern for the Natural Environment - Increasing Participation in Outdoor Sports - Damage to the Natural Environment caused by Tourism - Impact of Holiday Resorts and Sports Tourism Activities on the Natural Environment - Impact of Sports Tourism on Urban Environments	11	C4
V	**Present Status and Future Prospects:** Administrative and Policy Issues- Sports Tourism Administrative Infrastructures in various Countries and its Implications on Sports Tourism Policy - Sport Tourism in the Twenty-First Century - Future Trends.	7	C5
	Total	**45**	

Course Outcomes

Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand sports tourism scheme, infrastructure and participants.	PO1, PO2, PO4, PO7, PO8
CO2	Have better knowledge Active and passive Sports in the Holiday, Tourism Development, Major Events used to stimulate Sports Development	PO 2, PO5, PO6, PO7
CO3	Extrapolate Sports Activity Holidays, Major Sports Facilities and Events as an attraction for visitors	PO1, PO3, PO5, PO8
CO4	Understand the Environmental Impact of Sport Tourism and health Impact of Sport Tourism, Sports Tourism for People with Disabilities.	PO3, PO5, PO7, PO8

CO5	Know the Present Status and Future Prospects, policies, Twenty-First Century - Future Trends.	PO3,PO6, PO7, PO8
References Books		
1.	Joy Standeven and Paul de Knop, ***Sport Tourism,*** Human Kinetics	
2.	Mike Weed and Chris Bull, ***Sports Tourism: Participants, Policy and Providers,*** ELSEVIER	
3.	Mike Weed, ***Sport and Tourism: A Reader***, Routledge	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview	
Application (K3)	Suggest idea/concept with examples, Solve problems, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S		L			S	M
CO 2		M			M	S	L	
CO 3	S		M		S			S
CO 4			S		M		S	S
CO 5			S			L	M	M

S-Strong M-Medium L-Low

ELECTIVE - PAPER CODE – 23UE1CE010

Part – III– SPORTS FINANCE

Sub.code&Name	**23UE1CE010**	**SPORTS FINANCE**	
Course Objectives			
C1	Recognize and discuss current financial issues in Sport.		
C2	Compare financial statements to identify a sports business' strengths and weaknesses		
C3	Describe business structure options, requirements and financial implications as they pertain to sports business organizations and enterprises		
C4	Identify financial management techniques unique to professional and collegiate sports; Evaluate the capital budgeting process in a sports enterprise.		
C5	Understand Revenue Sharing, Financial Implication and the terminology of Franchisee in sports		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**The Basics of Sport Finance-** Financial Issues in Sport; Basic Financial Concepts; Identifying the role of accounting and financial data in sport decision making; Determining financial objectives of a sport organization; Evaluating internal and external sports finance constraints;	10	C1
II	**Principles of Financial Analysis-** Financial Statements, Forecasts, components of the balance sheet, income sheet and cash flow statements; Assessing an organizations liquidity, activity, leverage, profitability and inventory through ratio analysis;	9	C2
III	**Capital Structuring-** Identifying sources and strategies to obtain capital (personal funds, private financing and leverage) for different types of sport businesses; Capital Stocks; Bonds	8	C3
IV	**Financial Management-** Managing production and inventory of seasonal sport venues; Establishing income generating strategies for a losing team; Calculating the value of a sport business; Capital Budgeting; Short-term Financial Management; Inventory and Production Management.	10	C4

V	**Professional Sports-** Evaluating escalating salaries and salary caps; Understanding revenue sharing and league financial implications; Managing government interaction in professional sport; Valuing franchises/teams;	8	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Articulate the basic principles of sports finance.	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Be able to discuss the principles of financial analysis in the sports industry	PO4,PO6, PO8
CO3	Understand the capital structuring as it relates to sports finance.	PO2,PO3,PO5, PO7
CO4	Learned about the Financial Management in Sports Enterprise	PO4,PO6, PO7, PO8
CO5	Understand Revenue Sharing, Financial Implication and the terminology of Franchisee in sports.	PO1,PO2,PO3,PO4, PO5, PO7

References Books	
1.	Sports Finance by Fried G.H
2.	Managing Sports Finance by Robert Wilson
3.	Sports Funding and Finance by Bob Stewart

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions

Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

ELECTIVE - PAPER CODE – 23UE1CE011

Part – III– SPORTS HUMAN RESOURCE MANAGEMENT

Sub.code&Name	**23UE1CE011**	**SPORTS HUMAN RESOURCE MANAGEMENT**	
Course Objectives			
C1	To understand the significance of Human Resource Management in Sports.		
C2	Comprehensive study on the Individual Difference in Human Resource, Values, Personality etc.		
C3	Discuss about the Human Resource Practices in Sports Organization		
C4	To learned about Staffing and career consideration in Sports		
C5	Study about the employee's satisfaction and Attitudinal outcome in sports organization.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Human Resources Management in Sport and Recreation-** Significance of Human Resources in sports; Sport and Recreation Services; A Model of Human Resource Management; volunteers and Volunteerism; Role of the Sport or Recreation Manager.	9	C1
II	**Individual Differences in Human Resources-** Abilities- Issues in the Study of Ability; Cognitive Abilities; Emotional Intelligence. Personality- Determinants of Personality; Type Theories; Trait Theories; Personality and Organizational Behavior. Values- Values, Beliefs, Attitudes, and Norms; Sources of Values; Motivation- A Model of Motivation; Other Theories of Motivation.	10	C2
III	**Human Resource Practices in Sports Organisation-** Organizational Justice, Distributive Justice, Procedural Justice, Interactional Justic.vve. Job Design- Job Design Strategies, Task Attributes, Motivational Properties of Tasks, Implementing Task Attributes.	8	C3
IV	**Staffing and Career Considerations in Sports-** Purposes of Staffing, Focus of Staffing, Mentoring. Multidimensional Model of Leadership, Transformational, Transactional, Servant, and Authentic Leadership.	10	C4

	Performance Appraisal- Purposes of Performance Appraisal.		
V	**Attitudinal Outcomes-** Satisfaction- Theories of Job Satisfaction, Satisfaction with Volunteer Work, Participant Satisfaction, Measurement of Satisfaction. Commitment- Multidimensionality of Organizational Commitment, Occupational Commitment.	8	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the significance of Human Resource Management in Sports.	PO1, PO2, PO3, PO5, PO6, PO7
CO2	Learned about the Individual Difference in Human Resource, Values, Personality etc.	PO4, PO6, PO8
CO3	Be able to gain understanding about the Human Resource Practices in Sports Organization	PO2, PO3, PO5, PO7
CO4	Learned about Staffing and career consideration in Sports	PO4, PO6, PO7, PO8
CO5	Determine the employee's satisfaction and Attitudinal outcome in sports organization.	PO1, PO2, PO3, PO4, PO5, PO7

References Books	
1.	Human Resource Management in Sports and Recreation by Packianathan Chelladurai.
2.	Managing People in Sports Organizations- A Strategic Human Resource Management Perspective by Tracy Taylor, Alison Doherty, Peter McGraw

Methods of Evaluation

Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment

Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

ELECTIVE - PAPER CODE – 23UE1CE012

Part – III– ADVERTISING IN SPORTS

Sub.code&Name	**23UE1CE012**	**ADVERTISING IN SPORTS**	
Course Objectives			
C1	To explore Social, Economic and Legal Implications of advertisements, Objectives of Advertising in Sports.		
C2	To know Integrated Marketing Communication in Sports, Communication, media plan		
C3	To identify Advertiser, Advertising Agency and World of Media, Duties and responsibilities of a Brand manager		
C4	To evaluate brand endorsed, Impact of Celebrities, Role of Public Relations in promoting sporting events.		
C5	To measure the details of Sponsorship Agreement in National and International sports bodies.		
UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**INTRODUCTION TO ADVERTISING** Concept and definition of advertisement – Social, Economic and Legal Implications of advertisements – Objectives of Advertising in Sports.	6	C1
II	**IMC IN SPORTS** Concepts of Integrated Marketing Communication in Sports, Elements of Integrated Marketing Communication- Media plan – Type and choice criteria – Reach and frequency of advertisements.	9	C2
III	**BUSINESS OF ADVERTISING:** Advertiser- Advertising Agency and World of Media -Brand Manager- Duties and responsibilities of a Brand manager - Message development – Different types of advertisements.	12	C3

IV	**SPORTS PERSONALITIES AS BRAND ENDORSER:** Celebrities - Reputed sports persons -brand endorsed – Impact of Celebrities - Role of Public Relations in promoting sporting events.	6	C4
V	**SPONSORSHIP IN SPORTS:** Meaning and Objectives of Sponsorship, Advertising and Sponsorship - Details of Sponsorship Agreement in National and International sports bodies.	12	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concepts of Social, Economic and Legal Implications of advertisements, Objectives of Advertising in Sports.	PO1, PO2, PO3, PO5, PO7
CO2	Have familiarize the Integrated Marketing Communication in Sports, Communication, media plan, Media strategy and scheduling.	PO1, PO2, PO4, PO6
CO3	Have better Advertiser, Advertising Agency and World of Media, Duties and responsibilities of a Brand manager.	PO3, PO5, PO6,PO7, PO8
CO4	Learn brand endorsed, Impact of Celebrities, Role of Public Relations in promoting sporting events.	PO2, PO5, PO6, PO7, PO8
CO5	Think strategically Developing Sponsorship proposal, Details of Sponsorship Agreement in National and International sports bodies.	PO1, PO2, PO3, PO8

References Books

1.	S. H. H. Kazmi and Satish K Batra, Advertising & Sales Promotion, Excel Books, New Delhi, 2001.
2.	George E Belch and Michel A Belch, Advertising & Promotion, McGraw Hill, Singapore, 1998.

3.	Julian Cummings, Sales Promotion, Kogan Page, London 1998.
4.	E.Betch and Michael, Advertising and Promotion, McGraw Hill, 2003.
5.	Jaishri Jefhwaney, Advertising Management, Oxford, 2008.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test, Assignments Seminars, etc.,	25 Marks
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, short summary or overview
Application (K3)	Suggest idea/concept with examples, Observe, Explain current situations
Analyze (K4)	Problem-solving questions, finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		M		L	
CO 2	S	L		S		M		
CO 3			M		S	S	M	S
CO 4		M		S	S		L	M
CO 5	S	S	M					L

S-Strong M-Medium L-Low

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TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI – 600 127

REGULATIONS FOR

MASTER OF BUSINESS ADMINISTRATION

(SPECIALISATION IN SPORTS MANAGEMENT)

UNDER CHOICE BASED CREDIT SYSTEM (CBCS)

2023-2024 ONWARDS

DEPARTMENT OF SPORTS MANAGEMENT AND SPORTS PSYCHOLOGY & SOCIOLOGY

Regulations for Master of Business Administration (M.B.A) with specialisation in Sports Management – Regular Mode under Choice Based Credit System (CBCS)

The Choice Based Credit System (CBCS) and Learning Outcomes Based Curriculum Framework (LOCF) for the two years M.B.A Degree Programme with specialisation in Sports Management is implemented from the Academic Year 2023-2024 onwards.

1. INTRODUCTION:

Sports is one such fast emerging industry in India. There is a growing demand for quality, talented sports management professionals to manage players and the business surrounding it as India is emerging as the hub for professional sports. The success of major leagues with corporate sponsorships, such as ISL, PBL, IHL, Pro Kabaddi offers abundant opportunities for economic growth and employment in the future. MBA in Sport Management is an exciting degree that will help the students to develop their career in sport industry. It has been designed to meet the industry's need for well-qualified managers who can combine management and financial skills with specialist knowledge of sport. The programme will help the students to acquire necessary knowledge and skills required for reflective management practice in a range of sport settings. Sports management includes business activities such as planning, organizing, directing, controlling, budgeting, client servicing, hospitality, marketing, sponsorships, endorsements, contract negotiations, Customer Relationship Management, analytics of data and more. The objectives of the programme are:

1. To explore current trends and key concepts in sport management.
2. To understand the dynamics of Sports Industry at the national and International Level.
3. To enable students to develop analytical and decision-making skills.
4. To inculcate essential business and marketing skills blended with specialized knowledge in sports management.
5. To aim for holistic development of the students by inculcating business ethics and values.
6. To identify and evaluate recent changes in sport participation and policies and their implications on sports development.

7. To inculcate the knowledge on sports governance for effectively managing sport organizations and

8. To conduct research into sport issues relevant to managing sports and sport organizations.

2. APPROVAL OF ALL INDIA COUNCIL FOR TECHNICAL EDUCATION (AICTE):

The University has received approval from All India Council for Technical Education (AICTE) for the conduct of M.B.A programme from the Academic year 2009-2010 onwards.

3. ELIGIBILITY FOR ADMISSION:

Candidates for admission to the first year of the Master of Business Administration Degree Programme shall be required to have the following qualifications under 10+2+3 or 10+2+4 pattern of Education:

a) A pass with 50% of marks in any branch of study of a Bachelor Degree of Tamil Nadu Physical Education and Sports University or any other University recognized by the UGC/AIU or a qualification accepted by this University as equivalent thereto. A 5% of marks relaxation is given for candidates belonging to SC/ST category.

b) A Professional Degree with 50% of marks in Engineering/Technology/Medicine/Architecture/Law. A 5% of marks relaxation is given for candidates belonging to SC/ST category.

c) Professional Qualification with 50% of marks in Accountancy / Cost & Works Accountancy / Company Secretary ship. A 5% of marks relaxation is given for candidates belonging to SC/ST category.

4. ADMISSION CRITERIA:

A separate entrance examination will be conducted for the candidates by the University and the admission will be purely based on the marks obtained by the candidates in the entrance examination. State Government Reservation Policy is implemented for admission.

5. DURATION OF THE PROGRAMME

The normal duration of the M.B.A (Specialisation in Sports Management) Degree Programme shall be two years consisting of four semesters. A student who is unable to complete the program for whatever reasons within the minimum duration (two years) prescribed for the programme, may be allowed two years period of time beyond the normal

period to clear the backlog for qualifying for the Degree. In exceptional cases like major accidents or child birth, an extension of one more year shall be considered beyond maximum span of time. During the extended period, the student shall be considered as a Private Candidate and is not eligible for Ranking and Distinction

6. SEMESTERS:

An academic year is apportioned into two semesters:

Odd Semester – July to November

Even Semester - December to April

In each semester, the classes are conducted for 18 weeks with each week having 5 working days.

7. **PROGRAM EDUCATIONAL OUTCOMES**

PEO 1 – Employability: To develop students with industry specific knowledge & skills to meet the industry requirements and also join public sector undertaking through competitive examinations.

PEO 2 - Entrepreneur: To create effective business service owners, with a growth mindset by enhancing their critical thinking, problem solving and decision-making skills.

PEO 3 – Research and Development: To instill and grow a mindset that focusses efforts towards inculcating and encouraging the students in the field research and development.

PEO 4 – Contribution to Business World: To produce ethical and innovative business professionals to enhance growth of the business world.

PEO 5 – Contribution to the Society: To work and contribute towards holistic development of society by producing competent management professionals.

8. PROGRAM OUTCOMES:

PO1: Problem Solving Skill: Application of tools and techniques relevant to management theories and practices in analyzing and solving any kind of business problems including sports business.

PO2: Decision Making Skill: Fostering analytical and critical thinking abilities for data-based decision making.

PO3: Ethical Value: Ability to develop value-based leadership attributes which will ensure better sports governance.

PO4: Communication Skill: Ability to understand, analyze and effectively communicate global, economic, legal and ethical aspects of business.

PO5: Individual and Team Leadership Skill: Ability to be self-motivated in leading and driving a team towards achievement of organizational goals and contributing effectively to establish industrial harmony.

PO6: Employability Skill: Foster and enhance employability skills through knowledge on sports industry.

PO7: Entrepreneurial Skill: Equipped with skills and competencies to become a sports entrepreneur.

PO8: Contribution to Society: Strive towards becoming a global influencer and motivating future generation towards building a legacy that contributes to overall growth of humankind.

PEO – PO MAPPING

	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
PEO 1	Y	Y	Y	Y	Y	Y	Y	Y
PEO 2	Y	Y	Y	Y	Y	-	Y	Y
PEO3	Y	Y	Y	Y	Y	Y	-	Y
PEO 4	Y	Y	Y	Y	Y	Y	Y	Y
PEO 5	Y	Y	Y	Y	Y	Y	Y	Y

Y – Yes

9. CHOICE BASED CREDIT SYSTEM (CBCS):

The CBCS in M.B.A (Specialisation in Sports Management) Degree Programme would have five components and the total credit requirement for all components in two years is 102 credits. The following are the components:

Components	No of Courses	Credit Per Course	Total Credits
Core Courses	13	4	52
Core Elective Courses	7	3	21
Core Project Work	1	8	8

Internship	1	4	4
Generic Electives	2	3	6
Extra Disciplinary Course	1	3	3
Soft Skills Courses	4	2	8
Total Credits	**29**	**-**	**102**

10. CREDIT DISTRIBUTION:

The course wise credit distribution for all the four semesters of the programme is presented below:

FIRST SEMESTER

Components	Course Code	Name of the Courses	LH	Int	Ext	Total Marks	Credits
Core Courses	23PE1CT101	Management Principles and Business Ethics	4	25	75	100	4
	23PE1CT102	Quantitative Techniques and Research Methods in Business	4	25	75	100	4
	23PE1CT103	Managing Organizational Behaviour	4	25	75	100	4
	23PE1CT104	Accounting for Managers	4	25	75	100	4
	23PE1CT105	Managerial Economics	4	25	75	100	4
	23PE1CT106	Legal Systems in Business	4	25	75	100	4

Soft Skills Course	23PE1SS101	*Soft Skills I – Executive Communication*	*2*	*40*	*60*	*100*	*2*
Generic Elecive	*To be chosen from other Department*		*3*	*25*	*75*	*100*	*3*
Total Credits							*29*

SECOND SEMESTER

Courses	**Code**	**Name of the Courses**	**LH**	**Int**	**Ext**	**Total Marks**	**Credits**
Core Courses	23PE1CT201	Applied Operations Research	4	25	75	100	4
	23PE1CT202	Human Resource Management	4	25	75	100	4
	23PE1CT203	Marketing Management	4	25	75	100	4
	23PE1CT204	Operations Management	4	25	75	100	4
	23PE1CT205	Financial Management	4	25	75	100	4
	23PE1CT206	Strategic Management	4	25	75	100	4
Soft Skills Courses	23PE1SS201	*Soft Skills II –* Business Etiquette	*2*	*40*	*60*	*100*	*2*
	*23*PE1*SS202*	*Soft Skills III – Computing Skills*	*2*	*40*	*60*	*100*	*2*
Generic Elecive	*To be chosen from other Department*		*3*	*25*	*75*	*100*	*3*
Total Credits							*31*

Note: A minimum of four weeks Internship will be carried out during the summer vacation after the first year. Viva Voce will be conducted and marks shall be sent to the University and the same will be included in the Third Semester Marks Statement.

THIRD SEMESTER

Courses	Code	Name of the Courses	LH	Int	Ext	Total Marks	Credits
Core Course	23PE1CT301	Information Systems for Business	4	25	75	100	4
Core Elective Courses	**Elective - 1**		3	25	75	100	3
	Elective - 2		3	25	75	100	3
	Elective – 3		3	25	75	100	3
	Elective – 4		3	25	75	100	3
	Elective – 5		3	25	75	100	3
	Elective – 6		3	25	75	100	3
	Elective - 7		3	25	75	100	3
Extra Disciplinary Course	23PE1ED301	*Entrepreneurship Development*	*3*	*25*	*75*	*100*	*3*
Soft Skills Course	23PE1SS301	*Soft Skills IV– Leadership and Team Building Skills*	*2*	*40*	*60*	*100*	*2*
Internship	23PE1CI301	*Summer Internship*	*4 Weeks*	*100*	-	*100*	*4*
Total Credits							*34*

Note : Students should choose seven Elective Courses from the specialization list in consultation with the Head of the Department.

FOURTH SEMESTER

Courses	Code	Name of the Courses	Int	Ext	Total Marks	Credits
Core Project	23PE1CP401	Project Work	**25**	**75**	100	6
		Viva – Voce	25	75	100	2
Total Credits						*8*

Note: The Project Work will be evaluated jointly by Two Examiners (i.e. one Internal and one External) for a Maximum of 100 Marks (6 Credits). The Viva- Voce will be conducted with Two Examiners (i.e. one Internal and the one External) for a Maximum of 100 Marks (2 Credits).

11. LIST OF CORE ELECTIVES:

The following are the core electives offered for the students:

ELECTIVE COURSES : SPORTS MANAGEMENT

Code	Name of the Subject	LH	Int	Ext	Total Marks	Credits
23PE1CE001	Sports Organisation and Administration	3	25	75	100	3
23PE1CE002	Sports Management Principles and Practices	3	25	75	100	3
23PE1CE003	Sports Marketing	3	25	75	100	3
23PE1CE004	Sports Facility Management	3	25	75	100	3
23PE1CE005	Sports Psychology & Sociology	3	25	75	100	3
23PE1CE006	Sports Tourism	3	25	75	100	3
23PE1CE007	Advertising in Sports	3	25	75	100	3
23 PE1CE008	Sports Media Management	3	25	75	100	3

23 PE1CE009	Sports Event Management	3	25	75	100	3
23 PE1CE010	Sportsmanship and Ethics	3	25	75	100	3
23 PE1CE011	Sports Policy and Governance	3	25	75	100	3
23 PE1CE012	Sports Finance	3	25	75	100	3
23 PE1CE013	Sports Human Resource Management	3	25	75	100	3
23 PE1CE014	Sports Logistics and Supply Chain Management	3	25	75	100	3
23 PE1CE015	Schemes For Sports Development	3	25	75	100	3
23 PE1CE016	Sports Analytics	3	25	75	100	3

12. VALUE-ADDED COURSES OFFERED:

The Value-Added Courses are extra-credit courses and the credit for this course will not be included in the total CGPA. Instruction hours for these courses is 30 per course during a semester. A student can opt only one course during his/her study period. The following are the Value Added Courses offered for the students of MBA Programme:

Code	Name of the Course	LH	Int	Ext	Total Marks	Credits
23PE1VA001	Total Quality Management (Odd Semester)	2	100	-	100	2
23PE1VA002	E-Commerce (Even Semester)	2	100	-	100	2

Assessment of Value Added Courses shall be internal. Two Assessments shall be conducted preferably one in the middle and the other at the end of the course by the Department concerned.

The duration of assessment is one and a half hour each. The total marks obtained in the tests shall be reduced to 100 marks and rounded to the nearest integer. A committee consisting of the Head of the Department, staff handling the course and a senior Faculty member of the Department shall monitor the evaluation process. The list of students along with the marks and the grades earned may be forwarded to the Controller of Examinations by the Committee. The Head of the Department is responsible for maintaining and processing the records with regard to assessment marks and results.

The passing requirement for value added courses shall be 50% of the marks prescribed for the course. The grades obtained shall figure in the Mark sheet under the title 'Value Added Courses'.

13. GENERIC ELECTIVES OFFERED:

The following generic electives are offered for the students of Post Graduate programmes of other Departments during odd and even semesters:

Code	Name of the Subject	LH	PH	Int	Ext	Total Marks	Credits
23PE1GE001	Management Concepts (Odd Semester	3	0	25	75	100	3
23PE1GE002	Event Management (Even Semester)	3	0	25	75	100	3

14. ASSESSMENT:

Assessment of a student's attainment will consist of Continuous Internal Assessment (CIA) and End Semester Examinations (ESE). The ratio between CIA and ESE will normally be 25:75.

a) Continuous Internal Assessment (CIA)

	Exam/Test	Marks
Internal Marks 25 marks (Minimum Passing marks :12)	First Internal Exam	5
	Second Internal Exam	5
	Model Exam	10
	Assignment	3
	Seminar	2
	Total Marks	**25**

b) End Semester Examinations (ESE)

Except in the case of project-work and exclusively practical/field placement/soft skills courses, the ESE will consist of a written examination of three hours duration for a maximum score of 75. The minimum pass marks for End Semester Examinations is 50% (38 marks out of 75).

7. EVALUATION:

The following procedure is followed for evaluation:

a) The answer scripts are evaluated by either internal or external examiners.

b) The Question paper pattern under CBCS will include 1 mark, 2 marks, 5 marks and10 marks questions.

c) For a pass in each course, a candidate is required to secure at least 50% marks in the End Semester Examinations, i.e. 38 and a total of 50 marks including Continuous Internal Assessment.

8. ATTENDANCE REQUIREMENTS:

I. Students must have 75% of attendance in each semester to appear for the End Semester Examinations.

II. Students who have attendance between 70% and 74% shall apply for condonation in the prescribed form with the prescribed fee.

III. Students who have attendance between 65% and 69% shall apply for condonation in prescribed form with the prescribed fee along with the Medical Certificate.

IV. Students who have attendance between 60% and 64% shall carry over the End Semester Examinations in the ensuing Semester.

V. Students who have attendance below 60% are not eligible to appear for the End Semester Examinations. They shall re-do the semester(s) and therefore, they shall not move to the ensuing semester.

VI. A student can avail condonation only once during the course of study.

VII. Hall tickets will be issued to the eligible candidates only if they produce 'No Dues Certificate' from the Department, the Registrar's Office, the Library and

the Hostel Warden at the time of issue of “Hall Ticket” for the End Semester Examinations.

9. SYLLABUS:

A detailed syllabus for the courses of M.B.A (With Specialisation in Sports Management) Programme is given below:

SEMESTER I

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT101	**Management Principles and Business Ethics**	Core	4	-	-	-	4	60	25	75	100

Course Objectives	
C1	To familiarize the students to the basic concepts of management in order to aid in understanding how an organization function.
C2	To provide insights into Planning & Decision Making
C3	To throw light on Organizing, Managing Change and Innovation
C4	To elucidate on Leadership, Communication and Controlling.
C5	To create awareness and importance of Business Ethics and Social Responsibility.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**Introduction:** Nature of Management – Concepts and Foundations of Management- Managerial Functions- Management Skills - The Evolution of Management Thought – Tasks of a Professional Manager – Organizational Culture - Environment – Systems Approach to Management – Levels in Management – Disaster Management	10	C1
II	**Planning & Decision Making:** Steps in Planning Process – Scope and Limitations – Short Term and Long-Term Planning – Flexibility in Planning – Characteristics of a Sound Plan – Management by Objectives (MBO). Strategic Management Process Decision Making Process and Techniques. Business Models	11	C2
III	**Nature of Organizing:** Organization Structure and Design - Authority Relationships – Delegation of Authority and Decentralization – Interdepartmental Coordinator – emerging Trends in corporate Structure, Strategy and Culture – Impact of Technology on Organizational design – Mechanistic vs. Adoptive Structures – Formal and InformalOrganization. Span of control – Pros and Cons of Narrow and Wide Spans of Control – Optimum Span - Managing Change and Innovation.	14	C3
IV	**Leadership and Control:** Leadership: Approaches to Leadership and Communication. Control: Concept of Control – Application of the Process of Control at Different Levelsof Management (top, middle and first line). Performance Standards – Measurements ofPerformance –	13	C4

	Remedial Action - An Integrated Control system in an organization – Management by Exception (MBE)		
V	**Business Ethics:** Importance of Business Ethics – Ethical Issues and Dilemmas in Business - Ethical Decision Making and Ethical Leadership – Ethics Audit - Business Ethics and - CSR Models.	12	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Possess the knowledge on the basic concepts of management and understand how an organization function.	PO4, PO6, PO8
CO2	Possess knowledge on planning & decision making.	PO1, PO2
CO3	Have insights on organizing, managing change and Innovation	PO5, PO6, PO7
CO4	Learn leadership, communication and controlling skills.	PO4, PO5
CO5	Have better understanding on business ethics and social responsibility.	PO3, PO8

Reading List	
1.	https://deb.ugc.ac. In
2.	http://wwww.managementconcepts. Com
3.	International journal of Management Concepts and Philosophy
4.	Journal of Management, Sage Publications

References Books	
1.	Mukherjee, K., Principles of Management, 2nd Edition, Tata McGraw Hill Education Pvt. Ltd., 2009
2.	S. K. Mandal., Management Principles and practice, 3rd Edition, Jaico Publishing House, Jan.2011.
3.	Griffin, R. W., Management, 11th Edition, South-Western College Publication, January 2018.
4.	Koontz, H. and Weihrich, H., Essentials of Management: An International Perspective, 11th Edition, Tata McGraw Hill Education Private Ltd., July 2020
5.	Certo, S C. and Certo, T, Modern Management, 13th Edition, Prentice Hall, January 2014.
6.	Robbins, S and Coulter, M, 11th Edition, Management, Prentice Hall, 11th edition, January 2012
7.	Shaikh Ubaid, Disaster Management, Technical publications, 1st edition, 2020

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				2		2		2
CO 2	2	3						
CO 3					2	2	2	
CO 4				3	3			
CO 5			3					3

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT102	**Quantitative Techniques and Research Methods in Business**	Core	3	1	-	-	4	60	25	75	100

Course Objectives	
1	To provide the students with an introduction to probability theory and discuss how probability calculations may facilitate their decision making.
2	To construct a coherent research proposal that includes an abstract, literature review, research questions, ethical considerations and methodology.
3	To understand the basic statistical tools for analysis & interpretation of qualitative and quantitative data.
4	To recognize the principles and characteristics of the multivariate data analysis techniques.
5	To become familiar with the process of drafting a report that poses a significant problem

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**Introduction:** Probability - Rules of probability- Probability distribution; Binomial, Poisson and Normal Distributions, their applications in Business and Industrial Problem- Baye's Theorem and its applications - Decision Making under risk and uncertainty; Maximax, Maximin, Regret Hurwitz and Laplace Criteria in Business and Decision Making - Decision tree.	13	C1
II	**Research Methods:** Research - Definition - Research Process - Research Design – Definition- Types Of Research Design - Role of Theory in Research -	10	C2

	Variables in Research – Objectives - Hypothesis - Types of Data; Preliminary Vs Secondary- Methods of Primary Data Collection; Survey, Observation, Experiments - Construction Of Questionnaire - Questionnaire Schedule- Validity and Reliability of Instruments - Types of Scales; Nominal, Ordinal, Interval - Types of Attitude Measurement Scales – Sampling Techniques; Probability And Non probability Techniques- Optimal Sample Size determination.		
III	**Data Preparation and Analysis:** Data Preparation - Editing –Coding- Data Entry- Data Analysis- Testing of Hypothesis Univariate and Bivariate Analysis - Parametric and Nonparametric Tests and Interpretation of Test Results- Chi-Square Test- Correlation; Karl Pearson's Vs Correlation Coefficient and Spearman's Rank Correlation- Regression Analysis - One Way and Two Way Analysis of Variance.	13	C3
IV	**Multivariate Statistical Analysis:** Exploratory and Confirmatory Factor Analysis -Discriminant Analysis- Cluster Analysis -Conjoint Analysis - Multiple Regression- Multidimensional Scaling- Their Application in Marketing Problems - Application of Statistical Software for Data Analysis- SEM Analysis	14	C4
V	**Report Writing and Ethics in Business Research:** Research Reports- Different Types -Report Writing Format- Content of Report- Need For Executive Summary- Chapterization -Framing the Title of the Report- Different Styles Of Referencing -Academic Vs Business Research Reports - Ethics In Research.	10	C5
	Total	60	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Be able to develop problem-solving techniques needed to accurately calculate probabilities.	PO1, PO2, PO6, PO7
CO2	Be able to devise research methods, techniques and strategies in the appropriate manner for managerial decision making and conduct research for the industry.	PO4, PO6
CO3	Be able to apply and interpret the different types of quantitative and qualitative methods of data analysis.	PO4, PO6
CO4	Be able to use multivariate techniques appropriately, undertake multivariate hypothesis tests, and draw appropriate conclusions.	PO4, PO6
CO5	Be able to present orally their research or a summary of another's research in an organized, coherent, and compelling fashion.	PO4, PO6
Reading List		
1.	https://www.dartmouth.edu/~chance/teaching_aids/books_articles/probability_book/amsbook.mac.pdf	
2.	https://study.com/academy/topic/probability.html	
3.	https://onlinecourses.nptel.ac.in/noc18_ma07/preview	
4.	https://hbr.org/1964/07/decision-trees-for-decision-making	
References Books		
1.	Kumar, R., Research Methodology: A Step-by-Step guide for Beginners, Sage, South Asia, 4th Edition, 2014.	
2.	Srivastava, T.N. and Rego, S., Statistics for Management, 2nd Edition, Tata McGraw Hill, 3rd Edition, 2016.	
3.	Cooper, D.R., Schindler, P. And Business Research Methods, Tata- McGrew Hill,12th Edition, 2012.	
4.	Cooper, D.R., Schindler, P. and Sharma, J.K., Business Research Methods,11th Edition, Tata-McGraw Hill, 12 th Edition, 2018.	

5.	Johnson, R.A., and Wichern, D.W., Applied Multivariate Statistical Analysis, PHI Learning Pvt. Ltd., 6 th Edition, 2012.
6.	Anderson, Sweeny, Williams, Camm and Cochran, Statistics for business and Economics, Cengage Learning, New Delhi, 13th Edition, 2017

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3	3				3	3	
CO 2				3		3		
CO 3				2		2		
CO 4				2		2		
CO 5				2		3		

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT103	**Managing Organizational Behaviour**	Core	4	-	-	-	4	60	25	75	100

Course Objectives	
1	To familiarize the students to the basic concepts of managing Organizational Behaviour in order to aid in understanding how a men behave in an organization.
2	To provide insights on Individual Differences, perception, learning, Attitudes values and motivation
3	To throw light on Group Dynamics and Interpersonal Communication
4	To elucidate on Leadership, Politics, Conflicts and Negotiation.
5	To create awareness and importance of work stress and Emotional Intelligence and its influence on employees in an organization.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**Introduction to Organizational Behaviour:** Historical background of OB - Concept Relevance of OB – Contributing disciplines - to the field of OB, challenges and opportunities for OB, foundations of Individual Behaviour. Theory – social theory- Organizational Citizenship Behaviour	11	C1
II	**Individual Difference -** Personality – concept and determinants of personality – theories of personality – type of theories – trait theory – psycho analytic theory - social learning theory – Erikson's stages of Personality Development Chris Argyris Immaturity to Maturity Continuum. Personality – Job fit. **Perception:** Meaning Process – Factors influencing perception – Attribution theory	14	C2

	Learning: Classical, Operant and Social Cognitive Approaches – Managerial implications**.** **Attitudes and Values**:– Components, Attitude – Behaviour relationship, formation, values. **Motivation**: Early Theories of Motivation – Hierarchy of needs theory, Theory X and Theory Y, Two factor theory, McClelland's theory of needs and Contemporary theories of motivation – Self – Determination theory, Job Engagement, Goal Setting theory, Self– efficacy theory, Re – inforcement theory, Equity theory, Expectancy theory.		
III	**Group Dynamics –** Foundations of Group Behaviour – Group and Team - Stages of Group Development– Factors affecting Group and Team Performance - Group Decision making **Interpersonal Communication –** Communication Process – Barriers to Communication– Guidelines for Effective Communication	13	C3
IV	**Leadership –** Trait, Behavioural and Contingency theories, Leaders vs Managers Power and **Politics:** Sources of Power – Political Behaviour in Organizations – Managing Politics. **Conflict and Negotiation:** Sources and Types of Conflict –Negotiation Strategies– Negotiation Process.	11	C4
V	**Work Stress:** Stressors in the Workplace – Individual Differences on Experiencing Stress - Managing Workplace Stress. Organizational Culture and Climate: Concept and Importance – Creating and Sustaining Culture. **Emotional Intelligence,** Work Life Integration Practices.	11	C5

	Knowledge based enterprise- systems and Processes; Networked and virtual organizations.		
	Total	**60**	
Course Outcomes			
Course Outcomes	On completion of this course, students will;	**Program Outcomes**	
CO1	Possess the knowledge on the basic concepts of managing Organizational Behaviour in order to aid in understanding how an men behave in an organization	PO4	
CO2	Possess knowledge on Individual Differences, perception, learning, Attitudes values and motivation	PO3, PO6	
CO3	Have insights on Group Dynamics and Interpersonal Communication	PO2, PO4, PO5	
CO4	Learn Leadership, Politics, Conflicts and Negotiation.	PO5	
CO5	Have better understanding on work stress and Emotional Intelligence and its influence on employees in an organization.	PO6, PO8	
Reading List			
1.	www.himpub.com		
2.	https://iedunote.com.organisational-behaviour		
3.	www.yourarticlelibrary.com/organisation/		
4.	Journal of Organizational Behaviour – wiley Online Library		
References Books			
1.	Prasad .L.M., Organisational Behaviour ,Sultan Chand and Sons, 2019		
2.	C.B.Guptha, A Textbook Of Organisational Behaviours ,S.Chand & Company,2019		
3.	K. Aswattappa, Organisational Behaviour, Himalaya Publishing House, 12th Edition, 2016.		
4.	Luthans, F. Organizational Behaviour, 12th Edition, Tata McGraw Hill Education, 2017.		
5.	McShane, S.L., Von Glinow, M.A., and Sharma, R.R., Organizational Behaviour, 5th Edition, Tata McGraw-Hill Education Pvt. Ltd., 2011.		

6.	Stephen P. Robins, Timothy A. Judge and Neharika Vohra, Essentials of Organisational Behaviour, 18th Edition, Pearson Education, 2019.

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				2				
CO 2			3			3		
CO 3		3		3	3			
CO 4					3			
CO 5						3		2

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT104	**Accounting For Managers**	Core	3	1	-	-	4	60	25	75	100

Course Objectives	
1	To acquaint the students with the fundamentals of principles of financial, cost and management accounting
2	To enable the students to prepare, analyses and interpret financial statements
3	To acquaint the students with the tools and techniques of financial analysis
4	To enable the students to take decisions using management accounting tools.
5	To enable the students to prepare the reports with the accounting tools and facilitate managerial decision making.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	Financial Accounting – Meaning - Objectives - functions. Branches of Accounting: Financial, Cost and Management Accounting - Accounting Concepts and conventions. Journal – Ledger – Trial Balance – Preparation of Final Accounts: Trading, Profit and Loss Account and Balance Sheet (problems); International Accounting Standards - IFRS	14	C1
II	Financial Statement Analysis - Objectives - Techniques of Financial Statement Analysis: Common Size and Comparative Financial Statements, Trend analysis, Ratio Analysis. Fund Flow Statement - Statement of Changes in Working Capital - Preparation of Fund Flow Statement - Cash Flow Statement Analysis- Distinction between Fund Flow and Cash Flow Statement – problem.	13	C2
III	Marginal Costing - Definition - distinction between marginal costing and absorption costing - Break even	12	C3

	point Analysis - Contribution, p/v Ratio, margin of safety - Decision making under marginal costing system-key factor analysis, make or buy decisions, export decision, sales mix decision- Problems.		
IV	Budget, Budgeting, and Budgeting Control - Types of Budgets - Preparation of Flexible and fixed Budgets, master budget and Cash Budget - Problems - Zero Base Budgeting.	10	C4
V	Cost Accounting : meaning – Objectives - Elements of Cost – Cost Sheet(Problems) – classification of cost – Cost Unit and Cost Centre – Methods of Costing – Techniques of Costing. Standard costing and variance analysis Reporting to Management – Uses of Accounting information in Managerial decision-making. Reporting-Accounting Standards and Accounting Disclosure practices in India; Exposure to Practical Knowledge of using Accounting software-Open Source.	11	C5
	Total	**60**	

Course Outcomes

Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Be able to understand the fundamentals of principles of financial, cost and management accounting	PO6
CO2	Be able to prepare, analyze and interpret financial statements	PO1, PO2, PO4, PO6, PO7
CO3	Be able to use the tools and techniques of financial analysis.	PO1, PO2, PO3, PO6, PO7
CO4	Be able to take decisions using management accounting tools.	PO1, PO2, PO6, PO7
CO5	Be able to prepare the reports with the accounting tools and facilitate and take managerial decisions.	PO2, PO3, PO4, PO6, PO7, PO8

Reading List

1.	http://files.rajeshindukuristudyplace.webnode.com/200000014-9621c971b8/ accounting%20 for%20 managers.pdf
2.	http://shodhganga.inflibnet.ac.in/bitstream/10603/70588/9/09_chapter%201.pdf
3.	http://educ.jmu.edu/~drakepp/principles/module6/capbudtech.pdf
4.	https://www.researchgate.net/publication/313477460_concept_of_working_capital _management
References Books	
1.	Gupta, A., Financial Accounting for Management: An Analytical Perspective, 5th Edition, Pearson, 2016.
2.	Khan, M.Y. and Jain, P.K., Management Accounting: Text, Problems and Cases, 8thEdition, Tata McGraw Hill Education Pvt. Ltd., 2021.
3.	Nalayiram Subramanian, Contemporary Financial Accounting and reporting for Management – a holistic perspective- Edn. 1, 2014 published by S. N. Corporate Management Consultants Private Limited
4.	Horngren, C.T.,Sundem, G.L., Stratton, W.O., Burgstahler, D. and Schatzberg, J., 16th Edition, Pearson, 2013
5.	Noreen, E., Brewer, P. and Garrison, R., Managerial Accounting for Managers, 13th Edition, Tata McGraw-Hill Education Pvt. Ltd., 2009.
6.	Rustagi,R. P., Management Accounting, 2nd Edition, Taxmann Allied Services Pvt. Ltd, 2011

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1						2		2
CO 2	3	3		3		3	2	
CO 3	3	3	3			3	2	
CO 4	3	3				3	3	
CO 5		3	3	3		3	2	2

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT105	**Managerial Economics**	Core	4	-	-	-	4	60	25	75	100

Course Objectives	
1	To familiarize the students about managerial economics and to know the fundamental concepts affecting business decisions.
2	To understand concept of utility and demand analysis and demand forecasting
3	To know about production function and market structure
4	To have an idea and understanding about Macroeconomics like National Income, savings and investment, Indian economic policy and Planning.
5	To Provide insights on Money Market, Inflation and Deflation, Monetary and Fiscal policies, FDI and cashless economy.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	Introduction: Definition of Managerial Economics. Decision Making and the Fundamental Concepts Affecting Business Decisions – the Incremental Concept, Marginalism, Equi-marginal Concept, the Time Perspective, Discounting Principle, Opportunity Cost Principle- Micro and Macro Economics.	11	C1
II	Utility Analysis and the Demand Curve: Elasticity of Demand - Demand Analysis: Basic Concepts, and tools of analysis for demand forecasting. Use of Business Indicators: Demand forecasting for consumer, Consumer Durable and Capital Goods. Input-Output Analysis – Consumer Behavior-Consumer Equilibrium	12	C2
III	The Production Function: Production with One Variable Input – Law of Variable Proportions – Production with Two Variable Inputs – Production Isoquants – Isocost Lines Estimating Production Functions- Returns to	13	C3

	Scale– Economies Vs Diseconomies of Scale – Cost Concepts – Analysis of cost – Short and long run costs.Market Structure: Perfect and Imperfect Competition –Monopoly, Duopoly, Monopolistic Competition –Pricing Methods.		
IV	Macro Economic Variables – National Income-Concepts – Gross Domestic Product, Gross National Product, Net National Product – Measurement of National Income, Savings, Investment - Business Cycles and Contracyclical Policies – Role of Economic Policy – Indian Economic Planning	11	C4
V	Commodity and Money Market: Demand and Supply of Money – Money Market Equilibrium – Monetary Policy – Inflation – Deflation – Stagflation-Role of Fiscal Policies- Indian Fiscal Policies - Government Policy towards Foreign Capital and Foreign Collaborations – Globalization and its Impact. Cashless economy and digitalized cash transfers; Economic models and its steps; FEMA-GST-Industrial Policy in India and its effects on growth.	13	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Be able to understand the basic concepts of managerial economics that help the firm in decision-making process.	PO2, PO4
CO2	Be familiar about the Basic concepts of Demand, Supply and Equilibrium and their determinants	PO4, PO6, PO7
CO3	Have better idea and understanding about production function and market structure	PO6, PO7

CO4	Have better insights about macroeconomics concepts like National income, Savings and Investment, Indian Economic Policy and planning	PO8
CO5	Possess better knowledge about Money market, Monetary and Fiscal policy, inflation and deflation, FDI and globalization and Cashless economy and digitalized cash transfers.	PO7
Reading List		
1.	http://pearsoned.co.in/prc/book/paul-g-keat-managerial-economics-economic-tools-todays-decision-makers6e-6/9788131733530	
2.	http://www.onlinevideolecture.com/mba-programs/kmpetrov/managerial economics/?courseid=4207	
3.	https://www.slideshare.net/dvy92010/nature-and-scope-of-managerial-economics-76225857	
4.	The Indian Economic Journal - SAGE Journals	
References Books		
1.	1. Damodaran, S., Managerial Economics, 2nd Edition, Oxford University Press, 2011.	
2.	Dwivedi, D.N., Managerial Economics, Vikas Publishing House, 2011.	
3.	R. L. Varshney , K.L. Maheshwari., Managerial Economics, Sultan Chand & Sons, 2014.	
4.	William F. Samuelson, Stephen G. Marks, Jay L., Zagorsky., Managerial Economics, Wiley Publishers, 9th Edition (2021)	
5.	H. L.Ahuja., Managerial Economics.,Atlantic Publishers and distributors(P) Ltd., 2017.	
6.	Dominick Salvatore, Managerial Economics: Principles and worldwide applications, 9E Adaptation, Oxford university press, 9th Edition, 2020.	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		2		3				
CO 2				3		2	2	
CO 3						3	3	
CO 4								2
CO 5							2	

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT106	**Legal Systems in Business**	Core	4	-	-	-	4	60	25	75	100

Course Objectives	
1	To create knowledge and understanding on law of contracts
2	To describe about sale of goods and Negotiable instrument act
3	To have an overall understanding about partnership act and company law.
4	To familiarize various labor laws for effective administration of Human Resource of an organization.
5	To provide insights and awareness about consumer protection act, Cyber-crimes, Intellectual property Rights.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**The Law of Contracts:** Definition of Contact Offer and Acceptance – Essential Elements of a Valid Contract: Free Consent – Competency of Parties – Lawful Consideration – Legality of Object. Void, Voidable, Unenforceable and Illegal Contracts – Performanceof Contracts – Privity of Contracts – Assignment of Contracts – By Whom Contract must be Performed – Time and Place of Performance – Performance of Reciprocal Promises – Contracts which need not be performed, Discharge of Contracts : By Performance, By Agreement, By Impossibility, By Lapse of Time, By Operation of Law and By Breach of Contracts – Remedies for Breach of Contracts.	14	C1
II	**Sale of Goods Act:** Definition of a Sale and a Contract of Sale – Difference between (1)Sale and an Agreement to Sell (2) Sale and a Contract Form (3) Sale and Bailment (4) Sale and Mortgage of Goods (5) Sale and Time Purchase Conditions and Warranties –Passing of Property of Goods – Rights of an Unpaid Seller. **Negotiable Instruments Act:** Negotiable Instruments in General: Cheques, Bills of Exchange and Promissory Notes – Definition and Characteristics	10	C2
III	**Partnership Act:** Evolution – Definition of Partnership – Difference between Partnership and Joint Family Business – Kinds of Partnerships – Registration – Rights	13	C3

	and Liabilities of Partners – Dissolution. **Company Law:** Evolution of Company Form of Organisation – Companies Separate Legal Entity – Comparison of Company with Partnership and Joint Hindu Family Business – Kinds of Companies – Comparison of Private and Public Companies – Formation of Companies – General Idea About Memorandum and Articles of Association, Prospectus, Statement in lieu of Prospectus – Management of Companies – General Idea of Management of Companies – Officers, Meetings – Resolutions – Account and Audit – Winding up of Companies – General Idea of the Different Modesof Winding Up.		
IV	**Labour Law:** Factories Act, Minimum Wages Act, Industrial Disputes Act, Employees Compensation Act, Payment of Bonus Act 1965. Payment of Gratuity Act 1972. ESI Act, Employees Provident Fund and Miscellaneous Provisions Act 1952, Maternity Benefits Act, Child labour Abolition & Regulation Act,1986- Inter-state Migrant Workmen (Regulation of Employment & Conditions of services) Act 1979- Bonded Labour system (Abolition)Act 1976- Sexual Harassment of women at Workplace (Prevention, Prohibition & Redressal) Act 2013- Contract Labour (Regulation and Abolition) Act- Four Labour Codes and Rules-RTI Act 2005.	13	C4
V	Consumer Protection Act, Competition Act 2002, Cyber Crimes, IT Act 2008 – Intellectual Property Rights: Types of Intellectual Property – Trademarks Act 1999 – The Copyright Act 1957 – International Copyright Order, 1999 – Design Act, 2000; UNICITRAL – United Nations Commission on International Trade Law.	10	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Have knowledge on understandings on law of contract.	PO4, PO6, PO7
CO2	Know the sale of Goods & Negotiable instrument act.	PO6
CO3	Have understandings on partnership and company law	PO6, PO7
CO4	Have familiarize with various labour laws.	PO5, PO6, PO7
CO5	Possess insights & awareness about consumer protection Act Cyber Crimes, Intellectual Property Rights.	PO8

Reading List	
1.	http://www.legalserviceindia.com/article/
2.	http://www.freebookcentre.net/Law/Law-Books.html 2
3.	https://www.mooc-list.com/course/business-law-wma
4.	https://ilj.law.indiana.edu/
References Books	
1.	Kapoor ND., Legal Systems in Business, Edition 2 (2021), Sultan Chand & Sons.
2.	Rao, P.M., Mercantile Law, PHI Learning, 2011.
3.	Majumdar, A. K. and Kapoor, G.K., Company Law, 15th Edition, Taxmann Publications Pvt. Ltd., 2012.
4.	Majumdar, A. K. and Kapoor, G.K., Company Law and Practice, 17th Edition, Taxmann Publications Pvt. Ltd., 2012.
5.	Intellectual Property Laws, Universal Law Publishing, 2012.
6.	Daniel Albuquerque , Legal systems in Business, Oxford University Press India, 2nd Edition, 2015.

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1				2		2	2	
CO 2						2		
CO 3						2	2	
CO 4					2	2	2	
CO 5								2

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1SS101	**Soft Skills I – Executive Communication**	Soft Skills	-	-	2	-	2	30	40	60	100

Course Objectives	
1	To acquire communication awareness, they are going to get for the industry.
2	To make the customer realize that you can provide them with information and other essential things
3	To explore the skill of writing business proposals
4	To develop a plan for the meetings and interviews
5	To analyze the skills required for non-verbal communication

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**Communication:** Meaning and Significance of Communication for Management- Types of Communication Factors Affecting Effectiveness of Communication- Barriers to Communication- Principles of Effective Communication Dyadic Communication- Face-to-face Communication. Other Modes of Communication.	5	C1
II	**Business Correspondence:** Planning Business Messages: Analyzing the Task, Anticipating the Audience. Adapting the Message Organizing and Writing Business Messages: Patterns of organization, Use of Tools such as Mind Maps, Composing the Message- Norms for Business Letters Letters for Different Kinds of Situation: Personalized Standard Letters, Enquiries, Inviting Quotations, Sending Quotations, Placing Orders, Inviting tenders, Claim letters, Customers Complaints, Collection Letters, Sales	7	C2

	Promotion Letters- Revising Business Messages: Revising for Clarity. Conciseness and Readability, Proof reading and Evaluating- Letters of application and resume.		
III	**Business Reports and Proposals:** Structure of Reports- Long and Short Reports: Formal and Informal Reports- Writing Research Reports- Technical Reports- Norms for Including Exhibits and Appendices- Writing Business Proposals.	5	C3
IV	**Conducting Meetings and Interviews:** Procedure for Conducting Meetings- Preparing Agenda, Minutes and Resolutions- Conducting Seminars and Conferences- Procedure of Regulating Speech- Evaluating Oral Presentations Drafting Speech- Participating in Debates and Group Discussions- Presentation Skills- Fluency Development Strategies- Attending and Conducting Interviews- Listening.	7	C4
V	**Non-verbal Communication:** Personal Appearance- Posture- Body Language- Reading Nonverbal Messages- Use of Charts. Diagrams and Tables- Visual and Audio-visual Aids for Communication.	6	C5
	Total	**30**	

Course Outcomes

Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Understanding of theories and concepts, types and various modes of communication in organizations	PO4, PO6
CO2	Development of skills on developing Business Correspondence	PO4, PO6
CO3	Development of skills on preparing Business Reports and Proposals	PO4, PO6
CO4	To draft effective business correspondence with brevity, and clarity in designing and developing clean and lucid organizing skills.	PO4, PO6

CO5	To demonstrate his/her verbal and non-verbal communication ability through presentations.	PO4, PO6
Reading List		
1.	https://www.skillsyouneed.com/ips/communication-skills.html	
2.	https://mtbt.fpg.unc.edu/more-baby-talk/10-ways-promote-language-and-communication-skills-infants-and-toddlers	
3.	http://skillopedia.com	
4.	https://www.habitsforwellbeing.com/9-effective-communication-skills	
References Books		
1.	Chaney, L. and Martin, J., Intercultural Business Communication. Person, 4 ed., 2008.	
2.	Chaturvedi, Business Communication, Person, 2 edition, 2011	
3.	Bovec L. Courtland and John V. Thill, Business Communication Today, 10 ed., Pearson Education, New Delhi, 2011.	
4.	American Management Association, The AMA Handbook of Business Writing: The Ultimate Guide to Style, Usage, Punctuation, Construction and Formatting, 2010.	
5.	Gerson, Sharan J., and Steven M Gerson, Technical Writing: Process and Product, Person Education, New Delhi, 2008	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				3		3		
CO 2				3		3		
CO 3				3		3		
CO 4				3		3		
CO 5				3		3		

3-Strong 2-Medium 1-Low

SEMESTER II

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT201	**Applied Operations Research**	Core	3	1	-	-	4	60	25	75	100

Course Objectives	
1	To provide the students with introduction on OR and its models to aid in understanding its applicability in the various functional areas of management.
2	To understand the concept of linear programming models in determining profit maximization and cost minimization
3	To learn about various methods adopted in transportation and Assignments models.
4	To determine about inventory models, replacement models, job sequencing, networking model and Queuing model
5	To throw light on dynamic model and game models and the application of pure and mixed strategies in competitive environment.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	Introduction: Overview of operations research – Origin – Nature, scope & characteristics of OR – Models in OR – Application of operations research in functional areas of management	08	C1
II	Linear Programming Problem: Linear programming problem model – Formulation – Maximization & Minimization problem – Graphical method – Simplex method – Artificial variable –- Primal & Dual.	12	C2
III	Transportation problem: Basic Solution – North / West corner Solution, LCM, VAM, Matrices method – Optimal Solution – Stepping stone method – Vogel's approximation method – Modi method – Degeneracy –	12	C3

	Imbalance matrix. Assignment model: Hungarian method – Traveling salesmen problem.		
IV	Project Scheduling and Resource Management: Deterministic Inventory models – Purchasing & Manufacturing models – Probabilistic inventory models – Replacement model – Sequencing – Brief Introduction to Queuing models. Networking – Programme Evaluation and Review Technique (PERT) and Critical Path Method (CPM) for Project Scheduling- Crashing – Resource allocation and Resource Scheduling.	18	C4
V	Game Theory and Strategies: Games theory – two player zero sum game theory – Saddle Point –Mixed Strategies for games without saddle points – Dominance method – Graphical and L.P Solutions- Goal Programming; Simulation; Integer programming and Dynamic programming.	10	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Obtain insight on the origin and nature of OR and also the application of various models of OR.	PO4, PO6
CO2	Learn about the graphical, Simplex, Big M and dual methods of Linear programming problem.	PO1, PO2, PO6, PO7
CO3	Be well versed with the concept of transportation and Assignments models	PO1, PO2, PO6, PO7
CO4	Have better understanding on inventory models, replacement models, job sequencing, networking model and Queuing model	PO1, PO2, PO6, PO7
CO5	Be imparted knowledge on the various methods of game model	PO2, PO7
Reading List		

1.	www.cbom.atozmath.com
2.	http://www.pondiuni.edu.in/storage/dde/downloads/mbaii_qt.pdf
3.	http://164.100.133.129;81/econtent/Uploads/Operations_Research.pdf
4.	https://www.journals.elsevier.com/operations-research-perspectives
References Books	
1.	Anderson, D.R., Sweeney, D.J., Williams, T.A. and Martin, K., An Introduction to Management Science: Quantitative Approach to Decision Making, 14th Edition Paperback – 1, Cengage Learning India Pvt. Ltd., 2019
2.	Gupta, P.K., and Comboj, Introduction to Operations Research, S. Chand, 2014
3.	Hiller, F., Liebermann, Nag and Basu, Introduction to Operations Research, 11th Edition Paperback, Tata McGraw-Hill Publishing Co. Ltd., 2021
4.	Khanna, R.B., Quantitative Techniques for Managerial Decision Making, 3rd Edition – Paperback, New Age International Publishers, 2018
5.	Taha, H.A., Operations Research: An Introduction, 10th Edition, Pearson, 2019
6.	Vohra,N.D., Quantitative Techniques in Management, 5th Edition, Tata McGraw Hill Education Pvt. Ltd., 2017.

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				2		2		
CO 2	3	2				2	2	
CO 3	3	3				3	2	
CO 4	3	3				2	2	
CO 5		3					2	

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT202	**Human Resource Management**	Core	4	-	-	-	4	60	25	75	100

Course Objectives	
1	To embark importance of HRM role, functions and need
2	To assimilate theoretical and practical implications of HRP
3	To critically use appropriate training tools
4	To analyze and implement an effective performance management
5	To extrapolate and design compensation management techniques

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**Introduction:** Introduction of Human Resource Management: Importance of Human Resources, Definition and Objectives of Human Resources Management, Qualities of a good HR manager – Evolution and growth of Human Resource Management in India. Functionsof Human Resource Management. Strategic Human Resource Management (SHRM).Human Resource Policies: Need, type and scope, Human Resource Accounting andAudit- Gig Economy.	11	C1
II	**Human Resource Planning (HRP):** Human Resources Planning: Long and Short term planning, Job Analysis, Skills inventory, Job Description, Job Specification and Succession Planning, Strategic Human Resource Planning. Recruitment and selection: Purposes, types and methods of recruitment and selection, Relative merits and demerits of the different methods, Recruitment and Social Media.	13	C2

	Placement, Induction, Transfers, Promotions, Dismissal, Resignation, Exit Interviews,Reduction of attrition rate- Attrition and retention management		
III	**Training, Development & Career Management:** Importance and benefits of Training and Development, Types of Training Methods,Executive Development Programs, Concept and process of Career Management; Competency mapping, Knowledge Management & Talent Management.	10	C3
IV	**Performance Management:** Importance, process and Methods: Ranking, rating scales, critical incident method, Removing subjectivity from evaluation, MBO as a method of appraisal, Performance Feedback, Online PMS. Human Resource Information System; International Human Resource Management; Cross cultural diversity management; Hybrid work culture; work-life balance; Quality of work-life; HR Analytics.	14	C4
V	**Compensation Management:** Wage and Salary Administration: Job Evaluation, Calculation of Wage, Salary, Prerequisites, Compensation Packages, Cost of Living Index and Calculation of Dearness Allowance, Rewards and Incentives; ESOP-Financial and non-financial incentives, Productivity – linked Bonus, Compensation Criteria, Rewardsand Recognition.	12	C5
	Total	**60**	
Course Outcomes			
Course Outcomes	On completion of this course, students will;	**Program Outcomes**	
CO1	Gain an understanding of HRM policies and importance.	PO4, PO6	
CO2	Implement appropriate HRP in workplace.	PO6	

CO3	Apply feasible Training method and manage career progressions.	PO5, PO6, PO7
CO4	Demonstrate managing performance of human resources.	PO6, PO7
CO5	Design and justify compensation framework.	PO4, PO6, PO7
Reading List		
1.	https://businessjargons.com/performance-management.html	
2.	https://www.hr-guide.com/data/G400.htm	
3.	https://www.managementstudyguide.com/training-development-hr-function.htm	
4.	https://www.tandfonline.com/toc/rijh20/current	
References Books		
1.	Ashwathappa, K., Human Resource Management, 9th Edition, Tata McGraw-HillEducation Pvt. Ltd., 2021.	
2.	Ivanecevich, J.M., Human Resource Management, 12th Edition, Tata McGraw-HillEducation Pvt. Ltd., 2020.	
3.	Gary Dessler & Biju Varrkey, Human Resource Management, 16th Edition, Pearson India Pvt. Ltd., 2020.	
4	DeCenzo, D.A., Robbins S.P., Susan L Verhulst, Human Resource Management, 11th Edition,Wiley India Pvt. Ltd., 2015.	
5.	Leigh Thompson, Making the team, A guide for Managers, Pearson, 6th Edition 2019.	
6.	Gary Dessler, Fundamentals of Human Resource Management, Pearson, 4th Edition 2017.	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				M		M		
CO 2						M		
CO 3					S	S	M	
CO 4						M	M	
CO 5				M		M	M	

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT203	**Marketing Management**	Core	4	-	-	-	4	60	25	75	100

Course Objectives	
1	To develop an understanding and enhance the knowledge about marketing theories, principles, strategies and concepts and how they are applied.
2	To provide with opportunities to analyze marketing activities within the firm.
3	To analyze and explore the buyer behavior pattern in marketing situations.
4	To understand the branding, pricing and strategies in marketing a product.
5	To upgrade the knowledge and awareness of Consumer Rights in the Market.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	Introduction: Marketing Management Philosophies – What is marketing- The concepts of marketing- Marketing and Services – Digital Marketing – Social Media Marketing – Current marketing challenges; Rural Marketing – E-Rural Marketing – International Marketing – Industrial Marketing.	14	C1
II	Strategic Marketing– Marketing Management Process – Analysis of Marketing opportunities, Selecting Target Consumers, developing Marketing Mix Analysis of Macro and Micro environment Marketing Research as an Aid to Marketing, Marketing Research Process – Sales Forecasting –Techniques. Marketing Tactics, The Mix Service and Retail Marketing.	13	C2
III	MIS: Marketing Information Systems- Customer Relationship Management (CRM) Customer Engagement Marketing – Sales force Automation- Marketing Analytics	9	C3

IV	Buyer Behaviour: Factors Influencing Consumer Behaviour – Buying situation– Buying Decision Process – Industrial Buyer Behaviour. Market Segmentation: Targeting and Positioning – Competitive Marketing Strategies. Customer Life Cycle – Customer Life time Value, Product Portfolio Management.	12	C4
V	Product Policies: Consumer and Industrial Product Decisions, Branding, Packaging and Labelling – New Product Development and Product Life Cycle Strategies, Pricing – Pricing Strategies and approaches, Promotion Decisions: Promotion Mix – Integrated Marketing Communication – Advertising and Sales Promotion - Sales Force Decisions, Selection, Training, Compensation and Control – Publicity and Personal Selling – Distribution Management – Channel Management: Selection, Co-operation and Conflict Management – Vertical, Horizontal and Multi-channel Systems Consumer Protection – Awareness of Consumer Rights in the Market Place.	12	C5
	Total	**60**	

Course Outcomes

Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Understand the fundamental principles of marketing, marketing concepts and ideas.	PO4, PO6, PO7
CO2	Understand the organization's marketing strategy and marketing environment. Familiar with marketing research with forecasting techniques.	PO4, PO6
CO3	Understand the buyer behavior and market segmentation and competitive marketing strategies.	PO4, PO6, PO7
CO4	Think strategically about branding, pricing and marketing issues.	PO3, PO4, PO6, PO7

CO5	Familiar with Promotion decisions along with awareness on Consumer Rights in the Market Place.	PO6, PO8
Reading List		
1.	https://ocw.mit.edu/courses/sloan-school-of-management/15-810-marketing-management-fall-2010/lecture-notes/	
2.	https://cpbucket.fiu.edu/mar3023vd1131/syllabus.html	
3.	https://www.ama.org/ama-academic-journals/	
4.	https://www.emerald.com/insight/publication/issn/0736-3761	
References Books		
1.	Pillai & Baghawathy, Marketing Management, S.Chand , 2010.	
2.	Gupta Prachi, Aggarwal Ashita , et al., Marketing Management: Indian Cases, 1st Edition, 2017	
3.	G.Shainesh Philip Kotler, et..al., Marketing Management; Indian Case Studies included, 16th Edition, Pearson, 2022	
4.	Warren J. Keegan, Global Marketing Management, 8thEdition, Pearson, 2017.	
5.	Mullins, Marketing Management: A Strategic Decision Making Approach, 7th Edition, McGraw-Hill, 2010.	
6.	Philip Kotler and Keven Lane Keller, Marketing Management, 15th Edition, Pearson, 2015	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				2		2	2	
CO 2				3		3		
CO 3				2		2	2	
CO 4			2	2		2	2	
CO 5						2		2

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT204	**Operations Management**	Core	3	1	-	-	4	60	25	75	100

Course Objectives	
1	To understand the production function, production design & capacity planning,
2	Exploring the Make or Buy decision, and thus understanding the role of inventory management
3	To determine multiple plant location decisions and effective utilization of plant layout. To explain the models, concepts, and techniques adopted in the areas of inventory control and maintenance.
4	To elucidate the importance and usefulness of work-study and quality control tools
5	To provide insights on service operations management and waiting line analysis.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**INTRODUCTION:** Operations Management- Nature, Scope, Historical Development, Functions- Long term Vs Short term issues- A Systems Perspective- Challenges- Manufacturing Trends in India-Production Design and Process Planning- Types of Production Processes- Plant Capacity-Capacity Planning- Make or Buy Decisions- Use of Crossover Chart for Selection Processes-Types of Charts used in Operations Management.	11	C1
II	**FACILITY DESIGN:** Plant Location: Factors to be considered in Plant Location- Location Analysis Techniques- Choice of General Region, Particular community and Site- Multiple Plant Location Decision- Plant Location Trends. Layout of Manufacturing Facilities: Principles of a Good Layout- Layout Factors- Basic Types of Layout- Principles of Materials	12	C2

	Handling- Materials Handling Equipment - Role of Ergonomics in Job Design.		
III	**INVENTORY CONTROL &MAINTENANCE:** Basic Inventory Models- Economic Order Quantity- Economic Batch Quantity- Reorder Point-Safety Stock- Inventory Costs-Classification and Codification of Stock- ABC Classification-Materials Requirement Planning (MRP)- JIT- Implications of Supply Chain Management. Maintenance: Preventive Vs Breakdown Maintenance- Group Replacement Vs Individual Replacement- Breakdown Time Distribution- Maintenance of Cost Balance- Procedure for Maintenance.	13	C3
IV	**DESIGN OF WORK SYSTEMS AND QUALITY CONTROL:** Work Study- Objectives- Procedure- Method Study and Motion Study- Work Measurement- Time Study-Performance Rating- Allowance Factors- Standard Time- Work Sampling Techniques- Job Sequencing and Scheduling. Quality Control: Purpose of Inspection and Quality Control- Different Types of Inspection- Acceptance Sampling- The Operating Characteristic Curve- Control Charts for Variables and Attributes; Quality Circles; TQM – Six Sigma, Kaizen	14	C4
V	**SERVICE OPERATIONS MANAGEMENT:** Introduction to Services Management- Nature of Services- Types of Services- Service Encounter- Designing Service Organizations- Service Facility Location and Layout- Service Blueprinting-Waiting Line Analysis for Service Improvement- Service Processes and Service Delivery.	10	C5
	Total	**60**	
Course Outcomes			

Course Outcomes	On completion of this course, students will;	Program Outcomes
CO1	Understand the concepts of production and its design, capacity planning and make or buy decisions.	PO2, PO4
CO2	Be cognizant of the complexity involved in plant location decisions and utilization of plant layout.	PO2, PO7
CO3	Understand the Inventory models and the importance of maintenance techniques.	PO6, PO7
CO4	Be aware of work-study procedures and the importance on quality control tools	PO1, PO2, PO6, PO7
CO5	Have insight on service operations, service delivery and waiting line analysis.	PO2, PO6, PO7
Reading List		
1.	www.shsu.edu/~mgt_ves/mgt560/ServiceManagement.ppt	
2.	zums.ac.ir/files/research/site/ebooks/strategy/operations-strategy.pdf	
3.	https://www.emerald.com/insight/publication/issn/0144-3577	
4.	https://www.inderscience.com/jhome.php?jcode=ijaom	
References Books		
1.	Aswathappa K and Shridhara Bhat K, Production and Operations Management, 2nd Edition, Himalaya Publishing House, 2021.	
2.	Mahadevan B, Operations Management Theory and Practice, 3rd Edition, Pearson Education, 2015.	
3.	Russel and Taylor, Operations and Supply Chain Management, 8th Edition, Wiley, 2021.	
4.	William J Stevenson, Operations Management, 14th Edition, McGraw Hill, 2021.	
5.	Gerard Cachon and Christian Terwiesch, Operations Management, 3rd Edition, McGraw Hill, 2022.	
6.	Prof. K C Jain, Production and Operations Management, 1st Edition, Wiley,2022.	

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1		2		2				
CO 2		2					2	
CO 3						2	2	
CO 4	2	2				2	2	
CO 5		2				2	2	

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT205	**Financial Management**	Core	3	1	-	-	4	60	25	75	100

Course Objectives	
1	To create an understanding and familiarize the students to the fundamentals of financial management and create awareness on the various sources of finance.
2	To create awareness on the various investment techniques on the investment decision making.
3	To throw light on the concept of cost of capital and familiarize on the technique of identifying the right source of capital.
4	To educate on the concept of capital structure and the create understanding on the concept of dividend.
5	To create an understanding on the concept of working capital, its need, importance, factors and forecasting technique

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	Introduction: Financial management: Definition and scope – objectives of Financial Management – Profit Maximization - wealth maximization - functions and role of finance manager. Sources of finance – short term – Bank Sources – Long term – Shares – Debentures – Preferred stock – Debt: Hire purchase, Leasing, Venture Capital – Private equity- International Financial Management- Financial Planning- Behavioural Finance- Capital Market- Money Market- Micro Finance- Financial Information System.	11	C1
II	Investing Decision - Capital Budgeting Process – Techniques of Investment Appraisal: Pay Back Period; Accounting Rate of Return, Time Value of Money- DCF Techniques –Net Present Value, Profitability Index and	14	C2

	Internal Rate of Return- Problems - Risk analysis in Capital Budgeting- Introduction to Fintech – Digital Currency - Cryptocurrency – Financial Modeling; Hurdle Rate.		
III	Cost of Capital - Cost of specific sources of capital – Cost of equity capital – Cost of debt – Cost of preference – Cost of retained earnings - weighted average cost of capital. EBIT -EPS Analysis - Operating Leverage - Financial Leverage-problems.	14	C3
IV	Capital structure - Factors influencing capital structure – optimal capital structure - capital structure theories – Net Income Approach – Net Operating Income (NOI) Approach – Modigliani - Miller(MM) Approach – Traditional Approach – Practical Problems. Dividend and Dividend policy: Meaning, classification - sources available for dividends -Dividend policy general, determinants of dividend policy.	11	C4
V	Working Capital Management - Definition and Objectives - Working Capital Policies - Factors affecting Working Capital requirements - Forecasting Working Capital requirements (problems) - Cash Management - Receivables Management and - Inventory Management - Working Capital Financing - Sources of Working Capital and Implications of various Committee Reports- Financial Analytics.	10	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Be aware of the basic concepts of financial management and understand the various sources of finance.	PO4, PO6, PO7
CO2	Possess knowledge on investment decision making.	PO1, PO2, PO6, PO7

CO3	Have insights on the cost of capital and would have familiarized themselves with the technique of calculating the cost of capital.	PO2, PO7
CO4	Have learnt the concept of capital structure and dividend	PO6, PO7
CO5	Have good understanding on the concept of working capital, its need, importance, factors and the methods of forecasting it.	PO1,PO2, PO4, PO7
Reading List		
1.	https://accountingexplained.com/managerial/capital-budgeting/	
2.	http://www.studyfinance.com/lessons/workcap/	
3.	Journal of International Financial Management & Accounting	
4.	The Management Accountant Journal - icmai-rnj.in	
References Books		
1.	S.N.Maheswari, Finanacial Management, Sulthan Chand&Sons,15th Edition, 2019	
2.	I.M. Pandey Financial Management, Vikas Publishing House Pvt. Ltd., 11th edition, 2018.	
3.	Van Horne, J.C.,Financial Managememt and Policy, 13th Edition, Pearson, 2015.	
4.	Prasanna Chandra, Financial Management, 10th edition, Tata McGraw Hill, 2019	
5.	Periasamy, P., Financial Management, 4th Edition, Tata McGraw-Hill Education Pvt. Ltd., 2017.	
6.	Brigham, E.F. and Ehrhardt, M.C., Financial Management: Theory and Practice, 14th Edition, 2015.	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				2		2	2	
CO 2	2	3				2	2	
CO 3		2					3	
CO 4						2	3	
CO 5	2	2		3			2	

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT206	**Strategic Management**	Core	4	-	-	-	4	60	25	75	100

Course Objectives	
1	To enable the students, understand the importance of vision and mission in framing corporate strategy.
2	To provide insights on how business is responsible socially and ethically.
3	To highlight on the environmental analysis framework.
4	To throw light on strategic formulation and strategic choice.
5	To understand strategic implementation and strategic control.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	Introduction: Strategy – Strategic Management Process – Developing a Strategic Vision – Mission- Setting Objectives– Strategies and Tactics – Importance of Corporate Strategy – the 7-S Framework- Corporate Governance– Board of Directors: Role and Functions – Board Functioning – Top Management: Role and Skills.	11	C1
II	Corporate Policy and Planning in India: Importance – Characteristics – Objectives - Policy Formulation and Development – Types of Business Policies-Implementation of Policies. Society and Business: Social Responsibility of Business –Corporate Governance and Ethical Responsibility.	13	C2
III	Environmental Analysis: Environmental Scanning – Industry Analysis - The Synthesis of External Factors - Internal Scanning – Value Chain	11	C3

	Analysis – SWOT Audit –Scenario planning- Creating an Industry Matrix.		
IV	Strategy Formulation and Analysis: Strategy Formulation – Strategic Factors Analysis Summary Matrix (SFAS) Portfolio Analysis – Business Strategy- TOWS Matrix– Corporate Strategy – Functional Strategy – Strategic Choice – Generic, Competitive Strategies; ETOP, TOWS	12	C4
V	Strategy Implementation: Strategy Implementation - Corporate Culture – Matching Organisation Structure to Strategy – Mergers and Acquisitions and Diversifications – Strategic Leadership Strategic Control: Measurement in Performance- Problems in Measurement of Performance- Strategy Audit-Strategic Control Process – Du Pont's Control Model – Balanced Score Card – Michael Porter's Framework for Strategic Management – Future of Strategic Management – Strategic Information System.	13	C5
	Total	**60**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Be able to frame vision and mission statements.	PO3, PO4, PO7
CO2	Be social and ethically responsible.	PO3, PO8
CO3	Possess insights on making environmental analysis.	PO3, PO8
CO4	Possess knowledge on learning strategic formulation & strategy choice.	PO2, PO5, PO7
CO5	Understanding strategic implementation and control.	PO4, PO5, PO7

Reading List	
1.	Strategic Management Journal – Wiley online Library

2.	Journal of strategy and Management – Emerald Insight
3.	Mastering Strategic Management – WWW.opentextbooks.org.hk
4.	Mastering Strategic Management – WWW.saylor.org.
References Books	
1.	V S P Rao, Strategic Management Text and Cases, 2nd edition 2013.
2.	Kazmi, A., Strategic Management and Business Policy, 15th Edition, Tata McGraw-Hill Education, 2018.
3.	Dess, G., Lumpkin, G.T. and Eisner, A., Strategic Management, 8th Edition, Tata McGraw-Hill, 2018.
4.	Hill, C.W.L. and Jones, G.R., Strategic Management: An Integrated Approach, 9th Edition, Cengage Learning, 2012.
5.	Pearce II, J., Robinson, R.B. and Mittal, A., Strategic Management: Formulation, Implementation and Control, 12th Edition, McGraw-Hill, 2017.
6.	Wheelen, T.L. and Hunger, D., Strategic Management and Business Policy, 13th Edition, Pearson, 2012.

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1			3	2			3	
CO 2			3					3
CO 3			2					3
CO 4		2			3			2
CO 5				3	3			3

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1SS201	**Soft Skills II - Business Etiquette**	Soft Skills	-	-	2	-	2	3 0	40	60	100

Course Objectives	
1	To analyze the Business etiquette at workplace
2	To determine the Principles of exceptional work behavior
3	To explore Tech etiquette in using various telecommunication devices and channels
4	To successfully handle multi-cultural challenges
5	To ascertain sensitivity to new and emerging issues in etiquette

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	Introduction to business etiquette: The ABCs of etiquette Meeting and greeting scenarios-Developing a culture of excellence the principles of exceptional work behaviour - What is the role of Good Manners in Business? -Enduring Words Greetings and Introductions: Guideline for receptionists - Making introductions and greeting people- Greeting Components- The protocol of shaking hands- Introductions - Introductory scenarios - Addressing individuals.	7	C1
II	Meeting and Boardroom Protocol: Guidelines for planning a meeting - Before the meeting - On the day of the Meeting - Guidelines for Attending the meeting - For the Chairperson- For attendees - For Presenters - Planning a power point presentation-Dealing with customer complaints. Entertaining Etiquette: Planning a meal- Issuing invitations -Business meals basics - Basics of table etiquette - Holding and resting utensils - Business dining etiquette - Multi-cultural Highlight: Japanese Dinning-Specific food Etiquette guidelines.	6	C2
III	Telephone Etiquette: Cell phone etiquette-Social Media Usage etiquette- Telephone etiquette guidelines - Mastering the telephone courtesy - Active listening -	5	C3

	Putting callers on hold -Transferring a call - Screening calls - Taking at message - Voice Mail-Closing the call - When Making calls - Closing the call-Handling rude or impatient clients Internet & email etiquette: Internet usage in the workplace Email- Netiquette - Online chat - Online chat etiquette - Online chat etiquette guidelines		
IV	Business Attire & Professionalism: Business style and professional image - Dress code - Guidelines for appropriate business attire - Grooming for success - Guidelines for appropriate business attire - Grooming for success - Multicultural dressing Diversity Management- Gender Sensitivity- Social Media and Communication with colleagues-Preventing sexual harassment-Disability Etiquette: Basic disability Etiquette practices - Courtesies for wheelchair users Courtesies for blind or visually impaired - Courtesies for the deaf- People with speech impairments.	5	C4
V	Business Ethics: Ethics in the workplace - The challenge of business ethics - Creating an ethical compass - Business ethics and advantages - Ethical Issues - Conflict Management- Conflict resolution strategies - Choosing the appropriate gift in the business environment Multi-cultural challenges: Multi-cultural etiquette - Example of cultural sensitivity - Cultural differences and their effect on business etiquette- onsite projects-Cultural Highlight: China-Cultural Highlight: India.	7	C5
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Learn using business etiquette at work place	PO4, PO6, PO7
CO2	Be able to acquire knowledge about the Principles of exceptional work behaviour	PO4, PO6, PO7
CO3	Be able to enhance their knowledge of latest Tech etiquette in using various telecommunication devices and channels.	PO4, PO6, PO7
CO4	Get familiarized with the Successful handling of Multi-cultural challenge	PO4, PO6, PO7
CO5	Become sensitive to new and emerging issues in etiquette	PO4, PO6, PO7

Reading List	
1.	https://accountingexplained.com/managerial/capital-budgeting/

2.	http://www.studyfinance.com/lessons/workcap/
3.	Journal of International Financial Management & Accounting
4.	The Management Accountant Journal - icmai-rnj.in
References Books	
1.	Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition.
2.	Mehra, S. K. (2012) Business Etiquette A Guide For The Indian Professional. Noula: HarperCollins
3.	Pachter, B. (2013). The Essentials of Business Etiquette: How to Greet, Eat, and Tweet Your Way to Success (1) edition New York: McGraw-Hill Education.
4.	Past, K. (2008). Indian Business Etiquette: 1 (First edition). Ahmedabad Jaico Publishing House.
5.	Travis, R. (2013). Tech Eliquette: OMG, 2 Edition, RLT Publishing.
6.	Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition.

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				2		2	2	
CO 2				2		2	2	
CO 3				2		2	2	
CO 4				2		2	2	
CO 5				2		2	2	

3-Strong 2-Medium 1-Low

Subject Code	Subject Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1SS202	**Soft Skills III – Computing Skills**	Soft Skills	-	-	2	-	2	30	40	60	100

Course Objectives	
1	To create awareness and understanding on the basic functions of MS Excel
2	To elucidate the students on the various advanced functions of MS Excel
3	To educate the students on MS Access and its application in database management
4	To enable the students to understand the functions and usage of various cloud based apps like Google Drive, Google Sheets and Google Docs
5	To enable the students learn the functions and usage of Cloud based apps like Google Forms, Google Slides and Google Cloud Printing.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	MS Excel – Basic Functions - Workbook – Building – modifying - navigating; Worksheet – Auto fill copying and moving cells, inserting and deleting rows, printing; Formulas and functions-Troubleshooting formulas, Functions and its forms like database, reference, Databases – creating, sorting filtering and linking.	6	C1
II	MS Excel Advanced Functions – Vlookup – Hlookup – Charts – Count - Countif – Sum - Sumif – Product – Sumproduct. Functions: Mathematical - Financial - logic – Text - Statistical	6	C2
III	MS Access – Components, creating a database and project, import and exporting, customizing; Tables – creating and setting fields; Queries – types, creating, wizards – Reports – creating and layout.	6	C3
IV	Cloud based apps – Google Drive, Google Sheets, Google Docs,	6	C4
V	Cloud based apps - Google Forms, Google Slides – Google Cloud Print	6	C5
	Total	**30**	

Course Outcomes

Course Outcomes	On completion of this course, students will;	Program Outcomes
CO1	Have awareness and understanding on the basic functions of MS Excel	PO4, PO6, PO7
CO2	Know the advanced functions of MS Excel	PO4, PO6, PO7
CO3	Possess knowledge on MS Access and its application in database management	PO2, PO4, PO6, PO7
CO4	Understand and possess knowledge on the functions and usage of various cloud based apps like Google Drive, Google Sheets and Google Docs	PO4, PO5, PO6, PO7

CO5	Understand and be aware of the functions and usage of Cloud based apps like Google Forms, Google Slides and Google Cloud Printing.	PO4, PO6, PO7
Reading List		
1.	Humphrey M.L., Excel For Beginners, Kindle Edition, 2017	
2.	Richard Rost, Learning MS Access Kindle Edition, 2013	
3.	Sachin Srivastava, Google Cloud Platform, Kindle Edition, 2021	
4.	Valarie Lestourgeon, A Beginner's Guide to GCP, Kindle Edition, 2021	
References Books		
1.	Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition.	
2.	Mehra, S. K. (2012) Business Etiquette A Guide For The Indian Professional. Noula: HarperCollins	
3.	Pachter, B. (2013). The Essentials of Business Etiquette: How to Greet, Eat, and Tweet Your Way to Success (1) edition New York: McGraw-Hill Education.	
4.	Past, K. (2008). Indian Business Etiquette: 1 (First edition). Ahmedabad Jaico Publishing House.	
5.	Travis, R. (2013). Tech Eliquette: OMG, 2 Edition, RLT Publishing.	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				3		3	3	
CO 2				3		3	3	
CO 3		3		3	3	3	3	
CO 4				3	3	3	3	
CO 5				3		3	3	

3-Strong 2-Medium 1-Low

SEMESTER III

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CT301	**Information Systems for Business**	Core	4	-	-	-	4	60	25	75	100

Course Objectives	
1	To enable students to understand the fundamentals of information system and its role of information in managerial decision making
2	To throw light on fundamentals of information systems like TPS, DSS, and EIS.
3	To manage system applications and data to best support functional areas of business
4	To provide insights in securely managing database and information using the process of
5	To elucidate the need and importance of ERP, its selection and implementation in workplace

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	Introduction to information system-The management, structure and activities- Information needs and sources-Types of management decisions and information need. System classification Elements of system, input, output, process and feedback.	11	C1
II	Transaction Processing information system, Office Automation System (OAS) - Knowledge workers System (KWS); MIS; Information system for managers, Intelligence information system –Decision support system-Executive information systems.	11	C2
III	Functional Management Information System: Production / Operations Information system, Marketing Information Systems, Accounting	12	C3

	Information system, Financial Information system, Human resource Information system.		
IV	System Analysis and Design: The work of a system analyst- SDLC-System design – AGILE Model – Waterfall Model – Spiral Model – Iterative and Incremental Model - RAD Model - Requirement analysis-Data flow diagram, relationship diagram, design- Implementation-Evaluation and maintenance of MIS, Database System: Overview of Database-Components-advantages and disadvantages of database; Data Warehousing and Data Mining; Business Intelligence; Artificial Intelligence; Expert System; Big Data; Cyber Safety and Security-Cryptography; RSA Model of Encryption; Data Science - Block Chain Technology; E-commerce and E-Business models; IOT - RFID.	14	C4
V	Enterprise Resource Planning (ERP) System, Benefits of the ERP, ERP how differentfrom conventional packages , Need for ERP , ERP components , Selection of ERP Package, ERP implementation, Customer Relationship management. Organisation & Types, Decision Making, Data & information, Characteristics & Classification of information, Cost & value of information, various channels of information and MIS; Information system audit and control – E-Governance.	12	C5
	Total	**60**	
Course Outcomes			
Course Outcomes	On completion of this course, students will;	**Program Outcomes**	
CO1	Learn the importance of data and information in managerial decision making.	PO1, PO2, PO6	
CO2	Possess on the various IS and the its relevance to Organizational environment	PO3, PO5, PO8,	

CO3	Understand the application of IS on the various functions like Accounting, Finance, Marketing, Operations and HR	PO1, PO3, PO5, PO8
CO4	To study the various models and new technologies	PO1, PO2, PO6, PO7
CO5	Be exposed on the importance of selecting the appropriate ERP and its implementation	PO1, PO2, PO5, PO8

Reading List	
1.	Information Systems for Business and Beyond – opentextbooks.site.
2.	Management Information Systems: Managing the Digital firm – www.textbooks.com
3.	Information systems Journal – Wiley Online Library.
4.	Information Systems management in Business and development organisations – Harekrishna Misra – PHI Learning.

References Books	
1.	Azam, M., Management Information System, McGrawHill Education, 2012
2.	Laudon, K., Laudon, J. and Dass, R., Management Information Systems – Managing the Digital Firm, 11th Edition, Pearson, 2010.
3.	Murdick, R.G., Ross, J.E. and Claggett, J.R., Information Systems for Modern Management, 3rd Edition, PHI, 2011.
4.	O'Brien, J.A., Morakas, G.M. and Behl, R., Management Information Systems, 9th Edition, Tata McGraw-Hill Education, 2009.
5.	Saunders, C.S. and Pearson, K.E., Managing and Using Information Systems, 3rd Edition, Wiley India Pvt. Ltd., 2009.
6.	Stair, R. and Reynolds, G., Information Systems, 10th Edition, Cengage Learning,2012.

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3	2				3		
CO 2			3		3			3
CO 3	2		3		2			3
CO 4	3	3				2	3	
CO 5	3	2			2			3

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1ED301	**Entrepreneurship Development**	Extra Disciplinary	3	-	-	-	3	45	25	75	100

Course Objectives	
1	To introduce students to entrepreneurship and its growth in India.
2	To impart knowledge on innovation, its types, role of technology in innovation, patents and licensing.
3	To orient the students on new venture creation
4	To enable students to prepare a feasible business plan
5	To give inputs on various types of financing available for new ventures.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	Introduction: The Entrepreneur – Definition – Characteristics of Successful entrepreneur. Entrepreneurial scene in India; MSME; Analysis of entrepreneurial growth in different communities – Case histories of successful entrepreneurs. Similarities and Distinguish between Entrepreneur and Intrapreneur.	10	C1
II	Innovation in Business: Types of Innovation – Creating and Identifying Opportunities for Innovation – Design Thinking- The Technological Innovation Process – Creating New Technological Innovation and Intrapreneurship – Licensing – Patent Rights – Innovation in Indian Firms	8	C2
III	New Venture Creation: Identifying Opportunities for New Venture Creation: Environment Scanning – Generation of New Ideas for Products and Services. Creating, Shaping, Recognition, Seizing and Screening of Opportunities. Feasibility Analysis: Technical	10	C3

	Feasibility of Products and Services – Marketing Feasibility: Marketing Methods – Pricing Policy and Distribution Channels		
IV	Business Plan Preparation: Benefits of a Business Plan – Elements of the Business Plan – Developing a Business Plan – Guidelines for preparing a Business Plan – Format and Presentation; Start-ups and e-commerce Start-ups. Business Model Canvas	7	C4
V	Financing the New Venture: Capital structure and working capital Management: Financial appraisal of new project, Role of Banks – Credit appraisal by banks. Institutional Finance to Small Industries – Incentives – Institutional Arrangement and Encouragement of Entrepreneurship.	10	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Be able to know about growth of entrepreneurship in India	PO4, PO7
CO2	Gain knowledge on innovation, its types, role of technology in innovation, patents and licensing	PO7, PO8
CO3	Obtain knowledge on new venture creation	PO6, PO7
CO4	Be able to prepare a business plan	PO7, PO8
CO5	Gian knowledge on various types of financing available for new ventures.	PO7, PO8

Reading List	
1.	http://www.jimssouthdelhi.com/sm/BBA6/ED.pdf
2.	https://www.cengage.com/highered
3.	https://roadmapresearch.com/entrepreneurship-beyond-curriculum
4.	The International Journal of Entrepreneurship and Innovation

References Books	
1.	Reddy, N., Entrepreneurship: Text and Cases, Cengage Learning, 2010.

2.	Roy, R., Entrepreneurship, 2nd Edition, Oxford University Press, 2011.
3.	Barringer, B., Entrepreneurship: Successfully Launching New Ventures, 3rd Edition, Pearson, 2011.
4.	Bessant, J., and Tidd, J., Innovation and Entrepreneurship, 2nd Edition, John Wiley & Sons, 2011.
5.	Desai, V., Small Scale Industries and Entrepreneurship, Himalaya Publishing House, 2011.
6.	Entrepreneurship: Successfully Launching New Ventures, Global Edition, 6th Edition Bruce R. Barringer, Texas A & amp; M University, R. Duane Ireland, ©2018 |Pearson

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				3			3	
CO 2							3	2
CO 3						2	3	
CO 4							3	2
CO 5							3	3

3-Strong 2-Medium 1-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1SS301	**Soft Skills III – Leadership & Team Building Skills**	Soft Skills	-	-	2	-	2	30	40	60	100

Course Objectives	
1	To understand the characteristics, style, traits of leaders, and theories of leadership.
2	To learn more about self-leadership and developing team-building skills through case studies and examples.
3	To understand how to form, manage and lead the team.
4	To understand the measures of conflict in a team
5	To explore team roles & processes in developing and managing a team

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**Leadership Theories:** Nature of leadership theories & models of leadership - attributes of effective leaders - traits of leadership - interpersonal competence & leadership	5	C1
II	**Leadership Styles:** Leadership qualities -styles of leadership -attitudes-role models & new leadership - cultural differences and diversity in leadership - leader behaviour leadership in different countries- leadership ethics & social responsibility.	7	C2
III	**Leadership Skills:** Leadership skills - Leadership & management - transactional & transformational in leadership -Strength based leadership in practice - Tasks & Relationship approach in leadership - influence tactics of leaders- motivation and coaching skills. Establishing constructive climate- listening to out group members- communication and conflict resolution skills.	7	C3
IV	**Team Work:** Working in group & teams - characteristics of effective team- types- team development: Tuckman's team development stages- Belbin team roles - Ginnett - team effectiveness leadership model.	5	C4
V	**Exploring team roles & processes:** mapping the stages of group development -Building: and developing teams- overcoming resistance coping and conflict and Ego- leading a team managing meetings.	6	C5
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Critical understanding of theories and concepts of leadership and teamwork in organizations	PO4, PO5, PO6, PO7

CO2	Critical awareness of the importance of teamwork and development of the skills for building effective teams	PO4, PO5, PO6, PO7
CO3	Understanding of the techniques and practical understanding of how to apply theories and concepts to improve leadership skills.	PO2, PO4, PO5, PO6, PO7
CO4	Development of skills in effective leadership and professional communication	PO4, PO5, PO6, PO7
CO5	Demonstrate effective written communication skills for plans, strategies and outcomes.	PO4, PO6, PO7
Reading List		
1.	Uday Kumar Haldar, Leadership and Team Building,	
2.	D.K. Tripathy, Team Building and Leadership with Texts and Cases, Himalaya Publishing House, 2014	
3.	International Journal on Leadership, Publishing India Group	
4.	International Journal of Organizational Leadership, CIKD	
References Books		
1.	Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition.	
2.	Mehra, S. K. (2012) Business Etiquette A Guide For The Indian Professional. Noula: HarperCollins	
3.	Pachter, B. (2013). The Essentials of Business Etiquette: How to Greet, Eat, and Tweet Your Way to Success (1) edition New York: McGraw-Hill Education.	
4.	Past, K. (2008). Indian Business Etiquette: 1 (First edition). Ahmedabad Jaico Publishing House.	
5.	Travis, R. (2013). Tech Eliquette: OMG, 2 Edition, RLT Publishing.	
6.	Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition.	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1				3		3		
CO 2	3			3		3		
CO 3		2		3		3		
CO 4				3	2	3	1	
CO 5			2	3		3		

3-Strong 2-Medium 1-Low

SEMESTER- III- PAPER CODE –23PE1CI301
INTERNSHIP– SUMMER INTERNSHIP

Internship

At the end of Second Semester each student shall undertake a Summer Internship for a period of 4 weeks. It is mandatory for the students to seek written approval from the Faculty Guide and the Head of the Department about the topic and the Organization before commencing the Internship. The Summer Internship must be carried out compulsorily in any Sports Organization or Sports Related Organizations only. It can be a Corporate Entity / NGO / SME / Government Undertaking / Cooperative Sector / Sports Academies. On Successful completion of the Summer Internship, the student shall submit a structured report based on work done during this period in a prescribed format provided. A report of the same should be submitted to the Department on or before the last working day of the third semester.

Viva-Voce Examination

The performance of the students for the Summer Internship will be evaluated for a total of 100 marks, by Internal Examiner only. The Viva-voce will be conducted by a panel consisting of the Faculty guide in the presence of the Head of the Department.

Students have to secure minimum 50% of marks to get a pass in the Summer Internship. Students who fail in the Summer Internship or who were absent for the Viva or who fail to submit the report before the due date will have to redo the Summer Internship during the subsequent year and attend the Viva-Voce during the subsequent academic year.

ELECTIVE COURSES : SPORTS MANAGEMENT

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE101	**SPORTS ORGANIZATION AND ADMINISTRATION**	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand the National and International level Sports Environment
C2	To know the Sports organization's origin, power, authority and responsibility.
C3	To explore the sport organizational environment.
C4	To analyse the relationship between technology and sport organization.
C5	To measure the strategic approaches by Olympic sports organizations.

UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Social Context for Modern Sports:** Need for New Structure in Sports Today. International Sports Environment: IOC and International Federations – National Sports Environment: National Olympic Committees – National Federations – Governmental and Quasi – Governmental Organizations – Sports Conflicts –Conflicts arising from Anti-Doping Tests.	8	C1
II	**Origin and Operations of Sports Organizations** Defining the Legal Status – Social Profile of the Sports Organization – Choosing a type of Organization: Environmental Indicators – Power and Authority – Delegation of Responsibilities – Organizational Charts – Sports Identity Vs Image – Establishing a Sports Identity.	10	C2

III	**Sports Organizations and their Environment:** The nature of the Organizational Environment – Research on Organizational Environments – Controlling Environmental Uncertainty: Other Perspectives on the Organizational Environment. Relationship between Organization's Environment and its Structure.	9	C3
IV	**Sports Organizations and Technology:** Technology – Research on technology and Organizations – Critiques of the Technology Imperatives – Micro-Electronic Technologies – Relationship Between technology and Organizational Structure.	8	C4
V	**Cases of Strategic Approaches by some Olympic Sports Organizations:** FIVB – FIH - IPC – WADA – ISC – ZOC – OCM – OS – Measuring the Performance of Olympic Sports Organizations.	10	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Gain knowledge about the National and International sports committee, federation taken by government.	PO1, PO2, PO4, PO8
CO2	Have better understanding on legal status, Environmental Indicators, Power and Authority, Delegation of Responsibilities in Sports organisation	PO1, PO2, PO5, PO7
CO3	Learn more knowledge about nature, Controlling Environmental Uncertainty, sports Organizational Environment, Relationship between Organizations's Environment and its Structure.	PO1, PO4, PO5, PO7
CO4	Develop sports organisations technology in current environment	PO6, PO7, PO8
CO5	Be able to understand the Performance of Olympic Sports Organizations.	PO3, PO7, PO8
References Books		

1.	Ruben Acosta Hernandez, Managing Sports Organizations, Human Kinetics.
2.	Trevor Slack, Milena M. Parent, Understanding Sports Organizations.
3.	Jean – Loup Chappelet and Emmanuel Bayle, Strategic and Performance Management of Olympic Sports Organization.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview
Application (K3)	Suggest idea/concept with examples, Solve problems, Observe, Explain,
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S		L				M
CO 2	S	M			M		L	
CO 3	L				S		S	
CO 4				S		M	S	S
CO 5			S				M	M

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE102	SPORTS MANAGEMENT – PRINCIPLES AND PRACTICES	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To know the nature, scope, future challenges and opportunities of sports management
C2	To analyse the sports manager's skills and abilities
C3	To measure the planning process in sports organisation
C4	To evaluate the budget allocation and control in sports organisation's clients
C5	To understand the need for sports management research.

UNIT	Details	No. of Hours	Course Objectives
I	**Managing Sports in the 21st Century:** Defining Sports and Sports Management – Nature and Scope of the Sports Industry – Unique Aspects of the Sports Management – Sports Management Competencies – Future Challenges and Opportunities for Sports Managers – Future of Sports Industry/Organizations.	8	C1
II	**The Sports Manager:** Basics of Sports Management – Managing in the Sports Environment – Managing People and Administrative Units – Management Functions in sports – Motivating Abilities: Fundamentals.	7	C2
III	**Planning in Sports Organizations:** Planning Process – preparing the Organization for Planning – Participatory Strategic Planning – Long Term Planning – Creating a Medium term National Plan.	9	C3

IV	**Controlling in Sports Organizations:** Fundamentals of Budgeting – Preparing Budget – Allocating Resources – Control as Measurement and as Accountability – Financing and Budgeting Operations – Result – Oriented Budgeting – Controlling Deviations – The Challenges in Sports Today – Rising to New Challenges – Serving the Sports Organization's Clients.	11	C4
V	**The Future of Sports Management:** Why Sports Managers need to understand Research – Commercial and Academic Researchers in Sports Management – Sports Management Research: Key Concepts – Research Process – Current Challenges in Sports Management Research – The Future of Sports Management Research.	10	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Have better knowledge about fundaments of sports management	PO1, PO2, PO3, PO4, PO5, PO7
CO2	Understand the sports manager motivational ability, skills and managing the environment.	PO1, PO2, PO3, PO4, PO5
CO3	Measure the planning process and strategic in sports organisation	PO2, PO5, PO6, PO8
CO4	Analyse the controlling measures in budget planning and allocation	PO1, PO2, PO6, PO7
CO5	Demonstrate the need of future aspects of sports management Research.	PO1, PO6, PO8

References Books	
1.	Jean – Loup Chappelet and Emmanuel Bayle, Strategic and Performance Management of Olympic Sports Organization.
2.	Ruben Acosta Hernandez, Managing Sports Organizations, Human Kinetics.

3.	Trevor Slack, Milena M. Parent, Understanding Sports Organizations.	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M	M	S		L	
CO 2	S	S	S	M	M			
CO 3		M			L	S		S
CO 4	L	S				S		L
CO 5	M					M		S

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE103	SPORTS MARKETING	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To explore the sports marketing, implementation programme and models
C2	To know the factors, role of research in sports consumer behaviour
C3	To identify the sports product, core, sale approach used in sports.
C4	To analyse the pricing strategies, advertising media for sports.
C5	To measure the Cross-Impacts among 5Ps of sports marketing

UNIT	Details	No. of Hours	Course Objectives
I	**Sports marketing**: Definition – Marketing Myopia in Sport – Uniqueness of Sports Marketing – Model of the Sports Industry – Implementation of Sports Marketing Programme	7	C1
II	**Perspectives in Sports Consumer Behavior**: Environmental Factors – Individual Factors – Decision Making for Sports Involvement – Role of Research in Sports Marketing: Types of Primary Market Research – Common Problems in Sports Marketing Research.	9	C2
III	**The Sports Product**: Its Core and Extensions – Key Issues in Sports Product Strategy – Managing Sports Brands: Benefits and Development of Brand Equity – Sales: Definition – Typical Sales Approaches Used in Sports – Selling Sports to the Community.	7	C3
IV	**Pricing Strategies**: The Basics of Pricing – Core Issues – Special Pricing Factors – Advertising Media for Sports – Promotional Concepts, Practices and Components – Sponsorship: Definition – Growth of	11	C4

	Sponsorship – Evaluating and Ensuring Sponsorship Effectiveness – Selling the Sponsorship – Ethical Issues.		
V	**Place/Product Distribution**: Placing Core Products and their Extensions – The Facility – Marketing Channels – The Product-Place Matrix – Electronic Media Landscape – Media Impact on Sport Public Relations – Integrating Sales, Promotion, Sponsorship, Media and Community Relations – Cross Impacts among the Five P's – the Legal Aspects of Sports Marketing.	11	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concepts of Uniqueness of Sports Marketing, Model of the Sports Industry, Implementation of Sports Marketing Programme	PO2, PO3, PO4, PO7
CO2	Have familiarize the marketing research in sports products	PO1, PO 2, PO5, PO6
CO3	Have better knowledge product, brand and sales activity in sports product	PO3, PO4, PO5, PO6,PO7, PO8
CO4	Learn pricing strategies, practices, sponsorship and effectiveness.	PO4, PO6, PO7, PO8
CO5	Think strategically marketing mix, media, promotion of sports products	PO1, PO2, PO3, PO4, PO5

References Books	
1.	Bernard J Mullin, Stephen Hardy, William A Sutton, Sport Marketing, Human Kinetics.
2	Larry Degaris, Sports Marketing A Practical Approach, Routledge Taylor & Francis Group.
3	Daniel J.Bruton, Sports Marketing: The view of Industry Experts, Jones & Bartlett Learning.
4	Mathew D. Shank and Mark R. Lyberger, Sports Marketing: A Strategic perspective, Routledge.

Methods of Evaluation		
	Continuous Internal Assessment Test	25 Marks

Internal Evaluation	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview	
Application (K3)	Suggest idea/concept with examples, Observe, Explain current situations	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1		S	S	M			L	
CO 2	S	L			S	M		
CO 3			M	L	S	S	M	M
CO 4				S		M	L	M
CO 5	S	S	M	S	M			

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE104	SPORTS FACILITY MANAGEMENT	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand the facility management in sports
C2	To know facility planning for existence and future, site selection, design and construction
C3	To measure ventilation, air, heating, interior and exterior system
C4	To facilitate the sales, financial, employment, risk management
C5	To extrapolate event preparation and management, crowd management.

UNIT	Details	No. of Hours	Course Objectives
I	**Facility Management**: Meaning – The Facility Manager – Constituents – Managerial Functions – Computer Aided Facility Management – Strategies – Leadership – Outsourcing.	7	C1
II	**Facility Planning**: Fundamentals – Planning for Existing and Future Facilities – Facility Site and Design: Site Location – site Cost – Site Selection – Facility Design and Construction – Construction Planning and Elements – Project cost – Completion and Analysis.	9	C2
III	**Facility Systems**: Heating, Ventilation and Air-Conditioning – Energy Systems – Interior and Exterior Systems – Space Management – Facility Repair Management: Maintenance and Repair Program – Basic Maintenance.	8	C3
IV	**Facility Marketing:**	10	C4

	Sales – Financial Concepts – Revenue and Expenses – Budgeting – New Facility Financing – Selling of a Facility – Sports Facility Jobs – Employment Management – Training – Risk Management and Insurance.		
V	**Facility Preparation**: Attracting Events – Event Preparation Implementing a Security Plan: Crowd Management – Crisis Management – Event Management in the Facility: Marketing Efforts and Costs – Marketing for the Future.	11	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Gather more knowledge about facility management, role of facility manager, managerial functions	PO1, PO2, PO4, PO6, PO7
CO2	Understand facility planning, design and site	PO1, PO2, PO4, PO8
CO3	Measure Heating, Ventilation and Air-Conditioning, Energy Systems, Interior and Exterior Systems, Space Management	PO1, PO3, PO5, PO7
CO4	Analyse Sales, Financial Concepts, Revenue and Expenses, Budgeting, New Facility Financing, Selling of a Facility	PO2, PO4, PO7, PO8
CO5	Demonstrate the Event Management in the Facility: Marketing Efforts and Costs, Marketing for the Future.	PO1, PO2, PO3, PO4, PO5, PO7

References Books	
1.	Gil Fried, Managing Sports Facilities, Human Kinetics.
2	Eric C. Schwarz, Stacey A. Hall and Simon Shibli, Sports Facility Management: A Global Perspective, Routledge.
3	Thomas J. Aicher, Amanda L.Paule-Koba and Brianna L. Newland, Sports Facility and Even Management, Jones & Bartlett Learning.

4	Eric C. Schwarz, Hans Westerbeek, Dongfeng Liu, Paul Emery and Paul Turnar, Management Sports Facility and major Event, Routledge	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S		L		M	S	
CO 2	S	M		M				M
CO 3	M			S	S		M	
CO 4		L		S			L	S
CO 5	M	M	S	M	S		L	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE105	SPORTS PSYCHOLOGY AND SOCIOLOGY	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To know the sports psychology developments, Factors Affecting Sports Learning and Performance
C2	To learn motor learning levels, tension, stress, anxiety, motivation
C3	To gathered sports sociology of the individual, cultural
C4	To evaluate Sports and Politics, Sports and Religion, Sports and Social Stratification
C5	To measure social institutions, Sports Women in Our Society, Participation Pattern among Women.

UNIT	Details	No. of Hours	Course Objectives
I	**Sports Psychology:** Meaning and Definition of Sports Psychology – The Need and Importance of Sports Psychology in Physical Education and Sports – General Factors Affecting Sports Learning and Performance – Development of Sports Psychology – Motivation of Children and Youth in Sports – Perception – Reaction Time – Movement Time – Reflex Time – Response Time.	11	C1
II	**Motor Learning:** Tension – Frustration – Depression – Stress – Anxiety – Motivation – Factors influencing Motivation – Achievement Motivation – Ways and Means of Motivation – Personality – Meaning – Traits of Sportsmen – Effect of Sports Participation on Personality.	10	C2
III	**Sports Sociology:** Meaning and Definition of Sports Sociology – Sports and Socialization of the Individual –	7	C3

	Culture – Definition and Culture – Functions of Culture and Sports.		
IV	**Social Institutions:** Sports as a Social Institutions – Sports and its Relationship with Social Institutions – Growth of Commercial Sport – Sports and Politics – Sports and Religion – Sports and Social Stratification – Sports Participation and Career Success – Athletic Retirement and Social Mobility.	10	C4
V	**Women in Sports:** Sports Women in Our Society – Participation Pattern among Women – Gender Inequalities – Consequence of Sports Competition – Evaluation Processes.	7	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the Sports Psychology, Need and Importance of Sports Psychology in Physical Education and Sports	PO1, PO2, PO3, PO5, PO6, PO8
CO2	Have get the tension, frustration, depression, stress anxiety, Motivation, Factors influencing Motivation, achievement of Motivation	PO2, PO5, PO6, PO7
CO3	Have better Sports Sociology, Sports and Socialization of the Individual, Culture, Functions of Culture	PO1, PO3, PO4, PO5, PO6, PO7
CO4	Learn Sports as a Social Institutions, sports and its Relationship with Social Institutions, growth of Commercial Sport, Sports and Politics, Sports and Religion.	PO3, PO6, PO7
CO5	Think strategically Gender Inequalities, Consequence of Sports Competition, Evaluation Processes.	PO1, PO2,PO4, PO5, PO8

References Books	
1.	John D. Lauther, "Sports Psychology", Englewood, Prentice Hall Inc.
2.	Robert N, Singer, "Motor Learning and Human Performance", New York: The Macmillan Co.

3.	Microslaw Vauks and Bryant Cratty, "Psychology and the Superior Athlete", London, The Macmillan Co.
4.	Robert N. Singer, "The Psychology Domain Movement Behavior" Philadelphia – Lea and Febiger
5.	John D Lauther, "Psychology of Coaching", Englewood Cliffs, New Jersey Prentice Hall Inc 1983.
6.	H.I.A. Whiting K. Karman, L.B. Hendry and M.G. Jones, "Personality and Performance in Physical Education and Sports", Hendry Kimpton Publishers, London.
7.	Cratty B.J., "Social Dimensions of Physical Activity", New Jersey: Prentice Hall Inc.

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview
Application (K3)	Suggest idea/concept with examples, Observe, Explain current situations
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M		M
CO 2		S			S	M	S	
CO 3	M		S	S	L	S	L	
CO 4			S			L	M	
CO 5	L	M		M	M			S

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE106	SPORTS TOURISM	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand sports tourism scheme, infra and participants.
C2	To know Active and passive Sports in the Holiday, Tourism Development
C3	To explore Sports Activity Holidays, Major Sports Facilities and Events as an attraction for visitors
C4	To analyse Environmental Impact of Sport Tourism and health Impact of Sport Tourism
C5	To measure the Present Status and Future Prospects, policies

UNIT	Details	No. of Hours	Course Objectives
I	**Sports and Tourism:** The Nature of Sport, Tourism and Sports Tourism - Classification Scheme for Sports Tourism - The Infrastructure of Sports, Tourism and Sports Tourism - The Characteristics of Participants.	8	C1
II	**Sports in the Development of Tourism:** The influence of increased Sports Participation and Sports Tourism - Active and Passive Sports in the Holiday - active and Passive Sports during Non-holiday time - Tourism in the Development of Sports: Sports development based on available Tourism Resources and as a result of visiting Tourist Resources - Major Events used to stimulate Sports Development	9	C2
III	**The Economic Impact of Sport Tourism**: Sports and Tourism as Economic Activities -	10	C3

	Sports Activity Holidays - Major Sports Facilities and Events as an attraction for visitors - The Socio-cultural impact of Sport Tourism: Conceptual Background to Socio-cultural Impacts - Positive Impacts and Negative Impacts - Violence in and Surrounding Sport and Tourism.		
IV	**The Environmental Impact of Sport Tourism:** Concern for the Natural Environment - Increasing Participation in Outdoor Sports - Damage to the Natural Environment caused by Tourism - Impact of Holiday Resorts and Sports Tourism Activities on the Natural Environment - Impact of Sports Tourism on Urban Environments - The Health Impact of Sport Tourism: Health Implications of Sports Tourism Activities - Sports Tourism for People with Disabilities.	11	C4
V	**Present Status and Future Prospects:** Administrative and Policy Issues- Sports Tourism Administrative Infrastructures in various Countries and its Implications on Sports Tourism Policy - Sport Tourism in the Twenty-First Century - Future Trends.	7	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand sports tourism scheme, infrastructure and participants.	PO1, PO2, PO4, PO7, PO8
CO2	Have better knowledge Active and passive Sports in the Holiday, Tourism Development,	PO 2, PO5, PO6, PO7

	Major Events used to stimulate Sports Development	
CO3	Extrapolate Sports Activity Holidays, Major Sports Facilities and Events as an attraction for visitors	PO1, PO3, PO5, PO8
CO4	Understand the Environmental Impact of Sport Tourism and health Impact of Sport Tourism, Sports Tourism for People with Disabilities.	PO3, PO5, PO7, PO8
CO5	Know the Present Status and Future Prospects, policies, Twenty-First Century - Future Trends.	PO3,PO6, PO7, PO8
References Books		
1.	Joy Standeven and Paul de Knop, ***Sport Tourism,*** Human Kinetics	
2.	Mike Weed and Chris Bull, ***Sports Tourism: Participants, Policy and Providers,*** ELSEVIER	
3.	Mike Weed, ***Sport and Tourism: A Reader***, Routledge	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview	
Application (K3)	Suggest idea/concept with examples, Solve problems, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1	S	S		L			S	M
CO 2		M			M	S	L	
CO 3	S		M		S			S
CO 4			S		M		S	S
CO 5			S			L	M	M

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE107	ADVERTISING IN SPORTS	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To explore Social, Economic and Legal Implications of advertisements, Objectives of Advertising in Sports.
C2	To know Integrated Marketing Communication in Sports, Communication, media plan
C3	To identify Advertiser, Advertising Agency and World of Media, Duties and responsibilities of a Brand manager
C4	To evaluate brand endorsed, Impact of Celebrities, Role of Public Relations in promoting sporting events.
C5	To measure the details of Sponsorship Agreement in National and International sports bodies.

UNIT	Details	No. of Hours	Course Objectives
I	**INTRODUCTION TO ADVERTISING** Concept and definition of advertisement – Social, Economic and Legal Implications of advertisements – Objectives of Advertising in Sports.	6	C1
II	**IMC IN SPORTS** Concepts of Integrated Marketing Communication in Sports, Elements of Integrated Marketing Communication- Media plan – Type and choice criteria – Reach and frequency of advertisements – Cost of advertisements – Media strategy and scheduling.	9	C2

III	**BUSINESS OF ADVERTISING:** Advertiser- Advertising Agency and World of Media -Brand Manager- Duties and responsibilities of a Brand manager - Message development – Different types of advertisements – Layout – Design appeal – Copy structure – Advertisement production - Media Research – Testing validity and Reliability of ads – Measuring impact of advertisements	12	C3
IV	**SPORTS PERSONALITIES AS BRAND ENDORSER:** Celebrities - Reputed sports persons -brand endorsed – Impact of Celebrities - Role of Public Relations in promoting sporting events.	6	C4
V	**SPONSORSHIP IN SPORTS:** Meaning and Objectives of Sponsorship, Advertising and Sponsorship, Developing Sponsorship proposal- Details of Sponsorship Agreement in National and International sports bodies.	12	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concepts of Social, Economic and Legal Implications of advertisements, Objectives of Advertising in Sports.	PO1, PO2, PO3, PO5, PO7
CO2	Have familiarize the Integrated Marketing Communication in Sports, Communication, media plan, Media strategy and scheduling.	PO1, PO2, PO4, PO6
CO3	Have better Advertiser, Advertising Agency and World of Media, Duties and responsibilities of a Brand manager.	PO3, PO5, PO6,PO7, PO8
CO4	Learn brand endorsed, Impact of Celebrities, Role of Public Relations in promoting sporting events.	PO2, PO5, PO6, PO7, PO8
CO5	Think strategically Developing Sponsorship proposal, Details of Sponsorship Agreement in National and International sports bodies.	PO1, PO2, PO3, PO8

References Books		
1.	S. H. H. Kazmi and Satish K Batra, Advertising & Sales Promotion, Excel Books, New Delhi, 2001.	
2.	George E Belch and Michel A Belch, Advertising & Promotion, McGraw Hill, Singapore, 1998.	
3.	Julian Cummings, Sales Promotion, Kogan Page, London 1998.	
4.	E.Betch and Michael, Advertising and Promotion, McGraw Hill, 2003.	
5.	Jaishri Jefhwaney, Advertising Management, Oxford, 2008.	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, short summary or overview	
Application (K3)	Suggest idea/concept with examples, Observe, Explain current situations	
Analyze (K4)	Problem-solving questions, finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		M		L	
CO 2	S	L		S		M		
CO 3			M		S	S	M	S
CO 4		M		S	S		L	M
CO 5	S	S	M					L

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE108	SPORTS MEDIA MANAGEMENT	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand Impact of Sports Media, future needs of media.
C2	To know Sport Communication, Careers in Sport Related Field, sports Publishing, Popular Sports Channels Operating in India.
C3	To comprehensive study on different sports channels
C4	To ascertain the Value of Sports, Essential Qualification of Sports Writer, Presenter
C5	To extrapolate Role of Sports media career.

UNIT	Details	No. of Hours	Course Objectives
I	**SPORTS MEDIA-** Definition of Media - Introduction to different Sports Media – Impact of Sports Media – future of media.	6	C1
II	**SPORTS CHANNELS:** Introduction to Sport Communication - Careers in Sport Related Fields - Sport Publishing- Electronic-New Media. -Popular Sports Channels Operating in India.	7	C2
III	**COMPREHENSIVE STUDY ON DIFFERENT SPORTS CHANNELS:** Profile - Top Management- Functional Departments - Work Culture- Career Opportunities- Telecast rights for major Sporting Events- Program Mix- Advertising Opportunities.	12	C3
IV	**SPORTS JOURNALISM:** Introduction- Scope- News - Value of Sports-	10	C4

	Essential Qualification of Sports Writer - Presenter.		
V	**SPORTS MEDIA CAREER:** Careers in sports communication- Sports multimedia reporter - Sports broadcast producer/director - Sports team communication manager.	10	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the Impact of Sports Media, future needs of media.	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Know the Sport Communication process, Careers in Sport Related Field, sports Publishing, Popular Sports Channels Operating in India.	PO4,PO6, PO8
CO3	Have Knowledge about Work Culture, Career Opportunities, Telecast rights for major Sporting Events, Program Mix- Advertising Opportunities	PO2,PO3,PO5, PO7
CO4	Ascertain when the Value of Sports, Essential Qualification of Sports Writer,Presenter	PO4,PO6, PO7, PO8
CO5	Demonstrate the sports media career	PO1,PO2,PO3,PO4, PO5, PO7

References Books	
1.	Hall, Nichols, Moynahan, and Taylor (2007). Media Relations in Sport – 2 nd Ed. Morgantown, WV: Fitness Information Technology.
2.	Managing Sporting Events – Jerry Solomon (Human kinetics)
3.	Sports Journalism – Philip Andrews (Sage Publication)

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks

	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE109	SPORTS EVENT MANAGEMENT	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand elements and concepts of event management
C2	To ascertain the conceptualization event, objectives, content of event planning
C3	To know location, site, visual- audio pre-event operation
C4	To assess risk, safety and event evaluation
C5	To extrapolate event Management, designing an Event 5C's, and Event Promotion.

UNIT	Details	No. of Hours	Course Objectives
I	**EVENT MANAGEMENT:** Meaning of Events, Event Management, Designing an Event- 5C's (Conceptualisation, Costing, Canvassing, Customisation, Carrying out). Key Elements of Events-Event Infrastructure– Types of events – Meetings, Incentives Conferences, Events (MICE).	7	C1
II	**EVENT PLANNING:** Conceptualizing the event – Host, sponsor, Media, Guest, Participants, Spectators – Crew –Design of concept- Theme and content development - Visualization -Event objectives –Initial planning – Budgeting – Event design and budget checklist – Preparation of functional sheets – Timing – Contracts and Agreements – Insurance, Regulation, Licence and Permits –Negotiation.	10	C2
III	**PRE - EVENT OPERATION:** Site Selection – Types of location – Venue Requirements – Room, Stage, Audi-Visual, Lighting, Performers, Decors, Caterer, Photography & Videography – Protocols	10	C3

	– Guest list -Guest demographics – Children at event – Invitation – Media – Freelance Event Operation –Booking Systems – Computer Booking Systems, Manual Booking Systems – Staffing - Internal Marketing.		
IV	**SAFETY & EVENT EVALUATION:** Risk assessment – Safety officer, Medical Manager – Venue, Structural safety – Food safety - Occupational safety – Fire Prevention – Sanitary facilities – Vehicle traffic – Waste Management. Event Impact – Event Evaluation Process – Service Quality – Customer Satisfaction.	9	C4
V	**POST- EVENT OPEARTION:** Event Recording and Editing - Report and Account Settlement – Conduct Internal Debriefs –Preview billing and receipts – invoices , book keeping – Finance and Data Integration – Write post event report – Feedback and Survey – Event Follow-up Engagement.	9	C5
	Total	**45**	
Course Outcomes			
Course Outcomes	On completion of this course, students will	**Program Outcomes**	
CO1	Understand the objectives, types and concepts of event management	PO1,PO2,PO3,PO5, PO6,PO7	
CO2	Know the view, visual, budgeting of event planning	PO4,PO6, PO8	
CO3	Have Knowledge about room arrangement, guest list, booking system of pre- event operation	PO2,PO3,PO5, PO7	
CO4	Ascertain safety facilities of event management.	PO4,PO6, PO7, PO8	
CO5	Demonstrate the event Management, designing an Event 5C's, Role of Mass Media in Event Promotion	PO1,PO2,PO3,PO4, PO5, PO7	
References Books			
1.	Hall, Nichols, Moynahan, and Taylor (2007). Media Relations in Sport – 2 nd Ed. Morgantown, WV: Fitness Information Technology.		

2.	Managing Sporting Events – Jerry Solomon (Human kinetics)	
3.	Sports Journalism – Philip Andrews (Sage Publication)	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE110	SPORTSMANSHIP AND ETHICS	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand the concept of Sportsmanship and its importance.
C2	To Learned about ethics in sports and the code of ethics of different stakeholders.
C3	Comprehensive study on Gamesmanship, Fairness and Integrity.
C4	To gain an understanding about various types of ethical issues faced in the realm of sports.
C5	To Learned about the Code of Ethics of Different national and international sporting organization.

UNIT	Details	No. of Hours	Course Objectives
I	**Sportsmanship-** Fundamental of Sportsmanship; 6 pillars of Sportsmanship- Respect, Responsibility; fairness; caring; good citizenship and Trustworthiness; Importance of Sportsmanship; Sportsmanship as an ethical value.	9	C1
II	**Ethics in Sports-** Role of Ethics in Sports**;** Morality and ethical issues pertaining to sport; concept of personal and professional ethics; ethical decision-making in sport; Code of Sports ethics for students, Code of Sports ethics for Coaches; Code of Sports ethics for Athlete; Code of Sports ethics for Administrators; Responsibilities of Players and Coaches on and Off the Pitch.	10	C2
III	**Gamesmanship, Fairness and Integrity-** Gamesmanship and the moral ideal of fair play; Sports behavior and sportsmanship in Athletic program and venues; Cheating and strategic fouling; Bribery; Match Fixing; Gambling in Sports and Society; violence in Sports; Fan-behavior; gender equity in sport; Sportsmanship vs Gamesmanship.	10	C3
IV	**Ethical Issues-** Ethical and moral issues that exist in the sports management profession; Diversity	10	C4

	and Discrimination in sports; Sexual Harassment in Sports; The Ethics of Drug use and testing; Equity in Sports; Ethical Consideration in Sports Media; Ethical issues involving Coaches; Ethical Issues involving Parents and Fans.		
V	**National Sports Ethics**:Commission Bill 2016; The IOC Code of Ethics; FIFA Code of Ethics, ICC Code of Conduct; WADA Code of Ethics.	6	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concept of Sportsmanship and its importance.	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Learned about ethics in sports and the code of ethics of different types of stakeholders.	PO4,PO6, PO8
CO3	Have Knowledge about the concept of Gamesmanship, Fairness and Integrity.	PO2,PO3,PO5, PO7
CO4	Learned about various types of ethical issues faced in the realm of sports.	PO4,PO6, PO7, PO8
CO5	Learned about the Code of Ethics of Different national and international sporting organization.	PO1,PO2,PO3,PO4, PO5, PO7

References Books	
1.	Ethics in Sports by William J Morgan.
2.	Fair Play: The Ethics in Sports by Robert L Simon
3.	Sportsmanship: Multidisciplinary Perspectives by Tim Delaney
4.	Sportsmanship by Nick Hunter

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks

	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application(K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE111	**SPORTS POLICY AND GOVERNANCE**	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand the importance, objectives, challenges and impacts of sports policy.
C2	To know the Existing Sports Policy and Sports Good Governance Code in India.
C3	To understands the basics of sports governance in different level of organization.
C4	Explain how key principles of good governance and policy such as transparency, accountability, Democratic process and social responsibility can be applied in the context of the sport movement.
C5	Critically assess current theoretical tools on the need for, and recent efforts towards, establishing and benchmarking nationally and internationally applicable regulatory standards and legal frameworks in sport governance.

UNIT	Details	No. of Hours	Course Objectives
I	**Sports policy** - Introduction to Sports Policy; Understand the importance of policy in sports organizations; Objectives of Sports policy; Strategic management and sport policy development; Impact of sports policy in community development. Challenges of Policy Implementation and Sports Development in India.	8	C1
II	**National Sports Policy and Good Governance Code in India** – The National Sports Policy 1984, The National Sports Policy 2001; National Sports Development Code of India, 2011; National Code for Good Governance in sports, 2017 (Draft).	10	C2
III	**Sports Governance Basics**- Introduction to Sports Governance; Identifying the three levels of sports governance (local, national, international); Understanding the five R's of governance (regulations, rules, rankings, records, results); Importance of planning process in sport governance organizations; Issues and challenges in international sport governance.	9	C3

IV	Measuring the Principles of Transparency, Accountability, Solidarity, Democratic process, and Social Responsibility in sporting organizations; Ethics in sport policy and governance; Olympic ideals in international sport policy and governance; Sports Governance Structures in India..	8	C4
V	**Benchmarking Good Governance tool**- 'Basic Indicators for Better Governance in International Sport' (BIBGIS) by Chappelet and Mrkonjic; Sports Governance Observer' by AGGIS group; Future directions and strategy for the development of sports in India.	10	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the importance, objectives, challenges and impacts of sports policy.	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Be aware of the Existing Sports Policy and Sports Good Governance Code in India.	PO4,PO6, PO8
CO3	Have knowledge about the basics of sports governance in different level of organization.	PO2,PO3,PO5, PO7
CO4	Know about the Principles of Measuring Good Governance.	PO4,PO6, PO7, PO8
CO5	Learned about the different types of tools available for benchmarking Good Governance in National and International level.	PO1,PO2,PO3,PO4, PO5, PO7

References Books	
1.	Sports Policy and Governance by Neil King
2.	Sports and International Politics by P Arnaud and J Riordan
3.	Governance and policy in sports organizations by Hums, M. A. & MacLean, J. C

Methods of Evaluation		
	Continuous Internal Assessment Test	25 Marks

Internal Evaluation	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE112	**SPORTS FINANCE**	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	Recognize and discuss current financial issues in Sport.
C2	Compare financial statements to identify a sports business' strengths and weaknesses
C3	Describe business structure options, requirements and financial implications as they pertain to sports business organizations and enterprises
C4	Identify financial management techniques unique to professional and collegiate sports; Evaluate the capital budgeting process in a sports enterprise.
C5	Understand Revenue Sharing, Financial Implication and the terminology of Franchisee in sports

UNIT	Details	No. of Hours	Course Objectives
I	**The Basics of Sport Finance-** Financial Issues in Sport; Basic Financial Concepts; Identifying the role of accounting and financial data in sport decision making; Determining financial objectives of a sport organization; Evaluating internal and external sports finance constraints; Business Structure utilized in Sports- sole proprietorships, partnerships, corporations, limited liability corporations and limited liability partnerships.	10	C1
II	**Principles of Financial Analysis-** Financial Statements, Forecasts, components of the balance sheet, income sheet and cash flow statements; Assessing an organizations liquidity, activity, leverage, profitability and inventory through ratio analysis; Analyzing risk and return of financial assets.	9	C2
III	**Capital Structuring-** Identifying sources and strategies to obtain capital (personal funds, private financing and leverage) for different types of sport businesses; Capital Stocks; Bonds	8	C3
IV	**Financial Management-** Managing production and inventory of seasonal sport venues; Establishing	10	C4

	income generating strategies for a losing team; Calculating the value of a sport business; Capital Budgeting; Short-term Financial Management; Inventory and Production Management.		
V	**Professional Sports-** Evaluating escalating salaries and salary caps; Understanding revenue sharing and league financial implications; Managing government interaction in professional sport; Valuing franchises/teams; Understanding publicly owned and privately owned sports franchises; Projecting future profitability of franchises.	8	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Articulate the basic principles of sports finance.	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Be able to discuss the principles of financial analysis in the sports industry	PO4,PO6, PO8
CO3	Understand the capital structuring as it relates to sports finance.	PO2,PO3,PO5, PO7
CO4	Learned about the Financial Management in Sports Enterprise	PO4,PO6, PO7, PO8
CO5	Understand Revenue Sharing, Financial Implication and the terminology of Franchisee in sports.	PO1,PO2,PO3,PO4, PO5, PO7

References Books	
1.	Sports Finance by Fried G.H
2.	Managing Sports Finance by Robert Wilson
3.	Sports Funding and Finance by Bob Stewart

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	

External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE113	SPORTS HUMAN RESOURCE MANAGEMENT	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand the significance of Human Resource Management in Sports.
C2	Comprehensive study on the Individual Difference in Human Resource, Values, Personality etc.
C3	Discuss about the Human Resource Practices in Sports Organization
C4	To learned about Staffing and career consideration in Sports
C5	Study about the employee's satisfaction and Attitudinal outcome in sports organization.

UNIT	Details	No. of Hours	Course Objectives
I	**Human Resources Management in Sport and Recreation-** Significance of Human Resources in sports; Sport and Recreation Services; A Model of Human Resource Management; volunteers and Volunteerism; Role of the Sport or Recreation Manager; Customer Participation in Sport and Recreation Services; Customer as Input, Throughput, and Output.	9	C1
II	**Individual Differences in Human Resources-** Abilities- Issues in the Study of Ability; Cognitive Abilities; Emotional Intelligence. Personality- Determinants of Personality; Type Theories; Trait Theories; Personality and Organizational Behavior. Values- Values, Beliefs, Attitudes, and Norms; Sources of Values; Terminal and Instrumental Values; Hierarchy of Values. Motivation- A Model of Motivation; Other Theories of Motivation; Motivation as Personal Investment.	10	C2
III	**Human Resource Practices in Sports Organisation-** Organizational Justice, Distributive Justice, Procedural Justice, Interactional Justice. Job Design- Job Design Strategies, Task Attributes, Motivational Properties of Tasks, Implementing Task	8	C3

	Attributes, Task Attributes and, Individual Differences, Other Approaches to Job Design		
IV	**Staffing and Career Considerations in Sports**- Purposes of Staffing, Focus of Staffing, Mentoring. Multidimensional Model of Leadership, Transformational, Transactional, Servant, and Authentic Leadership. Performance Appraisal- Purposes of Performance Appraisal. Types of Rewards in Sports Organizations.	10	C4
V	**Attitudinal Outcomes**- Satisfaction- Theories of Job Satisfaction, Satisfaction with Volunteer Work, Participant Satisfaction, Measurement of Satisfaction. Commitment- Multidimensionality of Organizational Commitment, Occupational Commitment.	8	C5
	Total	**45**	
Course Outcomes			
Course Outcomes	On completion of this course, students will	**Program Outcomes**	
CO1	Understand the significance of Human Resource Management in Sports.	PO1, PO2, PO3, PO5, PO6, PO7	
CO2	Learned about the Individual Difference in Human Resource, Values, Personality etc.	PO4, PO6, PO8	
CO3	Be able to gain understanding about the Human Resource Practices in Sports Organization	PO2, PO3, PO5, PO7	
CO4	Learned about Staffing and career consideration in Sports	PO4, PO6, PO7, PO8	
CO5	Determine the employee's satisfaction and Attitudinal outcome in sports organization.	PO1, PO2, PO3, PO4, PO5, PO7	
References Books			
1.	Human Resource Management in Sports and Recreation by Packianathan Chelladurai.		
2.	Managing People in Sports Organizations- A Strategic Human Resource Management Perspective by Tracy Taylor, Alison Doherty, Peter McGraw		
Methods of Evaluation			
	Continuous Internal Assessment Test	25 Marks	

Internal Evaluation	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE114	**Sports Logistics and Supply Chain Management**	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To Understand the fundamental concepts and theories of logistics and supply chain management in the sports industry.
C2	To Analyse sports supply chain networks and design efficient logistics operations and to Utilize event logistics planning and execution strategies for sports competitions and events.
C3	To understand the inventory management techniques to optimize stock levels and ensure timely availability of sports equipment and merchandise.
C4	To Evaluate transportation modes and routes for efficient sports logistics operations and to Develop skills in distribution management specific to sports organizations.
C5	To Develop skills in warehousing management and to Incorporate sustainability practices into sports supply chain operations.

UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Introduction to Sports Logistics and Supply Chain Management** Definition and Importance sports logistics and supply chain management- Key components and functions of sports supply chains- Scope of sports logistics and supply chain management- Evolution of supply chain management. Trends and Challenges in Sports Logistics and Supply Chain Management.	8	C1
II	**Supply Chain Network Design and Strategy for Sports Organizations** Reviewing supply chain Network design in the sports industry: Key performance indicators (KPIs) for sports supply chains. Performance measurement techniques and tools. Evaluating the efficiency and effectiveness of sports supply chains. Risk management in sports supply chains: Identifying and assessing risks in sports supply chains. Developing risk mitigation strategies and contingency plans. Network Design in an Uncertain Environment. Understanding Supply Chain	10	C2

	Strategy in Sports: Importance of supply chain strategy. Differentiating supply chain strategy from overall organizational strategy. Aligning supply chain strategy with the goals and objectives of sports organizations.		
III	**Planning and Managing Inventories in a Supply Chain:** Introduction to Inventory Management: Importance of inventory management in supply chain. Role of inventory in balancing supply and demand. Inventory Planning and Forecasting: Aggregate Planning Sales and operations planning (S&OP), Demand forecasting- Forecasting methods and techniques in the sports industry. Inventory control techniques for sports equipment and merchandise - Just-in-time (JIT) and lean principles in sports inventory management. Emerging Trends and Technologies in Inventory Management.	11	C3
IV	**Transportation and Distribution Management in Sports** Importance of transportation management in supply chain operations. Transportation Modes, Selection and their characteristics- Transportation Planning and Routing. Scheduling for sports deliveries, and freight consolidation, Last-Mile Delivery and Customer Service.	7	C4
V	**Warehouse and Sustainability in Sports Supply Chain Management** Warehouse layout and design for sports organizations- Importance of warehouse management in supply chain. Role of warehouses in the overall logistics process. Challenges of warehouse management. Sustainable Warehouse Practices: Concept of sustainability in warehouse management. Incorporating sustainability considerations in packaging, material handling, and transportation. Environmental and social sustainability in supply chains. Green logistics and reverse logistics, Ethical considerations in supply chain operations.	9	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the fundamental concepts and theories of logistics and supply chain management in the sports industry.	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Understand the sports supply chain networks and design efficient logistics operations and also understand how to execution strategies for sports competitions and events.	PO4,PO6, PO8
CO3	Understand the inventory management techniques	PO2,PO3,PO5, PO7
CO4	It will understand the transportation modes Develop skills in distribution management specific to sports organizations.	PO4,PO6, PO7, PO8
CO5	Develop skills in warehousing management and Incorporate sustainability practices into sports supply chain operations.	PO1,PO2,PO3,PO4, PO5, PO7
References Books		
1.	Sports Logistics and Supply Chain Management" by Joshua Paul and David Bell (Publisher: Routledge)	
2.	Global Logistics and Supply Chain Management in Sports" by John Mangan, Chandra Lalwani, and Tim Butcher (Publisher: Kogan Page)	
3.	Sports Supply Chain Management" by Mark Durliat (Publisher: Taylor & Francis)	
4	Supply Chain Management in the Sport Industry" by James C. Burt and Daniel C. Funk (Publisher: Fitness Information Technology	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	

External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE115	**Schemes For Sports Development**	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand the concepts, principles, and theories of sports development in the context of sports management.
C2	To explore different Government Initiatives schemes and programs aimed at promoting sports development.
C3	To equip students with the knowledge and skills necessary to identify funding opportunities, develop effective fundraising strategies, and manage financial resources in the context of sports development.
C4	To understanding the detail on Infrastructure Development Schemes in Sports.
C5	To understands the significant, role and key principle and model of Talent Identification and Development Schemes.

UNIT	**Details**	**No. of Hours**	**Course Objectives**
I	**Introduction to Sports Development** Definition, scope and importance of sports development- Historical overview and evolution of sports development: Objectives and benefits of sports development- Importance of sports development in society- Key principles of sports development. Outcomes of sports schemes.	8	C1
II	**Government Initiatives for Sports Development Schemes** Schemes for Development- National-level sports schemes and policies- State-level sports development programs: Objective, and Significance of sports development schemes - Implementation and Evaluation of sports development schemes. Overview of different types of sports development schemes in India**.**	9	C2
III	**Funding Strategies and Resource for Sports Development** Government grants and funding schemes for sports development- Corporate sponsorships and private investments in sports. Fundraising strategies for	8	C3

	sports initiatives- Practical aspects of implementing sports development schemes. Fundraising and crowdfunding for sports initiatives- Community-based sports initiatives. School sports and educational institutions in grassroots development.		
IV	**Infrastructure Development Schemes in Sports** Introduction to Infrastructure Development in Sports- Importance and significance of sports infrastructure- Overview of infrastructure development schemes. Sports Infrastructure Planning and Needs Assessment- Conducting needs assessments for sports facilities. Identifying facility requirements for different sports- Maintenance and management of sports infrastructure.	9	C4
V	**Talent Identification and Development Schemes** Introduction to Talent Identification and Development- Definition and significance of talent identification and development. Role of talent identification and development in athlete progression. Key principles and models of talent identification- Talent Identification Frameworks and Models- Long-term athlete development models. Talent identification in specific sports disciplines. Gender-specific considerations in talent identification and development Schemes.	11	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the concepts, principles, and theories of sports development in the context of sports management.	PO1, PO2, PO3, PO5, PO6, PO7
CO2	Understand the different Government Initiatives schemes and programs for promoting sports development	PO4, PO6, PO8
CO3	Understanding of funding strategies and available resources for sports development initiatives. It explores various funding models, sources of funding, and financial management practices specific to sports development programs.	PO2, PO3, PO5, PO7
CO4	It will help in understanding the detail on Infrastructure Development Schemes in Sports.	PO4, PO6, PO7, PO8

CO5	It understands the significant, role and key principle and model of Talent Identification and Development Schemes.	PO1, PO2, PO3, PO4, PO5, PO7
References Books		
1.	Sports Governance, Development, and Corporate Responsibility" by Graham Cuskelly and Kathy Babiak	
2.	Sports Development: Policy, Process and Practice" by Kevin Hylton	
3.	Managing Sport Development: An International Approach" by Emma Sherry and Shirl Hoffman	
4	Sports Development: Policy, Process, and Practice" by Peter Bramham and Paul Roberts	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1CE116	**Sports Analytics**	Elective	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To understand the fundamentals of sports analytics and its applications in various aspects of sports management and Role of analytics in decision-making in sports
C2	To study the Performance analysis and Evaluation in sports analytic
C3	To understand Sports Analytics Tools and Technologies
C4	To Evaluate Emerging Trends in Sports Analytics and Discussion on future directions and career opportunities in sports analytics
C5	To understand the key concept of Sports Economics and Financial Analytics

UNIT	Details	No. of Hours	Course Objectives
I	**Introduction to Sports Analytics Management** Overview of analytics management and its significance in sports organizations - Role of analytics in decision-making in sports-Key challenges and opportunities in sport analytic. Ethical considerations in sports analytics. Evolution of analytics in business.	8	C1
II	**Performance Analysis and Evaluation** Definition and scope of performance analysis in sports -Statistical analysis of player performance-Advanced metrics for player evaluation- Evolution of analytics in business. Overview of performance metrics and indicators used in sports analysis-Predictive modelling for player performance forecasting, Performance benchmarking and comparative analysis. Team and Game Strategy Analysis. Predictive models for player potential and future performance.	10	C2
III	**Sports Analytics Tools and Technologies** Introduction to sports analytics software - Data visualization techniques for sports data. Machine learning and predictive modelling in sports analytics. Demonstrations of sports analytics applications.	6	C3

IV	**Emerging Trends in Sports Analytics** Introduction to cutting-edge topics in sports analytics- new data sources and technologies in sports analytics. Impact of artificial intelligence on sports analytics. Discussion on future directions and career opportunities in sports analytics.	10	C4
V	**Sports Economics and Financial Analytics** Economic Principles in Sports: Introduction to sports economics- Scope, objectives, and key concepts. Financial Analysis of Sports Organizations: Financial statement analysis- Understanding and interpreting financial statements of sports organizations- Revenue analysis- Cost analysis. Sports Valuation and Investment Analysis: Valuation methods for sports teams and franchises. Investment analysis and decision-making in the sports industry. Financial modelling and forecasting for sports organizations. Financial Analytics in Sports Sponsorship. Analyse the impact of economic factors on the business of sports.	11	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the significance in analytic in sports organizations and the Role of analytics in decision-making in sports and opportunities in sport analytic	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Understand the statistical analysis of performance- Advanced metrics for evaluation- Evolution of analytics in business, Predictive modelling for performance forecasting.	PO4,PO6, PO8
CO3	Understand the data visualization techniques for sports data. Machine learning and predictive modelling in sports analytics and sports analytics applications.	PO2,PO3,PO5, PO7
CO4	It will understand the technologies in sports analytics, artificial intelligence on sports analytics and future directions and career opportunities in sports analytics.	PO4,PO6, PO7, PO8
CO5	Understand the Economic Principles in Sports, Financial Analysis of Sports Organizations, Revenue analysis and Financial Analytics in Sports Sponsorship.	PO1,PO2,PO3,PO4, PO5, PO7
References Books		

1.	Sports Analytics: A Guide for Coaches, Managers, and Other Decision Makers" by Benjamin Alamar.
2.	The Sports Gene: Inside the Science of Extraordinary Athletic Performance" by David Epstein:
3.	Rules and Tools for Performance Analysis" by Dean Oliver

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks

Methods of Assessment	
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

SEMESTER- IV - PAPER CODE –23PE1DP401
Core Project - PROJECT REPORT

Project Work

Project Work is an integral part of MBA curriculum. The project work is very important for all MBA students as it enables them to gain their management skills. The final semester is completely allotted for the purpose of carrying out the Project Work. At the end of Third Semester, each student shall undertake a Project Work for a minimum of 12 weeks.

The following criteria to be fulfilled by the students before commencing the project work in the selected organization:

1. Each student has to submit the permission letter obtained from the organization to do the project work at the end of third semester itself. If a student fails to submit the permission letter, it will be considered as the student is not doing project work.

2. It is mandatory for the students to seek written approval from the Faculty Guide and the Head of the Department about the topic and the Organization before commencing the Project. The Project Work must be carried out compulsorily in any Sports Organization or Sports Related Organization only. It can be a Corporate Entity / NGO / SME / Government Undertaking / Cooperative Sector / Sports Academies.

3. It is mandatory for each student to attend the Periodic reviews without fail as and when it is scheduled by the department. If a student fails to attend the review(s), no alternative schedule will arranged and therefore the particular student cannot gain the marks allotted for the review(s).

4. It is compulsory for each student to submit the project completion certificate / letter from the organization on the date of joining the university during the fourth semester and this will be treated as a proof of work done / attendance for the student.

On Successful completion of the Project, the student shall submit a structured Project report based on work done during this period in a prescribed format provided through the concerned Guide.

Viva-Voce Examination

The performance of the students for the project work will be evaluated for a total of 100 marks (6 credits), by both internal and external Examiners. The Viva-voce will be conducted by a panel consisting of the Faculty guide, an External Examiner in the presence of the Head of the Department for the maximum of 100 marks (2 credits).

Students have to secure minimum 50% of marks to get a pass in the project work. Students who fail in the project work or who were absent for the Viva or who fail to submit the project report before the due date will have to redo the project work during the subsequent year and attend the Viva-Voce during the subsequent academic year.

VALUE ADDED COURSES

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1VA101	TOTAL QUALITY MANAGEMENT	Elective	2	-	-	-	2	30	25	75	100

Course Objectives	
C1	To understand the details of total quality management, Information and Analysis and Managing global environment- cultural and ethical environment.
C2	To study the management of quality process and human resource development and management
C3	To understand the Productivity, Quality and Strategic Quality Planning
C4	To study the Processes and Quality tools and the Concept of Quality process
C5	To Overview the important steps in ISO Registration- ISO in Indian Companies, Reengineering.

UNIT	Details	No. of Hours	Course Objectives
I	Introduction to Total Quality Management – Leadership – Information and Analysis –Managing in 21st century- global environment- cultural and ethical environment.	6	C1
II	Human Resource Development and Management – Management of process quality – Customer focus and satisfaction – Bench marking.	5	C2
III	Organizing for Total Quality Management – Productivity and Quality – Strategic Quality Planning. Cost of Quality.	5	C3
IV	Processes and Quality tools – The Concept of Quality process – Total Quality Management – Quality improvement tools – Understanding process	8	C4

	variation, Managing for quality- Japanese Management.		
V	ISO 9000 Overview- Important steps in ISO Registration- ISO in Indian Companies. Criteria for Quality programs, Universal Standards of Quality – Reengineering.	6	C5
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the details of total quality management, Information and Analysis and Managing global environment- cultural and ethical environment.	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Learn the management of quality process and human resource development and management	PO4,PO6, PO8
CO3	Understand the Productivity, Quality and Strategic Quality Planning	PO2,PO3,PO5, PO7
CO4	Understand the Processes and Quality tools and the Concept of Quality process	PO4,PO6, PO7, PO8
CO5	Learn by Overview the important steps in ISO Registration, Reengineering.	PO1,PO2,PO3,PO4, PO5, PO7

References Books	
1.	Vincent K. Omachonu & Joel E. Ross, Principles of Total Quality.
2.	Ron Collard, Total Quality.
3.	Townsend & Gebhardt, Commit to Quality.
4.	John Bark, Essence of TQM.
5.	Willborn & Cheng, Global Management of Quality Assurance Systems

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	

External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1VA102	E – COMMERCE	Elective	2	-	-	-	2	30	25	75	100

Course Objectives	
C1	To study the fundamental of and strategic of E- Commerce in business
C2	To understand the uses of business application in E-Commerce
C3	To learn the Structure, Architecture, Applications & Business Models, search engines
C4	To study E-Commerce Payments and Computer security classification
C5	To study the Issues in E-Commerce, Intelligent Agents, capabilities Cyber laws, contracts and warranties

UNIT	Details	No. of Hours	Course Objectives
I	**Fundamental of E-Commerce**: Traditional commerce and E commerce – Internet and WWW – role of WWW – value chains – strategic business and Industry value chains – role of E commerce. Driving forces – benefits and limitations of e-commerce.	7	C1
II	**Business Applications in E-Commerce:** Retailing in E-commerce – market research on internet customers – e-commerce for service sector – Advertising in e-commerce – B2B ecommerce.	5	C2
III	**E-Commerce Infrastructure** Intranet, Internet & Extranet – Structure, Architecture, Applications & Business Models, search engines	5	C3
IV	**E-Commerce Payments and Security** Computer security classification – copy right and Intellectual property – electronic commerce threats - strategies for marketing – sales	6	C4

	and promotion E-Payments and Internet fraud. Principles of e-fund transfer, credit and debit card usage, E-check and unified payment systems.		
V	**Issues in E-Commerce** Intelligent Agents - Definition and capabilities – limitation of agents – security –Legal, Ethics and Privacy issues – Protection needs and methodology - Consumer protection, Cyber laws, contracts and warranties. Taxation and Encryption Policies.	7	C5
	Total	**30**	

Course Outcomes		
Course Outcomes	On completion of this course, students will	**Program Outcomes**
CO1	Understand the fundamental of and strategic of E-Commerce in business	PO1,PO2,PO3,PO5, PO6,PO7
CO2	Understand the uses of business application in E-Commerce	PO4,PO6, PO8
CO3	Learn the Structure, Architecture, Applications & Business Models, search engines	PO2,PO3,PO5, PO7
CO4	Learn E-Commerce Payments and Computer security classification	PO4,PO6, PO7, PO8
CO5	Understand the Issues in E-Commerce, Intelligent Agents, capabilities Cyber laws, contracts and warranties	PO1,PO2,PO3,PO4, PO5, PO7

References Books	
1.	Efraim Turban et al., 'Electronic Commerce – A managerial perspective', Pearson Education Asia
2.	Kalakota et al, 'Frontiers of Electronic Commerce', Addison Wesley.
3.	Sandeep Krishnamurthy, 'E-Commerce Management – Text and Cases', Thomson Learning.

4.	Greenstein Firsman, 'Electronic Commerce', Tata McGraw Hill.	
Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
External Evaluation	End Semester Examination	75 Marks
	Total	100 Marks
Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions	
Understand/ Comprehend (K2)	MCQ, True/False, Short essays, Concept explanations, Short summary or overview, Group discussions	
Application (K3)	Suggest idea/concept with examples, case study, Observe, Explain,	
Analyze (K4)	Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, SPORTS knowledge	
Evaluate (K5)	Longer essay/ Evaluation essay, Critique or justify with pros and cons	
Create (K6)	Check knowledge in specific or off beat situations, Discussion, Debating or Presentations, event management	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

GENERIC ELECTIVE COURSES

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1GE301	**Management Concepts**	Core	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To familiarize the students to the basic concepts of management in order to aid in understanding how an organization functions.
C2	To provide insights on Planning & Decision Making
C3	To throw light on Organizing, Managing Change and Innovation
C4	To elucidate on Leadership, Communication and Controlling.
C5	To create awareness and importance of Business Ethics and Social Responsibility.

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**Introduction:** Nature of Management – Concepts and Foundations of Management- Managerial Functions- Management Skills - The Evolution of Management Thought – Tasks of a Professional Manager – OrganizationalCulture - Environment – Systems Approach to Management – Levels in Management – Disaster Management	10	C1
II	**Planning & Decision Making:** Steps in Planning Process – Scope and Limitations – Short Term and Long-Term Planning – Flexibility in Planning – Characteristics of a Sound Plan – Management By Objectives (MBO). Strategic Management Process Decision Making Process and Techniques. Business Models	9	C2
III	**Nature of Organizing:** Organization Structure and Design - Authority Relationships – Delegation of	10	C3

	Authority and Decentralization – Interdepartmental Coordinator – emerging Trends in corporate Structure, Strategy and Culture – Impact of Technology on Organizational design – Mechanistic vs. Adoptive Structures – Formal and InformalOrganization. Span of control – Pros and Cons of Narrow and Wide Spans of Control – Optimum Span - Managing Change and Innovation.		
IV	**Leadership and Control:** Leadership: Approaches to Leadership and Communication. Control: Concept of Control – Application of the Process of Control at Different Levels of Management (top, middle and first line). Performance Standards – Measurements ofPerformance – Remedial Action - An Integrated Control system in an Organization – Management by Exception (MBE) –	10	C4
V	**Business Ethics:** Importance of Business Ethics – Ethical Issues and Dilemmas in Business - Ethical Decision Making and Ethical Leadership – Ethics Audit - Business Ethics and - CSR Models.	6	C5
	Total	**45**	

Course Outcomes		
Course Outcomes	On completion of this course, students will;	**Program Outcomes**
CO1	Possess the knowledge on the basic concepts of management and understand how an organization functions.	PO4, PO6, PO8
CO2	Possess knowledge on planning & decision making.	PO1, PO2
CO3	Have insights on organizing, managing change and Innovation	PO5, PO6, PO7
CO4	Learn leadership, communication and controlling skills.	PO4, PO5
CO5	Have better understanding on business ethics and social responsibility.	PO3, PO8

Reading List	
1.	https://deb.ugc.ac. In
2.	http://wwww.managementconcepts. Com
3.	International journal of Management Concepts and Philosophy
4.	Journal of Management, Sage Publications
References Books	
1.	Mukherjee, K., Principles of Management, 2nd Edition, Tata McGraw Hill Education Pvt. Ltd., 2009
2.	S. K. Mandal., Management Principles and practice, 3rd Edition, Jaico Publishing House, Jan.2011.
3.	Griffin, R. W., Management, 11th Edition, South-Western College Publication, January 2018.
4.	Koontz, H. and Weihrich, H., Essentials of Management: An International Perspective, 11th Edition, Tata McGraw Hill Education Private Ltd., July 2020
5.	Certo, S C. and Certo, T, Modern Management, 13th Edition, Prentice Hall, January 2014.
6.	Robbins, S and Coulter, M, 11th Edition, Management, Prentice Hall, 11th edition, January 2012
7.	Shaikh Ubaid, Disaster Management, Technical publications, 1st edition, 2020

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

Course Code	Course Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23PE1GE402	**EVENT MANAGEMENT**	Core	3	-	-	-	3	45	25	75	100

Course Objectives	
C1	To study the History & Evolution, Structure of event industry Event Management as a profession and Code of Ethics
C2	To learn about the Design of concept, Event design and budget checklist, Insurance, Regulation, Licence and Permits
C3	To understand the role of event Marketing Planning, Managing Marketing Communication and Role of Internet.
C4	To study the event operation, Event Logistics, Control of event logistics, Evaluation & Logistics
C5	To study the safety & event evaluation measure, Structural safety and Event Evaluation Process

SYLLABUS

UNIT	Details	No. of Hours	Course Objectives
I	**EVENT CONTEXT** History & Evolution – Types of events – Meetings, Incentives Conferences, Events (MICE) – Types of Meeting, Trade Shows, Conventions, Exhibitions- Structure of event industry – Event Management as a profession – Perspectives on event: Government, Corporate & Community – Code of Ethics.	7	C1
II	**EVENT PLANNING & LEGAL ISSUES** Conceptualizing the event – Host, sponsor, Media, Guest, Participants, Spectators – Crew – Design of concept – Theme and content development – Visualization – Event objectives – Initial planning –	10	C2

	Budgeting – Event design and budget checklist – Preparation of functional sheets – Timing – Contracts and Agreements – Insurance, Regulation, Licence and Permits – Negotiation		
III	**EVENT MARKETING** Role of Strategic Marketing Planning - Pricing – Marketing Communication Methods & budget – Elements of marketing communication – Managing Marketing Communication – Role of Internet – Sponsorship – Event sponsorship – Strategy – Managing Sponsorships – Measuring & Evaluating sponsorship.	10	C3
IV	**EVENT OPERATION** Site Selection – Types of location – Venue Requirements – Room, Stage, Audi-Visual, Lighting, Performers, Decors, Caterer, Photography & Videography – Protocols – Guest list – Guest demographics – Children at event – Invitation – Media – Freelance Event Operation – Road show - Food & Beverage – Entertainment – Event Logistics – Supply of facilities – Onsite logistics – Control of event logistics – Evaluation & Logistics.	9	C4
V	**SAFETY & EVENT EVALUATION** Risk assessment – Safety officer, Medical Manager – Venue, Structural safety – Food safety – Occupational safety – Fire Prevention – Sanitary facilities – Vehicle traffic – Waste Management. Event Impact – Event Evaluation Process – Service Quality - Customer Satisfaction.	9	C5
	Total	**45**	
Course Outcomes			

Course Outcomes	On completion of this course, students will;	Program Outcomes
CO1	Understand the History & Evolution, Structure of event industry Event Management as a profession and Code of Ethics	PO4, PO6, PO8
CO2	Learn about the Design of concept, Event design and budget checklist, Insurance, Regulation, Licence and Permits	PO1, PO2
CO3	Understand the role of event Marketing Planning, Managing Marketing Communication and Role of Internet.	PO5, PO6, PO7
CO4	Understand the event operation, Event Logistics, Control of event logistics, Evaluation & Logistics	PO4, PO5
CO5	Understand the safety & event evaluation measure, Structural safety and Event Evaluation Process	PO3, PO8
References Books		
1.	Lynn Van Der Wagen, Event Management for Tourism, Cultural Business & Sporting Events, 4th Edition, Pearson Publications, 2014.	
2.	Lynn Van Der Wagen, & Brenda R. Carlos , Sucessful Event Management.	
3.	Judy Allen, Event Planning 2nd Edition, Wiley & Sons, Canada, 2014.	
4.	G.A.J. Bowdin, Events Management , Elseiver Butterworth	

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	S	S	M		L	M	S	
CO 2				M		L		M
CO 3		M		S	S		M	
CO 4						S	L	S
CO 5	M	M	S	L	S		M	

S-Strong M-Medium L-Low

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI- 600 127

SYLLABUS

M.Sc., PSYCHOLOGY

(REGULAR-2023-2024)

DEPARTMENT OF SPORTS PSYCHOLOGY & SOCIOLOGY

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI - 600 127

DESCRIPTION OF THE PROGRAMME

M.Sc. Psychology is a two years master's programme offered by the Department of Sports Psychology & Sociology. This programme provides an opportunity for the Students to acquire and demonstrate the knowledge of theory and research related to the fields of Clinical and Community Psychology. Students will establish the ability to conduct themselves professionally and ethically also, to demonstrate the ability to consume, conduct, and communicate research to a variety of inhabitants. Finally, this programme will shape the students an excellent professional psychologist.

REGULATIONS

The Choice Based Credit System (CBCS) for two years M.Sc., Degree programme in Psychology will be implemented from the academic year 2023-2024.

1. ELIGIBITLITY FOR ADMISSION

1.1 A Candidate shall be admitted to the degree of M.Sc., Psychology only if he/she produces satisfactory evidence to the effect that he/she has completed Bachelor's Degree in Psychology / Sport Psychology / Sport and Exercise Psychology / Sports Science/ Sports Coaching/Physical Education and Sports or an equivalent thereto in 10+2+3 or 10+2+4 pattern from a recognized university with a minimum of 50% marks in aggregate and any undergraduate **science Degree** recognized by the syndicate of Tamil Nadu Physical Education & Sports University.

1.2 Eligible for admissions and reservation of seats shall be according to the rules framed by the governing body of this University in this regard, from time to time at par with the UGC norms and regulations of the Government of Tamilnadu.

2. COURSE OF STUDY

2.1 The normal duration of the M.Sc., Psychology Programme shall be four semester (Two years).

2.2 Each academic year shall comprise of two semester's viz. **ODD** and **EVEN** semesters. Odd semesters shall be from July to November and Even Semesters shall be from December to May.

2.3 There shall be not less than 90 working days which shall comprise 480 teaching/Practical Activity clock hours for each semester.

3. CHOICE BASED CREDIT SYSTEM (CBCS)

The CBCS in M.Sc., programme would have the following five components and the minimum credit requirements for each component to be completed in two years are:

3.1 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

3.2 **Core course:** Are course that are basic to the subject of the degree. This is a course which is to be compulsorily studied by a student as a core requirement to the completion of the program.

3.3 **Elective Courses:** This is a course that is supportive to the discipline of study, provides an expanded scope, enables exposure to some other domains or nurtures proficiency/skills. Elective papers can be of two types: Discipline Specific Elective (DSE) and Generic Elective (GE).

3.4 **Discipline Specific Elective (DSE):** These courses are inter disciplinary in nature and considered similar to core course. And, the students have to choose one course from the option provided for them.

3.5 **Generic Elective (GE):** These courses add generic proficiency to the students. Students have to choose generic elective courses in consultation with the head of the department from the Generic Elective courses offered by other Division of study in Sports Science or from other Departments in university.

CREDIT ABSTRACT

Semester – Credit Subject	I	II	III	IV	Total Credit
Core course	12	12	12	12	48
Elective (Discipline Centric)	3	3	3	3	12
Generic Elective (GE)	3	3	-	-	06
Core - Practicum (Skill Enhancement Course)	2	2	2	2	08
Ability Enhancement Course (AEC)-Soft Skill	2	2	2	2	08
Thesis with Viva-Voce	-	-	-	5	05
Internship	-	-	3	-	03
Field Work / Extension Activity	-	-	-	1	01

Grant Total	**22**	**22**	**22**	**25**	**91**

4. COURSE WEIGHT

4.1 Courses will be designed with weightage of two /four credits, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise lectures/tutorials/laboratory/field work/outreach activities/project work/vocational training/viva/seminars etc. or a combination of some of these.

4.2It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

5. ASSESSMENT AND EVALUATION

Post Graduate degree programme M.Sc., Psychology (Two Years). It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

SEMESTER	CREDITS	TOTAL MARKS
I	22	600
II	22	600
III	22	600
IV	25	700
Grant Total	**91**	**2500**

5.1 Each course will be assessed on the basis of 100 marks. The marks would be divided between internal and external assessment.

5.2 There shall be one end semester external examination for each course in every semester consisting of 75% (75 marks) weight in theory and 75% (75 marks) in practical courses.

5.3 Each Theory course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	Marks
Assignments	2
Seminar / Conference Paper Presentations	3
Internal Assessment - I	5

Internal Assessment - II	5
Model Examination	10
Total	**25**

5.4 Each Practical Course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	**Marks**
Internal Viva	5
Record	5
Internal Assessment	5
Lab Performance	10
Total	**25**

5.5 The minimum passing standard will be 50% for the external and internal component of each theory course, i.e. 38 marks out of 75 (external - 50% of 75 marks) and 12.5 marks out of 25 (internal - 50% of 25 marks).In practical minimum passing standard will be 50% for the external exam and internal assessment for each practical course.

6. ATTENDANCE

6.1 Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course.

6.2 Students must have 75% of attendance in each course for appearing in the semester examinations.

6.3 Students who have 74% to 70% of attendance shall apply for condonation in the prescribed form with the prescribed fee.

6.4 Students who have 69% to 65% of attendance shall apply for condonation in the prescribed form with the prescribed fee along with the Medical Certificate.

6.5 Students who have below 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students will have to repeat the semester.

6.6 Obtaining condonation is not a matter of right of the students.

6.7 A student can avail condonation only once during the entire course of study.

7. END SEMESTER EXAMINAITION (ESE)

7.1 The ESE will consist of à written examination of three hours duration for a maximum score of 75. The following procedure will be followed for evaluation.

Pattern	Total No. of Question	Number of Question to be Answered	Marks for each Question	Total Marks
Multiple-Choice Questions	10	10	1	**10**
Short Answer / Problem Type	5	5	2	**10**
Short Essay / Problem	8	5	5	**25**
Long Answer / Essay / Problem Type	5	3	10	**30**
Total				**75**

7.2 A candidate who has secured a minimum of 50 marks in all courses prescribed in the programme and earned a minimum of the credits will be considered to have passed the Bachelor's Degree Programme.

7.3 A Student will be issued, hall ticket only if one produces "**No Dues**" certificates from the concerned department, the laboratory, the Registrar's Office, the Library and Hostel.

8. GRADING SYSTEM

A ten point rating is used for the evaluation of the performance of the student to provide a letter grade for each course and overall grade for the Master's Programme. The letter grade assigned is given below:

Letter	Grade	Grade Point	Range of Marks
O	Outstanding	10	91-100
A+	Excellent	9.0	81-90
A	Very Good	8.5	71-80
B+	Good	8.0	61-70

B	Above Average	7.5	51-60
C	Pass	7.0	50
RA	Reappear	0	0-49
AB	Absent	0	ABSENT

9. INTERNSHIP AND FIELD TRAINING

Internship and field training is an important component of Psychology that provides students with the opportunity to gain applied practical experience in the field of Psychology. It allows a student to employ what is learned in class in a supervised environment, which is critical in order to further develop professional skills and assure quality practice. The students will undergo Internship training /Clinical practice /Field training in TNPESU campus/ Sports Development Authority of TamilNadu (SDAT) coaching Centres /Sports Authority of India (Various coaching Centres of SAI) /Government Medical College/ other sporting centers / academies shall be evaluated through internal assessment only. At the end of Internship/field training, the student shall submit a certificate from the organization where he /she has undergone training and a brief report. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three member Departmental Committee constituted by the Head of the Department.

10. THESIS

The topic of thesis will be allocated in third Semester and candidate will work for one semesters and submit a written thesis in 4th semester. The student will be awarded grade for the total number of credits earned in thesis in III and IV semesters of study at the end of the IV semester.

SEMESTER I

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF3CT101	Cognitive Psychology	4	-	4	25	75	100
23PF3CT102	Advanced Social Psychology	4	-	4	25	75	100
23PF3CT103	Research Methodology	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF3CE001	Coping with stress	3	-	3	25	75	100
23PF3CE002	Social Problems and Issues	3	-	3	25	75	100
GENERIC ELECTIVE							
23PF3GE001	Interdepartmental Elective – I (Generic)	3	-	3	25	75	100
PRACTICUM							
23PF3L101	Psychological Testing - Practicum - I	-	4	2	25	75	100
23PF3AE101	Soft Skill – I (Communication Skill)	4	-	2	-	-	-
		22	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER II

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF3CT201	Neuro Psychology	4	-	4	25	75	100
23PF3CT202	Psychopathology - I	4	-	4	25	75	100
23PF3CT203	Statistics in Social Sciences	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF3CE003	Medical Sociology	3	-	3	25	75	100
23PF3CE004	Psychometrics	3	-	3	25	75	100
GENERIC ELECTIVE							
23PF3GE002	Interdepartmental Elective – II (Generic)	3	-	3	25	75	100
PRACTICUM							
23PF3L201	Psychological Testing - Practicum - II	-	4	2	25	75	100
23PF3AE201	Soft Skill – II (Basics of Computer Applications)	4	-	2	-	-	-
		22	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER III

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF3CT301	Fundamentals of Counselling Skills	4	-	4	25	75	100
23PF3CT302	Human Growth and Development	4	-	4	25	75	100
23PF3CT303	Psychopathology - II	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF3CE005	Team Cohesion and Group Dynamics	3	-	3	25	75	100
23PF3CE006	Health Psychology	3	-	3	25	75	100
PRACTICUM							
23PF3L301	On-field Psychological Support & Assessment- Practicum - III	-	4	2	25	75	100
23PF3AE301	Softskill – III (Life Skills Management)	2	-	2	-	-	-
23PF3IT301	Internship*	-	-	3	25	75	100
		17	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. *Internship will be carried out after completion of first year and before appearing for third semester examinations. The marks shall be sent to the University by the Department and the same will be included in the Third Semester Marks Statement.

3.*One month training at reputed Organizations / Sporting Clubs / Govt. Sports Authorities / Councils / National Teams and submit a report.

SEMESTER IV

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF3CT401	Counseling and Behavior Modification Techniques	4	-	4	25	75	100
23PF3CT402	Organizational Behaviour	4	-	4	25	75	100
23PF3CT403	Training and Development	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF3CE007	Positive Psychology	3	-	3	25	75	100
23PF3CE008	Psychotherapy	3	-	3	25	75	100
PRACTICUM							
23PF3L401	On-field Psychological Support & Assessment- Practicum - IV	-	4	2	25	75	100
23PF3TH401A	Thesis	-	4	4	25	75	100
23PF3TH401B	Viva-Voce	-	-	1	25	25	50
23PF3AE401	Softskill – IV (Yoga & Meditation)	2	-	2	-	-	-
23PF3EA401	Extension Activity	-	2	1	50	-	50
		17	**10**	**25**	**225**	**475**	**700**

SEMESTER - I

PAPER CODE	PAPER TITLE
23PF3CT101	Cognitive Psychology
23PF3CT102	Advanced Social Psychology
23PF3CT103	Research Methodology
Electives (Discipline Specific)	
PPY23DE001	Managerial Psychology
PPY23DE002	Social Problems and Issues
23PF3GE001	Generic elective -I
23PF3L101	Psychological Assessment - Practicum - I
23PF3AE101	Soft Skill – I (Communication Skill)

SEMESTER- I

COURSE CODE – 23PF3CT101

COGNITIVE PSYCHOLOGY

Objectives:

To study the concept of cognition and its application in cognitive psychology. Also, the students will acquire and demonstrate broad knowledge of psychology and demonstrate ability to integrate these areas with cognitive psychology.

Course Learning Outcomes:

At the end of this course the students would be able to:

1. Analyse each situation rationally and take decisions better and faster than others.
2. Comprehend the role of mental processing in day -to- day life for solving problems.
3. Identify the building blocks that enable students to identify their strengths and weaknesses so that they can further help others in doing so.
4. Cultivate cognitive skills to understand the mind and behaviour.
5. Explore and comprehend the concepts, principles and themes of cognitive psychology.

UNIT 1 – INTRODUCTION

Definition and Scope of Cognitive Psychology – History and Development of Cognitive Psychology – Intelligence – Definition – Theories of Intelligence – Emotional Intelligence –Definition and its components – Artificial Intelligence – Definition and its applications.

UNIT 2 – ATTENTION, PERCEPTION AND CONSCIOUSNESS

The nature and definition of attention, perception and consciousness – selective attrition anddivision of attention – theories of attention – filter theory, attenuation theory, late selection theory – theories of perception – bottom up and top down process – Gestalt approaches to perception – Disruptions of perception – subliminal perception – Consciousness of complexmental process.

UNIT 3 – MEMORY AND LANGUAGE

Short term vs long term memory – types of long term memory – encoding, storage, and retrieval – working memory – definition and model – process of forgetting – memory distortions – reconstructive retrieval – eyewitness testimony – Language – properties of language- process of language comprehension-language and thought – language in social context.

UNIT 4 – PROBLEM SOLVING AND CREATIVITY

Problem solving: Meaning – Problem solving cycle – types of problems – Problem solving techniques – obstacles and aids in problem solving – knowledge and problem solving – creativity – definition – divergent thinking – steps in creative thinking – nature of creative people – blocks to creative thinking – Promoting Creativity.

UNIT 5 – REASONING AND DECISION MAKING

Types of thinking – Reasoning: Meaning – categorical syllogisms – conditional syllogism –syllogistic reasoning – inductive reasoning – heuristics and biases and its types – Decision making: Meaning – types of decision making.

REFERENCES

1. Kellogg, R.T. (2007). *Fundamentals of cognitive psychology*. New Delhi, India: SagePublication.
2. Sternberg, R. J. (2009). *Applied cognitive psychology: Perceiving, learning andremembering*. New Delhi, India: Cengage Learning.
3. Parkin, A . J. (2000). *Essential Cognitive Psychology*. London: Psychology Press.
4. Smith, E.E & Kosslyn, S.M. (2007). *Cognitive psychology: Mind and brain*. NewDelhi, India: Prentice – Hall of India.
5. Riegler, B.R & Riegler, G. L. (2008). *Cognitive psychology. Applying the science ofthe mind.* New Delhi, India: Pearson India Education Services Private Limited.
6. Galotti, K.M. (2004). *Cognitive psychology: In and out of the laboratory*. New Delhi,India: Wadsworth.

COURSE CODE – 23PF3CT102

ADVANCED SOCIAL PSYCHOLOGY

Objectives:

The objective of advanced Social Psychology is acquisition of knowledge to use certain basic concepts and philosophies involved in social behaviour and an awareness of the major problems and issues in the discipline of social psychology.

Course Learning Outcomes:

At the end of this course the students would be able to:

1. Develop insight and analyze the contribution of social psychologists to the understanding of human society.
2. Evaluate effective strategies in socialization, group processes (both inter and intra-group) and helping behavior.
3. Ability to register the progression of theories in major areas in Social Psychology.
4. Interpret attitude formation and various methods to be used to change the attitude.

UNIT I : Historical and Conceptual Issues in Social Psychology : The definition and nature of social psychology; Growth of social psychology; alternative conceptions of social psychology; Development of social psychology in India; Current status of the discipline; indigenization of social psychology; Issues in experimental social psychology; Emerging alternative methods in social psychology; Ethical issues in social psychological research.

UNIT II : Social Interaction : Social cognition and impression management Self and identity. Culture and Development of Self. Social Identity. Diverse identities; Attribution- theories, biases and errors; Organizing and Changing attitudes; persuasion and propaganda techniques ;The development of social representation; Prejudice, Stereotypes and Discrimination; Theories of inter-group relations;Reducing prejudice.

UNIT III : Inter personal attraction : Interpersonal attraction and altruism-the beginning of attraction: proximity and emotions-the need to affiliate and the effect of observable characteristics-altruism- why, when, whom do we help-increasing helping behavior

UNIT IV : Conflict and peacemaking : Conflict and peacemaking-conflict: social dilemmas, competition, perceived injustice, misperception, peacemaking - contact, cooperation, communication, conciliation - Aggression: Theories and individual differences in aggression; Violence- sexual harassment, genocide, terrorism

UNIT V : Social Issues :

Environmental stresses and social behavior; Social psychological perspectives on health and illness; Culture Cross- cultural aspects of coping; Psychological effects of unemployment. Social and ethnic minorities and law; Cross-cultural psychology: Diversity in socialization: Individualistic vs. collectivistic culture: Poverty and deprivation- Application of social psychology to sports, military and media.

REFERENCES:

1. *Myers David G.(2002).Social Psychology.7th Edn., McGraw Hill Book Company*
2. *Baron A. And Byrne D. (2002). Social Psychology.TenthEdn.Prentice Hall Of India*
3. *Aronson, E., Wilson, T.D., and Akert, R.M. (1999). Social Psychology (3rd ed.). New York: Longman.*
4. *Fraser, C., and Burchell, B. (2001).Introducing Social Psychology. Cambridge: Polity.*

COURSE CODE – 23PF3CT103

RESEARCH METHODOLOGY

Objectives:

The main objectives of this course is to introduce the basic principles of Research Methodology, to discuss in-detail the sampling, data collection, analysis of data and report writing, to equip students with skills of various methods and techniques for scientific conduct of social science research.

Course Learning Outcomes:

On completion of the course the student will be able to:

1. Understand, participate and conduct various steps involved in research.
2. Differential understanding of appropriate techniques to be used in various types of scientific research in social sciences.
3. Analyse & comprehend research and its application.
4. Design and Develop the strategy, to conduct research.
5. Comprehend the inter relation between parameters under study.
6. Develop insight into procedural scientific steps of conducting a research.

UNIT I: FOUNDATIONS OF RESEARCH

Meaning – Critical thinking process – Objectives of science – Need for research – Research approaches – Steps in research. Method Vs Methodology. General Principles – Ethical issues: Children, Adults, Animals. Research problem – Sources – Criteria of good problem. Reviewing the literature – Research article.

UNIT II: HYPOTHESIS AND VARIABLES

Hypothesis: Meaning – Types – Basic concepts related to hypothesis testing. Variables – Definition – Ways of asking questions – measuring observed variables – Scales of measurement – Types of measures – Reliability – Validity.

UNIT III: RESEARCH DESIGN

Experimental design: Independent groups designs – Completely randomized groups designs, randomized factorial groups design. Dependent groups designs: Within-participants design, matched groups design – Mixed Designs – Single-participant design – Baseline designs. Non-experimental designs: Quasi-experiments – Time-series design, nonequivalent groups designs, longitudinal research, Cross-sectional research, Case-studies, Correlational research.

UNIT IV: SAMPLING

Sampling – Meaning – Probability and Non-probability sampling – Sample & effect size. Data collection methods: Observational research – Survey research. Sampling distribution – determining sample size – sampling error.

UNIT V: REPORT WRITING AND COMPUTERS IN RESEARCH

Writing Proposal – Plagiarism – References and In-text citation – APA primer - Presenting research: Research report – Typing guidelines – Oral and Poster presentation. Computers in research – Internet and research.

REFERENCES:

TEXT BOOKS

1. *Evans, A.N., & Rooney, B. J. (2008). Methods in psychological research. New Delhi, India: Sage Publications India Pvt. Ltd.*
2. *Jackson, S.L. (2010). Research methods and statistics. New Delhi, India: Cengage Learning India Pvt. Ltd.*

REFERENCE BOOKS

1. *Coaley, K. (2009). An introduction to psychological assessment and psychometrics. New Delhi, India: Sage Publications India Pvt. Ltd.*
2. *Coolican, H. (2009). Research methods in statistics in psychology. New Delhi, India: Rawat Publications.*
3. *Gravetter, F.J., & Forzana, L.A.B. (2009). Research methods for behavioral sciences. Boston, MA: Wadsworth Cengage learning. Tamilnadu State Council for Higher Education 20*
4. *Myers, J. (2008). Methods in psychological research. New Delhi, India: Sage Publications.*
5. *Singh, A.K. (2006). Tests, measurements and research methods in behavioural sciences. Patna, India: Bharati Bhavan Publishers.*

COURSE CODE – 23PF3CE001

DISCIPLINE SPECIFIC ELECTIVE – I

COPING WITH STRESS

Objectives:

The main objective of this course would identify the personal difficulties, reflect upon the stress management and relaxation strategies and become more effective in handling everyday pressures in a sustainable way.

Course Learning Outcomes:

On completion of the course the student will be able to:

1. Develop a balanced lifestyle in order to control stress in the long term.
2. Utilise effective relaxation and stress reduction techniques.
3. Develop a Personal Action Plan for Stress Management.

UNIT 1: Learning about sources of stress and its symptoms: Nature of stress- various sources of stress environmental, social, physiological and psychological; Symptoms of stress - emotional response, physiological & behavioural response.

UNIT 2: Coping --- (a) Concept of coping: Definition and Classification. (b) Measurement of coping behaviour.

UNIT 3: Life Style and Related aspects---- (a) Stress and Personality. (b) Life Style and Health: Cardiovascular disease, Atheroceterosis, cancer. (c) Stress and substance abuse: alcohol and other drugs

UNIT 4: Developing a sense of Humour – Learning to laugh – Using humour at work – Reducing conflicts with humour

UNIT 5: Learning to manage stress effectively: Methods - yoga, meditation, Vipassana, relaxation techniques, clarifying problem, alternate actions, support (Problem focused) emotion focused constructive approach

Readings: Weiten, W. & Lloyd, M.A (2007). Psychology applied to Modern life. Thomson Detmar Learning .

Suggested Readings:

1. Barrett.J.E. (1979) ---Stress and Mental Disorder, American Psychopathological Association Series,New York : Rayan Press, Section A-6.
2. Braumsteirn, J.J. and Toister, R.P (1981)----- Medical Applications of Behaviour Science chicago:Year Books Medical publishers Inc. Section A. I:

3. Dohrenwend B.S. and Dohrenwend, B.P. (1974) --- Stress life events : their nature and effect, Newyork, Johan willy and sons.
4. Goldberger, L. and Breznitz,S. (1982) ---- Handbook of stress : theoretical and clinical as pact
5. Harzars, R.S. and Talkman, S. (1984) ---- Stress, Appraisal and coping, Newyork: Springer.
6. Selye. H.(1980) ------Selyes guide to stress research vol. I, Newyork : Van Nostrand Reinhold. ADACP -

COURSE CODE – PPY23CE02

DISCIPLINE SPECIFIC ELECTIVE – 2

SOCIAL PROBLEMS AND ISSUES

Objectives:

The main objectives of the course to understand the problems of society and learn about corruption poverty and unemployment with causes and treatment.

Course Learning Outcomes:

On completion of the course the student will be able to:

1. Know about the problems and crimes of society.
2. To handle problems and treatment of corruption poverty and unemployment problems.
3. Understand Female foeticide and domestic violence's.

UNIT I Social Problems, Theoretical approaches to Social Problems; Social Problems and Disorganization.

UNIT II Social Deviance - Crime – Meaning – Types – Theories of Crime – Confinement and Correction of Criminals. Juvenile Delinquency – Meaning – Types – Causes – Characteristics – Factors Involved – Methods of treating delinquents-Corruption

UNIT III Poverty & Unemployment-Conceptual debate-causes-Rural poverty-Effective measures in poverty alleviation-Unemployment in India-Types-Causes-Consequences-Remedies

UNIT IV Terrorism – Characteristics – Objective – Origin and Development – Terrorism in India – Terrorism in other countries – Theoretical explanation of - Terrorism – Sociology of Terrorism.

UNIT V Female foeticide, Female infanticide and Domestic Violence - Female foeticide –Female infanticide - Causes and Consequences – Possible Solution - Domestic Violence-Causes-Effects of Domestic Violence

REFERENCES:

1. *Robert K. Merton and Robert Nisbet, (ed.) Contemporary social problems, Harcourt Brace, New York. 1971*

2. *Madan G.R. Indian Social problems Allied Publisher, New Delhi.1976*

3. *Ahuja Ram. Social problems in IndiaRawat Publication, New Delhi. 1999*

4. *Elliot, Mabel A and Merrill, Francis E., Social Disorganization, Harper and Brothers, New York, 1950*

5. *Gurr, Ted Robert, Why Men Rebel, Princeton: Princeton University Press, 1970*

COURSE CODE – 23PF3GE001

GENERIC ELECTIVE - 1

Objectives:

Course Learning Outcomes:

A student admitted in the Department of Sports Psychology & Sociology has to opt for the Generic Elective (GE) Course offered by other departments. As an example, a student admitted under M.Sc. Psychology programme can't opt for the Generic Elective Courses offered by Department of Sports Psychology & Sociology.

GENERIC ELECTIVE PAPERS OFFERED BY VARIOUS DEPARTMENTS IN THE ODD SEMESTER (FIRST SEMESTER)

Department	Name of the Generic Elective Paper	Brief Description
Sports Management		
Yoga		
Exercise Physiology & Nutrition		
Biomechanics		
Sports Technology		

Physical Education		
Advance Training & Coaching		

COURSE CODE – 23PF3L101

PRACTICUM – I

PSYCHOLOGICAL ASSESSMENT

Objectives:

This course is based on the practical application of the principles of classical as well as modern and updated psychological assessments.

Course Learning Outcomes:

On completion of the course the student will be able to:

1. Ability to administer, analyse and interpret results from various psychological tools.
2. Expanded knowledge of various assessment procedures like rating scales and calculation of errors associated with it.
3. A wide array of analytical techniques is learnt and their application understood

Students are required to conduct and record any 08 experiments.

1. Creativity
2. Emotional Intelligence
3. Memory
4. Sequin Form Board Test
5. Bender Gestalt Visual Motor Test
6. Life Skills
7. Big Five Personality
8. Intelligence
9. Concentration
10. Locus of Control –Internal/External

REFERENCES:

1. *Woodworth, R.S. and Scholsberg (1972), Experimental psychology. Holt, Rinehart & Winston.*
2. *Anastasi & Susana Urbina (2004) 7th Edition, Psychological Testing, Pearson Education Inc, New Delhi..*
3. *Parameseswaran & Ravichandran. (2003). Experimental psychology. Neel Kamal Publications.*

ABILITY ENHANCEMENT COURSE (AEC)

COURSE CODE – 23PF3AE101

COMMUNICATION SKILLS

Objectives:

The main objective of this course is to help students become familiar with grammar, and build confidence in them that grammar is 'learnable'. The course also helps the learners become aware of language, its dependence on grammar and the variety it exhibits.

Course Learning Outcomes:

On completion of the course the student will be able to:

1. Understand and appreciate English spoken by people from different regions
2. Use language for speaking with confidence in an intelligible and acceptable manner
3. Understand the importance of reading for life
4. Develop an interest for reading
5. Understand the importance of writing in academic life

Unit – I- Communication Skills: Role of communication in Present Days- Importance of Communication - Communication Barriers - Types of Communications: Verbal communication: Oral -Story telling- Crucial conversation – Face to Face Communication- Telephone communication, Aral- Listening and Hearing, Non - Verbal Communication: Facial Expressions- Body Language-Posture- Eye Contact, Written Communication: Journals- E-Mails- Blogs - Text Messages, Visual Communications: Signs- Symbols- Pictures.

Unit – II- Components of Communication – Context - Encoder- Encoding - Message - Medium - Receiver – Feedback- Level of Communication – Intrapersonal – Intrapersonal- Group and Public communication, Characteristics of Communication, Memorandum: Purpose- Format- Business Memo and Agenda, Basic Skills for Communications- Listening- Speaking- Reading and Writing.

Unit – III- Interview Skills: Preparing for Interview- -Personal interview - Technical interview - Group Discussion- Body language- Pronunciation- Speaking - Presentation skills: Preparation – The Subject – The Audience – The place- The time- Length of Talk and Structure of Presentation.

Unit – IV- Phonetics: Elements of English Language – Phonology- Morphology – Lexis – Syntax- Grammar, The Different Speech Organs and Their Role- The Individual Sounds- Vowel- Pure Vowel- Semi Vowel- Diphthongs- Classification of Diphthongs - Monotones- Consonants- Manner of Articulation- Place of Articulation.

Unit – V- Strong and weak Forms of Words- Stress- Word Stress- Primary Stress- Secondary Stress- Sentence Stress, Rhyme and Rhythm- Rhythm- Intonation- Raise - Fall - Raise Fall intonation.

Reference Books

1. Second Edition of “Communication Skills” Published by Carrier Skill Library.
2. Effective Communication Skills – A Book of MTD Training.
3. The Language Sound of Language by Michael Dobrovolsky and Francis katamba.

SEMESTER - II

PAPER CODE	PAPER TITLE
23PF3CT201	Neuro Psychology
23PF3CT202	Psychopathology - I
23PF3CT203	Statistics in Social Science
Electives (Discipline Specific)	
23PF3CE003	Medical Sociology
23PF3CE004	Psychometrics
23PF3GE002	Generic Elective -II
23PF3L201	Psychological Testing - Practicum - II
23PF3AE201	Soft Skill – II (Basics of Computer Applications)

COURSE CODE – 23PF3CT201

NEUROPSYCHOLOGY

Objectives:

To introduce the basic principles of Neuropsychology for a specialized area of psychology.

Course Learning Outcomes:

On completion of the course the student will be able to:

1. Describe the nature and basic principles of neuropsychology.
2. Identify the brain's levels and structures and summarize the functions of its parts.
3. Plan and Execute assessments and rehabilitation for individuals with neurocognitive dysfunctions.
4. Understand the complexities associated with the nervous system and its command centre – the brain.

UNIT I - NEUROPSYCHOLOGY;ITS AIMS,HISTORY AND METHODS

Neuropsychology: History and Definitions, Human Neuropsychology : Development of thediscipline, The tools of Human Neuropsychology : Measuring brain function and structure -In depth exploration of brain injury and disrupted function, Connectionism, EEG, ERPs, MEG, CT, PET, SPECT, MRI, fMRI, Biochemical techniques, Brian Electrical Stimulation, Modern brain stimulation: Trans-cranial magnetic stimulation and lateralization techniques

UNIT II – THE FRONTAL LOBES: COGNITION, SOCIAL BEHAVIOUR AND PERSONALITY

Frontal lobes: a brief review, frontal lobes: an anatomical sketch, early studies of frontal lobe function, tests used to measure frontal lobe (dys) function, the symptoms; an introduction, motor (pre- central) symptoms, sensory/perceptual symptoms, cognitive (pre frontal) symptoms, frontal lobes – mediating intelligence, decision making.

Theory of mind and the frontal lobe – understanding behaviour of others. Recent evidence for frontal cortex involvement.

Social Behaviour and personality – theories of frontal lobe functions; Luria's theory: the classical view, Norman and Shallice's supervisory attentional system, Rolls's theory of orbito-frontal function: stimulus – reward.

UNIT III -DISORDERS OF PERCEPTION AND MOVEMENT DISORDERS

Disorders of perception : Blindsight, Agnosias -Visual, Prosopagnnosia, Landmark agnosia, Auditory, Somatosensory, unilateral spatial neglect.Movement Disorders : Disorders of the human motor system, Parkinsonism and Parkinson's Disease- clinical features, Neuropathology and treatment ,Ataxia, Apraxia -Types , tests ,Cererbral Basis , Hemiplegia.

IV -LANGUAGE DISORDERS DEMENTIA AND DISORDERS OF THOUGHT AND MOOD

Neuropsychology of Language, Speech Production and comprehension, Aphasia -sensory, production, conduction, deep dysphasia, Transcortical sensory and motor, global aphasia and recovery from aphasia. Learning disorders - dyslexia, Dysgraphia.

Dementia and Alzheimer's disease -etiology, Alcoholic Dementia, Korsokoffs Psychosis .The neuropsychology of ageing.

Disorders of Thought and Mood -Schizophrenia-subtypes, Neuropathology, Epilepsy ,Depression and anxiety .

UNIT V - NEUROPSYCHOLGICAL ASSESSMENT

NeuroPsychological Assessment, its principles. The neuropsychological batteries- WechslerAdult Intelligence scales, Halstead Reitan Battery, Luria - Nebraaska NeuroPsychological Battery, Individual tests, Memory - the WMS, Practical Issues of NeuroPsychological Assessment , Choice of test, NeuroPsychological Assessment of Children, Faults in conducting and reporting the results of neuropsychological assessment, computer based assessment.

REFERENCES:

1. Zillmer, E.A., & Spiers, M.V. (2001). *Principles of neuropsychology*. Belmont, CA:Wadsworth/Thomson Learning.
2. Beaumont, J.G. (1983). *Introduction to neuropsychology*. Oxford, England: BlackwellScientific Publications
3. Martin, G.N. (2006). *Human neuropsychology*. London, England: Prentice Hall

COURSE CODE – 23PF3CT202

PSYCHOPATHOLOGY -I

Objectives:

The focus of this course includes Etiology, Prognosis, Epidemiology, Diagnosis and Differential Diagnostic criteria for various behavioural disorders including Anxiety, Affective and different Psychotic disorders, etc. through case history. It also discusses new age psychological disorders. This course helps to assess and observe clusters of psychiatric symptoms and robustly categorize them into DSM IV-TR /DSM 5diagnostic categories, using the multiaxial assessment.

Course Learning Outcomes:

1. Identify different types of anxiety and mood disorders, their clinical picture and management.
2. Analyse Impact of socio-occupational & personal functioning.
3. Formulate the case with the help of psychological testing.
4. Plan Therapeutic programs for management based on goals of therapy.
5. The students will understand signs and symptoms of psychopathology.
6. They will be able to assess the symptoms, nature, causes and dysfunctions associated with these disorders.
7. They will be able to understand the intervention programs with regard to the goals of therapy.
8. Develop familiarity with the usual clinical course of each specific mental illness.

UNIT I : Introduction :

Definition of Psychopathology - Historical views of abnormal behavior - The stigma of abnormal behavior – Adaptive and Maladaptive behavior – Adaptation and Adjustment – Causes and Risk factors for abnormal behavior – Biological, Psychosocial and Sociocultural view points and causal factors.

UNIT II : Classification - Categories of Maladaptive Behaviour :

Approaches to classification of Psychopathology: Categorical, Dimensional and Prototypal - Systems of classification, basic features; DSM-V, ICD-10 - Similarities and differences – Advantages and Disadvantages of Classification.

UNIT III:Psychological factors and Physical Symptoms

The Bio- Psychosocial Model – Stress and illness – Psycho-Physiological Disorders-

Classification of psycho physiological disorders – Rheumatoid Arthritis , low back pain, cancer, cardiovascular disorders- coronary heart disease – essential hypertension – headaches – migraine – tension headaches – asthma – eczema – peptic ulcers- colitis – genitourinary disorders – menstrual disorders

UNIT IV : Psychopathology of addiction and sexual disorders

Substance dependence– substance abuse - Substance use disorders– substance induced disorders – Substance use disorders Vs Substance induced disorders - Alcohol related disorders - other drugs –- Sexual deviations- forms of sexual deviations - causes – treatment .

UNIT V : Neuro psychological and behavioural disorders:

Dementia, delirium, head injury, epilepsy, other amnesic syndromes -Dissociative disorder, somatoform disorder- other neurotic disorder; Eating disorder : Anorexia, binge eating - Sleep disorders- Clinical characteristics and etiology.

REFERENCES:

1. Rosenhan D.L. & Seligman M.E.P (1989) Abnormal Psychology, London: WW Norton and Company, Kapur M. 2011.
2. H.E. Sutker P.B (2001) Introduction to Clinincal Psychology: Science, Practice & Ethics, Delhi: Pearson Education, Inc. Adams.
3. Millon, T., Blaney, P., & Davis, R.D. (1998). The oxford textbook of psychopathology. London: Oxford University Press.
4. Smith, N.W. (2001). Current systems in psychology: History, theory, research & applications. USA: Wadsworth/Thomson learning.
5. American Psychological Association. (1998). Diagnostic and statistical manual of mental disorders (4th.ed.): text revision (DSM-1V-TR). New Delhi: Jaypee Brothers MedicalPublishers (pvt) Ltd

COURSE CODE – 23PF3CT203

STATISTICS IN SOCIAL SCIENCE

Learning Objectives:

After completing this subject we will be able to understand about

1. The basic concepts of statistics, need of statistics and central tendency & dispersion,
2. Sampling, hypothesis testing, data analysis using descriptive statistics.
3. How to analysis the problem using SPSS software.

Learning Outcomes:

On completion of the course the student would be able to:

1. Analyse the basic concepts of statistics in psychology.
2. Description and communication of data through advanced methods.
3. Explore parametric and non- parametric statistical tools for analysis and interpretation.
4. Illustrate hypothesis testing by use of inferential tools.
5. Apply qualitative data analysis for in depth explorations

UNIT – I Statistics: Meaning, Definition and Importance: Raw Score, Class Intervals - Continuous and Discrete Series, Construction of Frequency Tables, Measures of Central Tendency: Mean Median and Mode - Meaning, Definition, Importance, Advantages and Disadvantages. Calculation of Mean, Median and Mode.

UNIT –II Measures of Variability- Range, Quartile Deviation, Mean/Average Deviation, Standard Deviation-Meaning, Definition and use. The Normal Curve: Meaning, Principles, Laws, Properties and Uses. Divergence from Normality-Skewness and Kurtosis. Scoring Scales- Sigma scale, Z Scale, T Scale.

UNIT – III Correlation- Pearson Product Moment Correlation, Spearman Rank Order Correlation, Phi Correlation, Biserial Correlation Partial and Multiple Correlation. Regression Lines.

UNIT – IV Testing of Hypothesis - Procedure, Types of Hypothesis, Level of Significance, One Tailed and Two Tailed Test, Degrees of Freedom, Test of Significance for Difference of Means- t Test -Independence and Dependence Test, Z-Test, One Way Analysis of Variance.

UNIT – V Non Parametric: Chi Square Test – Equal Occurrence Test, Independence of Attributes, Contingency Coefficient; Graphical Representation – Line Diagram, Bar Diagram- Multiple Bar Diagram, , Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, and Pie Diagram – introduction of SPSS Package.

Reference Books

1. Berg, “Essential of Research Methods in health Physical education”, Lippincott William and Wilkins Publisher.
2. Rothstein, Anne L. (2006), “Research Design and Statistics for Physical Education, Englewood Cliffs, and New Jersey: prentice Hall Inc.
3. Blum, J.R., and Fattu, N.A. 1954. Nonparametric methods.Rev.Educ.Res. 24, 467-487.
4. Conover, W.J. Practical Nonparametric statistics, 2nd edition. New York; John wiley& sons, 1980.
5. Gibbons, J.D., and Chakraborti. S., Nonparametric Statistical Inference, 3d ed., New York, Marcel Dekker. 1992.
6. Clarke, David H. Clarke, Harrison H. Research Process in Physical education, New Jersey: Prentice Hall Inc.1984.
7. Mohanty, B., & Misra, S. (2019). Statistics for behavioural and social sciences. New Delhi, India: Sage Publications.
8. Jerry R. Thomas, Jack K. Nelson and Stephen J. Silverman., Research methods in Physical Activity (5th Ed), New York: Human Kinetics, 2005.
9. Kraft, Charles H. and Van Eeden. Constance A Nonparametric Introduction to Statistics. New York: Macmillian, 1968.
10. Owen, D.B. Handbook of Statiscal Tables. Reading, Mass; Addison- Wesley, 1962.
11. Ruyon, R.P, Haber, A, Pittenger, D.J., & Coleman, K.A. (2010). Fundamentals of behavioural statistics. New York, NY: McGraw Hill.
12. Siegel, Sidney. Nonparametric statistics for the behavioural Sciences. New York: McGraw-Hill, 1956.
13. VarmaJ.Prakash; Sports Statistics Copyright 2000 by Venus Publication.

COURSE CODE – 23PF3CE003

DISCIPLINE SPECIFIC ELECTIVE – 3

MEDICAL SOCIOLOGY

Objectives:

The main objective of this course is to overview the social facets of health, disease, illness, and the organization/delivery of medical care and health care. Also, to investigate the impacts of social and institutional variables on health behaviour.

Course Learning Outcomes:

On completion of the course the student would be able to:

1. Review, critique, discuss, and provide examples of a variety of theories, research, and issues related to medical sociology.
2. Apply sociological theories, concepts, and research to their own experience of health, illness, and health care.

UNIT I Emerging relationship between medicine & sociology-Definition, scope & aims of medical sociology-Concept & Dimensions of Health

UNIT II Basic concepts- Disease, Illness, Sickness- The Sick Role- Social etiology and social epidemiology and its variables- Preventive and social medicine

UNIT III Causes of Illness, Modes of Therapy & systems of Medicine – Social causes of illness:Attitudes, Beliefs & Values associated with diseases and illness-Mode of therapy: Curative, Preventive and rehabilitative- System of Medicine in India: Ayurveda, Unani, Allopathy, Homeopathy and their different approaches to health

UNIT IV Hospital as a Social Organization- Meaning & function of Hospital- Types of Hospital : General, Specialty, Sanatoria, Dispensaries, teaching & Corporate Hospitals- Interpersonal relationship in hospital settings: Doctors, Nurses, Paramedical & their relationship with Patients

UNIT V The State & Health : Health Problems in India :Mental disorder, Aging, Reproductive Health – Health Policy & Programmes in India – Ethical Issues in Medical and Health care

REFERENCES:

1. Cockerham William C. Medical Sociology, Prentice Hall, N.J.1978

2. Howard E Freeman /Soilevine ,Handbook of Medical Sociology ,N.J

1. *Park & Park, Preventive & Social Medicine*
2. *Prabhakaran C.N. Preventive and Social Medicine, Jaypee Brothers, Medical Publishers, 2004*

COURSE CODE – 23PF3CE004

DISCIPLINE SPECIFIC ELECTIVE – 4

PSYCHOMETRICS

Objectives:

The objective of this course is to enlighten students the concepts, historical evolution and ethical consideration of administering psychometric testing.

Course Learning Outcomes:

On completion of this course the student should be able:

1. To appraise testing in psychology.
2. Interpret and assess the role of psychological testing in various settings.
3. Effectively synthesize and apply the variations in scales and tests.
4. Recognize the various types of psychological tests
5. Organize the various steps in construction of a psychological test.
6. Review the ethical issues surrounding psychometric evaluation in day to day life

UNIT I TEST CONSTRUCTION

Defining the test – Classification of tests – Characteristics of standardized test – Brief history of testing – Scaling – Selecting a scaling method. Representative scaling methods. Constructing the items. Testing the items. Revising the test. Publishing the test.

UNIT II CONSTRUCTION OF INTELLIGENCE TESTS

Item writing for Intelligence tests: Analogies, odd-man-out, sequences. Tests of ability and attainment: Content of items, multiple choice items. Advantages of multiple choice items. True-false items, matching items, choosing the item type. Other item types, arrangement of items for a test trial, guessing. Constructing Personality Inventories- Problems in constructing personality Inventories. Writing items for personality Inventories: item forms, guidelines for item writing. Eliminating response sets. Item content.

UNIT III CONSTRUCTION OF OTHER TYPES OF TESTS

Objective tests: Advantages, principles, stimulus-instruction situation, and response scoring parameters. Distinction between objective tests of ability, temperament and dynamics. Practical hints for objective test construction in personality and motivation. Differential motivation of different subjects. The influence of ability and achievement on objective test scores. Group vs Individual tests. Objective test dimensions. Projective tests-construction of projective tests. Item writing for mood and state scales. Attitude measurement: types of attitude scales.

UNIT IV ITEM ANALYSIS

Important variables for item analysis. Two indices in item analysis-correlations of items and the total score, choice of item –analytic statistics. Item scoring and item analysis-Item difficulty, Item discrimination, Item response theory. Selection of items after item analysis. Rewriting items. Failure to form a test.

UNIT V TEST STANDARDIZATION

An overview of the different types of reliability. Factors affecting reliability and validity-Generalizability of test scores. Using reliability information. Factors affecting reliability estimates. Special issues in reliability. Interpretation of reliability coefficient. An overview of the different types of validity. Validity coefficient and error of estimate-conditions affecting validity coefficient. Magnitude of validity coefficient. Standardizing the test-obtaining a representative normative sample. Sampling specific groups. Rules for sampling special groups.

Norms -Meaning and purpose of norms. Raw score transformation. Percentile and percentile ranks, standardized scores. Normalizing standard scores .T scores, stanines, sten scores and C scale. Selecting a norm group--age and grade norms. Local and sub group norms. Criterion referenced tests and norm referenced tests.

References

1. Anastasi, A., & Urbina, S. (2017). Psychological testing. (7th ed). Chennai, India: Pearson India Education Services Pvt. Ltd.
2. Gregory, R.J. (2017). Psychological testing. (7th ed.). Chennai, India: Pearson India Education Services Pvt. Ltd.
3. Husain, A. (2012). Psychological testing. Noida, India: Dorling Kindersley (India) Pvt. Ltd.
4. Kline, P. (2015). A hand book of test construction: Introduction to psychometric design. New York, NY: Methuen

COURSE CODE – 23PF3GE002

GENERIC ELECTIVE - 2

Objectives:

Course Learning Outcomes:

A student admitted in the Department of Sports Psychology & Sociology has to opt for the Generic Elective (GE) Course offered by other departments. As an example, a student admitted under M.Sc. Psychology programme can't opt for the Generic Elective Courses offered by Department of Sports Psychology & Sociology.

GENERIC ELECTIVE PAPERS OFFERED BY VARIOUS DEPARTMENTS IN THE EVEN SEMESTER (SECOND SEMESTER)

Department	Name of the Generic Elective Paper	Brief Description
Sports Management		
Yoga		
Exercise Physiology & Nutrition		
Biomechanics		
Sports Technology		

Physical Education		
Advance Training & Coaching		

COURSE CODE – 23PF3L201

PRACTICUM – II

PSYCHOLOGICAL TESTING - II

Objectives:

The main objective of this course is that the Psychological measurement and testing promotes competence in theories and method of psychological assessment, construction and standardization of psychological test.

Course Learning Outcomes:

On completion of this course the student should be able:

1. Analyze and apply the understanding of psychological testing.
2. Interpret and assess the role of psychological testing in various settings.
3. Recognize the various types of psychological tests
4. Organize the various steps in construction of a psychological test.
5. Review the ethical issues surrounding psychometric evaluation, testing and interpretation in day to day life

Students are required to conduct and record any 08 experiments.

1. Bhatia's Battery of Test of Intelligence
2. Projective Test – Sentence Completion
3. Mindfulness
4. Performance Failure Appraisal
5. Depression, Anxiety and Stress
6. Profile of Mood States
7. Myer Briggs Personality Types
8. Psychological Performance Adjustment
9. Adjustment
10. Emotional Intelligence

/

REFERENCES:

1. *Woodworth, R.S. and Scholsberg (1972), Experimental psychology. Holt, Rinehart & Winston.*
2. *Anastasi & Susana Urbina (2004) 7th Edition, Psychological Testing, Pearson Education Inc, New Delhi..*
3. *Parameswaran & Ravichandran. (2003). Experimental psychology. Neel Kamal Publications.*

COURSE CODE – 23PF3AE201

BASICS OF COMPUTER APPLICATIONS

Objectives:

This course aims at providing exposure to students in skill development towards basic office applications.

Course Learning Outcomes:

After successful completion of the course, student will be able to:

1. Demonstrate basic understanding of computer hardware and software.
2. Apply skills and concepts for basic use of a computer.
3. Identify appropriate tool of MS office to prepare basic documents, charts, spreadsheets and presentations.
4. Create personal, academic and business documents using MS office.
5. Create spreadsheets, charts and presentations.
6. Analyze data using charts and spread sheets.

Unit-I:

Basics of Computers: Definition of a Computer - Characteristics of computers, Applications of Computers – Block Diagram of a Digital Computer – I/O Devices, hardware, software human

ware, application software, system software, Memories - Primary, Auxiliary and Cache Memory.

MS Windows – Desktop, Recycle bin, My Computer, Documents, Pictures, Music, Videos,

Task Bar, Control Panel.

Unit-II:

MS-Word : Features of MS-Word - MS-Word Window Components - Creating, Editing, Formatting and Printing of Documents – Headers and Footers – Insert/Draw Tables, Table Auto format – Page Borders and Shading – Inserting Symbols, Shapes, Word Art, Page Numbers, Mail Merge.

Unit-III:

MS-Excel : Overview of Excel features – Creating a new worksheet, Selecting cells, Entering and editing Text, Numbers, Inserting Rows/Columns –Changing column

widths and row heights, Formulae, Referencing cells , Changing font sizes and colors, Insertion of Charts, Auto fill, Sort.

MS-PowerPoint: Features of PowerPoint – Creating a Presentation - Inserting and Deleting Slides in a Presentation – Adding Clip Art/Pictures -Inserting Other Objects, Audio, Video - Resizing and scaling of an Object – Slide Transition – Custom Animation.

Unit- IV:

Use of Internet:

Internet, World Wide Web, popular web browsing software, search engines, web pages, website, URL, e-mail, Applications of Internet.

REFERENCE BOOKS:

1. Working in Microsoft Office – Ron Mansfield - TMH.
2. MS Office 2007 in a Nutshell –Sanjay Saxena – Vikas Publishing House.
3. Excel 2020 in easy steps-Michael Price – TMH publications

SEMESTER - III

PAPER CODE	PAPER TITLE
23PF3CT301	Fundamentals of Counselling Skills
23PF3CT302	Advanced Social Psychology
23PF3CT303	Psychopathology - II
Electives (Discipline Specific)	
23PF3CE005	Gender and Society
23PF3CE006	Health Psychology
23PF3L301	On-field Psychological Support & Assessment – Practicum - III
23PF3AE301	Soft Skill – III (Life Skills Management)
23PF3IT301	Internship

COURSE CODE – 23PF3CT301

FUNDAMENTALS OF COUNSELING SKILLS

Objectives:

This course offers good progression to those seeking to attain an initial step towards being an accredited counsellor status and further enhance their functional role at work and in a personal capacity. It also aims to provide students with a sound level of competence in the use of counselling skills. This course will provide each student to develop and demonstrate theoretical models supported by a substantial body of idea related to approaches to counselling skills.

Course Learning Outcomes:

After successful completion of the course, student will be able to:

1. Apply and develop conceptual difference between guidance counseling & psychotherapy.
2. Develop technique and implication of applied counseling skills in areas of practice.
3. Evaluate counseling theories & their application to the outside world.
4. Evaluate various psychotherapies and schools in counselling techniques.
5. Develop skills of eclectic therapeutic plans.

UNIT I

Introduction: Definition – Development and goals- History and Current trends in counseling – Counselor – the nature of counselor's work - counselee relationship - counseling process: Steps – purposes of counseling - scope of counseling – characteristics of effective counseling

UNIT II

Approaches to Counseling: Directive, Non-directive, Psychoanalytic, Humanistic, Reciprocal inhibition technique, Eclectic approach - Basic Counseling Theories – Psychoanalytic theory, Adlerian theory, Existential theory, person centered theory, gestalt theory- Counselling in India - legal and ethical issues: ethical issues – ethical dilemmas – legal concerns of counselor.

UNIT III

Special areas: Family counseling, students counseling, parental counseling, educational, vocational and career counseling - Counseling Interview: Communication, verbal, nonverbal, interview, techniques of interview, relationship technique, problem

identification and exploration, sharing, transference, counter transference. - Counseling the special population - global counseling and trauma counseling

UNIT IV

Professional Preparation & Training**:** Selection, skills, counseling as a profession, desirable characteristics - Modern Trends: Career guidance, Functions of counselor, stages of counseling - Techniques: Egan's Model, Interviews, testing-– Mastering the techniques of counseling :

UNIT V

Group Counseling **–** Definitions –– values of group Counseling - Group therapy – Training & Sensitivity groups – Group process and group dynamics - Group Counseling and Group therapy; Group vs. Individual Counseling; Types of groups - Issues in Group Counseling.

REFERENCE:

1. Lewis E. Patterson and Elizabeth Reynolds Welfel (2000). The Counselling Process, 5th
   edition, Wasworth Brooks / Cole, Thomson Learning.
2. S. Narayana Rao (1981) Counselling Psychology, Tata McGraw Hill Publisher.
3. Brammer. L.M. and Shostrom E.L. (1977) Therapeutic Psychology, Englewood Cliffs, New Jersey.
4. Feltham. C & Horton. I (2000) Handbook of Counselling and Psychotherapy, London : Sage Publication.
5. Nelson - Jones, R. (1995). The Theory and Practice of Counselling, 2nd Edition, London : Cassell.
6. Covey, G. (2008). Theory and Practice of Counselling and Psychotherapy (8th ed.) Canada: Brookes/Cole.
7. Covey, G. (2008). Student manual for Theory and Practice of Counselling and Psychotherapy (8th ed.). CA: Brooks/Cole.
8. Burl E. Gilland & Richard K. James (1998). Theories and Strategies in Counselling and Psychotherapy. Singapore: Allyn and Bacon.
9. James O. Prochaska & John C. Norcross. (2007). Systems of Psychotherapy: A trans theoretical analysis (6th ed.). Thomson-Brooks/Cole.
10. Palmer, S. (ed.). (1999). Introduction to counselling and psychotherapy: The essential

guide. New Delhi: Sage.

11. Simon, L. (2000). Psychotherapy: Theory, practice, modern and post modern influences.

    Westport, Connecticut: Praeger.

12. Sharf, R.S.(2000). Theories of psychotherapy and counselling: Concepts and cases (2nd

    ed.).Singapore: Brooks/Cole.

COURSE CODE – 23PF3CT302

HUMAN GROWTH AND DEVELOPMENT

Objectives:

The major aim of this course to familiarize the students to the social, emotional and physical development of a child through various stages.

Course Learning Outcomes:

1. Appraise the students to the shades of development as a process.
2. Explain and analyze the theoretical viewpoints in relation to Developmental Psychology
3. Develop the skills to analyze etiology, symptoms and prognosis of developmental disorders
4. Developing knowledge and skills in different aspects of Learning and Motivation as implied in Educational Settings.

UNIT I: Life span development: issues and Theories: Introduction - Life span approach: The context of development – the impact of culture on development – the study of human development: The continuity of development – Determinants of Development – Major contemporary theories: Psychoanalytic, Cognitive and Behavioral

UNIT II: The Beginning Year: Genetics, Pregnancy, Birth and infancy : Genetic Foundations – The process of Conception – Prenatal Development – Stages of Prenatal development - Effects of prenatal environment – Birth : The Birth Process – Child birth methods – Complications – Infancy : Physical, perceptual, Cognitive , social and personality Development

UNIT III: Early childhood, Middle Childhood and Adolescence : Physical : Size and Proportion- Motor Development- Physical fitness – puberty- language – Structure of Language- language acquisition - concrete operational thought – Moral reasoning information processing : Attention- Memory – Disabilities in children- personality : The Development of self – Freud and Erikson's stage of personality – social : The child's Social world : Aggression, pro social behaviour - social play- self socialization

UNIT IV: Adulthood: Early, middle and late Adulthood – Physical, Cognitive, Personality, occupational , Family, Social relations and Adjustment – The impact of growing older- Metal health and aging – relations with grandchildren- retirement

UNIT V: Old Age : Death, Dying and Bereavement: Death: The Final Stage of life – The Dying Process: Kubler - Ross's Stage of Dying – Near Death Experiences – Issues in the care of Dying – Hospital Care – Bereavement.

References:

1. *Gormly, A.V. and Brodzinsky, D.M. Lifespan Human Development. NY: Harcourt Brace College Publishers 1993*
2. *VendarZanden, J.W. Human Development . New Delhi: McGraw Hill. Inc. 1993*
3. *Human Development – Elizabeth Hurlock Human Development - Papalia*

COURSE CODE – 23PF3CT303

PSYCHOPATHOLOGY – II

Objectives:

This course helps to assess and observe clusters of psychiatric symptoms and robustly categorize them into DSM IV-TR /DSM 5diagnostic categories, using the multiaxial assessment.

Course Learning Outcomes:

On completion of this course students would be able to:

1. To assess the symptoms, nature, causes and dysfunctions associated with these disorders.
2. To understand the intervention programs with regard to the goals of therapy.
3. Develop an understanding of etiology of various mental health symptoms and illnesses.
4. Develop familiarity with the usual clinical course of each specific mental illness.

UNIT I : Psychotic Disorder : Schizophrenic disorders – Definition – Characteristics- positive symptoms : Delusions, Hallucinations, Disorganized speech , disorganized and albizarre behavior - negative symptoms :Flat affect, poverty of speech, loss of directedness of motivation – loss of energy – loss of feelings of pleasure – Major subtypes of Schizophrenia – Therapeutic approaches

UNIT II : Anxiety , Obsessive Compulsive and Stress related Disorders : Anxiety Disorder – Symptoms and theoretical perspectives: Panic Disorder, Social Anxiety Disorder, Phobias, Generalized Anxiety Disorder, Obsessive Compulsive Personality disorder, PTSD and Adjustment disorders

UNIT III: Personality Disorder : Major personality disorders – its characteristics – paranoid personality disorder – schizoid personality disorder- Schizotypal personality disorder- Narcissistic personality disorder – borderline personality disorder – Antisocial Personality disorder – Avoidant Personality Disorder - Dependent personality distorder –– Treatment and outcomes.

UNIT IV : Bipolar and Depressive disorder : Symptoms, etiology, comorbidity : Bipolar I and II Disorder, Cyclothymic disorder, substance/mediation induced bipolar

and related disorder. Treatment: Lithium and mood stabilizers, adjunctive psychotherapy.

Depression: Symptoms, etiology, comorbidity: disruptive mood dysregulation disorder, major depressive disorder (including major depressive episode), persistent depressive disorder (dysthymia), premenstrual dysphoric disorder, substance/medication-induced depressive disorder, Psychological approaches- psychodynamic, behavioral, cognitive therapies Sociocultural approaches- multicultural treatment, family-social treatment Biological approaches- ECT, Antidepressants, brain stimulation,

UNIT V: Disorders of Infancy, Childhood and Adolescence : Disorders of Infancy, Childhood and Adolescence: Specific developmental disorder Learning Disability, ADHD Speech and Language Disorder, Causes, Assessment & Treatment; Pervasive developmental disorders: Autism Spectrum disorder, Aspergers syndrome, PDD NOS Causes, Assessment & Treatment; Behavioral and emotional disorders: Causes, Diagnosis & Treatment; Disorders of social functioning: Causes, Assessment & Treatment; Developmental Psychopathology in Indian context.

REFERENCES:

1) Comer, R.J. (2013). Abnormal Psychology. (8th ed). Worth Publishers.

2) DSM V 3

3) Sarason & Sarason (2005). Abnormal Psychology.(11thed). Pearson Education

Additional Reading:

1) American Psychiatric Association (2000).Diagnostic and statistical manual of mental disorders (4th ed., text rev.). Washington, DC: Author.

2) World Health Organization. (1992). ICD-10 Classifications of Mental and Behavioural Disorder: Clinical Descriptions and Diagnostic Guidelines. Geneva. World Health Organization (WHO).

3) Carson (2007). Abnormal Psychology.(13thed). Pearson Education.

COURSE CODE – 23PF3CE005

DISCIPLINE SPECIFIC ELECTIVE – 5

TEAM COHESION AND GROUP DYNAMICS

Objectives:

The main objective of this course is to focus more on the entire group rather than their individual selves and are more motivated to work towards the team goal.

Course Learning Outcomes:

On completion of this course students would be able to:

1. Demonstrate a basic understanding of different types of groups.
2. Demonstrate ability to identify the major characteristics of each of the stages of a group.
3. Demonstrate knowledge of the major tasks of group leadership at each of the group stages.
4. Demonstrate an understanding of the roles and expectations of group members at the various stages of a group.

UNIT I:

Introduction What is team – team Development, team Goals – what is Cohesiveness – team cohesiveness – measurement of cohesiveness – cohesiveness and performance – group cohesion – characteristics of group cohesion – factors affecting group cohesion.

UNIT II:

Groups and Teams What is a group – evaluation structure – communication structure – role structure – group development – intra & inter group processes – group and team dynamics.

UNIT III:

Building a Great Team Create a mission – Team Building – Team Communication - Assessing team qualities & responsibilities – create a motivational action plan – evaluate a team work through constructive feedback – trait of an effective team.

UNIT IV:

Group interaction and integration Cooperation and competition – leadership – group interaction & communication – personal social factors – cohesiveness and group development – achievement factors – attribution for causality – achievement rewards – decision making groups.

UNIT V:

The Sport Team Systematic model for group interaction – personal factors – personality, interpersonal compatibility, individual ability, motivation – environmental factors – nature of tasks – behavioral norms of the group – performance norms in the group.

REFERENCES:

1. Daisy S. (2007) – Psychology of Team Sports, Sports Publications, New Delhi.

2. Mark R. Beachang and Mark A. Eys (2014) –Group Dynamics in Exercise and Sports Psychology, 2nd Edition, Routledge, Taylor and Francis Group, London & New York.

3. Martens, R. (1987) – Coaches Guide to Sport Psychology, Human Kinetics Publishers, Champaign, Illinois

COURSE CODE – 23PF3CE006

DISCIPLINE SPECIFIC ELECTIVE – 6

HEALTH PSYCHOLOGY

Objectives:

This course will provide each student to explore many ways in which psychological theory can impact on health, behaviour and health care systems.

Course Learning Outcomes:

On completion of this course students would be able to:

1. To analyze Historical perspective on Health & Illness.
2. Introduction on how theoretical and empirical findings are applied to improve the lives and development of individuals and groups with the help of health psychology.
3. Analyze and critically evaluating fundamental issues, with a particular focus on how to promote health across a range of settings this course will be relevant for students who want to work in health settings.

Unit I: Introduction: An Introduction to Health Psychology: Meaning of Health Psychology -Relating Health Psychology to other fields -Nervous and Body system functions –The Endocrine System – The digestive System – The respiratory system – The Cardiovascular System – The Immune System.

Unit II : Enhancing Health and Prevention : Smoking – Reasons for smoking– Smoking and Health – Preventing and Quitting smoking – Alcohol use and abuse: Alcoholics– Reasons for use and abuse of alcohol– Preventing and treating for Alcohol abuse. Drug use and Abuse: Preventing and Stopping drug abuse. Nutrition: Consumption – Nutrition and Health – Weight control and diet – Exercise.

Unit III: Health and Treatment: Health Services – Perceiving and Interpreting systems – Using and misusing health services – The Patient-Practitioner relationship – adhering to medical advice. The hospital – Being hospitalized – Psychological problems of hospitalized patients.

Unit IV: Health and Stress Management : Stress - Definitions- Models of Stress – Theories of Stress - Stress reactions – Coping and Stress Management techniques-

Pain and its management - Psychological reactions of a patient to loss – Stages of Acceptance by Kubler-Ross.

Unit V: Health Management and rehabilitation : Management of Chronic and Terminally ill –Quality of Life – Social support and rehabilitation. Role of Indian Treatment – Yoga Asanas – Principles in Yoga Practice – Pranayama.

REFEFENCES:

1. *Shelley E. Taylor. Health Psychology Third Edition.McGraw HillInternational Editions, 1995.*
2. *Neil Niven, Health Psychology Second Edition. Churchill Livingstone,London.*
3. *Taimini. L.K. (1973).Glimpses into the Psychology of Yoga – TheTheosopihical Publication House, Chennai.*

COURSE CODE – 23PF3L301

PRACTICUM – III

ON-FIELD PSYCHOLOGICAL SUPPORT & ASSESSMENT – I

Objectives:

Course Learning Outcomes:

Psychological assessment is processed on the field for evaluating the mental health and behavioral functioning of athletes through the use of standardized tests, observations, and other methods. The students pursuing M.Sc. Psychology will typically conduct these assessments with the particular sport throughout the semester and submit a detailed report to pursue the credits. The Viva-voce will be conducted for the same with the internal examiners.

COURSE CODE – 23PF3AE401

LIFE SKILLS MANAGEMENT

Objectives:

Course Learning Outcomes:

Unit I: Introduction: Soft Skills - Concepts and Definition- Need and importance of Soft Skills – Developing Soft Skills – Implications on Youth Development .

Unit II: Behavioral Skills : Attitude, Lateral Thinking , Emotional Intelligence, Leadership, Team Building and Interpersonal Skills.

Unit III

Social Skills and Negotiation Skills: Self Awareness and Empathy , Influencing, - Effective Communication –Oral Presentation Skills – Interviewing – Delegating.

Unit IV: Thinking Skills: Critical Thinking and Creative Thinking – Problem Solving and Decision Making skills.

Unit V: Coping Skills : Coping with stress and Emotions – Conflict Resolution – Negotiating - Time and Stress Management Skills.

Reference Books

1. G. Ravindran, S P Benjamin, Elango and R. Arokiam (2007) - Success through Soft Skills, ICT.
2. Kamin M (2013) Soft Skills Revolution: A Guide for Connecting with Compassion for Trainers, Teams, and Leaders. ISBN: 978-1-118-10037-0

SEMESTER - IV

PAPER CODE	PAPER TITLE
23PF3CT401	Counseling and Behavior Modification
23PF3CT402	Organizational Behaviour
23PF3CT403	Training and Development
Electives (Discipline Specific)	
23PF3CE007	Positive Psychology
23PF3CE008	Psychotherapy
23PF3TH401A	Thesis
23PF3TH401B	Viva-Voce
23PF3L401	On-field Psychological Support & Assessment – Practicum - IV
23PF3AE401	Soft Skill – IV (Yoga & Meditation)
23PF3EA401	Extension Activity

COURSE CODE – 23PF3CT401

COUNSELING AND BEHAVIOR MODIFICATION

Objectives:

Course Learning Outcomes:

UNIT I

Basic concepts – Meaning of Counseling –Goals of counselling – counselling process – characteristics of counselor – Group counselling – special areas of counselling - applied areas multicultural counselling – Ethical issues- Psychotherapy – Effectiveness Of Psychotherapy

UNIT II

Approaches to counselling, person centered, Gestalt, Psychoanalytic, Cognitive, Trait factor, Behavioral and eclectic approach - Assessment Techniques - Important Factors – Tools of Assessment- Theories : Psychodynamic – Psychoanalytic and Adlerian Therapy Cognitive and Behavioural therapy: Behavioural Therapy – OCD, Cognitive: Beck's Cognitive Restructuring Therapy

UNIT III

Basic concepts of Behaviour Modification: Behaviour Counselling: Salient Features Enhancement of Client's Involvement – Some Misconceptions about Behavioral Approach. Relaxation Techniques: Jacobson's Deep Muscle Relaxation Training, Autogenic Training, Yoga and Meditation. Application of Behavior Therapy: Anxiety Disorders, Psychoactive substance use disorders, Sexual Disorders

UNIT IV

Assertion Training – Basic Dimensions – Training procedure – Components of Social Skill Training – Uses of social skill training – Precautionary points – systematic desensitization -. Operant Conditioning Techniques – Basic Paradigm – Schedules of Reinforcement – Aversive Conditioning and application – Token Economy – Shaping – Chaining – Other Operant Procedures, Premack's Principle and Prompting.

UNIT V

Cognitive Behaviour Modification – Fundamental Aspects – Cognitive Restructuring – Meichenbaum's Self Instructional training – Beck's Model – Rational Emotive Therapy (Ellis) – Thought Stopping and Variations – Problem Solving Techniques.

REFERENCES:

1. Corey, G (2005), Theory and Practice of Counseling and Psychotherapy, 7th Edition, Scarborough, Brooks/Cole.
2. Martin, G & Pear J (2000) Behavior Modification (7edition), New Delhi, Prentice Hall of India Pvt. Ltd.
3. Wolpe, J (1982), Practice of Behavior Therapy (3rd edition), New York, Oxford Pergamon Press Inc.
4. Nelson-Jones, R. (1994). - The theory of practice of counseling psychology – Cassel London.
5. Rimm, D.C. and Masters, J.C. (1974), - Behaviour Therapy: Techniques and Empirical Findings. New York: John Wiley and Sons.
6. Robert C. Carson. James. N. Butcher and Susan Mincka (1996) - Abnormal Psychology and Modern Life, 10th Edition, New York; Harper Collins College Publishers.
7. Swaminathan V.D. and Kaliappan, K.V. (1997), Psychology for effective living – Behaviour modification, Guidance, Counselling and Yoga, Chennai. The madras Psychology society publication.

COURSE CODE – 23PF3CT402

ORGANIZATIONAL BEHAVIOR

Objectives:

Course Learning Outcomes:

UNIT- 1 INTRODUCTION TO ORGANISATIONAL BEHAVIOR

Definition of Organisational Behaviour, Theoretical foundation for Organisational Behaviour, Fundamental concepts of Organisational Behaviour, Basic approaches of Organisational Behaviour, Models of Organisational Behaviour, Limitations of Organisational Behaviour, Challenges of Organisational Behaviour

UNIT- 2 INDIVIDUAL RELATED COMPONENTS AND PROCESSES INORGANISATIONAL BEHAVIOR

Personality, Perception, Attribution, Motivation, Stress, Decision making, Application in OB - Job Satisfaction - Job Involvement – Organizational commitment – organizational citizenship behavior – Meaning – Application.

UNIT3 GROUP RELATED COMPONENTS AND PROCESSES INORGANISATIONAL BEHAVIOR

Group Dynamics: Types of groups – Group norms – Group Cohesiveness – Teams, Communication, Leadership, Power and Politics, Conflict Resolution and Cooperation

UNIT- 4 ORGANISATION RELATED PROCESSES AND OUTCOMES

Organisational structure, Organisational designs, Organisational justice ethics and Corporate Social Responsibility, Creativity in organisations, Reward systems, Organisational Commitment and Organisational Citizenship Behaviour.

UNIT- 5 CONTEMPORARY TRENDS IN ORGANISATIONAL BEHAVIOR

Contemporary Organisational Designs, Positive Organisational Behaviour and Psychological Capital, Empowerment and Participation, Managing an International workforce

REFERENCES

1. Luthans, F. (2013). *Organisational behaviour.* (12th ed.). New Delhi, India: McGrawHill Education (India) Private Limited
2. Luthans, F. (1998). *Organisational behaviour*. (8th ed.). New Delhi, India: McGrawHill Education (India) Private Limited
3. Newstrom, J.W., & Davis, K. (2002). *Organisational behaviour*. (11th ed.). NewDelhi, India: McGraw Hill Publishing Company Limited
4. Robbins, S.P., Judge, T.A., & Vohra, N. (2011). *Organisational behaviour*. (14th ed.).New Delhi, India: Pearson Education
5. Robbins, S.P., & Sanghi, S. (2006). *Organisational behaviour*. (11th ed.). New Delhi,India: Pearson Education
6. Greenberg, J., & Baron, E.A. (2008). *Behaviour in organisations* (9th ed.). NewDelhi, India: PHI Learning Private Limited
7. Andre, R. (2009). *Organisational behaviour*. New Delhi, India: Pearson Education

COURSE CODE – 23PF3CT403

TRAINING AND DEVELOPMENT

Objectives:

Course Learning Outcomes:

UNIT-I NATURE AND MEANING OF TRAINING AND DEVELOPMENT

Training: Definition, Development: definition - Nature & Scope; Reasons for Training; Skills and Qualities of a trainer – Learning Process in Training

UNIT-II ASSESSING NEEDS AND DEVELOPING LEARNING OBJECTIVES

Need Assessment: Reasons, methods of data collection, criteria to be used to select a datagathering method

General Features of adult learners; basic learning styles of participants; factors influencingthe learning process

Writing objectives: SMART objectives, ideas for writing objectives, task analysis

UNIT-III TRAINING METHODS

On-the-job and off-the-job technical training - Principles of learning and the choice of methods. Lecture method, the case method, syndicate method, Group discussion, Brainstorming, Simulation, business game, role play, programmed learning, in basket exercise. Experiential learning techniques, audio visual aids - Training approaches to improve Productivity and quality - TQM, Quality Circles, KAIZEN.

UNIT-IV DESIGNING AND CONDUCTING TRAINING PROGRAMMES

Conducting training programmes, Explaining the four training styles, Gauging group dynamics, Training like a professional: presentation skills, participation materials, asking and answering questions, smooth transitions, wrap up and effective training sessions - Management Development: The nature of the

Managerial job- Knowledge and Skills requirements of managers-Management Development Programs and Techniques; Career Planning and Development.

UNIT-V EVALUATION OF THE TRAINING:

Purpose, Kirkpatrick's four levels of evaluation, guidelines for measuring the four levels, Evaluation methods, ROI – process and benefits.

REFERENCES

1. Biech, E. (2005). *Training for dummies.* Hoboken, NJ: Wiley Publishing Inc.
2. Singh, P.N. (1996). *Training management development.* (4th ed.). Mumbai,India: Suchandra Publications.
3. Hardingham, A. (1998). *Training essentials-psychology for trainers.* London,England: Chartered Institute of Personnel & Development.
4. Joyce P., & Sills, C. (2010). *Skills in Gestalt counselling & psychotherapy,* (2nd ed.). New Delhi, India: Sage Publications.
5. Agochiya, D. (2002). *Every trainer's handbook.* New Delhi, India: Sage Publications.
6. Blanchard, N. P., &Thacker, J. W. (2009). *Effective training: systems, strategies and practices.* New Delhi, India: Pearson Education.
7. Lynton, R. P., & Pareek, U. (2013). *Training for Development*. (3rd ed.) New Delhi, India: Sage Publications

COURSE CODE – 23PF3CE007

DISCIPLINE SPECIFIC ELECTIVE – 7

POSITIVE PSYCHOLOGY

Objectives:

Course Learning Outcomes:

Unit I: Positive Psychology : Introduction, Importance of Positive Emotions, Emotions and Motivation, The Evolutionary Need, Biology of Positive Emotions and Pleasure, Emotional Intelligence, Moods and Psychological Well-Being,

Unit II: Positive Emotional States: Subjective well being-, The science of happiness and life satisfaction, Resilience in Development, Concept of flow, Positive affectivity, Social construction of self-esteem -Optimal Experience and Peak Performance,

Unit III: Health and Wellness : Interpersonal relationship - Enhancement of closeness, compassion, forgiveness and gratitude, love, empathy and altruism. Wellness, Health Psychology, and Positive Coping -.**:** Role of personal control in Adaptive functioning Optimism, Hope, Self efficacy, goal-setting for life and happiness

Unit IV: Positive Traits :, Excellence, Aesthetics, Creativity, and Genius, The Pursuit of Excellence, The Foundations of Excellence, The Creative Person, Process, Environments,. Interventions for Enhanced Well-Being, Dimensions of Positive Mental Health - Positive Psychology Interventions, Positive Psychotherapy, Positive Psychology in Educational Settings.

Unit V: Religion and Spirituality and Future : Religion, Spirituality, and Well-Being, Religiosity and Health, Cognitive-Developmental Perspectives on Faith,

Psychodynamic Perspectives on Religion, Work, Community, Culture, and Well-Being, Future Applications of Positive Psychology.

Reference:

1. *C.Synder and Shane, J.Lopez, (2007), Positive Psychology The Scientific and Positive Explorations of Human Strengths, Sage Publications, Haryana.*
2. *Shane. J. Lopez, The Handbook of Positive Psychology, Newyork: Oxford University Press*

COURSE CODE: 23PF3CE008

DISCIPLINE SPECIFIC ELECTIVE – 8

PSYCHOTHERAPY

Objectives:

Course Learning Outcomes:

UNIT 1

Psychotherapy: Nature and scope; Common goals and ingredients of psychotherapy; Types of psychotherapeutic intervention, structuring therapeutic relationship: Nature of client-therapist relationship, dimensions and stages of client therapist relationship, building the helping relationship; structuring the therapeutic situation

UNIT 2

Overview of Counselling Model- Stage I, Stage II and Stage III, Building the Helping relationship, Basic communication skills for Helping, Basic Communication Skills – I, Basic Empathy and Probing. Testing, Assessment and Diagnosis in Counselling; the role of Theories of Psychotherapy, Choosing a Theoretical Orientation to therapy.

UNIT 3

Psychoanalytic and Psychodynamic Theories: Psychoanalytic Therapy, Key concepts of Sigmund Freud, Therapeutic process; Ego Psychology; Object Relations Theory ;Self Psychology; Existential Therapy: Overview, Key Concepts in, Therapeutic Process, PersonCentred Therapy: Overview, Key Concepts, Therapeutic Process. Gestalt Therapy: Overview, Influence of Existential on Gestalt Therapy, Key Concepts in, Therapeutic Process: Case Analysis.

UNIT 4

Behaviour Therapy: Brief Overview, Key Concepts, Therapeutic process, Current trends, Applied Behavioural analysis. Cognitive Approaches to Psychotherapy: Brief overview of different Cognitive approaches, Rational Emotive Behaviour Therapy,

Cognitive Behaviour Therapy. Mindfulness Based Cognitive Therapy. Transactional Analysis: Brief Overview, Key Concepts, Therapeutic process

UNIT 5

Biologically based therapies: Biofeedback- Electromyography; Finger temperature; GSR; EEG; Areas of application; Psychopharmacological therapy: Overview of major psychotropic drug doses.

REFERENCES:

1. Brems, C. (2001). Basic skills in psychotherapy and counselling. Singapore: Brooks/Cole.

2. Corey, G. (1996). Theory and practice of counselling and psychotherapy (5th ed.). Pacific Grove, CA: Thomson Brooks/

COURSE CODE – PPY23TH401

THESIS

Objectives:

Course Learning Outcomes:

Students are required to submit a thesis at the end of the year. The thesis shall embody the record of original investigation under the guidance of a supervisor.

COURSE CODE – 23PF3L401

PRACTICUM – IV

ON-FIELD PSYCHOLOGICAL SUPPORT & ASSESSMENT – II

Objectives:

Course Learning Outcomes:

As a continuation of the previous semester on-field psychological assessment report the students shall recommend a specific training programme for the diagnosed athletes for a minimum period of 8 weeks to enhance their performance and repeat the test after the treatment period. Then submit a final report to pursue the credits. The Viva-voce will be conducted for the same with the internal examiners.

ABILITY ENHANCEMENT COURSE

COURSE CODE – 23PF3AE401

YOGA AND MEDITATION

Objectives:

Course Learning Outcomes:

Unit I: Introduction to Yoga and Yogic Practices

1. Yoga: Etymology, definitions, aim, objectives and misconceptions
2. Yoga: Its Origin, history and development
3. Rules and regulations to be followed by yoga practioners
4. Introduction to Yoga practices
5. Shatkarma: meaning, purpose and their significance in Yoga Sadhana
6. Introduction to yogic loosening practices and suryanamaskar

Key words: History and development of Yoga, Shatkarma, Common Yogic Practices.

Unit II: Breathing Practices and Pranayama

1. Sectional Breathing (Abdominal, Thoracic and Clavicuar)
2. Yogic Deep Breathing
3. Concept of Puraka, Rechaka and Kumbhaka
4. Concept of Bandha and Mudra
5. Anulmoa Viloma / Nadi Shodhana
6. Shitali
7. Bhramari

Keywords: Sectional breathing, Deep Breathing, Bandha & Mudra, shitali, Bhramari.

Unit III: Practices leading to Meditation

1. Recitation of Pranava Mantra
2. Recitation of Hymns, in vocations and prayers
3. Anter Maun
4. Breath Meditation
5. Om Dhyana

Key Words: Pranav Mantra, Antermaun, Breath Meditation, Om Dhyan.

Suggested Readings:

1. Singh S.P & Yogi Mukesh: Foundation of Yoga, Standard Publication, New Delhi, 2010.
2. Swami Dhirendra Brahmchari: Yogasanna Vijnana, Dhirendra Yoga Publication, New Delhi, 1966.
3. Saraswathi, Swami Satyanand: Asana, Pranayama, Mudra, Bandha (APMB), Yoga Publications Trust, Munger, 2013.
4. H.R.Nagendra: Asana, Pranayama, Mudra, Bandha, swami Vivekananda Yogprakashan Bangalore, 2002.
5. Ishwar Bhardwaj: Saral Yogasana, satyam Publishing House, New Delhi, 2018.
6. Shri Rai Singh Chouhan: Mudra Rahasya, Bhartiya Yog Sansthan, New Delhi, 2014.
7. Dr.Vishwanth Prasad Sanha: Dhyan Yoga, Bhartiya Yog Sansthan, New Delhi, 1987.
8. Shri Deshraj: Dhyan Sadhana, Bhartiya Yoga Sansthan, New Delhi, 2015.

COURSE CODE – 23PF3EA401

EXTENSION ACTIVITY

Objectives:

Course Learning Outcomes:

The students pursuing M.Sc. Psychology shall compulsorily take part in the outreach programme / volunteering opportunities / community service program at schools, colleges, old age homes, villages, juvenile homes and hospitals for 5-7 days. A detailed report with the letter of appreciation from the respective organization would be considered for pursuing the credits.

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY
CHENNAI- 600 127

SYLLABUS

M.Sc., SPORTS PSYCHOLOGY & SOCIOLOGY

(REGULAR-2023-2024)

DEPARTMENT OF SPORTS PSYCHOLOGY & SOCIOLOGY

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI - 600 127

DESCRIPTION OF THE PROGRAMME

M.Sc. Sports Psychology & Sociology is a two years programme offered by the Department of Sports Psychology & Sociology. This programme provides an opportunity for the students to learn the psychological knowledge and skills to address optimal performance and well-being of athletes, developmental and social aspects of sports participation, and systemic issues associated with sports settings and organizations. The department will integrate the both theoretical and practical knowledge of psychology and sociology to train the students to become a professional in the field of sports psychology / Sports Sociology.

REGULATIONS

The Choice Based Credit System (CBCS) for two years M.Sc., Degree programme in Sport Psychology & Sociology will be implemented from the academic year 2023-2024.

1. ELIGIBITLITY FOR ADMISSION

1.1 A Candidate shall be admitted to the degree of M.Sc., Sports Psychology & Sociology only if he/she produces satisfactory evidence to the effect that he/she has completed Bachelor's Degree in Sport Psychology & Sociology / Sport Psychology / Psychology / Sport Sociology / Sociology / Sport and Exercise Psychology / Sports Science/ Sports Coaching / Physical Education and Sports or an equivalent thereto in 10+2+3 or 10+2+4 pattern from a recognized university with a minimum of 50% marks in aggregate and any undergraduate **science Degree** recognized by the syndicate of Tamil Nadu Physical Education & Sports University.

1.2 Eligible for admissions and reservation of seats shall be according to the rules framed by the governing body of this University in this regard, from time to time at par with the UGC norms and regulations of the Government of Tamilnadu.

2. COURSE OF STUDY

2.1 The normal duration of the M.Sc., Sport Psychology & Sociology Programme shall be four semester (Two years).

2.2 Each academic year shall comprise of two semester's viz. **ODD** and **EVEN** semesters. Odd semesters shall be from July to November and Even Semesters shall be from December to May.

2.3 There shall be not less than 90 working days which shall comprise 480 teaching/Practical Activity clock hours for each semester.

3. CHOICE BASED CREDIT SYSTEM (CBCS)

The CBCS in M.Sc., programme would have the following five components and the minimum credit requirements for each component to be completed in two years are:

3.1 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

3.2 **Core course:** Are course that are basic to the subject of the degree. This is a course which is to be compulsorily studied by a student as a core requirement to the completion of the program.

3.3 **Elective Courses:** This is a course that is supportive to the discipline of study, provides an expanded scope, enables exposure to some other domains or nurtures proficiency/skills. Elective papers can be of two types: Discipline Specific Elective (DSE) and Generic Elective (GE).

3.4 **Discipline Specific Elective (DSE):** These courses are inter disciplinary in nature and considered similar to core course. And, the students have to choose one course from the option provided for them.

3.5 **Generic Elective (GE):** These courses add generic proficiency to the students. Students have to choose generic elective courses in consultation with the head of the department from the Generic Elective courses offered by other Division of study in Sports Science or from other Departments in university.

CREDIT ABSTRACT

Semester – Credit Subject	I	II	III	IV	Total Credit
Core course	12	12	12	12	48
Elective (Discipline Centric)	3	3	3	3	12
Generic Elective (GE)	3	3	-	-	06
Core – Practical (Skill Enhancement Course)	2	2	2	2	08
Ability Enhancement Course (AEC)-Soft Skill	2	2	2	2	08

Thesis with Viva-Voce	-	-	-	5	05
Internship	-	-	3	-	03
Field Work / Extension Activity	-	-	-	1	01
Grant Total	**22**	**22**	**22**	**25**	**91**

4. COURSE WEIGHT

4.1 Courses will be designed with weightage of two /four credits, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise lectures/tutorials/laboratory/field work/outreach activities/project work/vocational training/viva/seminars etc. or a combination of some of these.

4.2 It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

5. ASSESSMENT AND EVALUATION

Post Graduate degree programme M.Sc., Sport Psychology & Sociology (Two Years). It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

SEMESTER	CREDITS	TOTAL MARKS
I	22	600
II	22	600
III	22	600
IV	25	700
Grant Total	**91**	**2500**

5.1 Each course will be assessed on the basis of 100 marks. The marks would be divided between internal and external assessment.

5.2 There shall be one end semester external examination for each course in every semester consisting of 75% (75 marks) weight in theory and 75% (75 marks) in practical courses.

5.3 Each Theory course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	Marks
Assignment	2

Seminar / Conference Paper Presentations	3
Internal Assessment Test - I	5
Internal Assessment Test – II	5
Model Examination	10
Total	**25**

5.4 Each Practical Course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	**Marks**
Internal Viva	5
Record	5
Internal Assessment	5
Lab Performance	10
Total	**25**

5.5 The minimum passing standard will be 50% for the external and internal component of each theory course, i.e. 38 marks out of 75 (external - 50% of 75 marks) and 12.5 marks out of 25 (internal - 50% of 25 marks).In practical minimum passing standard will be 50% for the external exam and internal assessment for each practical course.

6. ATTENDANCE

6.1 Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course.

6.2 Students must have 75% of attendance in each course for appearing in the semester examinations.

6.3 Students who have 74% to 70% of attendance shall apply for condonation in the prescribed form with the prescribed fee.

6.4 Students who have 69% to 65% of attendance shall apply for condonation in the prescribed form with the prescribed fee along with the Medical Certificate.

6.5 Students who have below 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students will have to repeat the semester.

6.6 Obtaining condonation is not a matter of right of the students.

6.7 A student can avail condonation only once during the entire course of study.

7. END SEMESTER EXAMINAITION (ESE)

7.1 The ESE will consist of à written examination of three hours duration for a maximum score of 75. The following procedure will be followed for evaluation.

Pattern	Total No. of Question	Number of Question to be Answered	Marks for each Question	Total Marks
Multiple-Choice Questions	10	10	1	10
Short Answer / Problem Type	5	5	2	10
Short Essay / Problem	8	5	5	25
Long Answer / Essay / Problem Type	5	3	10	30
Total				**75**

7.2 A candidate who has secured a minimum of 50 marks in all courses prescribed in the programme and earned a minimum of the credits will be considered to have passed the Bachelor's Degree Programme.

7.3 A Student will be issued, hall ticket only if one produces "**No Dues**" certificates from the concerned department, the laboratory, the Registrar's Office, the Library and Hostel.

8. GRADING SYSTEM

A ten point rating is used for the evaluation of the performance of the student to provide a letter grade for each course and overall grade for the Master's Programme. The letter grade assigned is given below:

Letter	Grade	Grade Point	Range of Marks
O	Outstanding	10	91-100
A+	Excellent	9.0	81-90
A	Very Good	8.5	71-80

B+	Good	8.0	61-70
B	Above Average	7.5	51-60
C	Pass	7.0	50
RA	Reappear	0	0-49
AB	Absent	0	ABSENT

9. INTERNSHIP AND FIELD TRAINING

Internship and field training is an important component of Sport Psychology & Sociology that provides students with the opportunity to gain applied practical experience in the field of Sport Psychology / Sport Sociology. It allows a student to employ what is learned in class in a supervised environment, which is critical in order to further develop professional skills and assure quality practice. The students will undergo Internship training / Clinical practice / Field training in TNPESU campus/ Sports Development Authority of TamilNadu (SDAT) coaching Centres / Sports Authority of India (Various coaching Centres of SAI) / Government Medical College/ other sporting centers / academies shall be evaluated through internal assessment only. At the end of Internship/field training, the student shall submit a certificate from the organization where he /she has undergone training and a brief report. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three member Departmental Committee constituted by the Head of the Department.

10. THESIS

The topic of thesis will be allocated in third Semester and candidate will work for one semester and submit a written thesis in 4th semester. The student will be awarded grade for the total number of credits earned in thesis in III and IV semesters of study at the end of the IV semester.

SEMESTER I

Note:

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF1CT101	Cognitive Psychology	4	-	4	25	75	100
23PF1CT102	Introduction to Sports Sociology	4	-	4	25	75	100
23PF1CT103	Research Methodology	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF1CE001	Coping with Stress	3	-	3	25	75	100
23PF1CE002	Methods and Measurement in Psychology	3	-	3	25	75	100
GENERIC ELECTIVE							
23PF1GE001	Interdepartmental Elective – I (Generic)	3	-	3	25	75	100
PRACTICUM							
23PF1L101	Psychological Assessment - Practicum - I	-	4	2	25	75	100
23PF1AE101	Soft Skill – I (Communication Skill)	4	-	2	-	-	-
		22	**4**	**22**	**150**	**450**	**600**

1. Students shall take Department Electives (DEs) from the choices available.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER II

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF1CT201	Psychological Aspects of Sports Performance	4	-	4	25	75	100
23PF1CT202	Indian Social System and Sports	4	-	4	25	75	100
23PF1CT203	Statistics in Social Sciences	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF1CE003	Motor Learning and Psychology of Coaching	3	-	3	25	75	100
23PF1CE004	Psychometrics	3	-	3	25	75	100
GENERIC ELECTIVE							
23PF1GE002	Interdepartmental Elective – II (Generic)	3	-	3	25	75	100
PRACTICUM							
23PF1L201	Psychological Assessment Practicum - II	-	4	2	25	75	100
23PF1AE201	Soft Skill – II (Basics of Computer Applications)	4	-	2	-	-	-
		22	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER III

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF1CT301	Fundamentals of Counselling Skills	4	-	4	25	75	100
23PF1CT302	Human Growth and Development	4	-	4	25	75	100
23PF1CT303	Sociological Theories	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF1CE005	Team Cohesion and Group Dynamics	3	-	3	25	75	100
23PF1CE006	Social Problems	3	-	3	25	75	100
PRACTICUM							
23PF1L301	On-field Psychological Assessment - Practicum - III	-	4	2	25	75	100
23PF1AE301	Softskill – III (Life Skills Management)	2	-	2	-	-	-
23PF1IT301	Internship*	-	-	3	25	75	100
		17	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. *Internship will be carried out after completion of first year and before appearing for third semester examinations. The marks shall be sent to the University by the Department and the same will be included in the Third Semester Marks Statement.
3. *One month training at reputed Organizations / Sporting Clubs / Govt. Sports Authorities / Councils / National Teams and submit a report.

SEMESTER IV

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF1CT401	Counseling and Behavior Modification Techniques	4	-	4	25	75	100
23PF1CT402	Scientific Dimensions of Sports Psychology	4	-	4	25	75	100
23PF1CT403	Intervention Strategies and Sports Behavior	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF1CE007	Positive Psychology	3	-	3	25	75	100
23PF1CE008	Sociology of Health	3	-	3	25	75	100
PRACTICUM							
23PF1L401	On-field Psychological Assessment - Practicum - IV	-	4	2	25	75	100
23PF1TH401A	Thesis	-	4	4	25	75	100
23PF1TH401B	Viva-Voce	-	-	1	25	25	50
23PF1AE401	Softskill – IV (Yoga & Meditation)	2	-	2	-	-	-
23PF1EA401	Extension Activity	-	2	1	50	-	50
		17	**10**	**25**	**225**	**475**	**700**

SEMESTER - I

PAPER CODE	PAPER TITLE
23PF1CT101	Cognitive Psychology
23PF1CT102	Introduction to Sports Sociology
23PF1CT103	Research Methodology
Electives (Discipline Specific)	
23PF1CE001	Coping with Stress
23PF1CE002	Methods and Measurement in Psychology
23PF1GE001	Generic elective -I
23PF1L101	Psychological Assessment - Practicum - I
23PF1AE101	Soft Skill – I (Communication Skill)

SEMESTER- I

COURSE CODE – 23PF1CT101

COGNITIVE PSYCHOLOGY

UNIT 1 – INTRODUCTION

Definition and Scope of Cognitive Psychology – History and Development of Cognitive Psychology – Intelligence – Definition – Theories of Intelligence – Emotional Intelligence –Definition and its components – Artificial Intelligence – Definition and its applications.

UNIT 2 – ATTENTION, PERCEPTION AND CONSCIOUSNESS

The nature and definition of attention, perception and consciousness – selective attrition anddivision of attention – theories of attention – filter theory, attenuation theory, late selection theory – theories of perception – bottom up and top down process – Gestalt approaches to perception – Disruptions of perception – subliminal perception – Consciousness of complexmental process.

UNIT 3 – MEMORY AND LANGUAGE

Short term vs long term memory – types of long term memory – encoding, storage, and retrieval – working memory – definition and model – process of forgetting – memory distortions – reconstructive retrieval – eyewitness testimony – Language – properties of language- process of language comprehension-language and thought – language in social context.

UNIT 4 – PROBLEM SOLVING AND CREATIVITY

Problem solving: Meaning – Problem solving cycle – types of problems – Problem solving techniques – obstacles and aids in problem solving – knowledge and problem solving – creativity – definition – divergent thinking – steps in creative thinking – nature of creative people – blocks to creative thinking – Promoting Creativity.

UNIT 5 – REASONING AND DECISION MAKING

Types of thinking – Reasoning: Meaning – categorical syllogisms – conditional syllogism –syllogistic reasoning – inductive reasoning – heuristics and biases and its types – Decision making: Meaning – types of decision making.

REFERENCES

1. Kellogg, R.T. (2007). *Fundamentals of cognitive psychology*. New Delhi, India: SagePublication.
2. Sternberg, R. J. (2009). *Applied cognitive psychology: Perceiving,*

learning andremembering. New Delhi, India: Cengage Learning.

3. Parkin, A . J. (2000). *Essential Cognitive Psychology*. London: Psychology Press.
4. Smith, E.E & Kosslyn, S.M. (2007). *Cognitive psychology: Mind and brain*. NewDelhi, India: Prentice – Hall of India.
5. Riegler, B.R & Riegler, G. L. (2008). *Cognitive psychology. Applying the science ofthe mind.* New Delhi, India: Pearson India Education Services Private Limited.
6. Galotti, K.M. (2004). *Cognitive psychology: In and out of the laboratory*. New Delhi,India: Wadsworth.

COURSE CODE – 23PF1CT102

INTRODUCTION TO SPORTS SOCIOLOGY

UNIT I

Introduction: Definition – Nature and Scope of Sociology and Sports Sociology – Relationship with other Social Sciences including Sports Sociology. Importance of sports sociology

UNIT II

Society and the place of sports and games: origin and development of sports in various societies (Greek & Roman) – Sports as social as group behavior – Sports as cultural activity: Sports culture - Sports and communities sports as community activity.

UNIT III

Sports as Social and a Group Process: Meaning and types of Social process – Sports in Social process frame work. Team spirit as supra – individual power: McDougals, Durkheim, Allports, Lewis.

UNIT IV

Socialization In and Social Control of Sports: Meaning of socialization Training and induction into sports as socialization – Role of parents and professionals in sports socialization – Meaning of social control – sports as a socially regulates activity – Sports as a social value – Sports and social rewards.

UNIT V

Social Stratification and Sports: Meaning and forms of stratification – Social class and sports – gender and sports – race and sports – Age and Sports – Globalization and Sports.

REFERENCES:

1) Fiehter, J.H. (1991), Sociology 2nd Ed. London. The University of Chicago Press.

2) Pascal, G. (1999) Fundamental of Sociology, 3rd Rev.Ed.,Bombay, Orient Longman.

3) Inkless.Alex,(1987) What is Sociology, New Delhi Prentice Hall of India Pvt.

4) Giddens A (1989) Sociology, Cambridge, Polity Press.

5) Harlambos, (1999) , Introduction to Sociology, Oxford University Press.

COURSE CODE – 23PF1CT103

RESEARCH METHODOLOGY

UNIT I: FOUNDATIONS OF RESEARCH

Meaning – Critical thinking process – Objectives of science – Need for research – Research approaches – Steps in research. Method Vs Methodology. General Principles – Ethical issues: Children, Adults, Animals. Research problem – Sources – Criteria of good problem. Reviewing the literature – Research article.

UNIT II: HYPOTHESIS AND VARIABLES

Hypothesis: Meaning – Types – Basic concepts related to hypothesis testing. Variables – Definition – Ways of asking questions – measuring observed variables – Scales of measurement – Types of measures – Reliability – Validity.

UNIT III: RESEARCH DESIGN

Experimental design: Independent groups designs – Completely randomized groups designs, randomized factorial groups design. Dependent groups designs: Within-participants design, matched groups design – Mixed Designs – Single-participant design – Baseline designs. Non-experimental designs: Quasi-experiments – Time-series design, nonequivalent groups designs, longitudinal research, Cross-sectional research, Case-studies, Correlational research.

UNIT IV: SAMPLING

Sampling – Meaning – Probability and Non-probability sampling – Sample & effect size. Data collection methods: Observational research – Survey research. Sampling distribution – determining sample size – sampling error.

UNIT V: REPORT WRITING AND COMPUTERS IN RESEARCH

Writing Proposal – Plagiarism – References and In-text citation – APA primer - Presenting research: Research report – Typing guidelines – Oral and Poster presentation. Computers in research – Internet and research.

REFERENCES:

TEXT BOOKS

1. *Evans, A.N., & Rooney, B. J. (2008). Methods in psychological research. New Delhi, India: Sage Publications India Pvt. Ltd.*
2. *Jackson, S.L. (2010). Research methods and statistics. New Delhi, India: Cengage Learning India Pvt. Ltd.*

REFERENCE BOOKS

1. *Coaley, K. (2009). An introduction to psychological assessment and psychometrics. New Delhi, India: Sage Publications India Pvt. Ltd.*
2. *Coolican, H. (2009). Research methods in statistics in psychology. New Delhi, India: Rawat Publications.*
3. *Gravetter, F.J., & Forzana, L.A.B. (2009). Research methods for behavioral sciences. Boston, MA: Wadsworth Cengage learning. Tamilnadu State Council for Higher Education 20*
4. *Myers, J. (2008). Methods in psychological research. New Delhi, India: Sage Publications.*
5. *Singh, A.K. (2006). Tests, measurements and research methods in behavioural sciences. Patna, India: Bharati Bhavan Publishers.*

COURSE CODE – 23PF1CE001

DISCIPLINE SPECIFIC ELECTIVE – I

COPING WITH STRESS

UNIT 1: Learning about sources of stress and its symptoms: Nature of stress- various sources of stress environmental, social, physiological and psychological; Symptoms of stress - emotional response, physiological & behavioural response.

UNIT 2: Coping --- (a) Concept of coping: Definition and Classification. (b) Measurement of coping behaviour.

UNIT 3: Life Style and Related aspects---- (a) Stress and Personality. (b) Life Style and Health: Cardiovascular disease, Atheroceterosis, cancer. (c) Stress and substance abuse: alcohol and other drugs

UNIT 4: Developing a sense of Humour – Learning to laugh – Using humour at work – Reducing conflicts with humour

UNIT 5: Learning to manage stress effectively: Methods - yoga, meditation, Vipassana, relaxation techniques, clarifying problem, alternate actions, support (Problem focused) emotion focused constructive approach

Readings: Weiten, W. & Lloyd, M.A (2007). Psychology applied to Modern life. Thomson Detmar Learning .

Suggested Readings:

1. Barrett.J.E. (1979) ---Stress and Mental Disorder, American Psychopathological Association Series,New York : Rayan Press, Section A-6.
2. Braumsteirn, J.J. and Toister, R.P (1981)----- Medical Applications of Behaviour Science chicago:Year Books Medical publishers Inc. Section A. I:
3. Dohrenwend B.S. and Dohrenwend, B.P. (1974) --- Stress life events : their nature and effect, Newyork, Johan willy and sons.
4. Goldberger, L. and Breznitz,S. (1982) ---- Handbook of stress : theoretical and clinical as pact
5. Harzars, R.S. and Talkman, S. (1984) ---- Stress, Appraisal and coping, Newyork: Springer.
6. Selye. H.(1980) ------Selyes guide to stress research vol. I, Newyork : Van Nostrand Reinhold. ADACP -

COURSE CODE – 23PF1CE002

DISCIPLINE SPECIFIC ELECTIVE - 2

METHODS AND MEASUREMENT IN PSYCHOLOGY

UNIT I

Introduction of psychological tests – meaning and nature of psychological testing – defining a psychological test – types of tests – individual vs. group – uses of tests – characteristics of good test – misuse of psychological tests and safeguards to avoid them.– Record writing procedure.

UNIT II

Measurement of educational achievement, intelligence – tests of educational achievement, proficiency tests, diagnostic, tests- tests of intelligence – scales of Stanford- Binet and Wechsler – group tests of intelligence – verbal, non verbal performance tests.

UNIT III

Aptitudes and their testing – meaning global and unitary approaches of aptitude testing, multifactor test batteries – DAT, GATB, other tests of special abilities and professional aptitudes.

UNIT IV

Tests of interest ,values – nature of interest, kinds of interest, different approaches for the assessment of interest, relation between interest and aptitude, Kuder's and strong interest inventories, information about measurement of interest – Types of values and their measurement

UNIT V

Different approaches to the personality, assessment of personality - rating scales, inventories, projective techniques, situational tests.

REFERENCES:

1. *Anastasi & Susana Urbina (2004) 7th Edition, Psychological Testing, Pearson Education Inc, New Delhi..*
2. *Parameseswaran & Ravichandran. (2003). Experimental psychology. Neel Kamal Publications.*
3. *Woodworth, R.S. and Scholsberg (1972), Experimental psychology. Holt, Rinehart & Winston*

COURSE CODE – 23PF1GE001

GENERIC ELECTIVE – 1

A student admitted in the Department of Sports Psychology & Sociology has to opt for the Generic Elective (GE) Course offered by other departments. As an example, a student admitted under M.Sc. Sports Psychology & Sociology programme can't opt for the Generic Elective Courses offered by Department of Sports Psychology & Sociology.

GENERIC ELECTIVE PAPERS OFFERED BY VARIOUS DEPARTMENTS IN THE ODD SEMESTER (FIRST SEMESTER)

Department	Name of the Generic Elective Paper	Brief Description
Sports Management		
Yoga		
Exercise Physiology & Nutrition		
Biomechanics		
Sports Technology		
Physical Education		
Advance Training & Coaching		

COURSE CODE – 23PF1L101

PRACTICUM – I

SPORTS PSYCHOLOGY LAB & FIELD

Students are required to conduct and record any 08 experiments.

1. Competitive State Anxiety
2. Sports Specific Personality
3. Locus of Control –Internal/External
4. Life Skills
5. Mental Imagery
6. Sports Motivation
7. Athlete Self Efficacy
8. Concentration
9. Sports Achievement Motivation
10. FIRO – B

REFERENCES:

1. Woodworth, R.S. and Scholsberg (1972), Experimental psychology. Holt, Rinehart & Winston.
2. Anastasi & Susana Urbina (2004) 7th Edition, Psychological Testing, Pearson Education Inc, New Delhi..
3. Parameseswaran & Ravichandran. (2003). Experimental psychology. Neel Kamal Publications.

ABILITY ENHANCEMENT COURSE (AEC)

COURSE CODE – 23PF1AE101

COMMUNICATION SKILLS

Unit – I- Communication Skills: Role of communication in Present Days- Importance of Communication - Communication Barriers - Types of Communications: Verbal communication: Oral -Story telling- Crucial conversation – Face to Face Communication- Telephone communication, Aral- Listening and Hearing, Non - Verbal Communication: Facial Expressions- Body Language-Posture- Eye Contact, Written Communication: Journals- E-Mails- Blogs - Text Messages, Visual Communications: Signs- Symbols- Pictures.

Unit – II- Components of Communication – Context - Encoder- Encoding - Message - Medium - Receiver – Feedback- Level of Communication – Intrapersonal – Intrapersonal- Group and Public communication, Characteristics of Communication, Memorandum: Purpose- Format- Business Memo and Agenda, Basic Skills for Communications- Listening- Speaking- Reading and Writing.

Unit – III- Interview Skills: Preparing for Interview- -Personal interview - Technical interview - Group Discussion- Body language- Pronunciation- Speaking - Presentation skills: Preparation – The Subject – The Audience – The place- The time- Length of Talk and Structure of Presentation.

Unit – IV- Phonetics: Elements of English Language – Phonology- Morphology – Lexis – Syntax- Grammar, The Different Speech Organs and Their Role- The Individual Sounds- Vowel- Pure Vowel- Semi Vowel- Diphthongs- Classification of Diphthongs - Monotones- Consonants- Manner of Articulation- Place of Articulation.

Unit – V- Strong and weak Forms of Words- Stress- Word Stress- Primary Stress- Secondary Stress- Sentence Stress, Rhyme and Rhythm- Rhythm- Intonation- Raise - Fall - Raise Fall intonation.

Reference Books

1. Second Edition of “Communication Skills” Published by Carrier Skill Library.
2. Effective Communication Skills – A Book of MTD Training.

The Language Sound of Language by Michael Dobrovolsky and Francis katamba.

SEMESTER - II

PAPER CODE	PAPER TITLE
23PF1CT201	Psychological Aspects of Sports Performance
23PF1CT202	Indian Social System and Sports
23PF1CT203	Statistics in Social Science
Electives (Discipline Specific)	
23PF1CE003	Motor Learning and Psychology of Coaching
23PF1CE004	Psychometrics
23PF1GE002	Generic Elective -II
23PF1L201	Psychological Assessment - Practicum - II
23PF1AE201	Soft Skill – II (Basics of Computer Applications)

COURSE CODE – 23PF1CT201

PSYCHOLOGICAL ASPECTS OF SPORTS PERFORMANCE

UNIT I

Bases of Psychological Preparation: Positive Attitude, Calmness, Self Confidence, Fighting spirit – Adapting to competitive situation, situational control , controlling the athletes state before competition - Overtraining, Physiological and Psychological Impact of Overtraining.

UNIT II

Cognition: Thinking- Strategic Thinking, Attention-Dimensions of Attention, Role of attention in Individual and Team Sports, Ways to improve attention and concentration skills, Discussion: Direct and Indirect Suggestions

UNIT III

Motivation: Motivation of children and Youth in sports - Extrinsic and Intrinsic Motivation in Sports – Perceived competence - Achievement Motivation and Competitiveness, Theories of Achievement Motivation

UNIT IV

Psychological Preparation of Training and Competition: Competition in sports – types of competition - Determinants of Competitive Behavior –Characteristics of pre-competition , competition and post competition -

UNIT V

Personality: Personality and Psychological characteristics of Athletes – Personality traits and sports - Mood states and athletic performance – Iceberg Profile – Mental Health and Sports.

REFERENCES:

1. Gangopadhyay, S.R. (2008) – Sports Psychology, Sports Publications, New Delhi.

2. Burton, D, Thomas D. (2008) – Sport Psychology for Coaches, Human Kinetics Publishers, UK.

3. Gurbakhsh S.Sandhu (2002) - Psychology in Sports – A Contemporary Approach' friends publications, New Delhi

4. Martens, R. (1987) – Coaches Guide to Sport Psychology, Human Kinetics Publishers, Champaign, Illinois

COURSE CODE – 23PF1CT202

INDIAN SOCIAL SYSTEM AND SPORTS

UNIT I - Indian Society: Indian society as a multicultural society - Multiculturalism and its implication for Indian Sports. Age and Sex Structure of India's population and its implication for sports. Stages of life and its implication.

UNIT II - Village Community and Sports: Village as a community and a social system – Village Social Life and the place of games and sports: Sports as divisive and cohesive social activity of the villages – Rural religion, festivals and sports – Rural family, leisure and recreation activities – Traditional competitive sports events of rural India – Recent initiatives to promote rural talents in sports in India.

UNIT III - Traditional Institution and Sports in India: Family and Sports – Tennis, equestrian, cricket – Caste and Sports – Religion and Sports – Region and Sports

UNIT IV - Social change and sports in Modern India: Emergence of sports as a profession and vocation in modernization and parochialization – Emergence of traditional sports as universalization - Corporatization of sports in India - Institutionalization of traditions sports of India.

UNIT V - Politics of Sports in India: Organizational structure of sports in India: Ministry, Boards, Authorities, Universities, Associations, Clubs challenges facing sportsman in India.

REFERENCES:

1. ***Mandelbun, D.G.L. (1990),*** *Society in India, Berkerley, and University of California Press, Vol 1 Parts 24 & 4.*
2. ***Singh, Yogendra,*** *(1993) Modernization of Indian Tradition, a Systematic Study of Social Cahange, New Delhi, Thompson Press.*
3. ***Srinivas M.N.*** *(1962), Caste in Modern India and other essay, Bombay, Asia Publishing House.*
4. ***Nicholas B.Dirks.*** *(1996) Castes of mind permanent block D-28, Oxford Apartments, 11, 1.p.extention, Delhi. 110 092.*

COURSE CODE – 23PF1CT203

STATISTICS IN SOCIAL SCIENCE

Learning Objectives:

After completing this subject we will be able to understand about

1. The basic concepts of statistics, need of statistics and central tendency & dispersion,
2. Sampling, hypothesis testing, data analysis using descriptive statistics.
3. How to analysis the problem using SPSS software.

UNIT – I Statistics: Meaning, Definition and Importance: Raw Score, Class Intervals - Continuous and Discrete Series, Construction of Frequency Tables, Measures of Central Tendency: Mean Median and Mode - Meaning, Definition, Importance, Advantages and Disadvantages. Calculation of Mean, Median and Mode.

UNIT –II Measures of Variability- Range, Quartile Deviation, Mean/Average Deviation, Standard Deviation-Meaning, Definition and use. The Normal Curve: Meaning, Principles, Laws, Properties and Uses. Divergence from Normality-Skewness and Kurtosis. Scoring Scales- Sigma scale, Z Scale, T Scale.

UNIT – III Correlation- Pearson Product Moment Correlation, Spearman Rank Order Correlation, Phi Correlation, Biserial Correlation Partial and Multiple Correlation. Regression Lines.

UNIT – IV Testing of Hypothesis - Procedure, Types of Hypothesis, Level of Significance, One Tailed and Two Tailed Test, Degrees of Freedom, Test of Significance for Difference of Means- t Test -Independence and Dependence Test, Z-Test, One Way Analysis of Variance.

UNIT – V Non Parametric: Chi Square Test – Equal Occurrence Test, Independence of Attributes, Contingency Coefficient; Graphical Representation – Line Diagram, Bar Diagram- Multiple Bar Diagram, , Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, and Pie Diagram – introduction of SPSS Package.

Reference Books

1. Berg, “Essential of Research Methods in health Physical education”, Lippincott William and Wilkins Publisher.
2. Rothstein, Anne L. (2006), “Research Design and Statistics for Physical Education, Englewood Cliffs, and New Jersey: prentice Hall Inc.
3. Blum, J.R., and Fattu, N.A. 1954. Nonparametric methods.Rev.Educ.Res. 24, 467-487.
4. Conover, W.J. Practical Nonparametric statistics, 2nd edition. New York; John wiley& sons, 1980.
5. Gibbons, J.D., and Chakraborti. S., Nonparametric Statistical Inference, 3d ed., New York, Marcel Dekker. 1992.
6. Clarke, David H. Clarke, Harrison H. Research Process in Physical education, New Jersey: Prentice Hall Inc.1984.
7. Jerry R. Thomas, Jack K. Nelson and Stephen J. Silverman., Research methods in Physical Activity (5th Ed), New York: Human Kinetics, 2005.
8. Kraft, Charles H. and Van Eeden. Constance A Nonparametric Introduction to Statistics. New York: Macmillian, 1968.
9. Owen, D.B. Handbook of Statiscal Tables. Reading, Mass; Addison- Wesley, 1962.
10. Siegel, Sidney. Nonparametric statistics for the behavioural Sciences. New York: McGraw-Hill, 1956.
11. VarmaJ.Prakash; Sports Statistics Copyright 2000 by Venus Publication.

COURSE CODE – 23PF1CE003

DISCIPLINE SPECIFIC ELECTIVE – 3

MOTOR LEARNING AND PSYCHOLOGY OF COACHING

UNIT I

Motor learning Defined: Motor learning as a set of process, learning produces and acquired capability for movement, motor learning is not directly observable, motor learning is relatively permanent – measuring motor learning - performance curves – conditions of practice: distribution of practice, part vs. whole practice.

UNIT II

The Learning Process: Characteristics of the learning process – the law of practice – stages of motor learning – individual differences and motor learning – two theories of motor learning: closed-loop theory, schema theory – factors affecting motor learning: body build, height and weight, strength, endurance, flexibility, balance.

UNIT III

Characteristics of Coach: Personal factors – Knowledge, Philosophy, Role frame-Coaching Context: contextual factors – cultural factors , Resources, and Extraneous factors – Coaching Efficacy and Coach-Athlete relationship

UNIT IV

Philosophy of Coaching: Principles of coaching –different style in coaching – Autonomy Supportive Coaching - Self Determination Theory – The essence of coaching: effective messages sending systems, effective messages receiving systems.

UNIT V

Facilitating Psychological Growth and Development: Psychology of the Young Athlete - Strategies for Structuring Sport Situations to meet the needs of Young Athletes – Character and Sportspersonship: Fairplay, Sportspersonship, Character, Enhancement of Character Development through Sports and Physical Education.

REFERENCES:

1. Gangopadhyay, S.R. (2008) – Sports Psychology, Sports Publications, New Delhi.

2. Weinberg, R.S., Gould, D (2003) - Foundations of Sport and Exercise Psychology. 3rd Edition, Human Kinetics, Australia.

3.Richard A.S, Lee, T.A (1982)- Motor Control and Learning – A Behavioral Emphasis, 3rd Edition,

COURSE CODE – 23PF1CE004

DISCIPLINE SPECIFIC ELECTIVE - 4

PSYCHOMETRICS

UNIT I TEST CONSTRUCTION

Defining the test – Classification of tests – Characteristics of standardized test – Brief history of testing – Scaling – Selecting a scaling method. Representative scaling methods. Constructing the items. Testing the items. Revising the test. Publishing the test.

UNIT II CONSTRUCTION OF INTELLIGENCE TESTS

Item writing for Intelligence tests: Analogies, odd-man-out, sequences. Tests of ability and attainment: Content of items, multiple choice items. Advantages of multiple choice items. True-false items, matching items, choosing the item type. Other item types, arrangement of items for a test trial, guessing. Constructing Personality Inventories- Problems in constructing personality Inventories. Writing items for personality Inventories: item forms, guidelines for item writing. Eliminating response sets. Item content.

UNIT III CONSTRUCTION OF OTHER TYPES OF TESTS

Objective tests: Advantages, principles, stimulus-instruction situation, and response scoring parameters. Distinction between objective tests of ability, temperament and dynamics. Practical hints for objective test construction in personality and motivation. Differential motivation of different subjects. The influence of ability and achievement on objective test scores. Group vs Individual tests. Objective test dimensions. Projective tests-construction of projective tests. Item writing for mood and state scales. Attitude measurement: types of attitude scales.

UNIT IV ITEM ANALYSIS

Important variables for item analysis. Two indices in item analysis-correlations of items and the total score, choice of item –analytic statistics. Item scoring and item analysis-Item difficulty, Item discrimination, Item response theory. Selection of items after item analysis. Rewriting items. Failure to form a test.

UNIT V TEST STANDARDIZATION

An overview of the different types of reliability. Factors affecting reliability and validity-Generalizability of test scores. Using reliability information. Factors affecting reliability estimates. Special issues in reliability. Interpretation of reliability coefficient. An overview of the different types of validity. Validity coefficient and error of estimate-conditions affecting validity

coefficient. Magnitude of validity coefficient. Standardizing the test-obtaining a representative normative sample. Sampling specific groups. Rules for sampling special groups.

Norms -Meaning and purpose of norms. Raw score transformation. Percentile and percentile ranks, standardized scores. Normalizing standard scores .T scores, stanines, sten scores and C scale. Selecting a norm group--age and grade norms. Local and sub group norms. Criterion referenced tests and norm referenced tests.

References

1. Anastasi, A., & Urbina, S. (2017). Psychological testing. (7th ed). Chennai, India: Pearson India Education Services Pvt. Ltd.
2. Gregory, R.J. (2017). Psychological testing. (7th ed.). Chennai, India: Pearson India Education Services Pvt. Ltd.
3. Husain, A. (2012). Psychological testing. Noida, India: Dorling Kindersley (India) Pvt. Ltd.
4. Kline, P. (2015). A hand book of test construction: Introduction to psychometric design. New York, NY: Methuen

COURSE CODE – 23PF1GE002

GENERIC ELECTIVE - 2

A student admitted in the Department of Sports Psychology & Sociology has to opt for the Generic Elective (GE) Course offered by other departments. As an example, a student admitted under M.Sc. Sports Psychology & Sociology programme can't opt for the Generic Elective Courses offered by Department of Sports Psychology & Sociology.

GENERIC ELECTIVE PAPERS OFFERED BY VARIOUS DEPARTMENTS IN THE EVEN SEMESTER (SECOND SEMESTER)

Department	Name of the Generic Elective Paper	Brief Description
Sports Management		
Yoga		
Exercise Physiology & Nutrition		
Biomechanics		
Sports Technology		
Physical Education		
Advance Training & Coaching		

COURSE CODE – 23PF1L201

PRACTICUM – II

PSYCHOLOGICAL ASSESSMENT

1. Sports Aggression
2. Team Cohesion
3. Mental Toughness
4. Mindfulness
5. Sports Emotion
6. Psychological Performance
7. Performance Failure Appraisal
8. Athletic Coping Skills
9. SVT
10. Bio feedback

REFERENCES:

1. Woodworth, R.S. and Scholesberg (1972), Experimental psychology. Holt, Rinehart & Winston.
2. Anastasi & Susana Urbina (2004) 7th Edition, Psychological Testing, Pearson Education Inc, New Delhi.
3. Cronbach, L.J, Essentials of Psychological Testing.
4. Parameseswaran & Ravichandran. (2003). Experimental psychology. Neel Kamal Publication

COURSE CODE – 23PF1AE201

BASIC COMPUTER APPLICATIONS

Objectives:

This course aims at providing exposure to students in skill development towards basic office applications.

Course Learning Outcomes:

After successful completion of the course, student will be able to:

1. Demonstrate basic understanding of computer hardware and software.
2. Apply skills and concepts for basic use of a computer.
3. Identify appropriate tool of MS office to prepare basic documents, charts, spreadsheets and presentations.
4. Create personal, academic and business documents using MS office.
5. Create spreadsheets, charts and presentations.
6. Analyze data using charts and spread sheets.

Unit-I:

Basics of Computers: Definition of a Computer - Characteristics of computers, Applications of Computers – Block Diagram of a Digital Computer – I/O Devices, hardware, software human

ware, application software, system software, Memories - Primary, Auxiliary and Cache Memory.

MS Windows – Desktop, Recycle bin, My Computer, Documents, Pictures, Music, Videos,

Task Bar, Control Panel.

Unit-II:

MS-Word : Features of MS-Word - MS-Word Window Components - Creating, Editing, Formatting and Printing of Documents – Headers and Footers – Insert/Draw Tables, Table Auto format – Page Borders and Shading – Inserting Symbols, Shapes, Word Art, Page Numbers, Mail Merge.

Unit-III:

MS-Excel : Overview of Excel features – Creating a new worksheet, Selecting cells, Entering and editing Text, Numbers, Inserting Rows/Columns –Changing column

widths and row heights, Formulae, Referencing cells , Changing font sizes and colors, Insertion of Charts, Auto fill, Sort.

MS-PowerPoint: Features of PowerPoint – Creating a Presentation - Inserting and Deleting Slides in a Presentation – Adding Clip Art/Pictures -Inserting Other Objects, Audio, Video - Resizing and scaling of an Object – Slide Transition – Custom Animation.

Unit- IV:

Use of Internet:

Internet, World Wide Web, popular web browsing software, search engines, web pages, website, URL, e-mail, Applications of Internet.

REFERENCE BOOKS:

1. Working in Microsoft Office – Ron Mansfield - TMH.
2. MS Office 2007 in a Nutshell –Sanjay Saxena – Vikas Publishing House.
3. Excel 2020 in easy steps-Michael Price – TMH publications

SEMESTER - III

PAPER CODE	PAPER TITLE
23PF1CT301	Fundamentals of Counselling Skills
23PF1CT302	Life Span Development
23PF1CT303	Sociological Theories
Electives (Discipline Specific)	
23PF1CE005	Team Cohesion and Group Dynamics
23PF1CE006	Social Problems
23PF1L301	On-field Sports Psychology Assessment – Practicum - III
23PF1AE301	Soft Skill – III (Life Skills Management)
23PF1IT301	Internship

COURSE CODE – 23PF1CT301

FUNDAMENTALS OF SPORTS COUNSELING SKILLS

UNIT I

Introduction to Counseling - Definition – Development and goals- preparation – counseling process: Steps – different phases. - Current trends in counseling– Characteristics of Counselor – the nature of counselor's work -counselee relationship - counseling process: Steps – purposes of counseling – characteristics of effective counseling

UNIT II

Approaches to Counseling: Directive, Non-directive, Psychoanalytic, Humanistic, Reciprocal inhibition technique, Eclectic approach - Basic Counseling Theories – Psychoanalytic theory, Adlerian theory, Existential theory, person centered theory, gestalt theory- Sports Counseling in India - legal and ethical issues: – legal concerns of counselor.

UNIT III

Special areas: Family counseling, students counseling, parental counseling, educational, vocational and career counseling -Counseling Interview: Communication, verbal, nonverbal, interview, techniques of interview, relationship technique, problem identification and exploration, sharing, transference, counter transference. - Counseling the special population - global counseling and trauma counseling

UNIT IV

Professional Preparation & Training**:** Selection, skills, counseling as a profession, desirable characteristics - Other methods of assessment – Observation, rating scales – checklists – interview schedules – Verbatim reports – Autobiography, dairies and daily schedules – group assessment techniques: Case study preparation and report writing - Techniques: Egan's Model, Interviews, testing-– Mastering the techniques of sports counseling:

UNIT V

Some of the basic symptoms to look out for in athletes for sports counseling. Inconsistent athletic performance - Getting in their own way - Low self-confidence -

Sense of athletic unfulfillment - Lack of family support - Unrealistic dreams within the athletes - Inability to improve skills or feeling stuck - Not giving them permission to succeed - Social withdrawal - Depressive thoughts - Ineffective goal-setting - Inability to recognize past successes on the part of the athletes or their coaches or managers - Health failing process.

REFERENCE:

1. Lewis E. Patterson and Elizabeth Reynolds Welfel (2000). The Counselling Process, 5th edition, Wasworth Brooks / Cole, Thomson Learning.
2. S. Narayana Rao (1981) Counselling Psychology, Tata McGraw Hill Publisher.
3. Brammer. L.M. and Shostrom E.L. (1977) Therapeutic Psychology, Englewood Cliffs, New Jersey.
4. Feltham. C & Horton. I (2000) Handbook of Counselling and Psychotherapy, London : Sage Publication.
5. Nelson - Jones, R. (1995). The Theory and Practice of Counselling, 2nd Edition, London : Cassell.
6. Covey, G. (2008). Theory and Practice of Counselling and Psychotherapy (8th ed.) Canada: Brookes/Cole.
7. Covey, G. (2008). Student manual for Theory and Practice of Counselling and Psychotherapy (8th ed.). CA: Brooks/Cole.
8. Burl E. Gilland & Richard K. James (1998). Theories and Strategies in Counselling and Psychotherapy. Singapore: Allyn and Bacon.
9. James O. Prochaska & John C. Norcross. (2007). Systems of Psychotherapy: A trans theoretical analysis (6th ed.). Thomson-Brooks/Cole.
10. Palmer, S. (ed.). (1999). Introduction to counselling and psychotherapy: The essential guide. New Delhi: Sage.
11. Simon, L. (2000). Psychotherapy: Theory, practice, modern and post modern influences. Westport, Connecticut: Praeger.
12. Sharf, R.S.(2000). Theories of psychotherapy and counselling: Concepts and cases (2nd ed.).Singapore: Brooks/Cole.

COURSE CODE – 23PF1CT302

HUMAN GROWTH AND DEVELOPMENT

UNIT I: Life span development: issues and Theories: Introduction - Life span approach: The context of development – the impact of culture on development – the study of human development: The continuity of development – Determinants of Development – Major contemporary theories: Psychoanalytic, Cognitive and Behavioral

UNIT II: The Beginning Year: Genetics , Pregnancy , Birth and infancy : Genetic Foundations – The process of Conception – Prenatal Development – Stages of Prenatal development - Effects of prenatal environment – Birth : The Birth Process – Child birth methods – Complications – Infancy : Physical, perceptual, Cognitive , social and personality Development

UNIT III: Early childhood, Middle Childhood and Adolescence : Physical : Size and Proportion- Motor Development- Physical fitness – puberty- language – Structure of Language- language acquisition - concrete operational thought – Moral reasoning information processing : Attention- Memory – Disabilities in children- personality : The Development of self – Freud and Erikson's stage of personality – social : The child's Social world : Aggression, pro social behaviour - social play- self socialization

UNIT IV: Adulthood : Early, middle and late Adulthood – Physical, Cognitive, Personality, occupational , Family, Social relations and Adjustment – The impact of growing older- Metal health and aging – relations with grandchildren- retirement

UNIT V: Old Age : Death, Dying and Bereavement: Death: The Final Stage of life – The Dying Process: Kubler - Ross's Stage of Dying – Near Death Experiences – Issues in the care of Dying – Hospital Care – Bereavement.

References:

1. *Gormly, A.V. and Brodzinsky, D.M. Lifespan Human Development. NY: Harcourt Brace College Publishers 1993*
2. *VendarZanden, J.W. Human Development . New Delhi: McGraw Hill. Inc. 1993*
3. *Human Development – Elizabeth Hurlock*
4. *Human Development - Papalia*

COURSE CODE – 23PF1CT303

SOCIOLOGICAL THEORIES

UNIT I: SOCIOLOGICAL THEORY: Definition of Theory, Characteristics of Sociological Theory, Types: Functions of Theories.

UNIT II: AUGUSTE COMTE: Beginning of Sociology. Methods of Inquiry. The Law of Human Progress. Hierarchy of Sciences. Social Statics and Dynamics.

UNIT III: HERBERT SPENCER: The Evolutionary Doctrine. The Organic Analogy. Social Types: Militant and Industrial Societies.

UNIT IV: KARL MARX: Dialectical materialism. Economic determinism. Class struggle. The Concept of Alienation. Theory of Social Change.

UNIT V: EMILE DURKHEIM: Methodology of Social Sciences. Individual and Society. The Sociology of Religion. Theory of Suicide. Division of Labour. Anomie.

REFERNCES:

1. *Barnes, Harry Elmer "AN INTRODUCTION TO THE HISTORY OF SOCIOLOGY", Chicago, University of Chicago Press, 1948.*
2. *Coser, Lewis A. "MASTERS OF SOCIOLOGICAL THOUGHT" New york, Harcourt Brace Jovanovich, Inc., 1971.*
3. *Timasheff, Nicholas S. SOCIOLOGICAL THOERY – ITS NATURE & GROWTH", New York, Random House, 1967.*
4. *Nishet, Robert A. "THE SOCIOLOGICAL TRADITION", London, Heinemann, 1979.*
5. *Bogardus, Emory S. "THE DEVELOPMENT OF SOCIAL THOUGHT", Bombay, Vakils, Borrer and Simons Pvt. Ltd., 1960.*
6. *Aron, Raymond "MAIN CURRENTS IN SOCIOLOGICAL THOUGHT" Vol. 1&2, Hammondsworth, Middleses, Penguin Books, 1965.*
7. *Abel, Theodore "THE FOUNDATION OF SOCIOLOGICAL THEORY" Indian ed., Jaipur, Rawat Publications, 1980.*
8. *Abraham, Francis M. "MODERN SOCIOLOGICAL THEORY: AN INTRODUCTION "Delhi, Oxford University Press, 1982.*

COURSE CODE – 23PF1CE005

DISCIPLINE SPECIFIC ELECTIVE – 5

TEAM COHESION AND GROUP DYNAMICS

UNIT I: Introduction

What is team – team Development, team Goals – what is Cohesiveness – team cohesiveness – measurement of cohesiveness – cohesiveness and performance – group cohesion – characteristics of group cohesion – factors affecting group cohesion.

UNIT II: Groups and Teams

What is a group – evaluation structure – communication structure – role structure – group development – intra & inter group processes – group and team dynamics.

UNIT III: Building a Great Team

Create a mission – Team Building – Team Communication - Assessing team qualities & responsibilities – create a motivational action plan – evaluate a team work through constructive feedback – trait of an effective team.

UNIT IV: Group interaction and integration

Cooperation and competition – leadership – group interaction & communication – personal social factors – cohesiveness and group development – achievement factors – attribution for causality – achievement rewards – decision making groups.

UNIT V: The Sport Team

Systematic model for group interaction – personal factors – personality, interpersonal compatibility, individual ability, motivation – environmental factors – nature of tasks – behavioral norms of the group – performance norms in the group.

REFERENCES:

1. Daisy S. (2007) – Psychology of Team Sports, Sports Publications, New Delhi.
2. Cox, R (2002) – Sports Psychology – Concepts and Applications, International Edition, McGraw Hill
3. Martens, R. (1987) – Coaches Guide to Sport Psychology, Human Kinetics Publishers, Champaign, Illinois.

COURSE CODE – 23PF1CE006

DISCIPLINE SPECIFIC ELECTIVE - 6

SOCIAL PROBLEMS

UNIT I : Social Problems – Concept of Social Problems – Characteristics of Social Problems Causes of Social Problem – Theoretical approaches to Social Problems _ Social Problems and Social Disorganization.

UNIT II : Social Deviance – Crime – Meaning – Types – Theories of Crime-Confinement and Correction of Criminals. Juvenile Delinquency – Meaning – Type – Causes – Characteristics – Factors Involved – Methods of treating delinquents.

UNIT III : Poverty and Unemployment – Concept – Types – Causes – Meaning of Unemployment – Types – Causes – Effects of Poverty and Unemployment – Measures to remove Poverty and Unemployment.

UNIT IV : Terrorism – Characteristics – Objective – Origin and Development – Terrorism in India – Terrorism in other countries – Theoretical explanation of Terrorism – Sociology of Terrorism.

UNIT V : Child Abuse and Child Labour – Child Population and working children – Concept and types of child abuse – Causes of child abuse – Effects of abuse of Children – The problem of child labour. AIDS – Meaning – Magnitude of AIDS – Causes – Measures to eradicated AIDS

REFERENCES:

1. *Robert K. Merton and Robert Nisbet, Contemporary social problems, Harcourt Barie Joranoric Inc., New York.*
2. *David James F Social Problems enduring major issues and changes. New York.*
3. *Madhan G.R. Indian Social problems Allied Pub. Co., New Delhi.*
4. *Ram Ahuja Social problems in India LRawat Publication, New Delhi*
5. *Elliot and Merrill L Disorganizations : Personal and Social*

COURSE CODE – 23PF1L301

PRACTICUM – III

ON-FIELD PSYCHOLOGICAL SUPPORT & ASSESSMENT – I

Psychological assessment is processed on the field for evaluating the mental health and behavioral functioning of athletes through the use of standardized tests, observations, and other methods. The students pursuing M.Sc. Sports Psychology & Sociology will typically conduct these assessments with the particular sport throughout the semester and submit a detailed report to pursue the credits. The Viva-voce will be conducted for the same with the internal examiners.

COURSE CODE – 23PF1AE401

LIFE SKILLS MANAGEMENT

Unit I: Introduction: Soft Skills - Concepts and Definition- Need and importance of Soft Skills – Developing Soft Skills – Implications on Youth Development .

Unit II: Behavioral Skills : Attitude, Lateral Thinking , Emotional Intelligence, Leadership, Team Building and Interpersonal Skills.

Unit III

Social Skills and Negotiation Skills: Self Awareness and Empathy , Influencing, - Effective Communication –Oral Presentation Skills – Interviewing – Delegating.

Unit IV: Thinking Skills: Critical Thinking and Creative Thinking – Problem Solving and Decision Making skills.

Unit V: Coping Skills : Coping with stress and Emotions – Conflict Resolution – Negotiating - Time and Stress Management Skills.

Reference Books

1. G. Ravindran, S P Benjamin, Elango and R. Arokiam (2007) - Success through Soft Skills, ICT.
2. Kamin M (2013) Soft Skills Revolution: A Guide for Connecting with Compassion for Trainers, Teams, and Leaders. ISBN: 978-1-118-10037-0

SEMESTER - IV

PAPER CODE	PAPER TITLE
23PF1CT401	Counseling and Behavior Modification Techniques
23PF1CT402	Scientific Dimensions of Sports Psychology
23PF1CT403	Intervention Strategies and Sports Behavior
Electives (Discipline Specific)	
23PF1CE007	Positive Psychology
23PF1CE008	Sociology of Health
PPS23TH401 A	Thesis
PPS23TH401 B	Viva-Voce
23PF1L401	On-field Sports Psychology Assessment – Practicum - IV
23PF1AE401	Soft Skill – IV (Yoga & Meditation)
23PF1EA401	Extension Activity

COURSE CODE – 23PF1CT401

COUNSELING AND BEHAVIOR MODIFICATION TECHNIQUES IN SPORTS

UNIT I

Introduction to Behavior Modification- Meaning - Characteristics- Historical Perspectives of Behavior modification - Major theories and experiments – Assumptions – Effects of Behavior Therapy - Some Basic Aspect of Behavior – Behaviorism – Modalities of Behavior – Skilled vs Performance deficits.

UNIT II

Exploring Athletic behavior- Key concepts: Motivation and Goal setting- anxiety in Sport Performance- Concentration in Sports Performance- Self- Confidence- Peak Performance and Expertise.

UNIT III

Different approaches to counseling, person centered, Gestalt, Psychoanalytic, Cognitive, Trait factor, Behavioral and eclectic approach - Assessment Techniques - Important Factors – Tools of Assessment- Theories : Psychodynamic – Psychoanalytic and Adlerian Therapy Cognitive and Behavioural therapy: Behavioural Therapy – OCD, Cognitive: Beck's Cognitive Restructuring Therapy

UNIT IV

Behavior Counseling: Salient Features Enhancement of Client's Involvement – Some Misconceptions about Behavioral Approach. Relaxation Techniques: Jacobson's Deep Muscle Relaxation Training, Autogenic Training, Yoga and Meditation. Application of Behavior Therapy: Anxiety Disorders, Psychoactive substance use disorders, Sexual Disorders

UNIT V

Assertion Training – Basic Dimensions – Training procedure – Components of Social Skill Training – systematic desensitization - Operant Conditioning Techniques – Basic Paradigm – Schedules of Reinforcement – Aversive Conditioning and application – Token Economy – Shaping – Chaining – Other Operant Procedures, Premack's

Principle and Prompting. – Cognitive Restructuring – Meichenbaum's Self Instructional training – Thought Stopping and Variations – Problem Solving Techniques.

REFERENCES:

1. Corey, G (2005), Theory and Practice of Counseling and Psychotherapy, 7th Edition, Scarborough, Brooks/Cole.
2. Martin, G & Pear J (2000) Behavior Modification (7edition), New Delhi, Prentice Hall of India Pvt. Ltd.
3. Wolpe, J (1982), Practice of Behavior Therapy (3rd edition), New York, Oxford Pergamon Press Inc.
4. Nelson-Jones, R. (1994). - The theory of practice of counseling psychology – Cassel London.
5. Rimm, D.C. and Masters, J.C. (1974), - Behaviour Therapy: Techniques and Empirical Findings. New York: John Wiley and Sons.
6. Robert C. Carson. James. N. Butcher and Susan Mincka (1996) - Abnormal Psychology and Modern Life, 10th Edition, New York; Harper Collins College Publishers.
7. Swaminathan V.D. and Kaliappan, K.V. (1997), Psychology for effective living – Behaviour modification, Guidance, Counselling and Yoga, Chennai. The madras Psychology society publication.

COURSE CODE – 23PF1CT402

SCIENTIFIC DIMENSIONS OF SPORTS PSYCHOLOGY

UNIT I - History, origin and development of sports psychology – meaning, definitions, nature, scope and sports psychology. Need – importance of sports psychology.

UNIT II - Sports Psychology Association of India – interdisciplinary approach – importance of sports psychology for physical educators, coaches and athletes – ethic in sports psychology. Scientific foundations of psychological study of sports – developmental sports psychology – cognitive sports psychology – clinical sports psychology.

UNIT III - Psycho-physiological phenomena – visual, auditory and tactual cues – reaction time and performance time, speed and accuracy, warming up for action, fatigue, learning and performance, psychological and physiological limits.

UNIT IV - Socio- psychological phenomena, Socio- cultural force and sports competition and cooperation in physical activities – socio-economic status and athletes – women in physical education and sports – competition for the young. Personality traits and athletic participation – leadership – internationalism in sports – sports and social changes.

UNIT V - Differently challenged/abled person – injuries and related psychological adjustments. The perceptually handicapped – adjustment to physical impairment – personal injuries and psychological adjustments – psychosomatic disorders.

REFERENCES:

1. Gangopadhyay, S.R. (2008) – Sports Psychology, Sports Publications, New Delhi.

2. Liukkonen, J. (2007) – Psychology for Physical Educators – Students in Focus, Human Kinetics, U.K.

3. Shaw, D.F., Gorely, T. Corban, R.M. (2005) - Sport and Exercise Psychology, BIOS Scientific Publishers, UK

4. Llewellyn, J.H., Blucker A.J (1989)- Psychology of Coaching, 2nd Edition, Surjeet Publications, New Delhi.

COURSE CODE – 23PF1CT403

INTERVENTION STRATEGIES AND SPORTS BEHAVIOR

UNIT I: Intervention strategies: introduction, mental skills training in sports, Sports Psychology : A clinician's perspective, action theory approach to applied sports psychology, eating disorders in sport: from theory to research to intervention, psychosocial antecedents of sport injury and intervention for risk reduction.

UNIT II : Intervention Strategies: Relaxation Procedures - Progressive Relaxation – Autogenic Training, Transcedental Meditation – Biofeedback, **Cognitive Strategies**: Imagery, Thought Stopping and Centering, Self – Talk, Psyching up strategies.

UNIT III : Overtraining: Performance focus, Psychological Well-being, Educating Coaches and Athletes about Overtraining, Physical Health, Increasing Coach-Athlete Communication, Developing Athlete Resources.

UNIT IV : Energy Management: Understanding Energy Management- Arousal affecting Performance, Effects of Under arousal and Over arousal in Performance, Developing Athlete Energy Management Skills – Phases in energy management - Education Phase, Acquisition Phase and Implementation Phase, athletes choking under pressure, preparatory routines in self paced events: Do they benefit the skilled athletes or the beginners helped.

UNIT V : Communication Process: Purposes, Types of Communication. Breakdown in Communication, Improving Communication, Confrontation.

REFERENCES:

1. Weinberg, R.S, Gould D (2003) – Foundations of Sport & Exercise Psychology, 3rd Edition, Human Kinetics, South Australia.

2. Gurbakhsh S.Sandhu (2002) - Psychology in Sports – A Contemporary Approach, Friends publications, New Delhi .

3. Murphy, S.M. (1995) Sport Psychology Interventions, Human Kinetics, Auckland.

COURSE CODE – 23PF1CE007

DISCIPLINE SPECIFIC ELECTIVE – 7

POSITIVE PSYCHOLOGY

Unit–I: Define Positive Psychology? Traditional psychology; positive psychology; goals, assumptions and definitions of positive psychology.

Unit – II Positive Emotional States and Processes: Happiness and Well being, Positive Affect and Positive Emotions, Emotional Intelligence, Resilience

Unit – III: Positive Cognitive States and Processes: Self-efficacy, Optimism, Hope, Wisdom, Flow, Mindfulness.

Unit – IV: Personal Goals as Windows to Well–Being: The search for universal human motives; the personalization of goals in self–concept; goals contribute most to well–being. Materialism and its discontents. Self –regulation and self –control: The value of self-control; Personal goals and self -regulation; goals that create self – regulation problems; everyday explanations for self–control failure; goal disengagement.

Unit – V: Life Above Zero: Positive psychology revisited; interconnections of the "Good" and the "Bad"; contours of a positive life; meaning and means; mindfulness and well–being.

References

Steve, B.R. & Marie, C.K. (2009). Positive Psychology. Dorling Kindersley: India.

Boniwell, I. (2006). Positive Psychology in a Nutshell. PWBC (Personal Well–Being Centre).

Snyder. R, S. (2007). Positive Psychology: The Scientific & Practical exploration of human strengths. New Delhi: Sage Publications.

Baumgardner, S.R. Crothers M.K. (2010). Positive psychology. Upper Saddle River, N.J.: Prentice Hall.

Carr, A. (2004). Positive Psychology: The science of happiness and human strength.UK: Routledge.

COURSE CODE – 23PF1CE008

DISCIPLINE SPECIFIC ELECTIVE - 8

SOCIOLOGY OF HEALTH

UNIT I - Concept of Health and Illness: Definition of health, Aspects of health – Physical, Social, emotional and spiritual. Definition of disease, natural history of disease, disease classification. Social and preventive medicine, Community health.

UNIT II - Social epidemiology: The development of epidemiology, principles and methods of epidemiology, epidemiological measures. Epidemiology of disease – Man and his environment. Social etiology – Social epidemiology and ecology of disease – Microbial theory – Process of transmission.

UNIT III - Social and cultural context of health behavior: Home remedies – local community healers – traditional health care institutions. Family and health care decisions – women and elderly as health care givers – the traditional support networks and involvement of supportive ties.

UNIT IV - Health Care delivery system: Traditional – Native medicine – Alternate medicine and integrated approach. Health care and agencies: Primary health care centers and sub centers providing primary health care in rural communities. Counseling and counseling techniques.

UNIT V - Policies and Programmes: National health policy, provision of health care in rural and urban communities, Public health programmes; special teams and integrated health and family welfare approach: multipurpose health workers. Medical benefits – ESI, Maternity benefits, death benefit, medical insurance. Integrated programmes for rehabilitation, effective treatment and disability limitation, Immunization.

REFERNCES:

1. *Albrecht, Gary L. and Fitzpatric, R. 1994. Quality of life in Health care: Advances in Medical Sociology. Mumbai: Jai Press.*
2. *Andie L. Knuston. 1965. The Individual, Society and Health Behaviour. New York:Sage.*
3. *Coe. Rodney. M. 1970 Sociology of medicine. New York: Mc Graw Hill*
4. *Cockerham, William C. 1997. Medical sociology. New Jersey: Prentice Hall.*

5. *Dak T.M. (Ed.) 1991. Sociology of Healthin India. Delhi. Rawat.*
6. *Fox, Renee C. 1988. Essays in Medical Sociology: Journeys into the field. New York: Transaction Publishers.*
7. *Gunatilake, G. 1984. Intersectoral linkages and health development: Case Studies in India(Kerala State), Jamaica, Norway, Srilanka and Thailand (WHO offset series) Geneva: WHO*
8. *Nayar, K.R. 1998. Ecology and Health: A System Approach. New Delhi: APH Publishing Corporation.*
9. *Nettleton Sarah. 1995. The Sociology of Health and Illness. UK: Polity press.*
10. *Park, K. Preventive and Social Medicine.*
11. *Venkataraman, R. 1979. Medical Sociology in an Indian Settiong, Madras: Macmillan.*

COURSE CODE – PPS23TH401

THESIS

Students are required to submit a thesis at the end of the year. The thesis shall embody the record of original investigation under the guidance of a supervisor.

COURSE CODE – 23PF1L401

PRACTICUM – IV

ON-FIELD PSYCHOLOGICAL SUPPORT & ASSESSMENT – II

As a continuation of the previous semester on-field psychological assessment report the students shall recommend a specific training programme for the diagnosed athletes for a minimum period of 8 weeks to enhance their performance and repeat the test after the treatment period. Then submit a final report to pursue the credits. The Viva-voce will be conducted for the same with the internal examiners.

ABILITY ENHANCEMENT COURSE

COURSE CODE – 23PF1AE401

YOGA AND MEDITATION

Unit I: Introduction to Yoga and Yogic Practices

1. Yoga: Etymology, definitions, aim, objectives and misconceptions
2. Yoga: Its Origin, history and development
3. Rules and regulations to be followed by yoga practioners
4. Introduction to Yoga practices
5. Shatkarma: meaning, purpose and their significance in Yoga Sadhana
6. Introduction to yogic loosening practices and suryanamaskar

Key words: History and development of Yoga, Shatkarma, Common Yogic Practices.

Unit II: Breathing Practices and Pranayama

1. Sectional Breathing (Abdominal, Thoracic and Clavicuar)
2. Yogic Deep Breathing
3. Concept of Puraka, Rechaka and Kumbhaka
4. Concept of Bandha and Mudra
5. Anulmoa Viloma / Nadi Shodhana
6. Shitali
7. Bhramari

Keywords: Sectional breathing, Deep Breathing, Bandha & Mudra, shitali, Bhramari.

Unit III: Practices leading to Meditation

1. Recitation of Pranava Mantra
2. Recitation of Hymns, in vocations and prayers
3. Anter Maun
4. Breath Meditation
5. Om Dhyana

Key Words: Pranav Mantra, Antermaun, Breath Meditation, Om Dhyan.

Suggested Readings:

1. Singh S.P & Yogi Mukesh: Foundation of Yoga, Standard Publication, New Delhi, 2010.
2. Swami Dhirendra Brahmchari: Yogasanna Vijnana, Dhirendra Yoga Publication, New Delhi, 1966.
3. Saraswathi, Swami Satyanand: Asana, Pranayama, Mudra, Bandha (APMB), Yoga Publications Trust, Munger, 2013.
4. H.R.Nagendra: Asana, Pranayama, Mudra, Bandha, swami Vivekananda Yogprakashan Bangalore, 2002.
5. Ishwar Bhardwaj: Saral Yogasana, satyam Publishing House, New Delhi, 2018.
6. Shri Rai Singh Chouhan: Mudra Rahasya, Bhartiya Yog Sansthan, New Delhi, 2014.
7. Dr.Vishwanth Prasad Sanha: Dhyan Yoga, Bhartiya Yog Sansthan, New Delhi, 1987.
8. Shri Deshraj: Dhyan Sadhana, Bhartiya Yoga Sansthan, New Delhi, 2015.

COURSE CODE – 23PF1EA401

EXTENSION ACTIVITY

The students pursuing M.Sc. Psychology shall compulsorily take part in the outreach programme / volunteering opportunities / community service program at schools, colleges, old age homes, villages, juvenile homes and hospitals for 5-7 days. A detailed report with the letter of appreciation from the respective organization would be considered for pursuing the credits.

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI- 600 127

SYLLABUS

M.Sc., SPORTS PSYCHOLOGY

(REGULAR-2023-2024)

DEPARTMENT OF SPORTS PSYCHOLOGY & SOCIOLOGY

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI - 600 127

DESCRIPTION OF THE PROGRAM

M.Sc. Sports Psychology is a two years programme offered by the Department of Sports Psychology & Sociology. This programme provides research-approach to study that helps to understand how psychology affects performance. Students study the effects various kinds of exercise have on mental health, as well as emotions and cognitive reasoning. This course offers a diversified career path and specialization opportunities. The department will integrate both theoretical and practical knowledge of the field to train the students to become a professional in the field of sports psychology.

REGULATIONS

The Choice Based Credit System (CBCS) for two years M.Sc., Degree programme in Sport Psychology will be implemented from the academic year 2023-2024.

1. ELIGIBITLITY FOR ADMISSION

1.1 A Candidate shall be admitted to the degree of M.Sc.,Sports Psychology only if he/she produces satisfactory evidence to the effect that he/she has completed Bachelor's Degree in Sport Psychology / Psychology / Sport and Exercise Psychology / Sports Science/ Sports Coaching/Physical Education and Sports or an equivalent thereto in 10+2+3 or 10+2+4 pattern from a recognized university with a minimum of 50% marks in aggregate and any undergraduate **science Degree** recognized by the syndicate of Tamil Nadu Physical Education & Sports University.

1.2 Eligible for admissions and reservation of seats shall be according to the rules framed by the governing body of this University in this regard, from time to time at par with the UGC norms and regulations of the Government of Tamilnadu.

2. COURSE OF STUDY

2.1 The normal duration of the M.Sc., Sport Psychology Programme shall be four semester (Two years).

2.2 Each academic year shall comprise of two semester's viz. **ODD** and **EVEN** semesters. Odd semesters shall be from July to November and Even Semesters shall be from December to May.

2.3 There shall be not less than 90 working days which shall comprise 480 teaching/Practical Activity clock hours for each semester.

3. CHOICE BASED CREDIT SYSTEM (CBCS)

The CBCS in M.Sc., programme would have the following five components and the minimum credit requirements for each component to be completed in two years are:

3.1 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

3.2 **Core course:** Are course that are basic to the subject of the degree. This is a course which is to be compulsorily studied by a student as a core requirement to the completion of the program.

3.3 **Elective Courses:** This is a course that is supportive to the discipline of study, provides an expanded scope, enables exposure to some other domains or nurtures proficiency/skills. Elective papers can be of two types: Discipline Specific Elective (DSE) and Generic Elective (GE).

3.4 **Discipline Specific Elective (DSE):** These courses are inter disciplinary in nature and considered similar to core course. And, the students have to choose one course from the option provided for them.

3.5 **Generic Elective (GE):** These courses add generic proficiency to the students. Students have to choose generic elective courses in consultation with the head of the department from the Generic Elective courses offered by other Division of study in Sports Science or from other Departments in university.

CREDIT ABSTRACT

Semester – Credit Subject	I	II	III	IV	Total Credit
Core course	12	12	12	12	48
Elective (Discipline Centric)	3	3	3	3	12
Generic Elective (GE)	3	3	-	-	06
Core - Practicum (Skill Enhancement Course)	2	2	2	2	08
Ability Enhancement Course (AEC)-Soft Skill	2	2	2	2	08

Thesis with Viva-Voce	-	-	-	5	05
Internship	-	-	3	-	03
Field Work / Extension Activity	-	-	-	1	01
Grant Total	**22**	**22**	**22**	**25**	**91**

4. COURSE WEIGHT

4.1 Courses will be designed with weightage of two /four credits, depending upon the content, duration and specialization. All courses need not carry the same weight. A course may comprise lectures/tutorials/laboratory/field work/outreach activities/project work/vocational training/viva/seminars etc. or a combination of some of these.

4.2It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

5. ASSESSMENT AND EVALUATION

Post Graduate degree programme M.Sc., Sport Psychology (Two Years). It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching or two hours of practical work.

SEMESTER	CREDITS	TOTAL MARKS
I	22	600
II	22	600
III	22	600
IV	25	700
Grant Total	**91**	**2500**

5.1 Each course will be assessed on the basis of 100 marks. The marks would be divided between internal and external assessment.

5.2 There shall be one end semester external examination for each course in every semester consisting of 75% (75 marks) weight in theory and 75% (75 marks) in practical courses.

5.3 Each Theory course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	Marks
Assignments	2

Seminars / Conference Paper Presentations	3
Internal Assessment Test – I	5
Internal Assessment Test – II	5
Model Examination	10
Total	**25**

5.4 Each Practical Course shall have internal assessment of 25% weightage on the following:

Components of Internal Evaluation of Theory	**Marks**
Internal Viva	5
Record	5
Internal Assessment Test	5
Lab Performance	10
Total	**25**

5.5 The minimum passing standard will be 50% for the external and internal component of each theory course, i.e. 38 marks out of 75 (external - 50% of 75 marks) and **12.5 marks out of 25 (internal - 50% of 25 marks)**.In practical minimum passing standard will be 50% for the external exam and internal assessment for each practical course.

6. ATTENDANCE

6.1 Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course.

6.2 Students must have 75% of attendance in each course for appearing in the semester examinations.

6.3 Students who have 74% to 70% of attendance shall apply for condonation in the prescribed form with the prescribed fee.

6.4 Students who have 69% to 65% of attendance shall apply for condonation in the prescribed form with the prescribed fee along with the Medical Certificate.

6.5 Students who have below 60% of attendance are not eligible to appear for the examination. It is furthered clarified that the students will have to repeat the semester.

6.6 Obtaining condonation is not a matter of right of the students.

6.7 A student can avail condonation only once during the entire course of study.

7. END SEMESTER EXAMINATION (ESE)

7.1 The ESE will consist of à written examination of three hours duration for a maximum score of 75. The following procedure will be followed for evaluation.

Pattern	Total No. of Question	Number of Question to be Answered	Marks for each Question	Total Marks
Multiple-Choice Questions	10	10	1	10
Short Answer / Problem Type	5	5	2	10
Short Essay / Problem	8	5	5	25
Long Answer / Essay / Problem Type	5	3	10	30
Total				**75**

7.2 A candidate who has secured a minimum of 50 marks in all courses prescribed in the programme and earned a minimum of the credits will be considered to have passed the Bachelor's Degree Programme.

7.3 A Student will be issued, hall ticket only if one produces "**No Dues**" certificates from the concerned department, the laboratory, the Registrar's Office, the Library and Hostel.

8. GRADING SYSTEM

A ten point rating is used for the evaluation of the performance of the student to provide a letter grade for each course and overall grade for the Master's Programme. The letter grade assigned is given below:

Letter	Grade	Grade Point	Range of Marks
O	Outstanding	10	91-100
A+	Excellent	9.0	81-90

A	Very Good	8.5	71-80
B+	Good	8.0	61-70
B	Above Average	7.5	51-60
C	Pass	7.0	50
RA	Reappear	0	0-49
AB	Absent	0	ABSENT

9. INTERNSHIP AND FIELD TRAINING

Internship and field training is an important component of Sport Psychology that provides students with the opportunity to gain applied practical experience in the field of Sport Psychology. It allows a student to employ what is learned in class in a supervised environment, which is critical in order to further develop professional skills and assure quality practice. The students will undergo Internship training /Clinical practice /Field training in TNPESU campus/ Sports Development Authority of TamilNadu (SDAT) coaching Centres /Sports Authority of India (Various coaching Centres of SAI) /Government Medical College/ other sporting centers / academiesshall be evaluated through internal assessment only. At the end of Internship/fieldtraining, the student shall submit a certificate from the organization where he /she has undergone training and a brief report. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three member Departmental Committee constituted by the Head of the Department.

10. THESIS

The topic of thesis will be allocated in third Semester and candidate will work for one semesters and submit a written thesis in 4th semester. The student will be awarded grade for the total number of credits earned in thesis in III and IV semesters of study at the end of the IV semester.

SEMESTER I

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF2CT101	Cognitive Psychology	4	-	4	25	75	100
23PF2CT102	Principles of Sport Psychology	4	-	4	25	75	100
23PF2CT103	Research Methodology	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF2CE001	Coping with Stress	3	-	3	25	75	100
23PF2CE002	Emotional Intelligence	3	-	3	25	75	100
GENERIC ELECTIVE							
23PF2GE001	Interdepartmental Elective – I (Generic)	3	-	3	25	75	100
PRACTICUM							
23PF2L101	Psychological Assessment Practicum - I	-	4	2	25	75	100
23PF2AE101	Soft Skill – I (Communication Skill)	4	-	2	-	-	-
		22	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER II

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF2CT201	Psychological Aspects of Sports Performance	4	-	4	25	75	100
23PF2CT202	Biological Basis of Behavior	4	-	4	25	75	100
23PF2CT203	Statistics in Social Science	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF2CE003	Motor Learning and Psychology of Coaching	3	-	3	25	75	100
23PF2CE004	Psychometrics	3	-	3	25	75	100
GENERIC ELECTIVE							
23PF2GE002	Interdepartmental Elective – II (Generic)	3	-	3	25	75	100
PRACTICUM							
23PF2L201	Psychological Assessment Practicum - II	-	4	2	25	75	100
23PF2AE201	Soft Skill – II (Basics of Computer Applications)	4	-	2	-	-	-
		22	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. Students shall take Interdepartmental Electives (IDEs) from a range of choices available.

SEMESTER III

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF2CT301	Fundamentals of Counselling Skills	4	-	4	25	75	100
23PF2CT302	Psychology of Athletic Injury and Rehabilitation	4	-	4	25	75	100
23PF2CT303	Psychological Preparation and Mental Skills Training	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF2CE005	Team Cohesion and Group Dynamics in Sports	3	-	3	25	75	100
23PF2CE006	Psychotherapy	3	-	3	25	75	100
PRACTICUM							
23PF2L301	On-field Sport Psychology Assessment- Practicum - III	-	4	2	25	75	100
23PF2AE301	Softskill – III (Life Skills Management)	2	-	2	-	-	-
23PF2IT301	Internship*	-	-	3	25	75	100
		17	**4**	**22**	**150**	**450**	**600**

Note:

1. Students shall take Department Electives (DEs) from the choices available.
2. *Internship will be carried out after completion of first year and before appearing for third semester examinations. The marks shall be sent to the University by the Department and the same will be included in the Third Semester Marks Statement.

3.*One month training at reputed Organizations / Sporting Clubs / Govt. Sports Authorities / Councils / National Teams and submit a report.

SEMESTER IV

Course code	Course Title	Hours/ Week		C	Marks		
		L	P		CIA	ESE	Total
23PF2CT401	Counseling and Behavior Modification Techniques	4	-	4	25	75	100
23PF2CT402	Sports for the Challenged	4	-	4	25	75	100
23PF2CT403	Athletic Psychopathology	4	-	4	25	75	100
DISCIPLINE SPECIFIC ELECTIVE (Choose any one)							
23PF2CE007	Positive Psychology	3	-	3	25	75	100
23PF2CE008	Introduction to Sports Sociology	3	-	3	25	75	100
PRACTICUM							
23PF2L401	On-field Sport Psychology Assessment- Practicum - IV	-	4	2	25	75	100
23PF2TH401A	Thesis	-	4	4	25	75	100
23PF2TH401B	Viva-Voce	-	-	1	25	25	50
23PF2AE401	Softskill – IV (Yoga & Meditation)	2	-	2	-	-	-
23PF2EA401	Extension Activity	-	2	1	50	-	50
		17	**10**	**25**	**225**	**475**	**700**

SEMESTER - I

PAPER CODE	PAPER TITLE
23PF2CT101	Cognitive Psychology
23PF2CT102	Principles of Sports Psychology
23PF2CT103	Research Methodology
Electives (Discipline Specific)	
23PF2CE001	Coping with Stress
23PF2CE002	Emotional Intelligence
23PF2GE001	Generic elective -I
23PF2L101	Psychological Assessment Practicum - I
23PF2AE101	Soft Skill – I (Communication Skill)

SEMESTER- I

COURSE CODE – 23PF2CT101

COGNITIVE PSYCHOLOGY

UNIT 1 – INTRODUCTION

Definition and Scope of Cognitive Psychology – History and Development of Cognitive Psychology – Intelligence – Definition – Theories of Intelligence – Emotional Intelligence –Definition and its components – Artificial Intelligence – Definition and its applications.

UNIT 2 – ATTENTION, PERCEPTION AND CONSCIOUSNESS

The nature and definition of attention, perception and consciousness – selective attrition anddivision of attention – theories of attention – filter theory, attenuation theory, late selection theory – theories of perception – bottom up and top down process – Gestalt approaches to perception – Disruptions of perception – subliminal perception – Consciousness of complexmental process.

UNIT 3 – MEMORY AND LANGUAGE

Short term vs long term memory – types of long term memory – encoding, storage, and retrieval – working memory – definition and model – process of forgetting – memory distortions – reconstructive retrieval – eyewitness testimony – Language – properties of language- process of language comprehension-language and thought – language in social context.

UNIT 4 – PROBLEM SOLVING AND CREATIVITY

Problem solving: Meaning – Problem solving cycle – types of problems – Problem solving techniques – obstacles and aids in problem solving – knowledge and problem solving – creativity – definition – divergent thinking – steps in creative thinking – nature of creative people – blocks to creative thinking – Promoting Creativity.

UNIT 5 – REASONING AND DECISION MAKING

Types of thinking – Reasoning: Meaning – categorical syllogisms – conditional syllogism –syllogistic reasoning – inductive reasoning – heuristics and biases and its types – Decision making: Meaning – types of decision making.

REFERENCES

1. Kellogg, R.T. (2007). *Fundamentals of cognitive psychology*. New Delhi, India: SagePublication.
2. Sternberg, R. J. (2009). *Applied cognitive psychology: Perceiving, learning andremembering.* New Delhi, India: Cengage Learning.

3. Parkin, A . J. (2000). *Essential Cognitive Psychology*. London: Psychology Press.
4. Smith, E.E & Kosslyn, S.M. (2007). *Cognitive psychology: Mind and brain*. NewDelhi, India: Prentice – Hall of India.
5. Riegler, B.R & Riegler, G. L. (2008). *Cognitive psychology. Applying the science ofthe mind.* New Delhi, India: Pearson India Education Services Private Limited.
6. Galotti, K.M. (2004). *Cognitive psychology: In and out of the laboratory*. New Delhi,India: Wadsworth.

COURSE CODE – 23PF2CT102

PRINCIPLES OF SPORTS PSYCHOLOGY

UNIT I

Introduction to Sport Psychology: Meaning and scope, Importance, relationship with other sport sciences, development of sport psychology in India and worldwide.- sports psychology for physical educators, coaches and athletes – ethics in sports psychology.

UNIT-II

Attention :

Attention in sport - information processing - memory systems - measuring information - selective attention - Limited information processing capacity - attention narrowing - measuring attentional focus - attention focused training - types of attentional focus - thought stopping and centering - associative vs dissociative attentional strategies. Flow in sports– Experience of Flow- Dimension of flow –– Measuring Flow.

UNIT III

Emotions and Motivation: Nature of emotion - types of emotions - factors effecting emotions – control of emotions in sports –Building of Social and emotional skills in sports- Emotional Intelligence and Emotions Associated with Optimal and Dysfunctional Athletic Performance.

Motivation definition, (drive, need and motives, instinct, attitude, achievement motivation,) Kinds of Motivation - Effects of external rewards on intrinsic motivation Techniques of motivating the Athletes. Self-confidence in sport - models of self confidence – developing self confidence - gender and self-confidence.

UNIT IV

Personality in Sport: Concept and definition, Modern perspective, (trait, humanistic, social cognitive and biological)**,** Dynamics of personality in sport –Personality sport type - Player position and personality profile - personality profiles of athletes differing in skill level - Sports and Personality.

UNIT-V

Psychological Preparation and Competition: Phenomenon of competitive sport, long term Psychological preparation for competition (arousal regulation, imagery, self-confidence, goal setting, concentration.),short term psychological preparation (upcoming competition).

REFERENCES:

Robert C. Eklund, Gershon Tenenbaum (2014) Encyclopaedia of Sports & Exercise Psychology, Sage Publications, Los Angles.

Weinberg RS and Gould D (2003). Foundations of Sport and Exercise Psychology. Human Kinetics. US

COURSE CODE – 23PF2CT103

RESEARCH METHODOLOGY

UNIT I

Definition of research – meaning need, importance and scope of research in sports psychology - Classification of research : Basic research, Action research, Applied research. Ethics in research. Recent Research trends in Sports Psychology .

UNIT II

Descriptive research methods – need and importance of survey Study, case study, interview technique, Historical and philosophical research, observation, construction and standardization of Questionnaire.

UNIT III

Research Design: Definition, Types of Research Design: Experimental design – Single group design – Reverse group design – Repeated measures design – Static group design – Factorial design – fixing the level of Significance and degrees of freedom for a research problem

UNIT IV

Sampling: definition, sampling planning – components – sample methods – probability and non – probability methods – sampling distribution – determining sample size – sampling error.

UNIT V

Contents in the research report: Introduction – Hypothesis – Delimitation – Limitation - Review of related literature – Summary – Conclusion – Recommendations. Research format: Style of writing research report. Mechanism of writing Research Proposal - Abstract – Synopsis – References – Appendixes – Contents – Tables – figures – preliminary – end pages.

REFERENCES:

1. Clarke David. H and Clarke H. Harrison (1984) **Research process in Physical Education**, New Jersey: Prentice Hall Inc.
2. Best, John W. and Kalm James, V. (1980) **Research in Education**, New Delhi: Prentice Hall of India.
3. Kothari C.R. (1985) **Research Methodology** 2nd revised ed., New Age International, Publisher; New Delhi.

COURSE CODE – 23PF2CE001

DISCIPLINE SPECIFIC ELECTIVE – I

COPING WITH STRESS

UNIT 1: Learning about sources of stress and its symptoms: Nature of stress- various sources of stress environmental, social, physiological and psychological; Symptoms of stress - emotional response, physiological & behavioural response.

UNIT 2: Coping --- (a) Concept of coping: Definition and Classification. (b) Measurement of coping behaviour.

UNIT 3: Life Style and Related aspects---- (a) Stress and Personality. (b) Life Style and Health: Cardiovascular disease, Atheroceterosis, cancer. (c) Stress and substance abuse: alcohol and other drugs

UNIT 4: Developing a sense of Humour – Learning to laugh – Using humour at work – Reducing conflicts with humour

UNIT 5: Learning to manage stress effectively: Methods - yoga, meditation, Vipassana, relaxation techniques, clarifying problem, alternate actions, support (Problem focused) emotion focused constructive approach

Readings: Weiten, W. & Lloyd, M.A (2007). Psychology applied to Modern life. Thomson Detmar Learning .

Suggested Readings:

1. Barrett.J.E. (1979) ---Stress and Mental Disorder, American Psychopathological Association Series,New York : Rayan Press, Section A-6.
2. Braumsteirn, J.J. and Toister, R.P (1981)----- Medical Applications of Behaviour Science chicago:Year Books Medical publishers Inc. Section A. I:
3. Dohrenwend B.S. and Dohrenwend, B.P. (1974) --- Stress life events : their nature and effect, Newyork, Johan willy and sons.
4. Goldberger, L. and Breznitz,S. (1982) ---- Handbook of stress : theoretical and clinical as pact
5. Harzars, R.S. and Talkman, S. (1984) ---- Stress, Appraisal and coping, Newyork: Springer.
6. Selye. H.(1980) ------Selyes guide to stress research vol. I, Newyork : Van Nostrand Reinhold. ADACP -

COURSE CODE – 23PF2CE002

DISCIPLINE SPECIFIC ELECTIVE - 2

EMOTIONAL INTELLIGENCE

Unit I - Understanding the Self a) The self-concept and self-esteem b) Facilitating self-awareness through reflective exercises, JOHARI window, personal SWOT analysis, self-awareness questionnaires/inventories

Unit 2: Emotional Intelligence; Models of Emotional Intelligence; EQ competencies: self-awareness, self-regulation, motivation, empathy, and interpersonal skills; Importance of Emotional Intelligence

Unit 3: KNOWING ONE'S AND OTHERS' EMOTIONS: Levels of emotional awareness; Recognizing emotions in oneself; the universality of emotional expression; Perceiving emotions accurately in others

Unit 4: MANAGING EMOTIONS: The relationship between emotions, thought and behaviour; Techniques to manage emotions

Unit 5: APPLICATIONS: Workplace; Relationships; Conflict Management; Effective Leadership

Readings:

Bar-On, R., & Parker, J.D.A.(Eds.) (2000). The handbook of emotional intelligence. San Francisco, California: Jossey Bros.

Goleman, D. (1995). Emotional Intelligence. New York: Bantam Book.

Goleman, D. (1998). Working with Emotional Intelligence. New York: Bantam Books.

Singh, D. (2003). Emotional intelligence at work (2 nded.) New Delhi: Response Books.

COURSE CODE – 23PF2GE001

GENERIC ELECTIVE - 1

A student admitted in the Department of Sports Psychology & Sociology has to opt for the Generic Elective (GE) Course offered by other departments. As an example, a student admitted under M.Sc. Sports Psychology programme can't opt for the Generic Elective Courses offered by Department of Sports Psychology & Sociology.

GENERIC ELECTIVE PAPERS OFFERED BY VARIOUS DEPARTMENTS IN THE ODD SEMESTER (FIRST SEMESTER)

Department	Name of the Generic Elective Paper	Brief Description
Sports Management		
Yoga		
Exercise Physiology & Nutrition		
Biomechanics		
Sports Technology		
Physical Education		
Advance Training & Coaching		

COURSE CODE – 23PF2L101

PRACTICUM – I

PSYCHOLOGICAL ASSESSMENT

Students are required to conduct and record any 08 experiments.

1. Competitive State Anxiety
2. Sports Specific Personality
3. Locus of Control –Internal/External
4. Life Skills
5. Mental Imagery
6. Sports Motivation
7. Athlete Self Efficacy
8. Concentration
9. Sports Achievement Motivation
10. Flow State

REFERENCES:

1. Woodworth, R.S. and Scholsberg (1972), Experimental psychology. Holt, Rinehart & Winston.
2. Anastasi & Susana Urbina (2004) 7th Edition, Psychological Testing, Pearson Education Inc, New Delhi.. Parameseswaran & Ravichandran. (2003). Experimental psychology. Neel Kamal Publications.

ABILITY ENHANCEMENT COURSE (AEC)

COURSE CODE – 23PF2AE101

COMMUNICATION SKILLS

Unit – I- Communication Skills: Role of communication in Present Days- Importance of Communication - Communication Barriers - Types of Communications: Verbal communication: Oral -Story telling- Crucial conversation – Face to Face Communication- Telephone communication, Aral- Listening and Hearing, Non - Verbal Communication: Facial Expressions- Body Language-Posture- Eye Contact, Written Communication: Journals- E-Mails- Blogs - Text Messages, Visual Communications: Signs- Symbols- Pictures.

Unit – II- Components of Communication – Context - Encoder- Encoding - Message - Medium - Receiver – Feedback- Level of Communication – Intrapersonal – Intrapersonal- Group and Public communication, Characteristics of Communication, Memorandum: Purpose- Format- Business Memo and Agenda, Basic Skills for Communications- Listening- Speaking- Reading and Writing.

Unit – III- Interview Skills: Preparing for Interview- -Personal interview - Technical interview - Group Discussion- Body language- Pronunciation- Speaking - Presentation skills: Preparation – The Subject – The Audience – The place- The time- Length of Talk and Structure of Presentation.

Unit – IV- Phonetics: Elements of English Language – Phonology- Morphology – Lexis – Syntax- Grammar, The Different Speech Organs and Their Role- The Individual Sounds- Vowel- Pure Vowel- Semi Vowel- Diphthongs- Classification of Diphthongs - Monotones- Consonants- Manner of Articulation- Place of Articulation.

Unit – V- Strong and weak Forms of Words- Stress- Word Stress- Primary Stress- Secondary Stress- Sentence Stress, Rhyme and Rhythm- Rhythm- Intonation- Raise - Fall - Raise Fall intonation.

Reference Books

1. Second Edition of “Communication Skills” Published by Carrier Skill Library.
2. Effective Communication Skills – A Book of MTD Training.
   The Language Sound of Language by Michael Dobrovolsky and Francis katamba.

SEMESTER - II

PAPER CODE	PAPER TITLE
23PF2CT201	Psychological aspects of Sports Performance
23PF2CT202	Biological Basis of Behaviour
23PF2CT203	Behavioural statistics
Electives (Discipline Specific)	
23PF2CE003	Motor Learning and Psychology of Coaching
23PF2CE004	Psychometrics
23PF2GE002	Generic Elective -II
23PF2L201	Psychological Assessment - Practicum - II
23PF2AE201	Soft Skill – II (Basics of Computer Applications)

COURSE CODE – 23PF2CT201

PSYCHOLOGICAL ASPECTS OF SPORTS PERFORMANCE

UNIT I

Bases of Psychological Preparation: Positive Attitude, Calmness, Self Confidence, Fighting spirit – Adapting to competitive situation, situational control , controlling the athletes state before competition - Overtraining, Physiological and Psychological Impact of Overtraining.

UNIT II

Anxiety and arousal in sport - neurophysiology of arousal - autonomic nervous system - Brain mechanisms - preferred state of arousal - defining anxiety and stress - measurement of anxiety - multidimensional nature of anxiety - Time-to-event nature of precompetitive anxiety - differential effect of somatic and cognitive anxiety on performance - intensity and direction issues - the sports grid - relationship between arousal and athletic performance - inverted U theory - drive theory - alternatives to inverted U theory

UNIT III

Motivation: Motivation of children and Youth in sports - Extrinsic and Intrinsic Motivation in Sports – Perceived competence - Achievement Motivation and Competitiveness, Theories of Achievement Motivation

UNIT IV

Psychological Preparation of Training and Competition: Competition in sports – types of competition - Determinants of Competitive Behavior –Characteristics of pre-competition , competition and post competition -

UNIT V

Social psychology of sport - aggression in sport - theories of aggression - measurement of aggression - the catharsis effect - fan violence - effects of aggression on performance - situational factors in a sport setting - reducing aggression in sport - audience effects in sport - social facilitation - effect of interactive audience on performance - audience characteristics

REFERENCES:

1. Gangopadhyay, S.R. (2008) – Sports Psychology, Sports Publications, New Delhi.

2. Burton, D, Thomas D. (2008) – Sportes Psychology for Coaches, Human Kinetics Publishers, UK.

3. Gurbakhsh S.Sandhu (2002) - Psychology in Sports – A Contemporary Approach' friends publications, New Delhi

4.Martens, R. (1987) – Coaches Guide to Sport Psychology, Human Kinetics Publishers, Champaign, Illinois

COURSE CODE – 23PF2CT202

BIOLOGICAL BASES OF BEHAVIOR

UNIT I

Introduction: The origins of biopsychology, Nature of biological psychology – Mind Brain Relationship , Methods of study of research in biopsychology – anatomical methods, degeneration techniques, lesion techniques, chemical methods, stereotaxic surgery, micro-electrode studies, oscilloscope, polygraph, scanning methods and ethical issues in research.

UNIT II

Neurons: Neurons and Neuronal conduction – Structure of neurons, types, functions, neural conduction, communication between nurons, synaptic conduction , neurotransmitters.

UNIT III

Nervous System : The structure and functioning of the Nervous system- Basic features of Nervous System, Meninges, Ventricular System, Cerebrospinal fluid, Blood brain barrier, Peripheral Nervous System, Cranial Nerves, Spinal Nerves, Autonomic Nervous System: Major structures and functions, Spinal Cord. Brain: Forebrain, Mid brain, Hind brain, Cerebral cortex, temporal, Parietal and occipital lobes; prefrontal cortex.

UNIT IV

Bio-Psychology of Cognitive Functions Learning : Neurophysiology of learning, Synaptic plasticity; Memory, Neurological basis of Memory, Brain damage and dysfunction of memory. Language: Lateralisation, Evolution and Neurophysiology of Speech. Disorders of Reading, Writing : Aphasia , Alexia and Dyslexia.

UNIT V

Bio-Psychology of Arousal Physiological correlations of Arousal: Consciousness and Sleep, factors affecting Consciousness, Sleep: Rhythms of sleeping and waking , neural basis of biological clocks , stages of sleep, brain mechanisms of REM sleep and dreaming-Physiological mechanisms of Sleep and Waking, Disorders of Sleep.

Essential Reading:

Carlson, N.R. (2004) Physiology of Behavior (8th Edition), Boston: Alwyn and Bacon

Kalat, J.W (2004) Biological Psychology (8th edition) Belmont: Wadsworth/Thomson Learning.

REFERENCES:

1. Wagner, H. & Silber, K (2004) Physiological Psychology, Garland Science ,Abingdon : UK

2. Rosenweig, M R Leiman, AL & Breedlove, SM (1999) Biological Psychology: An introduction to behavioral, Cognitive, Clinical neuroscience (2nd edition) USA; Sinauer Associates, Inc
3. Wallace, B & Fisher, L.E. (1991) Consciousness and Behavior (3rd Edition) USA, Allyn & Bacon.
4. Pinel, J P J (2000) Biopsychology (4th Ed.) Boston: Allyn & Bacon
5. Kandel E R. Schwartz, J H & Jessel, T.M. (2000) Principles of neural science (4th edn.) New York, McGraw-Hill.
6. Leukel , F (1985) Introduction to physiological psychology (3rd. ed) New Delhi, CPS Publishers.

COURSE CODE – 23PF2CT203

STATISTICS IN SOCIAL SCIENCE

Learning Objectives:

After completing this subject we will be able to understand about

1. The basic concepts of statistics, need of statistics and central tendency & dispersion,
2. Sampling, hypothesis testing, data analysis using descriptive statistics.
3. How to analysis the problem using SPSS software.

UNIT – I Statistics: Meaning, Definition and Importance: Raw Score, Class Intervals - Continuous and Discrete Series, Construction of Frequency Tables, Measures of Central Tendency: Mean Median and Mode - Meaning, Definition, Importance, Advantages and Disadvantages. Calculation of Mean, Median and Mode.

UNIT –II Measures of Variability- Range, Quartile Deviation, Mean/Average Deviation, Standard Deviation-Meaning, Definition and use. The Normal Curve: Meaning, Principles, Laws, Properties and Uses. Divergence from Normality-Skewness and Kurtosis. Scoring Scales- Sigma scale, Z Scale, T Scale.

UNIT – III Correlation- Pearson Product Moment Correlation, Spearman Rank Order Correlation, Phi Correlation, Biserial Correlation Partial and Multiple Correlation. Regression Lines.

UNIT – IV Testing of Hypothesis - Procedure, Types of Hypothesis, Level of Significance, One Tailed and Two Tailed Test, Degrees of Freedom, Test of Significance for Difference of Means-t Test -Independence and Dependence Test, Z-Test, One Way Analysis of Variance.

UNIT – V Non Parametric: Chi Square Test – Equal Occurrence Test, Independence of Attributes, Contingency Coefficient; Graphical Representation – Line Diagram, Bar Diagram-Multiple Bar Diagram, , Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, and Pie Diagram – introduction of SPSS Package.

Reference Books

1. Berg, “Essential of Research Methods in health Physical education”, Lippincott William and Wilkins Publisher.
2. Rothstein, Anne L. (2006), “Research Design and Statistics for Physical Education, Englewood Cliffs, and New Jersey: prentice Hall Inc.
3. Blum, J.R., and Fattu, N.A. 1954. Nonparametric methods.Rev.Educ.Res. 24, 467-487.

4. Conover, W.J. Practical Nonparametric statistics, 2nd edition. New York; John wiley& sons, 1980.
5. Gibbons, J.D., and Chakraborti. S., Nonparametric Statistical Inference, 3d ed., New York, Marcel Dekker. 1992.
6. Clarke, David H. Clarke, Harrison H. Research Process in Physical education, New Jersey: Prentice Hall Inc.1984.
7. Jerry R. Thomas, Jack K. Nelson and Stephen J. Silverman., Research methods in Physical Activity (5th Ed), New York: Human Kinetics, 2005.
8. Kraft, Charles H. and Van Eeden. Constance A Nonparametric Introduction to Statistics. New York: Macmillian, 1968.
9. Owen, D.B. Handbook of Statiscal Tables. Reading, Mass; Addison- Wesley, 1962.
10. Siegel, Sidney. Nonparametric statistics for the behavioural Sciences. New York: McGraw-Hill, 1956.
11. VarmaJ.Prakash; Sports Statistics Copyright 2000 by Venus Publication.

COURSE CODE – 23PF2CE003

DISCIPLINE SPECIFIC ELECTIVE – 3

MOTOR LEARNING AND PSYCHOLOGY OF COACHING

UNIT I

Motor learning Defined: Motor learning as a set of process, learning produces and acquired capability for movement, motor learning is not directly observable, motor learning is relatively permanent – measuring motor learning - performance curves – conditions of practice: distribution of practice, part vs. whole practice.

UNIT II

The Learning Process: Characteristics of the learning process – the law of practice – stages of motor learning – individual differences and motor learning – two theories of motor learning: closed-loop theory, schema theory – factors affecting motor learning: body build, height and weight, strength, endurance, flexibility, balance.

UNIT III

Characteristics of Coach: Personal factors – Knowledge, Philosophy, Role frame- Coaching Context: contextual factors – cultural factors, Resources, and Extraneous factors – Coaching Efficacy and Coach-Athlete relationship

UNIT IV

Philosophy of Coaching: Principles of coaching –different style in coaching – Autonomy Supportive Coaching - Self Determination Theory – The essence of coaching: effective messages sending systems, effective messages receiving systems.

UNIT V

Facilitating Psychological Growth and Development: Psychology of the Young Athlete - Strategies for Structuring Sport Situations to meet the needs of Young Athletes – Character and Sportspersonship: Fairplay, Sportspersonship, Character, Enhancement of Character Development through Sports and Physical Education.

REFERENCES:

1. **Paul A. Davis (2016)** The Psychology of Effecive Coaching and Mangement, Nova Publishing, New York.

2. **Weinberg, R.S., Gould, D (2003**) - Foundations of Sport and Exercise Psychology. 3rd Edition, Human Kinetics, Australia.

3.Richard A.S, Lee, T.A (1982)- Motor Control and Learning – A Behavioral Emphasis, 3rd Edition,

COURSE CODE – 23PF2CE004

DISCIPLINE SPECIFIC ELECTIVE - 4

PSYCHOMETRICS

UNIT I TEST CONSTRUCTION

Defining the test – Classification of tests – Characteristics of standardized test – Brief history of testing – Scaling – Selecting a scaling method. Representative scaling methods. Constructing the items. Testing the items. Revising the test. Publishing the test.

UNIT II CONSTRUCTION OF INTELLIGENCE TESTS

Item writing for Intelligence tests: Analogies, odd-man-out, sequences. Tests of ability and attainment: Content of items, multiple choice items. Advantages of multiple choice items. True-false items, matching items, choosing the item type. Other item types, arrangement of items for a test trial, guessing. Constructing Personality Inventories- Problems in constructing personality Inventories. Writing items for personality Inventories: item forms, guidelines for item writing. Eliminating response sets. Item content.

UNIT III CONSTRUCTION OF OTHER TYPES OF TESTS

Objective tests: Advantages, principles, stimulus-instruction situation, and response scoring parameters. Distinction between objective tests of ability, temperament and dynamics. Practical hints for objective test construction in personality and motivation. Differential motivation of different subjects. The influence of ability and achievement on objective test scores. Group vs Individual tests. Objective test dimensions. Projective tests-construction of projective tests. Item writing for mood and state scales. Attitude measurement: types of attitude scales.

UNIT IV ITEM ANALYSIS

Important variables for item analysis. Two indices in item analysis-correlations of items and the total score, choice of item –analytic statistics. Item scoring and item analysis-Item difficulty, Item discrimination, Item response theory. Selection of items after item analysis. Rewriting items. Failure to form a test.

UNIT V TEST STANDARDIZATION

An overview of the different types of reliability. Factors affecting reliability and validity-Generalizability of test scores. Using reliability information. Factors affecting reliability estimates. Special issues in reliability. Interpretation of reliability coefficient. An overview of the different types of validity. Validity coefficient and error of estimate-conditions affecting validity

coefficient. Magnitude of validity coefficient. Standardizing the test-obtaining a representative normative sample. Sampling specific groups. Rules for sampling special groups.

Norms -Meaning and purpose of norms. Raw score transformation. Percentile and percentile ranks, standardized scores. Normalizing standard scores .T scores, stanines, sten scores and C scale. Selecting a norm group--age and grade norms. Local and sub group norms. Criterion referenced tests and norm referenced tests.

References

1. Anastasi, A., & Urbina, S. (2017). Psychological testing. (7th ed). Chennai, India: Pearson India Education Services Pvt. Ltd.
2. Gregory, R.J. (2017). Psychological testing. (7th ed.). Chennai, India: Pearson India Education Services Pvt. Ltd.
3. Husain, A. (2012). Psychological testing. Noida, India: Dorling Kindersley (India) Pvt. Ltd.
4. Kline, P. (2015). A hand book of test construction: Introduction to psychometric design. New York, NY: Methuen

COURSE CODE – 23PF2GE002

GENERIC ELECTIVE - 2

A student admitted in the Department of Sports Psychology & Sociology has to opt for the Generic Elective (GE) Course offered by other departments. As an example, a student admitted under M.Sc. Sports Psychology programme can't opt for the Generic Elective Courses offered by Department of Sports Psychology & Sociology.

GENERIC ELECTIVE PAPERS OFFERED BY VARIOUS DEPARTMENTS IN THE EVEN SEMESTER (SECOND SEMESTER)

Department	Name of the Generic Elective Paper	Brief Description
Sports Management		
Yoga		
Exercise Physiology & Nutrition		
Biomechanics		
Sports Technology		
Physical Education		
Advance Training & Coaching		

COURSE CODE – 23PF2L201

PRACTICUM – II

PSYCHOLOGICAL ASSESSMENT

Students are required to conduct and record any 08 experiments.

1. Sports Aggression
2. Team Cohesion
3. Mental Toughness
4. Mindfulness
5. Sports Emotion
6. Psychological Performance
7. Performance Failure Appraisal
8. Athletic Coping Skills
9. Eye Hand Coordination
10. Bio feedback

REFERENCES:

1. Woodworth, R.S. and Scholsberg (1972), Experimental psychology. Holt, Rinehart & Winston.
2. Anastasi & Susana Urbina (2004) 7th Edition, Psychological Testing, Pearson Education Inc, New Delhi..
3. Parameseswaran & Ravichandran. (2003). Experimental psychology. Neel Kamal Publications.

COURSE CODE – 23PF2AE201

BASICS OF COMPUTER APPLICATIONS

Objectives:

This course aims at providing exposure to students in skill development towards basic office applications.

Course Learning Outcomes:

After successful completion of the course, student will be able to:

1. Demonstrate basic understanding of computer hardware and software.
2. Apply skills and concepts for basic use of a computer.
3. Identify appropriate tool of MS office to prepare basic documents, charts, spreadsheets and presentations.
4. Create personal, academic and business documents using MS office.
5. Create spreadsheets, charts and presentations.
6. Analyze data using charts and spread sheets.

Unit-I:

Basics of Computers: Definition of a Computer - Characteristics of computers, Applications of Computers – Block Diagram of a Digital Computer – I/O Devices, hardware, software human ware, application software, system software, Memories - Primary, Auxiliary and Cache Memory.

MS Windows – Desktop, Recycle bin, My Computer, Documents, Pictures, Music, Videos, Task Bar, Control Panel.

Unit-II:

MS-Word : Features of MS-Word - MS-Word Window Components - Creating, Editing, Formatting and Printing of Documents – Headers and Footers – Insert/Draw Tables, Table Auto format – Page Borders and Shading – Inserting Symbols, Shapes, Word Art, Page Numbers, Mail Merge.

Unit-III:

MS-Excel : Overview of Excel features – Creating a new worksheet, Selecting cells, Entering and editing Text, Numbers, Inserting Rows/Columns –Changing column widths and row heights, Formulae, Referencing cells , Changing font sizes and colors, Insertion of Charts, Auto fill, Sort.

MS-PowerPoint: Features of PowerPoint – Creating a Presentation - Inserting and Deleting Slides in a Presentation – Adding Clip Art/Pictures -Inserting Other Objects, Audio, Video - Resizing and scaling of an Object – Slide Transition – Custom Animation.

Unit- IV:

Use of Internet:

Internet, World Wide Web, popular web browsing software, search engines, web pages, website, URL, e-mail, Applications of Internet.

REFERENCE BOOKS:

1. Working in Microsoft Office – Ron Mansfield - TMH.
2. MS Office 2007 in a Nutshell –Sanjay Saxena – Vikas Publishing House.
3. Excel 2020 in easy steps-Michael Price – TMH publications

SEMESTER - III

PAPER CODE	PAPER TITLE
23PF2CT301	Fundamentals of Counseling Skills
23PF2CT302	Psychology of Athletic Injury and Rehabilitation
23PF2CT303	Psychological Preparation and Mental Skills training
Electives (Discipline Specific)	
23PF2CE005	Team Cohesion and Group Dynamics in Sports
23PF2CE006	Psychotherapy
23PF2L301	On-field Sports Psychology Assessment – Practicum - III
23PF2AE301	Soft Skill – III (Life Skills Management)
23PF2IT301	Internship

COURSE CODE – 23PF2CT301

FUNDAMENTALS OF COUNSELING SKILLS

UNIT I

Introduction to Counseling - Definition – Development and goals- preparation – counseling process: Steps – different phases. - Current trends in counseling– Characteristics of Counselor – the nature of counselor's work -counselee relationship - counseling process: Steps – purposes of counseling – characteristics of effective counseling

UNIT II

Approaches to Counseling: Directive, Non-directive, Psychoanalytic, Humanistic, Reciprocal inhibition technique, Eclectic approach - Basic Counseling Theories – Psychoanalytic theory, Adlerian theory, Existential theory, person centered theory, gestalt theory- Sports Counseling in India - legal and ethical issues: – legal concerns of counselor.

UNIT III

Special areas: Family counseling, students counseling, parental counseling, educational, vocational and career counseling -Counseling Interview: Communication, verbal, nonverbal, interview, techniques of interview, relationship technique, problem identification and exploration, sharing, transference, counter transference. - Counseling the special population - global counseling and trauma counseling

UNIT IV

Professional Preparation & Training**:** Selection, skills, counseling as a profession, desirable characteristics - Other methods of assessment – Observation, rating scales – checklists – interview schedules – Verbatim reports – Autobiography, dairies and daily schedules – group assessment techniques: Case study preparation and report writing - Techniques: Egan's Model, Interviews, testing-– Mastering the techniques of sports counseling:

UNIT V

Some of the basic symptoms to look out for in athletes for sports counseling. Inconsistent athletic performance - Getting in their own way - Low self-confidence - Sense of athletic unfulfillment - Lack of family support - Unrealistic dreams within the athletes - Inability to improve skills or feeling stuck - Not giving them permission to succeed - Social withdrawal - Depressive thoughts - Ineffective goal-setting - Inability to recognize past successes on the part of the athletes or their coaches or managers - Health failing process.

REFERENCE:

1. Lewis E. Patterson and Elizabeth Reynolds Welfel (2000). The Counselling Process, 5th edition, Wasworth Brooks / Cole, Thomson Learning.
2. S. Narayana Rao (1981) Counselling Psychology, Tata McGraw Hill Publisher.
3. Brammer. L.M. and Shostrom E.L. (1977) Therapeutic Psychology, Englewood Cliffs, New Jersey.
4. Feltham. C & Horton. I (2000) Handbook of Counselling and Psychotherapy, London : Sage Publication.
5. Nelson - Jones, R. (1995). The Theory and Practice of Counselling, 2nd Edition, London : Cassell.
6. Covey, G. (2008). Theory and Practice of Counselling and Psychotherapy (8th ed.) Canada: Brookes/Cole.
7. Covey, G. (2008). Student manual for Theory and Practice of Counselling and Psychotherapy (8th ed.). CA: Brooks/Cole.
8. Burl E. Gilland & Richard K. James (1998). Theories and Strategies in Counselling and Psychotherapy. Singapore: Allyn and Bacon.
9. James O. Prochaska & John C. Norcross. (2007). Systems of Psychotherapy: A trans theoretical analysis (6th ed.). Thomson-Brooks/Cole.
10. Palmer, S. (ed.). (1999). Introduction to counselling and psychotherapy: The essential guide. New Delhi: Sage.
11. Simon, L. (2000). Psychotherapy: Theory, practice, modern and post modern influences.
    Westport, Connecticut: Praeger.
12. Sharf, R.S.(2000). Theories of psychotherapy and counselling: Concepts and cases (2nd ed.).Singapore: Brooks/Cole.

COURSE CODE – 23PF2CT302

PSYCHOLOGY OF ATHLETIC INJURY AND REHABILITATION

Unit I :

Sports Injuries - Injury - causes of Injury – common sports injuries - factors contributing to injury in sports – psychological susceptibility to Injury - Rehabilitation – definition- types of rehabilitation – rehabilitation for athletes .

Unit II:

Psychological antecedents to Sports Injury – Stress and Injury model , Stress Response – Stress History –Major life events, daily hassles, Prior injury history - Antecedents of Sports injury – Personality, Anxiety, Locus of Control, Mental and Emotional states.

Unit III :

Psychological models for sport injury rehabilitation – A biopsychosocial model of sport injury rehabilitation. Cognitive appraisal models - stage of the return to sport models – motivation based model - Grief response models - The integrated model of psychological response to sports injuries and rehabilitation process Grief response models.

Unit IV:

Burn out and Sports Injuries – Psychological issues of Injuries and sports –Psychological aspects of pain, Pain measurement and pain mediation - Psychological implications of long term rehabilitation for athletes

Unit V:

Psychological interventions in sports injury - Injury and Healing Process including Injury Management, Recovery - visualizations for sports , positive self talk, rational emotive therapy, goal setting relaxation and mindfulness.

REFERENCES:

Robert C. Eklundy and Gershan Tenenbaum (2014)-Enceclopedia of Sport and Exercise Psychology, Sage Publications

Monna Arvinen-Barrow and Natalie Walker (2013) – The Psychology of Sports Injury and Rehabilitation, Routledge

COURSE CODE – 23PF2CT303

PSYCHOLOGICAL PREPARATION AND MENTAL SKILLS TRAINING

UNIT I

Mental Toughness – A social Cognitive Personality construct: Mental Toughness is multidimensional, aspects of MT are inherited, aspects of MT are learned- Pillars of Mental Toughness: Motivation, Self-Confidence, Coping with Pressures.

UNIT II:

Stress in Sports – Anxiety Management Training – Applied Relaxation, Arousal Energising Techniques, Breath Control and Deep Breathing, Cognitive Affection, Stress Management Training, Cognitive Control, Hypnosis, Meditation, Performance and Competition Planning , Self Compassion , Stress Inoculation Training.

UNIT III

Arousal adjustment strategies - the Relaxation procedures - autogenic training - Progressive relaxation - meditation - biofeedback - hypnosis - arousal energising strategies - goal setting - pep talk - bulletin boards - publicity and news coverage - fan support - self activation - coach athlete and parent interaction - pre-competition workout Cognitive behavioural intervention in sport - coping strategies in sport - imagery in sport - mental practice as a form of imagery - theories of how imagery works - external and internal imagery - the Effectiveness of imagery in enhancing sports performance - measurement of imagery - developing imagery skills - cognitive behavioural intervention programs using imagery and relaxation - visual-motor behavioural rehearsal - stress inoculation training - stress management training – goal setting in sport.

Unit IV:

Energizing (Activation) Strategies : Arousal and Activation, Visualization and Self Talk strategies, Mental Imagery and Visualization – Arousal and Performance relationship.

UNIT V:

Coping in Sports: Classifying coping in Sport ; Problem and emotion focused coping, Avoidance Coping Task, Distraction and Disengagement oriented Coping – Coping Effectiveness and Coping Self Efficacy. Psychological Skills Training (PST) Definition, Importance of PST, Myths about PST,

REFERENCES:

Robert C. Eklundy and Gershan Tenenbaum (2014)-Enceclopedia of Sport and Exercise Psychology, Sage Publications

COURSE CODE – 23PF2CE005

DISCIPLINE SPECIFIC ELECTIVE – 5

TEAM COHESION AND GROUP DYNAMICS

UNIT I:

Introduction What is team – team Development, team Goals – what is Cohesiveness – team cohesiveness – measurement of cohesiveness – cohesiveness and performance – group cohesion – characteristics of group cohesion – factors affecting group cohesion.

UNIT II:

Groups and Teams What is a group – evaluation structure – communication structure – role structure – group development – intra & inter group processes – group and team dynamics.

UNIT III:

Building a Great Team Create a mission – Team Building – Team Communication - Assessing team qualities & responsibilities – create a motivational action plan – evaluate a team work through constructive feedback – trait of an effective team.

UNIT IV:

Group interaction and integration Cooperation and competition – leadership – group interaction & communication – personal social factors – cohesiveness and group development – achievement factors – attribution for causality – achievement rewards – decision making groups.

UNIT V:

The Sport Team Systematic model for group interaction – personal factors – personality, interpersonal compatibility, individual ability, motivation – environmental factors – nature of tasks – behavioral norms of the group – performance norms in the group.

REFERENCES:

1. Daisy S. (2007) – Psychology of Team Sports, Sports Publications, New Delhi.

2. Mark R. Beachang and Mark A. Eys (2014) –Group Dynamics in Exercise and Sports Psychology, 2nd Edition, Routledge, Taylor and Francis Group, London & New York.

3. Martens, R. (1987) – Coaches Guide to Sport Psychology, Human Kinetics Publishers, Champaign, Illinois

COURSE CODE – 23PF2CE006

DISCIPLINE SPECIFIC ELECTIVE - 6

PSYCHOTHERAPY

UNIT 1

Psychotherapy: Nature and scope; Common goals and ingredients of psychotherapy; Types of psychotherapeutic intervention, structuring therapeutic relationship: Nature of client-therapist relationship, dimensions and stages of client therapist relationship, building the helping relationship; structuring the therapeutic situation

UNIT 2

Overview of Counselling Model- Stage I, Stage II and Stage III, Building the Helping relationship, Basic communication skills for Helping, Basic Communication Skills – I, Basic Empathy and Probing. Testing, Assessment and Diagnosis in Counselling; the role of Theories of Psychotherapy, Choosing a Theoretical Orientation to therapy.

UNIT 3

Psychoanalytic and Psychodynamic Theories: Psychoanalytic Therapy, Key concepts of Sigmund Freud, Therapeutic process; Ego Psychology; Object Relations Theory ;Self Psychology; Existential Therapy: Overview, Key Concepts in, Therapeutic Process, PersonCentred Therapy: Overview, Key Concepts, Therapeutic Process. Gestalt Therapy: Overview, Influence of Existential on Gestalt Therapy, Key Concepts in, Therapeutic Process: Case Analysis.

UNIT 4

Behaviour Therapy: Brief Overview, Key Concepts, Therapeutic process, Current trends, Applied Behavioural analysis. Cognitive Approaches to Psychotherapy: Brief overview of different Cognitive approaches, Rational Emotive Behaviour Therapy, Cognitive Behaviour Therapy. Mindfulness Based Cognitive Therapy. Transactional Analysis: Brief Overview, Key Concepts, Therapeutic process

UNIT 5

Biologically based therapies: Biofeedback- Electromyography; Finger temperature; GSR; EEG; Areas of application; Psychopharmacological therapy: Overview of major psychotropic drug doses.

REFERENCES:

1. Brems, C. (2001). Basic skills in psychotherapy and counselling. Singapore: Brooks/Cole.
2. Corey, G. (1996). Theory and practice of counselling and psychotherapy (5th ed.). Pacific Grove, CA: Thomson Brooks/

COURSE CODE – 23PF2L301

PRACTICUM – III

On-field Sports Psychology Assessment – I

Psychological assessment is administered on the field for evaluating the mental health and behavioral functioning of athletes through the use of standardized tests, observations, and other methods. The students pursuing M.Sc. Sports Psychology will typically conduct these assessments with the particular sport throughout the semester and submit a detailed report to pursue the credits. The Viva-voce will be conducted for the same with the internal examiners.

COURSE CODE – 23PF2AE401

LIFE SKILLS MANAGEMENT

Unit I: Introduction: Soft Skills - Concepts and Definition- Need and importance of Soft Skills – Developing Soft Skills – Implications on Youth Development .

Unit II: Behavioral Skills : Attitude, Lateral Thinking , Emotional Intelligence, Leadership, Team Building and Interpersonal Skills.

Unit III

Social Skills and Negotiation Skills: Self Awareness and Empathy , Influencing, - Effective Communication –Oral Presentation Skills – Interviewing – Delegating.

Unit IV: Thinking Skills: Critical Thinking and Creative Thinking – Problem Solving and Decision Making skills.

Unit V: Coping Skills : Coping with stress and Emotions – Conflict Resolution – Negotiating - Time and Stress Management Skills.

Reference Books

1. G. Ravindran, S P Benjamin, Elango and R. Arokiam (2007) - Success through Soft Skills, ICT.
2. Kamin M (2013) Soft Skills Revolution: A Guide for Connecting with Compassion for Trainers, Teams, and Leaders. ISBN: 978-1-118-10037-0

SEMESTER - IV

PAPER CODE	PAPER TITLE
23PF2CT401	Counselling and Behaviour Modification Techniques in Sports
23PF2CT402	Sports for the challenged
23PF2CT403	Athletic Psychopathology
Electives (Discipline Specific)	
23PF2CE007	Positive Psychology
23PF2CE008	Introduction to Sports Sociology
PSP23TH401 A	Thesis
PSP23TH401 B	Viva-Voce
PPS23SE401	On-field Sports Psychology Assessment – Practicum - IV
PPS23AE401	Soft Skill – IV (Yoga & Meditation)
PPS23EA401	Extension Activity

COURSE CODE – 23PF2CT401

COUNSELING AND BEHAVIOR MODIFICATION TECHNIQUES IN SPORTS

UNIT I

Introduction to Behavior Modification- Meaning - Characteristics- Historical Perspectives of Behavior modification - Major theories and experiments – Assumptions – Effects of Behavior Therapy - Some Basic Aspect of Behavior – Behaviorism – Modalities of Behavior – Skilled vs Performance deficits.

UNIT II

Exploring Athletic behavior- Key concepts: Motivation and Goal setting- anxiety in Sport Performance- Concentration in Sports Performance- Self- Confidence- Peak Performance and Expertise.

UNIT III

Different approaches to counseling, person centered, Gestalt, Psychoanalytic, Cognitive, Trait factor, Behavioral and eclectic approach - Assessment Techniques - Important Factors – Tools of Assessment- Theories : Psychodynamic – Psychoanalytic and Adlerian Therapy Cognitive and Behavioural therapy: Behavioural Therapy – OCD, Cognitive: Beck's Cognitive Restructuring Therapy

UNIT IV

Behavior Counseling: Salient Features Enhancement of Client's Involvement – Some Misconceptions about Behavioral Approach. Relaxation Techniques: Jacobson's Deep Muscle Relaxation Training, Autogenic Training, Yoga and Meditation. Application of Behavior Therapy: Anxiety Disorders, Psychoactive substance use disorders, Sexual Disorders

UNIT V

Assertion Training – Basic Dimensions – Training procedure – Components of Social Skill Training – systematic desensitization - Operant Conditioning Techniques – Basic Paradigm – Schedules of Reinforcement – Aversive Conditioning and application – Token Economy – Shaping – Chaining – Other Operant Procedures, Premack's Principle and Prompting. – Cognitive Restructuring – Meichenbaum's Self Instructional training – Thought Stopping and Variations – Problem Solving Techniques.

REFERENCES:

1. Corey, G (2005), Theory and Practice of Counseling and Psychotherapy, 7th Edition, Scarborough, Brooks/Cole.
2. Martin, G & Pear J (2000) Behavior Modification (7edition), New Delhi, Prentice Hall of India Pvt. Ltd.
3. Wolpe, J (1982), Practice of Behavior Therapy (3rd edition), New York, Oxford Pergamon Press Inc.
4. Nelson-Jones, R. (1994). - The theory of practice of counseling psychology – Cassel London.
5. Rimm, D.C. and Masters, J.C. (1974), - Behaviour Therapy: Techniques and Empirical Findings. New York: John Wiley and Sons.
6. Robert C. Carson. James. N. Butcher and Susan Mincka (1996) - Abnormal Psychology and Modern Life, 10th Edition, New York; Harper Collins College Publishers.
7. Swaminathan V.D. and Kaliappan, K.V. (1997), Psychology for effective living – Behaviour modification, Guidance, Counselling and Yoga, Chennai. The madras Psychology society publication.

COURSE CODE – 23PF2CT402

SPORTS FOR THE CHALLENGED

UNIT I

Introduction – Sport in Society – Athletes with Disability - Historical context of Disability and Sports – Emergence and Development of Disability sports – Theories of Disability: Disability as a personal tragedy , Social model of Disability - Sports Current Challenges and Controversies in Disability Sports.

UNIT II

Adapted Sports – Brief history of Adapted Physical Education – Beginning of Adapted Physical Education - Shift to sports and the whole person - Emerging comprehensive sub-discipline – Recent and current status – Role of Physical Educationist in Adapted Sport.

UNIT III

Paralympics Games for people with Intellectual Disability – Coaching and training of athletes with disabilities – Disability Sports Movement - Special Olympics

UNIT IV

Sports activities for individuals with individual needs – Deaflympics, Paraplegic, Cerebral Palsy, Blind, Amputee, Down Syndrome, Autism Spectrum Disorder, Specific Learning Disability , Mentally challenged .

UNIT V

Inclusion and Integration – Equity Issues – Marketing Disability Sports – Future of Disability Sports.

REFERENCES:

John,P Winnick - Adapted Physical Education and Sport , Volume I , Human Kinetics, 2005

Nigel Thomas, Andy Smith – Disability, Sport and Society – An Introduction , Routledge,2008.

Steve Bailey - Athlete First – A history of the Paralympic Movement , John Wiley & Sons.

COURSE CODE – 23PF2CT403

ATHLETIC PSYCHOPATHOLOGY

UNIT I : Introduction :

Definition of Psychopathology - Historical views of abnormal behavior - The stigma of abnormal behavior – Adaptive and Maladaptive behavior – Adaptation and Adjustment – Causes and Risk factors for abnormal behavior among athletes– Biological, Psychosocial and Sociocultural view points and causal factors.

UNIT II : Classification - Categories of Maladaptive Behaviour :

Approaches to classification of Psychopathology: Categorical, Dimensional and Prototypal - Systems of classification, basic features; DSM-V, ICD-10 - Similarities and differences – Advantages and Disadvantages of Classification.

UNIT III :Psychopathology of addiction and sexual disorders

Substance dependence in sports– substance abuse - Substance use disorders– substance induced disorders – Substance use disorders Vs Substance induced disorders - Alcohol and Sports – Alcohol related disorders - other drugs – Association between Athletes and Substance Abuse - Sexual deviations- forms of sexual deviations - causes – treatment .

UNIT IV : Anxiety and Mood Disorders :

Anxiety Disorders and Athletes: Panic Disorder, Phobic disorders, Obsessive Compulsive Disorder, Generalised Anxiety disorder, Post traumatic stress disorder – Somatoform, Dissociative and Mood Disorders among athletes : Bipolar affective disorders, Dysthymia, Cyclothymia - Anxiety, Somatoform and Dissociative Disorders

UNIT V: Neuro psychological and Behavioural disorders:

Dementia, delirium, head injury, epilepsy, other amnesic syndromes -Dissociative disorder, somatoform disorder- other neurotic disorder among athletes – Mental Health and Elite athletes; Eating and Sleep disorders and athletes: Anorexia, binge eating - Sleep disorders - Clinical characteristics and etiology.

REFERENCE:

1. Blaney, P H., Krueger, R. F. & Million, T. (2015).Oxford Textbook of Psychopathology (3rd edition). London: Oxford University Press.
2. Fish, F. J.(1967). Fish's Clinical psychopathology: signs and symptoms in psychiatry (3rd. Ed.). Bristol :J. Wright,

3. Sadock, B.J. & Sadock, V.A. (2015). Kaplan & Sadock's Synopsis of psychiatry: Behavioral sciences/clinical psychiatry (10th. Ed.). Philadelphia: Lippincott Williams & Wilkins.

COURSE CODE – 23PF2CE007

DISCIPLINE SPECIFIC ELECTIVE – 7

POSITIVE PSYCHOLOGY

Unit–I: Define Positive Psychology? Traditional psychology; positive psychology; goals, assumptions and definitions of positive psychology.

Unit – II Positive Emotional States and Processes: Happiness and Well being, Positive Affect and Positive Emotions, Emotional Intelligence, Resilience

Unit – III: Positive Cognitive States and Processes: Self-efficacy, Optimism, Hope, Wisdom, Flow, Mindfulness.

Unit – IV: Personal Goals as Windows to Well–Being: The search for universal human motives; the personalization of goals in self–concept; goals contribute most to well–being. Materialism and its discontents. Self –regulation and self –control: The value of self-control; Personal goals and self -regulation; goals that create self – regulation problems; everyday explanations for self–control failure; goal disengagement.

Unit – V: Life Above Zero: Positive psychology revisited; interconnections of the "Good" and the "Bad"; contours of a positive life; meaning and means; mindfulness and well–being.

References

Steve, B.R. & Marie, C.K. (2009). Positive Psychology. Dorling Kindersley: India.

Boniwell, I. (2006). Positive Psychology in a Nutshell. PWBC (Personal Well–Being Centre).

Snyder. R, S. (2007). Positive Psychology: The Scientific & Practical exploration of human strengths. New Delhi: Sage Publications.

Baumgardner, S.R. Crothers M.K. (2010). Positive psychology. Upper Saddle River, N.J.: Prentice Hall.

Carr, A. (2004). Positive Psychology: The science of happiness and human strength.UK: Routledge.

COURSE CODE – 23PF2CE008

DISCIPLINE SPECIFIC ELECTIVE - 8

INTRODUCTION TO SPORTS SOCIOLOGY

UNIT I

Introduction: Definition – Nature and Scope of Sociology and Sports Sociology – Relationship with other Social Sciences including Sports Sociology. Importance of sports sociology

UNIT II

Society and the place of sports and games: origin and development of sports in various societies (Greek & Roman) – Sports as social as group behavior – Sports as cultural activity: Sports culture - Sports and communities sports as community activity.

UNIT III

Sports as Social and a Group Process: Meaning and types of Social process – Sports in Social process frame work. Team spirit as supra – individual power: McDougals, Durkheim, Allports, Lewis.

UNIT IV

Socialization In and Social Control of Sports: Meaning of socialization Training and induction into sports as socialization – Role of parents and professionals in sports socialization – Meaning of social control – sports as a socially regulates activity – Sports as a social value – Sports and social rewards.

UNIT V

Social Stratification and Sports: Meaning and forms of stratification – Social class and sports – gender and sports – race and sports – Age and Sports – Globalization and Sports.

REFERENCES:

1) Fiehter, J.H. (1991), Sociology 2nd Ed. London. The University of Chicago Press.

2) Pascal, G. (1999) Fundamental of Sociology, 3rd Rev.Ed.,Bombay, Orient Longman.

3) Inkless.Alex,(1987) What is Sociology, New Delhi Prentice Hall of India Pvt.

4) Giddens A (1989) Sociology, Cambridge, Polity Press.

5) Harlambos, (1999) , Introduction to Sociology, Oxford University Press.

COURSE CODE – PSP23TH401

THESIS

Students are required to submit a thesis at the end of the year. The thesis shall embody the record of original investigation under the guidance of a supervisor.

COURSE CODE – 23PF2L401

PRACTICUM – IV

ON-FIELD PSYCHOLOGICAL SUPPORT & ASSESSMENT – II

As a continuation of the previous semester on-field psychological assessment report the students shall recommend a specific training programme for the diagnosed athletes for a minimum period of 8 weeks to enhance their performance and repeat the test after the treatment period. Then submit a final report to pursue the credits. The Viva-voce will be conducted for the same with the internal examiners.

ABILITY ENHANCEMENT COURSE

COURSE CODE – 23PF2AE401

YOGA AND MEDITATION

Unit I: Introduction to Yoga and Yogic Practices

1. Yoga: Etymology, definitions, aim, objectives and misconceptions
2. Yoga: Its Origin, history and development
3. Rules and regulations to be followed by yoga practioners
4. Introduction to Yoga practices
5. Shatkarma: meaning, purpose and their significance in Yoga Sadhana
6. Introduction to yogic loosening practices and suryanamaskar

Key words: History and development of Yoga, Shatkarma, Common Yogic Practices.

Unit II: Breathing Practices and Pranayama

1. Sectional Breathing (Abdominal, Thoracic and Clavicuar)
2. Yogic Deep Breathing
3. Concept of Puraka, Rechaka and Kumbhaka
4. Concept of Bandha and Mudra
5. Anulmoa Viloma / Nadi Shodhana
6. Shitali
7. Bhramari

Keywords: Sectional breathing, Deep Breathing, Bandha & Mudra, shitali, Bhramari.

Unit III: Practices leading to Meditation

1. Recitation of Pranava Mantra
2. Recitation of Hymns, in vocations and prayers
3. Anter Maun
4. Breath Meditation
5. Om Dhyana

Key Words: Pranav Mantra, Antermaun, Breath Meditation, Om Dhyan.

Suggested Readings:

1. Singh S.P & Yogi Mukesh: Foundation of Yoga, Standard Publication, New Delhi, 2010.

2. Swami Dhirendra Brahmchari: Yogasanna Vijnana, Dhirendra Yoga Publication, New Delhi, 1966.
3. Saraswathi, Swami Satyanand: Asana, Pranayama, Mudra, Bandha (APMB), Yoga Publications Trust, Munger, 2013.
4. H.R.Nagendra: Asana, Pranayama, Mudra, Bandha, swami Vivekananda Yogprakashan Bangalore, 2002.
5. Ishwar Bhardwaj: Saral Yogasana, satyam Publishing House, New Delhi, 2018.
6. Shri Rai Singh Chouhan: Mudra Rahasya, Bhartiya Yog Sansthan, New Delhi, 2014.
7. Dr.Vishwanth Prasad Sanha: Dhyan Yoga, Bhartiya Yog Sansthan, New Delhi, 1987.
8. Shri Deshraj: Dhyan Sadhana, Bhartiya Yoga Sansthan, New Delhi, 2015.

COURSE CODE – 23PF2EA401

EXTENSION ACTIVITY

The students pursuing M.Sc. Sports Psychology shall compulsorily take part in the outreach programme / volunteering opportunities / community service program at schools, colleges, old age homes, villages, juvenile homes and hospitals for 5-7 days. A detailed report with the letter of appreciation from the respective organization would be considered for pursuing the credits.

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY CHENNAI – 127

B.Sc. SPORTS COACHING

REGULATION AND SYLLABUS 2020-21

DEPARTMENT OF ADVANCED TRAINING AND TECHNOLOGY

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY CHENNAI

DEPARTMENT OF ADVANCED SPORTS TRAINING AND TECHNOLOGY

B.Sc., SPORTS COACHING (REGULAR)
CHOICE BASED CREDIT SYSTEM (CBCS)
SUBJECT MATTER AND EVALUATING SYSTEM
NORMS RULES AND REGULATIONS

1. PREAMBLE

The Bachelor of Sports Coaching B.Sc., (Sports Coaching)programme in intended for candidates who desirous to pursuing bachelor degree in Sports Coaching and for preparing a professional cadre of Sports Coaches.

2. REGULATION

The syllabus is for three year B.Sc., Degree programme under CBCS system – Regular and it was implemented form the academic year 2020-21onwards.

3. ELIGIBILITY FOR ADMISSION

Candidates shall be admitted to the B.Sc., degree in Sports Coaching in he/she produces satisfactory evidence to the effect that he/she has successfully completed plus two examinations or is equivalent approved by the syndicate of the Tamil Nadu Physical Education and Sports University, Chennai with sports background, at least School District Level Participation.

4. SCHEME OF SELECTION

Physical fitness, skill test will be conducted to all the applicants, and the tests carry 80 marks. Sports participation performance in the specified sport/game will be assessed according to the level of participation as listed below concedes maximum of 20 marks. In physical fitness tests, five tests will be conducted, each test carries 10 marks, (5 X 10 = 50), and three skill tests of specified sport/game will be assessed and it carries 10 marks (3 X 10 = 30)

Marks distributed for Sports participation is given below.

	Gold	Silver	Bronze	Participation
National	20	18	16	10
state	15	13	11	7
Divisional	10	9	8	5
District	8	7	6	4
zonal	5	4	3	2

The Rank list will be prepared after conducting the tests. If the applicants are more than 50 in numbers, the rank list will be prepared as per admission roaster system following the Tamil Nadu state government admission rules.

5. **COURSE OF STUDY**

B. Sc., (Sports Coaching), Programme shall be of duration of three Academic years with six semesters. A student should complete. B. Sc., (Sports Coaching) Programme within five years from the date of registration. The total working days of each semester shall be 90 days exclusive of the period of the admission and examination etc., the medium of Instruction and examination shall be English.

6. **SEMESTERS**

An academic year is of two semesters.

Odd Semester - July to November

Even Semester - December to April

In each semester, the courses are taught for 18 weeks with each week having 5 working days.

7. **CHOICE BASED CREDIT SYSTEM (CBCS)**

The CBCS in BSc, (Sports Coaching) programme would have the following components and the minimum credit requirements for each component to be completed in three years are:

Languages	-	32 Credits
Core Subjects & Practical	-	72 Credits
Elective	-	24 Credits
Ability Enhancement compulsory course (AECC)	-	02 Credits

Extra curricular	-	12 Credits
Soft skill	-	04 Credits
Total	-	**146 Credits**

8. **COURSE WEIGHT**

Course will be designed with weightage depending upon the content, duration and specialization.

9. **MARKS/CREDIT DISTRIBUTION**

I SEMESTER

PART	Subject code	Name of the paper/components	L	C	Int	Ext	Total
I - Language	USC18CT101A USC18CT101B USC18CT101C	Tamil I Hindi I special English I	4	4	25	75	100
II Language	USC18CT102	English I	4	4	25	75	100
Core Subject	USC18CT103	Anatomy and Physiology	4	4	25	75	100
	USC18CT104	History and administration of Sport/Game	4	4	25	75	100
Discipline Specific Elective -	USC18DSE101	Choose any one of the subject from the pool from odd semester	4	4	25	75	100
Core Practical	USC18CP101 A USC18CP101 B USC18CP101 C USC18CP101 D USC18CP101 E	Practical – skill test – sport/Game A.Volleyball/ B. Football/ C.Kabaddi / D Athletics E.Hockey	8	4	25	75	100
Co-curricular Activities	USC18CC101	NSS/NCC		2	-	-	-
Total Credit / marks				26	-	-	600

II Semester

PART	Subject code	Name of the paper/components	L	C	Int	Ext	Total
I - Language	USC18CT201A USC18CT201B USC18CT201C	Tamil II Hindi II Special English II	4	4	25	75	100
II Language	USC18CT202	English II	4	4	25	75	100
Core Subject	USC18CT203	Science of Sports Training	4	4	25	75	100
	USC18CT204A USC18CT204B USC18CT204C USC18CT204D USC18CT204E	Rules and Regulation of Sport/Game A.Volleyball/ B. Football/ C.Kabaddi / D Athletics E.Hockey	4	4	25	75	100
Discipline Specific Elective	USC18DSE201	Choose any one of the subject from the pool from even semester	4	4	25	75	100
Core Practical	USC18CP201A USC18CP201B USC18CP201C USC18CP201D USC18CP201E	Practical – II, Specified sport/Game – coaching Level – I A.Volleyball/ B. Football/ C.Kabaddi / D Athletics E.Hockey	8	4	25	75	100
Ability Enhancement compulsory course (AECC) III - Co-curricular Activities	USC18AE201	Environmental studies (Foundation Course)	2	2	-	-	-
	USC18CC201	Community engagement (Swatch Bharath)		2	-	-	-
Total Credit / Marks				28			600

III SEMESTER

PART	Subject code	Name of the paper/components	L	C	Int	Ext	Total
I - Language	USC18CT301A USC18CT301B USC18CT301C	Tamil III Hindi III Special English III	4	4	25	75	100
II Language	USC18CT302	English III	4	4	25	75	100
Core Subject	USC18CT303	Sports Medicine and Nutrition	4	4	25	75	100
	USC18CT304A USC18CT304B USC18CT304C USC18CT304D USC18CT304E	Techniques and technical training of Sports/ Games A.Volleyball/ B. Football/ C.Kabaddi / D Athletics E.Hockey	4	4	25	75	100
Discipline Specific Elective	USC18DSE301	Choose any one of the subject from the pool from odd semester	4	4	25	75	100
Core Practical	USC18CP301	Teaching and Coaching of Techniques and technical training	8	4	25	75	100
Co Curricular Activities	USC18CC301	Pedagogy competition		2	-	-	-
Total Credit / Marks				26			600

IV SEMESTER

PART	Subject code	Name of the paper/components	L	C	Int	Ext	Total
I - Language	USC18CT401A USC18CT401B USC18CT401C	Tamil IV Hindi IV Special English IV	4	4	25	75	100
II Language	USC18CT402	English IV	4	4	25	75	100
Core Subject	USC18CT403	Sports Psychology and Sociology of Sport	4	4	25	75	100
	USC18CT404A USC18CT404B USC18CT404C USC18CT404D USC18CT404E	Tactics and tactical development of specified Sport/game A.Volleyball/ B. Football/ C.Kabaddi / D Athletics E.Hockey	4	4	25	75	100
Discipline Specific Elective	USC18DSE401	Choose any one of the subject from the pool from even semester	4	4	25	75	100
Core Practical	USC18CP401	Specified Sports / Games, coaching Level – II,	8	4	25	75	100
Extra-curricular Activities	USC18CC401	Sports center /Industrial Visit		2	-	-	-
Total Credits/Marks				26			600

V SEMESTER

PART	Subject code	Name of the paper/components	L	C	Int	Ext	Total
Core Subject	USC18CT501	Kinesiology and sports Bio Mechanics	4	4	25	75	100
	USC18CT502A USC18CT502B USC18CT502C USC18CT502D USC18CT502E	Specific Motor qualities of sport/game A.Volleyball/ B. Football/ C.Kabaddi / D Athletics E.Hockey	4	4	25	75	100
Discipline Specific core	USC18DSE501	Choose any one of the subject from the pool from odd semester	4	4	25	75	100
II - Core Practical	USC18CP501	Specific training – coaching	8	4	25	75	100
III - Soft Skill	USC18SS501	Sports Massage	2	2	25	75	100
Co – curricular activities	USC18CC501	Disaster management		2	-	-	-
Total Credit/ marks				20			500

VI SEMESTER

PART	Subject code	Name of the paper/components	L	C	Int	Ext	Total
Core Subjects	USC18CT601A USC18CT601B USC18CT601C USC18CT601D USC18CT601E	Team Preparation , Coaching And Match Analysis of Sport/Game A.Volleyball/ B. Football/ C.Kabaddi / D Athletics E.Hockey	4	4	25	75	100
	USC18CT602	philosophy of coaching	4	4	25	75	100
Discipline Specific Elective	USC18DSE601	Choose any one of the subject from the pool from even semester	4	4	25	75	100
II – Core Practical	USC18CP601	Specified Sports / Games –coaching level – III	8	4	25	75	100

III - Soft Skill	USC18SS601	Gym Management	2	2	25	75	100
Co – curricular activities	USC18CC601	Internship training		2	--	---	--
Total credit/ Marks				20		--	500

The final year students will be required to coach a team of game of their choice, either with a mentor coach as an 'expert' or under the supervision of the Head Coach for 15 days. And in the final semester the students should undergo the internship practice in any one of the schools, in order to get the coaching exposure. And they have to produce the records for their coaching programme. This internship is designed to assist students to enter the sport-related work environment.

10. **ASSESSMENT**

Assessment of the students is consists of continuous Internal Assessment (CIA) and End Semester Examination (ESE). The ratio between CIA and ESE will normally be 25:75.

11**. PRACTICAL COMPONENT**

In each year students are required to undertake a practicum including in a variety of contexts. In their first year, students will coach in a primary school. In the second year students are expected to coach an under-15-year- team in sport of their choice. Third-year students will be required to coach a team of their choice, either with a mentor coach as an 'expert' or under the supervision of College tutor. In their final year students have a workplace internship to apply their skills and learning. This internship is designed to assist students to enter the sport-related work environment.

12. **CONTINUOUS INTERNAL ASSESSMENT (CIA)**

The CIA marks shall be awarded based on the following:

THEORY	**MARKS**
Best Scores of two test out of three test	20
Model Exam	20
Seminar	05
Attendance	05
Total	50

50 percentage of CIA marks will be taken for scoring.

13. **END SEMESTER EXAMINATION (ESE)**

Except in the case of internship and exclusively practical/field placement courses, the ESE will consist of a written examination of three hours duration for a maximum score of 75. Practical examination for 75 marks will be conducted with external examiner during even semester of all the three years.

14. **EVALUATION**

The following procedure will be followed for evaluation

a) The answer scripts are evaluated by internal/external examiners

b) Theory papers : Duration Three Hours – External

Part A (10 x 2)	-	20 (Question Type)
Part B (5 x 5)	-	25 (Either or Type)
Part C(3 x 10)	-	30 (Essay type –3 Question)
Total		75 Marks

c) For a pass in each paper, the candidate is required to secure at least 50% in semester examination.

15. **ATTNEDANCE**

Attendance is compulsory for the students with minimum of 80%, since this course is practical based. If the attendance is less than 80% to 70%, he/she can to move to the next year but he/she is not allowed to write the examination, if he/she compensate the shortage of attendance in the next academic session and he/she will be allowed to write the examination in the next semester. If any student is having less than 70% he/she has redo the course.

16. The Award of Grades is as follows

MARKS	GRADE	DESCRIPTION	GRADE POINTS
90 and above	S	Superior	9.0 - 10.0
80 to 89	A	Very Good	8.0 - 8.9
70 to 79	B	Good	7.0 - 7.9
60 to 69	C	Very Fair	6.0 - 6.9
50 to 59	D	Satisfactory	5.0 – 5.9
Less than 50 ‘	RA	Re Appear	

If a student has any grievance over CIA he/she may submit a appeal

through his/her class advisor to appeal committee, which consist of the HOD, class Advisor and course teacher within seven working days of the declaration of the Score. The Appeals committee will review/peruse the student's records work. Any appeal should be made along with an appeal fee as per university norms. The decision of the appeals committee shall be final.

16 **CAREER OPPORTUNITIES**

In addition to preparing students for sport coaching positions, the B.Sc., allows students to develop skills which can be useful in sport related fields and roles beyond coaching. These include role as coach educators and sport development officers in national organizations, community groups and sporting federations, managerial and development roles skills trainer, exercise scientists, and recreation officers personal trainer, free lancer, project officer and match analyst.

17 **FURTHER STUDY**

Postgraduate opportunities exist here in Tamil Nadu Physical Education and Sports University, Chennai, in areas such as Physical Education, Sports Coaching, Sports Psychology, Yoga, Bio Mechanics, Exercise Physiology and Sports Management.

Following the B. Sc., one further year of study towards a Post Graduate Diploma in Coaching enables to become a coach or Bachelor of Physical education enables to become a physical education teacher.

CREDIT AND MARKS ABSTRACT

SEMESTER	CREDITS	TOTAL MARKS
I	26	600
II	28	600
III	26	600
IV	26	600
V	20	500
VI	20	500
Grand Total	146	3400

CREDIT ABSTRACT

Semester - Credits Subject	I	II	III	IV	V	VI	Total Credit
Languages - I	**4**	**4**	**4**	**4**	**-**	**-**	**16**
Languages - II	**4**	**4**	**4**	**4**	**-**	**-**	**16**
Core –Theory	**8**	**8**	**8**	**8**	**8**	**8**	**48**
Core – Practical	**4**	**4**	**4**	**4**	**4**	**4**	**24**
Discipline Specific Elective	**4**	**4**	**4**	**4**	**4**	**4**	**40**
Ability Enhancement compulsory course (AECC)	**-**	**2**	**-**	**-**	**-**	**-**	**02**
Co - curricular	**2**	**2**	**2**	**2**	**2**	**2**	**12**
Soft Skill	**-**	**-**	**-**	**-**	**2**	**2**	**4**
Grand Total	**26**	**28**	**26**	**26**	**20**	**20**	**146**

MARKS ABSTRACT

Semester - Credits Subject	I	II	III	IV	V	VI	Total Credit
Languages - I	100	100	100	100	-	-	400
Languages - II	100	100	100	100	-	-	400
Core –Theory	200	200	200	200	200	200	1200
Core – Practical	100	100	100	100	100	100	600
Elective	100	100	100	100	100	100	600
Ability Enhancement compulsory course (AECC)	-	--	-	-	-	-	---
Extra - curricular	-	-	-	-	-	-	-
Soft Skill	-	-	-	-	100	100	200
Grand Total	600	600	600	600	500	500	3400

DICIPLINE SPECIFIC ELECTIVE

ODD SEMESTER	EVEN SEMESTER
Strength and conditioning	Sports Law
Women in Olympic movement	Test and Measurement
Talent Identification	Play field and Equipment Management
Project Event Management	Doping and its classification
Computer Application & Sports Communication	Management of Special Olympic sports
On field Sports injury Management	Exercises and sports for women

SEMESTER- I- PAPER CODE - UEN18CT101A

TAMIL I

முதலாம் ஆண்டு இளம் அறிவியல் தாள் -1

முதற் பருவம்

இலக்கியமும் மொழித்திறனும்

அலகு:1

காணிநிலம் வேண்டும் : பாரதியார்

நல்லதோர் வீணை

சிக்கனம் : சுரதா

அலகு : 2

புதுமைப்பித்தன் சிறுகதைகள்

1 கடவுளும் கந்தசாமி பிள்ளையும் .

2 .சாப விமோசனம்

3 பென்னாகரம் .

அலகு :3

உரைநடை - விளையாட்டுகள் தோற்றமும் வளர்ச்சியும்

விளையாட்டு வரையறை தமிழர் வாழ்வில் - விளையாட்டின் தோற்றம்- விளையாட்டு - விளையாட்டு வகை தொகை- விளையாட்டு கொள்கைகள்

அலகு :4

மொழிப் பயிற்சி

1. பொருந்தியசொல் தருதல்
2. மரபுத்தொடர்கள்
3. கலை சொற்கள்

அலகு -5

1. தமிழ் இலக்கிய வரலாறு
2. நாட்டுப்புற இலக்கிய வரலாறு - நாட்டுப்புற பாடல்கள்- – பழமொழிகள்-நாட்டுப்புற கதைகள் புதினங்கள் தோற்றமும் - விடுகதைகள்சிறுகதைகள் வளர்ச்சியும்
3. கவிதை இலக்கிய வரலாறுமரபுக்கவிதைகள்புதுக்கவிதைகள்தோற்றமும்வளர்ச்சியும்
4. நாடக இலக்கியத்தின் தோற்றமும் வளர்ச்சியும்

பார்வை நூல்கள்:

1. பேரா. எம் . ஆர். அடைக்கலசாமி,(2000 தமிழ் இலக்கிய வரலாறு (
,ராசி பதிப்பகம் - சென்னை.73
2. த.மலையரசி,(2013தமிழ் இலக்கியங்களில் (
- பாவை பதிப்பகம் மதுரை- விளையாட்டுக்கூறுகள்1
3. சொ.பரமசிவம்,(2000 நற்றமிழ் இலக்கணம்(,பட்டுப்பதிப்பகம்
சென்னை -40
4. சங்க இலக்கிய நூல்கள் .கழக வெளியீடு-

SEMESTER- I- PAPER CODE - UEN18CT101

HINDI I (B)

UNIT- I

Prose: SabhayataKaRashasya by Premchand

Business & Administrative Terminology – Translation from Hindi to English Business Letters – Enquires, Orders and Complaints

UNIT – II

Prose: Mitratha by AacharyaRamchandraShukla

Business & Administrative Terminology – Translation from Hindi to English Letters to the Editor for Social cause

UNIT – III

Prose: Nayasamaj by Hari Krishna "Premi"

Official Letters: Memorandum, Circular

UNIT – IV

Prose: BadtheshoreKaGehrataSankat by Ravendra Kumar

Applied Grammar: Change the Tense

Official Letters: Reminder, Notice, Office Order

UNIT V

Prose: TootiHuyiZindagi by Sri RajjanTrivedi

Applied Grammar: Correction of Sentence

Letters of Application: Leave Letter & Banking Letters – Opening an account closing an account, issue of cheque book

Reference Books:

1. Prose (Detailed Study) HINDI GADHYA MALA, Syed Rahamathullah PoornimaPrakashan Publications
2. Applied Grammer , HINDI GRAMMER, Sastri&Apte, Dakshin Bharat Hindi PracharSabha publications
3. Functional Hindi & Letter Writing, PRAYOJAN MOOLAK HINDI, Syed Rahamathullah & ChittiAnnapoorna, PoornimaPrakashan publication

SEMESTER- I- PAPER CODE - UEN18CT101

SPECIAL ENGLISH I (C)

OBJECTIVES:

To improve Four Primary Skills though prose, poem, short story, one act play and grammar.

To make learners comprehend and appreciate various cultures and varieties of presentation in the representative texts

LEARNING OUTCOMES:

1. Students can analyze a poem, prose short story etc.
2. Students can describe, explicate, poem. Prose, short stories etc.
3. Students can be participating all kinds of grammatical practice and exercise in the beginning level.
4. To help learners understand the salient features of one-act plays
5. To expose learners to the sociological and psychological dimensions of characterization

UNIT-I- PROSE

A) My Greatest Olympic Prize - Jesse Owens

B) If, you are wrong, admit it - Dale carnage

UNIT-II- POEM

A. Pulley - George Herbert

A) La Belle Dame Sans Merci - John Keats

UNIT-III- SHORT STORIES

A) The Snake in the Grass - R.K. Narayan

B) Three Questions - Leo Tolstoy

UNIT-IV- ONE ACT PLAY

A) A Marriage proposal - Anton Chekhov

B) The Goat - Edward Albee

UNIT-V- BASIC ENGLISH GRAMMAR

a) Parts of Speech

b) Kinds of Sentence

c) Tense and their forms.

d) Sentence Patterns

Reference:

1. Bhongle, Rangrao. (Ed) Contemporary American Literature: Poetry, Fiction, Drama and Criticism..
2. Collins - An Introduction to American Literature Crawford, Bartholow V et al. American Literature.

3. Mathiessew, F.O. American Literature up to Nineteenth Century Spiller - Cycle of American Literature - A New Harvest of American Literature
4. Great Indian "Twentieth Century writers and their works" by Emerald publications.

SEMESTER- I- PAPER CODE - USC18CT 102

ENGLISH – I BASIC LANGUAGE SKILL

OBJECTIVES:

1. To make students involved in Listening and writing for developing Basic Learning Skills.

2. To make academic presentations precisely, logically and effectively

LEARNING OUT COMES:

1. Students can learn theme, ideas and information from Listening from a poem, prose, short story etc…
2. This enhance students to know how to write in basic level,
3. Students can gain knowledge on both uses and usage of grammar section.

LISTENING & SPEAKING

UNIT-I

A) Greeting people & responding to greetings
B) Introducing oneself & Other People
C) Asking for and giving personal Details (Name, Occupation, etc.,)

UNIT-II

A) Using the Telephone- exchanging information & taking messages
B) Describing a visual clipping

WRITING

UNIT-III

A) Completing forms with personal details bio-data & curriculum vitae
B) Paragraph writing converting note making to paragraph.
C) Interpreting advertisements

UNIT-IV

A) Grammar in Usage
B) Descriptive writing- describe a scene / a person/ a situation
C) Translate 50 words

UNIT-V

A) Cabuliwallah - Rabindranath Tagore
B) The last Leaf - O.Hentry
C) Upper division Love - ManoharMalgnkar

REFFERENCE:

1. The last leaf and others stories by AnandkumarRaju (Blackie Books)

2. Great Indian "Twentieth Century writers and their works" by Emerald Publications.
3. Ramachandran, T. N., trans. The Hymns of KaaraikkaalAmmaiyaar. Dharmapuram: International Institute of SaviaSiddhanta Research,
4. English Grammer in use by Raymond Murphy, Cambridge publication 3rd edition.
5. Basic English Grammer by Betty.S.Azar and Stacy A.Hagen Pearson Publication 4th edition

SEMESTER- I- PAPER CODE - USC18CT 103

ANATOMY AND PHYSIOLOGY

UNIT – I

Anatomy: meaning – definition- need - importance. Physiology: meaning - importance - Cell – structure – function - types - Tissue - structure - Skin – Structure – function

UNIT – II

Muscular system: meaning - structure: skeletal, cardiac, smooth. – hypertrophy. Functions - contraction: isotonic - isometric - concentric – eccentric- cycle. Muscular fiber: type 1- type II A – type II B. Effect of exercise

UNIT – III

Cardio vascular system - meaning. Organs - Heart - Structure - functions Cardiac cycle – Cardiac output - stroke volume. Pulmonary circulation - systemic circulation. Lungs: structure and functions - Spinal cord. Effect of exercise

UNIT – IV

Respiratory system: meaning - structure - mechanism of breathing – Gas exchange. Effect of exercise. Endocrine - kidney - structure functions

UNIT - V

Nerves system: meaning – types - central nervous system - brain and spinal cord - peripheral nervous system - cranial, spinal, peripheral nerves Function: sensory, integration, and motor**.**

REFERENCE

1. Surrender H Singh, Krishna Garg, (2008), : Anatomy and Physiology for Nurses & Allied Health Sciences" CBS
2. Clerk.D.H.(1995) : Exercise Physiology Prentice-Hall,Inc., Englewood Clif, New jersy
3. Frank W Dick, Sports training principles, London, Lepus Book Co., 1980
4. Kara Rogers(2011), "The Respiratory System" Britanniacal educational publishers
5. S.B. Bhise and Yadan (2009) "Human anatomy and Physiology" Chelsea house publisher.

SEMESTER- I- PAPER CODE - USC18CT 104

HISTORY AND ADMINISTRATION OF SPORTS/GAME

(ATHLETICS/FOOTBALL/KABADDI/HOCKEY/VOLLEYBALL)

UNIT – I

History of Volleyball/Football/Kabaddi/hockey/Athletics - Origin - Development - International federation - National federation – organization Structure - functions and role - Recent Trends

UNIT – II

Competitions: School levels - Bharathiar day – Republic day – National level: SGFI – University level - State associations – District associations- Mini – Sub junior - Junior inter district – national championship - International competitions – method of organization – Drawing of fixtures – Knockout seeding - league

UNIT - III

Developmental schemes: Sports Authority of India - Aim- motto- vision- organizational set up. Schemes: academics - Kholo India – STC – SAG – NSTC – SPDA- NCOE- regional centers - Sports promotion - infrastructure facilities – selection of teams.

UNIT - IV

Developmental schemes: Sports Development Authority of Tamil Nadu - aim- motto- vision- schemes: Sports Hostel- Hostel of excellence –academies – World beaters - infrastructure facilities- organizational set up – recent trends -

UNIT - V

Sports awards: SDAT - Chief Minister's award – Coach – Physical education teacher – players' incentives – High cash incentives – pension - Sports scholarship – medal winners – Awards: Arjuna award – Dhronachariya award – Rajive Khel rathina award- Dhayan chand life time achievement award - eminent sports personalities in sports

REFERENCES :

1. FIVB coaches manual. FIFA manual , AAA Coaches book
2. www.sdat.tn.gov.in 3. www.sportsauthorityofindia.nic.in

SEMESTER- II- PAPER CODE - UEN18CT201

TAMIL II (A)

முதலாம் ஆண்டு இளம் அறிவியல் தாள் -2

இரண்டாம்பருவம்

இலக்கியமும் மொழித்திறனும்

அலகு :1

1 நந்திக்கலம்பகம் .
2.தமிழ் விடு தூது

அலகு: 2.

1(குறத்தி மலை வளம் கூறல்) திருக்குற்றால குறவஞ்சி.
2 முக்கூடல் பள்ளு.

அலகு: 3 தமிழரின் வீர விளையாட்டுக்கள்ஏறுதழுவுதல். ,மற்போர்,விற்போர்,வேட்டை,சிலம்பம் களரி

அலகு:4 மொழிப் பயிற்சி.

1. பிழை நீக்கம்
2. விளம்பர வாசகங்களை உருவாக்குதல்
1. நேர்காணல்

அலகு: 5 தமிழ் இலக்கிய வரலாறு .

1. சிற்றிலக்கியவரலாறு
2. கிருத்துவ இலக்கிய வரலாறு
3. இசுலாமிய இலக்கிய வரலாறு
4. காப்பிய இலக்கிய வரலாறு

பார்வை நூல்கள்:

1. பேரா அடைக்கல சாமி. ஆர் . எம்.,(2000 தமிழ் இலக்கிய வரலாறு(,ராசி பதிப்பகம் - சென்னை.73
2. த மலையரசி.,(2013தமிழ் இலக்கியங்களில் (- பாவை பதிப்பகம் மதுரை- விளையாட்டுக்கூறுகள்1
3. சொ பரமசிவம்.,(2000 நற்றமிழ் இலக்கணம்(,பட்டுப்பதிப்பகம் சென்னை -40
4. சங்க இலக்கிய நூல்கள் .கழக வெளியீடு-

SEMESTER- II- PAPER CODE - UEN18CT201

HINDI II (B)

PAPER – II: ONE ACTPLAY, SHORT STORY AND TRNSLATION PRACTICE

UNIT - I

Detailed Study : Deep Dan by Dr. Ram Kumar Verma

Non – Detailed Study : MukthiDhan by Premchand

UNIT – II

Detailed Study :DusHazar by Uday Shankar Bhatt

Non – Detailed Study :Tayee by VishambharNathSharmaKaushik

UNIT – III

Detailed Study:YehMeriJanmaBhoomiHai by Hari Krishna"Premi"Mera Vatan by Vishnu Prabhakar

UNIT –IV

Detailed Study: Mai BhiManav Hun by Vishnu Prabhakar

Translation Practice : English to Hindi

UNIT – V

Non - Detailed Study : AadmiKaBaccha by Yashpal

Translation Practice : Hindi to English

Reference Books:

1. One Act Play (Detailed Study) Dr.Sridhar Singh EKANKI RATNAKAR VaniPrakashan

2. Short Story (Non-Detailed Study) ChittiAnnapoorna "KATHA MADHURI" Rajeswari Publications

3. Translation Practice Dr. Syed Rahamathullah & Dr.ChittiAnnapoorna, " "PRAYOJAN MOOLAK HINDI" , PoornimaPrakashan

SEMESTER- II- PAPER CODE - UEN18CT201

SPECIAL ENGLISHII (C)

OBJECTIVES:

1. To make students involved in Listening and writing for developing Basic Learning Skills and make familiar with Literary works and practice in analyze and describe literary works.

LEARNING OUT COMES:

1. To expose learners to short story writing over the centuries
2. To provide learners an insight into different cultures

3. To help learners appreciate different themes, strategies and techniques employed by the writers

UNIT I - PROSE

1. The Refugee - K.A. Abbas
2. The lion and the Lamb - Leonard Clark

UNIT II – POEMS

1. The solitary Reaper -William wordsworth
2. Gift - Alice Walker

UINIT III- SHORT STORIES

1. The Postmaster - Rabindranath Tagore
2. The Model millionaire - Oscar wilde

UNIT IV- ONE ACT PLAYS

1. The dear departed: A comedy in one-act Stanley Houghton
2. The Sherif's Kitchen - Ronald Gow

UNIT V- COMMUNICATIVE GRAMMAR

Grammar, Framing Questions, common errors, more Grammars, word building, prefix and suffix.

REFERENCE

1. Panorama English for communication by Emerald publications.
2. Effective Communication Skills prepared and published by MTD
3. English Grammar in use by Raymond Murphy, Cambridge publication 3rd edition.
4. Basic English Grammar by Betty.S.Azar and Stacy A.Hagen Pearson Publication 4th edition.

SEMESTER- II- PAPER CODE - USC18CT202

ENGLISH -II DEVELOPING THE LANGUAGE SKILLS - LISTENING & SPEAKING

OBJECTIVES:

To Develop the Language Skills through the skill of Listening and Speaking.

LEARNING OUT COMES:

Students can participate various speaking activates to improve their skill of speaking such as storytelling, Conversation, dialogue completing, debate etc…

These practices make students interesting on speaking English and they can speak without hesitation before peer group and others.

When students know about Features and necessaries of Listening and speaking skill they can involve voluntary to participate in activities of speaking and listening.

LISTENING AND SPEAKING

UNIT-I

A) Asking for & Giving permission

B) Inviting a person – accepting and / declining

UNIT-II

A) Grammar in usage

B) Translation- idioms & phrases

C) Filling up forms- Bank Chelan's/ Pay in Slips/ Demand Draft, Railway Reservation/ Cancellation

UNIT-III

A) Welcoming a foreign visitor & describing region& country

B) Letter writing

C) Descriptive writing

UNIT-IV

A) Ode to the west wind - P.B. Shelley

B) The Gift of India - SarojiniNoidu.

UNIT-V

A) The Man who could work Miracle - H.G.Wells

B) The Verger - Samerset Maugham

REFFERENCE:

1. The Last leaf & Other stories by AnandkumarFaju(Blackie Books)
2. The Silent Song- K.M.Tharangan(macmillans)
3. English:Grammer in use by Raymond Murphy, Cambridge publication 3rd edition.

4. Basic English Grammer by Betty.S.Azar and Stacy A.Hagen Pearson Publication 4th edition

SEMESTER- II- PAPER CODE - USC18CT 202

SCIENCE OF SPORTS TRAINING:

UNIT - I

Sports training: meaning - definition - aim - objective - characteristic - General principles – Progression of load – Individualizing - over load - specificity- reversibility. Warming up: types – general – special - importance and benefits. Cool down : importance and benefits.

UNIT - II

Physical fitness components: meaning definition- importance. Speed – strength- endurance – coordinative abilities – flexibility. Training load: over load – symptoms – causes – recovery. Forms of speed – reaction speed – Speed in movement- locomotors speed- sprinting speed – speed endurance. Factors affecting speed.

UNIT - III

Strength: Meaning – definition- types – maximum strength- explosive strength- strength endurance- factors affecting strength. Flexibility: meaning – definition – importance – factors affecting flexibility - types

UNIT – 1V

Coordinative abilities: meaning – definition – types - Differential ability - Orientation ability - Coupling ability- Reaction ability -Balance ability-Rhythm ability- adaptation ability. Endurance: meaning – definition- types – Nature of activity – duration of activity – long term – middle term- short term- importance.

UNIT - V

Peridization : meaning – definition- types – single – double- multiple- Periods: preparatory – competitive – transition . Plan: annual plan - Micro – meso- macro – session plan

REFERENCE

1. Frank W. Dick, Sports training principles, London, Lepus Book Co., 1980
2. Hardyal Singh Science of Sports training, DVS publication, New Delhi, 1995

SEMESTER- II- PAPER CODE - USC18CT 204A

RULES REGULATION OF SPORT/GAME – VOLLEYBALL

UNIT - I

Facilities and equipment: Playing area - Dimensions measurements - layout – markings.- surface – zones –Temperature - lighting . Net and Post - balls. Teams: composition – captain – Coach – assistant coach (Rule No 1-5)

UNIT - II

Playing format: score - set – match – toss –starting lineup – Positions – rotations. Playing actions: start of play - playing the ball – ball at net – Player at the net. (Rule No 6 to 11)

UNIT III

Service: Service order- screening – fault. Attack hit: restriction – fault – Block: Contact – hit – service – fault. Interpretations: interruptions – time out – substitutions – illegal. Game delays – change of court. (Rule No 12 to 16)

UNIT - IV

Game delays: types - delay sanctions - exceptional interruptions – intervals change of court – libero – Participant contact – sportsman like contact – fair play – misconduct – sanctions (Rule No 17-21)

UNIT - V

Referrers : composition – procedure – I referee – II referee – scorer – assistant scorer – line judges- signals. (Rule no 22 – 28)

REFERENCE

1. Official volleyball rules – FIVB
2. www.fivb.org

SEMESTER- II- PAPER CODE - USC18CT 204B

RULES REGULATION OF SPORT/GAME – FOOTBALL

UNIT - I

Facilities and equipment: Playing area - Dimensions measurements - layout – markings.- surface – zones –Temperature - lighting . Net and Post - balls. Teams: composition – captain – Coach – assistant coach (Rule No 1-5)

UNIT - II

Laws 1 – 5

UNIT III

Laws 6 - 11

UNIT - IV

Laws 12 - 17

UNIT - V

Referrers : composition – procedure – I referee – II referee – scorer – assistant scorer – line judges- signals. (Rule no 22 – 28)

REFERENCE

1. Official football rules – FIFA

SEMESTER- II- PAPER CODE - USC18CT 204C

RULES REGULATION OF SPORT/GAME – KABADDI

UNIT - I

Facilities and equipment: Playing area - Dimensions measurements - layout – markings.- surface – zones –Temperature - lighting . Net and Post - balls. Teams: composition – captain – Coach – assistant coach (Rule No 1-5)

UNIT - II

Playing format: score - set – match – toss –starting lineup – Positions – rotations. Playing actions: start of play - playing the ball – ball at net – Player at the net. (Rule No 6 to 11)

UNIT III

Service: Service order- screening – fault. Attack hit: restriction – fault – Block: Contact – hit – service – fault. Interpretations: interruptions – time out – substitutions – illegal. Game delays – change of court. (Rule No 12 to 16)

UNIT - IV

Game delays: types - delay sanctions - exceptional interruptions – intervals change of court – libero – Participant contact – sportsman like contact – fair play – misconduct – sanctions (Rule No 17-21)

UNIT - V

Referrers : composition – procedure – I referee – II referee – scorer – assistant scorer – line judges- signals. (Rule no 22 – 28)

REFERENCE

1. AKFI Official l rules book

SEMESTER- II- PAPER CODE - USC18CT 204 D

Rules and Regulation of specified sport (Athletics)

Unit 1

Dimension & Marking of Track : -Layout of 400 m track marking - -Layout of 200 m track marking - -Different kind of staggers - -Marking for relay competitions (4x100 m, 4x400 m)

Unit 2

Marking for field events**:** -Layout for shot put, discus throw, hammer throw & Javelin throw arena -Layout for Long jump, Triple jump, High jump & Pole vault arena

Unit 3

Duties & Responsibilities of Officials**:** Technical delegates - Jury of appeal -Start coordinator, Starter & Recallers - Technical manager – Referees –Judges - Time keepers & photo finish judges - Lap scorers -Call room judges

Unit 4

Interpretation of rules & regulations**:** -Starts, Race & finish - -Hurdle races & steeple chase race --Relay races --Race walk --Cross country – road races - -Technical rules of combined events (Heptathlon & Decathlon)

Unit 5

Technical rules of field events**:** Throws (Shot put, Discus throw, Hammer throw & Javelin throw) -Horizontal jumps (Long jump , Triple jump) -Vertical jumps (High jump , Pole vault)

References:

1.Dr.George Emmanuel, Track and field events Layout and marking

2.World Athletics-Competition and technical rules-2020 edition

SEMESTER- II- PAPER CODE - USC18CT 204E

RULES REGULATION OF SPORT/GAME – HOCKEY

UNIT - I

Facilities and equipment: Playing area - Dimensions measurements - layout – markings.- surface – zones –Temperature - lighting . Stick - ball - goal keeper

UNIT - II

Field of play – composition of team- Playing format – captain - score - set – match – toss – starting lineup – Positions – players clothing and equipments.

UNIT III

Match and results: start – re start – ball outside of the field –method of scoring conduct of play – player

UNIT - IV

Conduct of play – goal keeper – umpire – penalties – procedure – personal – personality

UNIT - V

Umpire – objective – apply the rules – skills – signals – style of officiating

REFERENCE

1. Rules of Hockey – International Hockey Federation

SEMESTER III- PAPER CODE -UEN18CT301

TAMIL III (A)

இரண்டாம் ஆண்டு இளம் அறிவியல் தாள் -3

முன்றாம்பருவம்

இலக்கியமும் மொழித்திறனும்

அலகு: 1

1 மாணிக்க வாசகர்- திருவாசகம்.

(திருவாசகம் முதல் ரு செய்யுள் (

. 2. நாலாயிர திவ்விய பிரபந்தம் ஆண்டாள்-

வாரணம் ஆயிரம் தொடங்கி ரு செய்யுள்

அலகு: 2

கம்பராமாயணம்

(சுந்தரகாண்டம் ஊர் தேடு படலம் முதல் எச செய்யுள்-)

அலகு:4

சமுதாய நோக்கில் தமிழர் விளையாட்டுக்கள் க-

வாழ்க்கைக்கு பயன்படும் விளையாட்டுக்கள் விளையாட்டு - விளையாடுவதற்கு ஏற்ற வசதிகள் விலக்கையாட்டுப் - நெறிமுறைகள் விளையாட்டில் ஆண் பெண் பாகுபாடு விளையாடும் - பொது பெண்களும்

அலகு:4.

மொழிப பயிற்சி

1 வேலை வாய்ப்பு வேண்டி விண்ணப்பம் .

2 கடிதம் எழுதுதல்.

3 நேர்காணல் .

அலகு:5.

தமிழ் இலக்கிய வரலாறு

1 பல்லவர் கால பக்தி இலக்கிய வரலாறு

2 பிற்கால சோழர் கால இலக்கிய வரலாறு.

பார்வை நூல்கள்:

1. பேரா அடைக்கல சாமி. ஆர் .எம்.,(2000 தமிழ் இலக்கிய வரலாறு (,ராசி பதிப்பகம் - சென்னை.73
2. த மலையரசி.,(2013தமிழ் இலக்கியங்களில் (- பாவை பதிப்பகம் மதுரை- விளையாட்டுக்கூறுகள்1
3. சொ பரமசிவம்.,(2000 நற்றமிழ் இலக்கணம்(,பட்டுப்பதிப்பகம் சென்னை -40

4. சங்க இலக்கிய நூல்கள் .கழக வெளியீடு-

SEMESTER III- PAPER CODE -UEN18CT301

HINDI III (B)

OLD POETRY, HISTORY OF HINDI LITERATURE

[UPTO REETHI KAAL]

Unit I: Old Poetry: Kabir Das – Saakhi History of Hindi Literature: AadiKaal – KaalvibhajanvaNamkaran Ki Samsaya, Aadi Kaleen Pravrithiya&Repersentative Poets – AmerKhurso&Chandvardaya

Unit II: Old Poetry: Sur Das – BharamarGeetha History of Hindi Literature: BhakthiKaal – NirgunBhakthiSathya- Visheshatayen& Representative Poets- Kabir, Jayasee

Unit III: Old Poetry: Tulsi das – KevatPrasang History of Hindi Literature: BhakthiKaal – NirgunBhakthiSathya- Visheshatayen& Representative Poets- Tulsi, Surdas

Unit IV: Old Poetry: MeeraBai – Padh History of Hindi Literature: ReethiKaal – ReethikaaleenPavirithiya&Visheshatayen

Unit V: Old Poetry: Rahim – Padh, Tiruvalluvar History of Hindi Literature: ReethiKaal- ReethBadh, ReethiSidhKavya&ReethiMukthKavya, Representative Poets- Biharilal&Ghananandh

Reference Book:

1. Old Poetry: Poetry selection – 2001 University Publication, University of Madras
2. History of Hindi Literature:
   [a] Hindi Sathiya Yu gaur Pravrithiya by Siva kumarsharma , Ashok Prakashan ,
   [b] Hindi SahithyaKaVivechanatmakIthihasByRAjNAth Sharma, VinodPustakMandir , Agra

SEMESTER III- PAPER CODE -UEN18CT301
SPECIAL ENGLISH III (C)

OBJECTIVES:

1. To acquaint the students with different Kinds of Grammar.
2. To acquaint the students with different genres of Literature
3. To make students read and enjoy literature and to critically analyze the different forms.

LEARNING OUT COMES:

1. Should be aware of the characteristics of literature as a literary genre.
2. Should be able to pinpoint the linguistic qualities.
3. To unravel the many meanings of the text
4. Should develop acumen to read, appreciate and discuss literature and its ramifications at various levels.

UNIT-I- PROSE

A) The life of Divine - Sri Aurobindo

B) From Home Coming - R. Parthasarathi

UNIT – II- POEM

A) My Grandmother's House - Kamala Das.

B) Kubla Khan - S.T. Coleridge

UNIT – III- SHORT STORIES

A) The English Teacher - R.K. Narayan.

B) Clear Light of Day - Anita Desai.

UNIT-IV-NOVELS

A) Tughlaq - GrishKarnad

B) The Serpent and the Rope - Raja Rao

UNIT-V- SOFT SKILLS

A) Interview Skills

a) Personal Interview

b) Subjective Interview

c) Group Discussion

d) Preparing for Interview.

REFFERENCE:

1. Effective Communication Skills prepared and published by MTD Training
2. Ten Twentieth Century Indian poets Edited by K.Parthasarathi.

SEMESTER- III- PAPER CODE - USC18CT 302

ENGLISH - III PROGRESSIVE LANGUAGE SKILLS – USC18CT 302

OBJECTIVES:

1. To help students improve their thinking in a systematic way by familiarizing them with the major basic mental operations and skills through the names associated with them
2. To impart effective reading skills by giving extensive practice in reading comprehension exercises
3. To prepare students to master the art of condensation, and compose an effective letter and a successful résumé
4. To impart effective training in the logical mechanism of writing an essay
5. To acquaint the learners with the mechanics of Power Point Presentations

LEARNING OUT COMES:

1. Think in a logical way by identifying the fallacies in arguments and to appreciate the value of looking at an issue from various points of view without possible biases
2. Read and comprehend the major points discussed in various types of written texts
3. Make notes, write precise, letter and resume
4. Write an essay in a systematic manner

LISTENING & SPEAKING

UNIT-I

A) Discussion interests & leisure activities
B) Checking in & out of a hotel
C) Complaint & apology

UNIT – II

A) Comprehension
B) Developing hinds

UNIT – III

A) Descriptive Writing
B) Translation – Sentences – English to Tamil

UNIT- IV

A) Nissim Ezekiel : "Poet, Lover, Birdwatcher"
B) A. K. Ramanujan : "Of Mothers, Among Other Things"

UNIT - V

A) Drama - Arthur Miller : Death of a Salesman
B) Short Story - Edgar Allen Poe : The Fall of the House of Usher

REFERENCES:

1. Narasimhaiah, C. D. "An Anthology of Commonwealth Poetry" India: Macmillan, 1990.
2. Ramanan, Mohan (Ed) Four Centuries of American Poetry: An Anthology.

3. Chennai: Macmillan.An Anthology of Poems in English. Chennai: Longman

a) Discussion interests & leisure activities
b) Checking in & out of a hotel
c) Complaint & apology

SEMESTER- III - PAPER CODE - USC18CT 303

SPORTS MEDICINE AND NUTRITION

UNIT – I

Sports medicine: meaning - aim - objective - need - importance - preventive - measures - First Aid - Safety - hygiene

UNIT - II

Injuries: Meaning - types – sprain- strain – contusions - tear - sports specific injuries - fracture - types - laceration - abrasion - dislocation - CPR

UNIT - III

Women in sports : anatomical - biological - physiological - psychological - factors affecting sports performance

UNIT - IV

Massage - types - importance - need - principles - doping – classifications. Rehabilitation – treatments.

UNIT - V

Nutrition - classification - sources - balance diet - Carbohydrate - fat - protein - vitamins - supplements - pre game meal - post game meal

REFERENCE

1. Lars Peterson and Per Restorn (2001) Sport Injuries – Their Prevention and treatment, United States, Human Kinetics
2. Richard B.Birrer (2004), Sports Medicine for the Primary care physician, Florida, United Stetes, Human Kinetics
3. Bruckner and Karim Khan (2006) Clinical Sports medicine, Australia Megraw Hill
4. Sports medicine by Richer H. strauss

SEMESTER-III- PAPER CODE - USC18CT 304 A

TECHNIQUE AND TECHNICAL TRAINING OF SPORTS/ GAMES (VOLLEYBALL)

UNIT – I

Technique - Definition - fundamental skills - offensive skills – defensive skills - without equipment – positioning – movements - Principles of learning

UNIT – II

Technique: fundamental skills - with equipment/ball – offensive skills – defensive skills - simple to complex exercises - positioning - movements - Technical training - simple - complex - pressure - training under physical aspects.

UNIT - III

Techniques: Teaching fundamental skills –offensive skills – anatomical aspect – applied biomechanics - technical training

UNIT - IV

Teaching: fundamental skills – defensive skills – anatomical aspect – applied biomechanics – means of identifying faults – correction s.

UNIT - V

Training: advanced skills –offensive skills – training – corrections – analysis - defensive skills – training – corrections – analysis – testing

REFERENCE :

1. FIVB/FIFA/IHF/IAAF coaches manual
2. Ceile Reynand " Coaching volleyball technical and tactical skills" Human kinetics
3. International sports Academy – Part I & Part II
4. Edward Spooner "The science of Volleyball Practice development and drill design" I universe Publications.

SEMESTER-III- PAPER CODE - USC18CT 304 B

TECHNIQUE AND TECHNICAL TRAINING OF SPORTS/ GAMES (FOOTBALL)

UNIT – I

Technique - Definition - fundamental skills - offensive skills – defensive skills - without equipment – positioning – movements - Principles of learning

UNIT – II

Technique: fundamental skills - with equipment/ball – offensive skills – defensive skills - simple to complex exercises - positioning - movements - Technical training - simple - complex - pressure - training under physical aspects.

UNIT - III

Techniques: Teaching fundamental skills –offensive skills – anatomical aspect – applied biomechanics - technical training

UNIT - IV

Teaching: fundamental skills – defensive skills – anatomical aspect – applied biomechanics – means of identifying faults – correction s.

UNIT - V

Training: advanced skills –offensive skills – training – corrections – analysis - defensive skills – training – corrections – analysis – testing

REFERENCE :

1. Coaching manual by S. Subramanian & Richerd Bate Malayasia
2. FIFA coaches manual

SEMESTER-III- PAPER CODE - USC18CT 304 C

TECHNIQUE AND TECHNICAL TRAINING OF SPORTS/ GAMES (KABADDI)

UNIT – I

Technique - Definition - fundamental skills - offensive skills – defensive skills - without equipment – positioning – movements - Principles of learning

UNIT – II

Technique: fundamental skills - with equipment/ball – offensive skills – defensive skills - simple to complex exercises - positioning - movements - Technical training - simple - complex - pressure - training under physical aspects.

UNIT - III

Techniques: Teaching fundamental skills –offensive skills – anatomical aspect – applied biomechanics - technical training

UNIT - IV

Teaching: fundamental skills – defensive skills – anatomical aspect – applied biomechanics – means of identifying faults – correction s.

UNIT - V

Training: advanced skills –offensive skills – training – corrections – analysis - defensive skills – training – corrections – analysis – testing

REFERENCE :

1. IKF coaches manual

SEMESTER-III- PAPER CODE - USC18CT 304 D

TECHNIQUE AND TECHNICAL TRAINING OF SPORTS/ GAMES (ATHLETICS)

UNIT – I

Technique - Definition - fundamental skills - throws event - without equipment – positioning – movements - Principles of learning

UNIT – II

Technique: fundamental skills – Jumps - with equipment/ball – simple to complex exercises - positioning - movements - Technical training - simple - complex - pressure - training under physical aspects.

UNIT - III

Techniques: Track events - teaching fundamental skills – anatomical aspect – applied biomechanics - technical training

UNIT - IV

Teaching: Combined events - fundamental skills – defensive skills – anatomical aspect – applied biomechanics – means of identifying faults – correction s.

UNIT - V

Training: Decathlon – heptathlon – road race – marathon – waling – ruining advanced skills– training – corrections – analysis - defensive skills – training – corrections – analysis – testing

REFERENCE :

1. Coaching manual by S. Subramanian & Richerd Bate Malayasia
2. IAAF coaches manual

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SEMESTER-III- PAPER CODE - USC18CT 304 E

TECHNIQUE AND TECHNICAL TRAINING OF SPORTS/ GAMES (HOCKEY)

UNIT – I

Technique - Definition - fundamental skills - offensive skills – defensive skills - without equipment – positioning – movements - Principles of learning

UNIT – II

Technique: fundamental skills - with equipment/ball – offensive skills – defensive skills - simple to complex exercises - positioning - movements - Technical training - simple - complex - pressure - training under physical aspects.

UNIT - III

Techniques: Teaching fundamental skills –offensive skills – anatomical aspect – applied biomechanics - technical training

UNIT - IV

Teaching: fundamental skills – defensive skills – anatomical aspect – applied biomechanics – means of identifying faults – correction s.

UNIT - V

Training: advanced skills –offensive skills – training – corrections – analysis - defensive skills – training – corrections – analysis – testing

REFERENCE :

1. Coaching manual by S. Subramanian & Richerd Bate Malayasia
2. HIF coaches manual
3. International sports Academy – Part I & Part II

SEMESTER IV- PAPER CODE -UEN18CT401

TAMIL IV (A)

இரண்டாம் ஆண்டு இளம் அறிவியல் தாள் -4
நான்காம் பருவம்
இலக்கியமும் மொழித்திறனும்

அலகு:1 வாழ்க்கை த்துணை நலம் : திருக்குறள் அறத்துப்பால்.,மக்கள் பேறு
பொருட்பால் கல்வி:,கேள்வி காமத்துப் பால் குறிப்பு அறிதல்: ,புணர்ச்சி மகிழ்தல்

அலகு: 2 பத்துப் பாட்டு நெடுநெல் வாடை

அலகு:3

சமுதாய நோக்கில் தமிழர் விளையாட்டுகள் -2
கூட்டுணர்வு விளையாட்டுக்கள் சமயம் - சார்பு விளையாட்டுக்கள்- விளையாட்டில் நம்பிக்கையும் பழக்- சார்ந்த விளையாட்டுக்கள்க வழக்கங்களும் இயற்கையோடு இயைதல் விளையாட்டில் -

அறிவியலும் விளையாட்டும் விளையாடும் வரலாற்று - அறஉணர்வு விளையாட்டில் குற்றமும் தண்டனையும் - நிகழ்வும்

அலகு -4 மொழிப பயிற்சி.

1ஆங்கிலத்திலிருந்து தமிழில் மொழிபெயர்த்தல்.

2. தமிழிலிருந்து ஆங்கிலத்தில் மொழிபெயர்த்தால்

அலகு:5தமிழ் இலக்கிய வரலாறு.

1. சங்க இலக்கிய வரலாறு
2. அறஇலக்கிய வரலாறு

பார்வை நூல்கள்:

1. பேரா அடைக்கல சாமி. ஆர் . எம்.,(2000 தமிழ் இலக்கிய வரலாறு (,ராசி பதிப்பகம் - சென்னை.73
2. த மலையரசி.,(2013 தமிழ் இலக்கியங்களில் (விளையாட்டுக்கூறுகள் - பாவை பதிப்பகம் மதுரை-1
3. சொ பரமசிவம்.,(200 நற்றமிழ் இலக்கணம்(,பட்டுப்பதிப்பகம் சென்னை -40

SEMESTER IV- PAPER CODE -UEN18CT401

HINDI IV (B)

PAPER IV: MODERN POETRY, HISTORY OF HINDI LITERATURE (ADHUNIK KAAL ONLY)

UNIT- I

Modern Poetry: ApnaSansar by MithiliSharanGupt, Chinta by Jeya Shankar Prasad. History of Hindi Literature: BharatenduYag- VisheshatayenArunPravithiyan Representation Poet – Bharatendu

UNIT –II

Modern Poetry: MurjhayaHuaPhool by MahadeviVerma. History of Hindi Literature: DwivediYug- VisheshatayenArunPravithiyan, Representation Poet -Dwivedi Yug.

UNIT –III

Modern Poetry: SnehShapath by Bhavani Prasad Mishra. History of Hindi Literature: Chayaavad- VisheshatayenArunPravithiyan, Representation PoetJeya Shankar Prasad, SuryakanthTripathiNirala, SumithraNandhanPanth, MahadeviVarma.

UNIT – IV

Modern Poetry: Nimna Madhya Vargh by PrabhaharMacheve. History of Hindi Literature: NayiKavitha - VisheshatayenArunPravithiyan, Representation Poet – PrabhakarMachve&BharathBhooshanAharwal.

UNIT – V

Modern poetry: Anewaalone se eksavaal by BharathBhooshanAharwal. History Hindi Literature: Upayans, KahaniArunNayak(UdbhauaurVikkas)

REFERENCE BOOKS:

1. Modern Poetry: Poetry Selection-2001 University Publications University of Madras.
2. History of Literature: Hindi SathyayugaurPravirthiyan by Siva Kumar Sharma Ashok PrakashanNayiSadik, New Dhelhi – 6
3. Hindi SahithyaKaVivechanatmakIthihasBy Raj Nath Sharma VinodPustakMandir, Agra.

SEMESTER IV- PAPER CODE -UEN18CT401

SPECIAL ENGLISH IV (C)

OBJECTIVES:

1. The aim of the course is to enhance the level of critical thinking of the students to such a degree that the students could critically interact with prose writings from different contexts

LEARNING OUT COMES:

1. To enable the students to identify the specificities of various modes of prose writing and to equip them to write prose in as many different modes as possible
2. To develop the critical thinking ability of the student to respond to various modes of prose writings in relation to their socio-historic and cultural contexts.

UNIT-I- PROSE

A) Off Studies - Francis Bacon

B) The South sea House - Charles Lamb

Unit – II- POEM

A) The mending Wall -Robert frost.

B) Summer in Calcutta - Kamala Dass

UNIT – III- SHORT STORIES

A) The old man woman and the Cow- Mulk Raj Anand

B) The Lottery Ticket - Anton Chekhov

UNIT-IV- ONE ACT PLAYS

A) A Memory of Two Monday - Arther Miller

B) Krapp's Last Tape` - Raja Rao

UNIT-V- PHONETICS

a) Speech System in English

b) Vowels

c) Consonants

REFFERENCE

1. Put English Phonetics into Practice compiled by Szilagyi Laszlo
2. The Last leaf & Other stories by AnandkumarFaju(Blackie Books)

SEMESTER- IV- PAPER CODE - USC18CT 402

ENGLISH – IV CAREER LISTENING AND SPEAKING

OBJECTIVES

1. To impart advanced training in standard pronunciation, word stress and intonation
2. To train students in the correct use of English in a formal way
3. To improve the learners' vocabulary by familiarizing them with the ways of word formation
4. To develop communication skills by providing theoretical knowledge of the mechanism of effective communication

LEARNING OUT COMES:

1. Speak English with an unaffected accent using stress and intonation
2. use acceptable English in academic writing
3. use English language in a more meaningful way with an enriched word power
4. communicate in a professional way using various communication strategies

UNIT-I

A) Group discussion – predicting and describing future possibilities

1. Globalization
2. Feminism

3. Current event

B) Interview- focus in personality development and body language

WRITING

UNIT-II

A) Report writing

B) Note making

UNIT-III

A) How to write an e-mail

B) Descriptive writing – writing with purpose

UNIT-IV

B) Song on May Morning - John Milton

C) Leave this Chanting - Rabindranath Tagore

UNIT-V

A) Tintern Abbey - William Wordsworth

B) She Stoops to Conquer - Oliver Goldsmith

REFERENCE:

1. A.K.RamanBhushanam "Human values through English prose" (Blackie)
2. English Grammar in use by Raymond Murphy, Cambridge publication 3rd edition.
3. Basic English Grammar by Betty.S.Azar and Stacy A.Hagen Pearson Publication 4th edition

SEMESTER- IV- PAPER CODE - USC18CT 403

SPORTS PSYCHOLOGY AND SOCIOLOGY OF SPORT -

UNIT - I

Psychology - Definition – importance – branches - sports psychology - Definition – importance – role - development

UNIT - II

Personality – definition – theories - traits– neuroticism – extraversion – introvert- openness – agreeableness – conscientiousness - inter personal relation – temperament – sanguine – choleric – melancholic - phlegmatic.

UNIT – III

Motivation - definition – types – intrinsic – extrinsic – social influence – peer group - anxiety – cognition - stress - aggression – arousal – emotions

UNIT - - IV

Learning - Theories of learning - classical conditioning – gestalt learning theory – law and effect – operant conditioning - transfer of learning – self confidence – development - Psychological skill training – imagery – goal setting

UNIT – V

Sports sociology: meaning – definition - need - importance - scope - sociogram - audience effect

REFERENCES :

1. John.D,Lauther, (2001) Psychology of coaching, New jersy; Enginewood Cliffs, Prenticce Hall Inc.

2. Thelma Horn (2002) Advances in Sports Psychology, Human Kinetics.
3. Jay Coakley(2001), Sports in society – issues and conterouersies in International education, Mc-Craw Seventh.Ed.
4. Yobu A Sports sociology, Jehova Nissin Publication 2003
5. David Tod, "Sports Psychology" Macmillan international 2010
6. Ramalingam "Education Psychology" Mc Graw Hill Publication 2013

SEMESTER- IV- PAPER CODE - USC18CT 404 A

TACTICS AND TACTICAL DEVELOPMENT OF SPORT/GAME – VOLLEYBALL

UNIT – I

Tactics - definition – classification – importance – stages of teaching – descriptive analysis of offensive skills - Defensive skills

UNIT - II

Tactics – Offensive skills - advantage - disadvantage - individual tactics - tactical development - group tactics – tactical development - training under tactical and physical aspects

UNIT - III

Tactics – team tactics – tactical development – methods and means training - training under tactical aspects – Mental training to improve tactics

UNIT - IV

Strategies – meaning – importance – methods - factors affecting - System of paly – formation - methods – importance - functional training – set plays - attacking - defense - importance

UNIT - V

Match practice – related practice – phase practice – minor games – small sided games

REFERENCE :

1. Coaches Manual : Erric Ribbeck, Gremany
2. FIVB/FIFA/IHF/IAAF coaches manual
3. International Academy – Part I & Part II

4. Ceile Reynand " Coaching volleyball technical and tactical skills" Human kinetics
5. Toni Faovzi " Volleyball- Technique and Tactics" Lulu publications

SEMESTER- IV- PAPER CODE - USC18CT 404 AB

TACTICS AND TACTICAL DEVELOPMENT OF SPORT/GAME – FOOTBALL

UNIT – I

Tactics - definition – classification – importance – stages of teaching – descriptive analysis of offensive skills - Defensive skills

UNIT - II

Tactics – Offensive skills - advantage - disadvantage - individual tactics - tactical development - group tactics – tactical development - training under tactical and physical aspects

UNIT - III

Tactics – team tactics – tactical development – methods and means training - training under tactical aspects – Mental training to improve tactics

UNIT - IV

Strategies – meaning – importance – methods - factors affecting - System of paly – formation - methods – importance - functional training – set plays - attacking - defense - importance

UNIT - V

Match practice – related practice – phase practice – minor games – small sided games

REFERENCE :

1. Coaches Manual : Erric Ribbeck, Gremany
2. FIFA coaches manual

3. International Academy – Part I & Part II

SEMESTER- IV- PAPER CODE - USC18CT 404 C

TACTICS AND TACTICAL DEVELOPMENT OF SPORT/GAME – KABADDI

UNIT – I

Tactics - definition – classification – importance – stages of teaching – descriptive analysis of offensive skills - Defensive skills

UNIT - II

Tactics – Offensive skills - advantage - disadvantage - individual tactics - tactical development - group tactics – tactical development - training under tactical and physical aspects

UNIT - III

Tactics – team tactics – tactical development – methods and means training - training under tactical aspects – Mental training to improve tactics

UNIT - IV

Strategies – meaning – importance – methods - factors affecting - System of paly – formation - methods – importance - functional training – set plays - attacking - defense - importance

UNIT - V

Match practice – related practice – phase practice – minor games – small sided games

REFERENCE :

1. Coaches Manual : Erric Ribbeck, Gremany
2. AKFI coaches manual
3. International Academy – Part I & Part II

SEMESTER- IV- PAPER CODE - USC18CT 404 D

TACTICS AND TACTICAL DEVELOPMENT OF SPECIFIED SPORTS

ATHLETICS

Unit 1

Historical development - National and International level - National bodies controlling sports and their affiliated units - International bodies controlling sports and their affiliated units - Major National and International competition

Unit 2

Sprints**:** Crouch starts and its variation – finishing technique – Running stride and its - phases (drive, support and recovery phase) Hurdles**:** Technique of 100 m and 110 m hurdles – Technique of 400 m hurdles

Unit 3

Middle and long distance**:** Techniques – Strategy – Tactics - Race walk **:** Techniques – phases of walking stride

Unit 4

Technical characteristics of Jumps ; -Long jump --Triple jump --High jump -Pole vault

Unit 5

Technical characteristics of Throws: -Shot put --Discus throw --Javelin throw --Hammer throw – types of passing button

References:

1.Run, Jump, Throws, IAAF guide to teaching athletes

2.,Deberly, J.menneth, modern track and field

3.Will freeman, Track and field coaching essentials, Human kinetics

SEMESTER- IV- PAPER CODE - USC18CT 404 E

TACTICS AND TACTICAL DEVELOPMENT OF SPORT/GAME – HOCKEY

UNIT – I

Tactics - definition – classification – importance – stages of teaching – descriptive analysis of offensive skills - Defensive skills

UNIT - II

Tactics – Offensive skills - advantage - disadvantage - individual tactics - tactical development - group tactics – tactical development - training under tactical and physical aspects

UNIT - III

Tactics – team tactics – tactical development – methods and means training - training under tactical aspects – Mental training to improve tactics

UNIT - IV

Strategies – meaning – importance – methods - factors affecting - System of paly – formation - methods – importance - functional training – set plays - attacking - defense - importance

UNIT - V

Match practice – related practice – phase practice – minor games – small sided games

REFERENCE :

1. Coaches Manual : Erric Ribbeck, Gremany
2. IHF coaches manual

SEMESTER- V- PAPER CODE -UEN18DE501

KINESIOLOGY AND SPORTS BIO MECHANICS

UNIT – I

Kinesiology - meaning – definition – need – importance – role - Planes – Axis
Myology -structure - Muscles – origin – insertion – Osteology –structure - bones - joints – fundamental movements.

UNIT – II

Bio mechanics – definition - meaning - need - importance – kinematics – kinetics - speed - Velocity - Acceleration –displacement – equilibrium.

UNIT – III

Motion – meaning – definition – types – liner motion – curvilinear - Newton laws – first law – second law – third law - Lever – types – importance.

UNIT – IV

Force : concept – effects - types - factors determining - Projectile motion – importance – friction – advantage.

UNIT – V

Kinesiology and bio mechanical movements – walking – running – jumping – throwing

REFERENCES :

1. Bruce Aberethy, (2005). The Biophysical foundation of human movement. Human Kinetics
2. MC Clawaig, (2002). Biomechanics of human motion. Delhi : Sports publication
3. Rai Ramesh, (1998), Bio mechanics – Mechanical aspects of human motion, Delhi,
4. Peter Jain, (2006). Atlas of Human body. Delhi: Sports publication
5. Nancy Hamiltion, (2002) Kinesiology. Scientific basis of human motion. Newyark: Mc Graw-Hall companies, Inc.
6. Paul Jackson Mansfield " Essentials of Kinesiology" Elsevier 2014
7. Nichdas Stergious, (2004). Innovative Analysis of human movement. Human Kinetics

SEMESTER- V- PAPER CODE -UEN18DE502 A

SPECIFIC MOTOR QUALITIES OF SPORT/GAME : VOLLEYBALL

UNIT – I

Motor quality: forms – reaction speed – speed in movement – loco motor speed – sprinting speed – speed endurance - development - means and methods of development. Specific exercises – specific sport – development.

UNIT – II

Strength: types – maximum strength – explosive strength – strength endurance - means and methods of development – resistance training –Circuit training - up hill training – game specific exercises- development

UNIT - III

Endurance: Basic - General – specific – Nature of activity – duration of activity – 20 km walking - means and methods of development – circuit training – interval training – game specific exercises – development.

UNIT - IV

Coordinative abilities: classification - importance – need - means and method of development - game specific exercises – means and methods of development. Flexibility: types- stretching – active – passive – PNF stretch – sports specific exercises – development.

UNIT - V

Specific Plan: types – significance – micro – meso- macro. Specific Periodisation - aim – need – importance – Single – double – multiple - top form - various periods – preparatory – competitive - transitional - training schedules – daily – weekly monthly)

REFERENCES :

1. Frank W Dick, Sports training principles, London, Lepus Book Co., 1980
2. Hardyal Singh Science of sports training, DVS Publication, New Delhi, 1995

SEMESTER- V- PAPER CODE -UEN18DE502 B

SPECIFIC MOTOR QUALITIES OF SPORT/GAME : FOOTBALL

UNIT – I

Motor quality: forms – reaction speed – speed in movement – loco motor speed – sprinting speed – speed endurance - development - means and methods of development. Specific exercises – specific sport – development.

UNIT – II

Strength: types – maximum strength – explosive strength – strength endurance - means and methods of development – resistance training –Circuit training - up hill training – game specific exercises- development

UNIT - III

Endurance: Basic - General – specific – Nature of activity – duration of activity – 20 km walking - means and methods of development – circuit training – interval training – game specific exercises – development.

UNIT - IV

Coordinative abilities: classification - importance – need - means and method of development - game specific exercises – means and methods of development. Flexibility: types- stretching – active – passive – PNF stretch – sports specific exercises – development.

UNIT - V

Specific Plan: types – significance – micro – meso- macro. Specific Periodisation - aim – need – importance – Single – double – multiple - top form - various periods – preparatory – competitive - transitional - training schedules – daily – weekly monthly)

REFERENCES :

1. Frank W Dick, Sports training principles, London, Lepus Book Co., 1980
2. Hardyal Singh Science of sports training, DVS Publication, New Delhi, 1995

SEMESTER- V- PAPER CODE -UEN18DE502 C

SPECIFIC MOTOR QUALITIES OF SPORT/GAME : KABADDI

UNIT – I

Motor quality: forms – reaction speed – speed in movement – loco motor speed – sprinting speed – speed endurance - development - means and methods of development. Specific exercises – specific sport – development.

UNIT – II

Strength: types – maximum strength – explosive strength – strength endurance - means and methods of development – resistance training –Circuit training - up hill training – game specific exercises- development

UNIT - III

Endurance: Basic - General – specific – Nature of activity – duration of activity – 20 km walking - means and methods of development – circuit training – interval training – game specific exercises – development.

UNIT - IV

Coordinative abilities: classification - importance – need - means and method of development - game specific exercises – means and methods of development. Flexibility: types- stretching – active – passive – PNF stretch – sports specific exercises – development.

UNIT - V

Specific Plan: types – significance – micro – meso- macro. Specific Periodisation - aim – need – importance – Single – double – multiple - top form - various periods – preparatory – competitive - transitional - training schedules – daily – weekly monthly)

REFERENCES :

1. Frank W Dick, Sports training principles, London, Lepus Book Co., 1980
2. Hardyal Singh Science of sports training, DVS Publication, New Delhi, 1995

SEMESTER- V- PAPER CODE -UEN18DE502 D

SPECIFIC MOTOR QUALITIES OF SPORT/GAME : ATHLETICS

UNIT – I

Motor quality: forms – reaction speed – speed in movement – loco motor speed – sprinting speed – speed endurance - development - means and methods of development. Specific exercises – specific sport – development.

UNIT – II

Strength: types – maximum strength – explosive strength – strength endurance - means and methods of development – resistance training –Circuit training - up hill training – game specific exercises- development

UNIT - III

Endurance: Basic - General – specific – Nature of activity – duration of activity – 20 km walking - means and methods of development – circuit training – interval training – game specific exercises – development.

UNIT - IV

Coordinative abilities: classification - importance – need - means and method of development - game specific exercises – means and methods of development. Flexibility: types- stretching – active – passive – PNF stretch – sports specific exercises – development.

UNIT - V

Specific Plan: types – significance – micro – meso- macro. Specific Periodisation - aim – need – importance – Single – double – multiple - top form - various periods – preparatory – competitive - transitional - training schedules – daily – weekly monthly)

REFERENCES :

1. Frank W Dick, Sports training principles, London, Lepus Book Co., 1980
2. Hardyal Singh Science of sports training, DVS Publication, New Delhi, 1995

SEMESTER- V- PAPER CODE -UEN18DE502 E

SPECIFIC MOTOR QUALITIES OF SPORT/GAME : HOCKEY

UNIT – I

Motor quality: forms – reaction speed – speed in movement – loco motor speed – sprinting speed – speed endurance - development - means and methods of development. Specific exercises – specific sport – development.

UNIT – II

Strength: types – maximum strength – explosive strength – strength endurance - means and methods of development – resistance training –Circuit training - up hill training – game specific exercises- development

UNIT - III

Endurance: Basic - General – specific – Nature of activity – duration of activity – 20 km walking - means and methods of development – circuit training – interval training – game specific exercises – development.

UNIT - IV

Coordinative abilities: classification - importance – need - means and method of development - game specific exercises – means and methods of development. Flexibility: types- stretching – active – passive – PNF stretch – sports specific exercises – development.

UNIT - V

Specific Plan: types – significance – micro – meso- macro. Specific Periodisation - aim – need – importance – Single – double – multiple - top form - various periods – preparatory – competitive - transitional - training schedules – daily – weekly monthly)

REFERENCES :

1. Frank W Dick, Sports training principles, London, Lepus Book Co., 1980
2. Hardyal Singh Science of sports training, DVS Publication, New Delhi, 1995

SEMESTER - V- PAPER CODE -UEN18DE503 A

TEAM PREPARATION, COACHING AND MATCH ANALYSIS OF SPORT/GAME VOLLEYBALL

UNIT – I

Physical preparation: motor qualities – assessment -testing and recording – training – pre season – off season – in season - Player identification - selection of team player - guide to select team – diet

UNIT – II

Skills preparations: advance skills- tactics – offensive – defensive - Modern training – completive exercises - assessment – evaluation – team training - off season - pre season - in season – team training – diet

UNIT – III

Psychological preparation - Inter personal relation - Motivation - autogenic training – pep talk – psychological training - goal setting - criticism - effective.

UNIT – IV

Team preparations: regular meeting - Pre competition meeting - half time meeting - post match meeting – previous matches review - purpose - fluid replacement - diet - pre – during - after the match – relaxation.

UNIT – V

Match analysis - aim - objectives - methods - system - psychological factors diet - climate - ground condition - medical assistance - physical fitness - technical - tactical - strategies - opponent's team - key player - dangerous players - strong and weak points of players - execution - feedback - chart - notational analysis

REFERENCES :

1. FIVB coaches manual
2. FIVB Rules book
3. International Academy - Part I & Part II

SEMESTER - V- PAPER CODE -UEN18DE503 B

TEAM PREPARATION, COACHING AND MATCH ANALYSIS OF SPORT/GAME FOOTBALL

UNIT – I

Physical preparation: motor qualities – assessment -testing and recording – training – pre season – off season – in season - Player identification - selection of team player - guide to select team – diet

UNIT – II

Skills preparations: advance skills- tactics – offensive – defensive - Modern training – completive exercises - assessment – evaluation – team training - off season - pre season - in season – team training – diet

UNIT – III

Psychological preparation - Inter personal relation - Motivation - autogenic training – pep talk – psychological training - goal setting - criticism - effective.

UNIT – IV

Team preparations: regular meeting - Pre competition meeting - half time meeting - post match meeting – previous matches review - purpose - fluid replacement - diet - pre – during - after the match – relaxation.

UNIT – V

Match analysis - aim - objectives - methods - system - psychological factors diet - climate - ground condition - medical assistance - physical fitness - technical - tactical - strategies - opponent's team - key player - dangerous players - strong and weak points of players - execution - feedback - chart - notational analysis

REFERENCES :

1. Soccer : Arpan Csanadi
2. FIFA coaches manual
3. FIFA Rules book
4. International Academy - Part I & Part II

SEMESTER - V- PAPER CODE -UEN18DE503 C

TEAM PREPARATION, COACHING AND MATCH ANALYSIS OF SPORT/GAME KABADDI

UNIT – I

Physical preparation: motor qualities – assessment -testing and recording – training – pre season – off season – in season - Player identification - selection of team player - guide to select team – diet

UNIT – II

Skills preparations: advance skills- tactics – offensive – defensive - Modern training – completive exercises - assessment – evaluation – team training - off season - pre season - in season – team training – diet

UNIT – III

Psychological preparation - Inter personal relation - Motivation - autogenic training – pep talk – psychological training - goal setting - criticism - effective.

UNIT – IV

Team preparations: regular meeting - Pre competition meeting - half time meeting - post match meeting – previous matches review - purpose - fluid replacement - diet - pre – during - after the match – relaxation.

UNIT – V

Match analysis - aim - objectives - methods - system - psychological factors diet - climate - ground condition - medical assistance - physical fitness - technical - tactical - strategies - opponent's team - key player - dangerous players - strong and weak points of players - execution - feedback - chart - notational analysis

REFERENCES :

1. AIKFI coaches manual
2. International Academy - Part I & Part II

SEMESTER - V- PAPER CODE -UEN18DE503 D

TEAM PREPARATION, COACHING AND MATCH ANALYSIS OF SPORT/GAME ATHLETICS

UNIT – I

Physical preparation: motor qualities – assessment -testing and recording – training – pre season – off season – in season - Player identification - selection of team player - guide to select team – diet

UNIT – II

Skills preparations: throws event skills- tactics – Modern training – completive exercises - assessment – evaluation – team training - off season - pre season - in season – diet

UNIT – III

Skills preparations: Jumps - skills- tactics – Modern training – completive exercises - assessment – evaluation – training - off season - pre season - in season – diet

Psychological preparation - Inter personal relation - Motivation - autogenic training – pep talk – psychological training - goal setting - criticism - effective.

UNIT – IV

Team preparations: regular meeting - Pre competition meeting - half time meeting - post competition meeting – previous competition review - purpose - fluid replacement - diet - pre – during - after the competition – relaxation. Psychological preparation - Inter personal relation - Motivation - autogenic training – pep talk – psychological training - goal setting - criticism - effective.

UNIT – V

Competition analysis - aim - objectives - methods - system - psychological factors diet - climate - ground condition - medical assistance - physical fitness - technical - tactical - strategies - opponent's team - key player - dangerous players - strong and weak points of players - execution - feedback - chart - notational analysis

REFERENCES :

1. IAAF coaches manual

SEMESTER - V- PAPER CODE -UEN18DE503 E

TEAM PREPARATION, COACHING AND MATCH ANALYSIS OF SPORT/GAME HOCKEY

UNIT – I

Physical preparation: motor qualities – assessment -testing and recording – training – pre season – off season – in season - Player identification - selection of team player - guide to select team – diet

UNIT – II

Skills preparations: advance skills- tactics – offensive – defensive - Modern training – completive exercises - assessment – evaluation – team training - off season - pre season - in season – team training – diet

UNIT – III

Psychological preparation - Inter personal relation - Motivation - autogenic training – pep talk – psychological training - goal setting - criticism - effective.

UNIT – IV

Team preparations: regular meeting - Pre competition meeting - half time meeting - post match meeting – previous matches review - purpose - fluid replacement - diet - pre – during - after the match – relaxation.

UNIT – V

Match analysis - aim - objectives - methods - system - psychological factors diet - climate - ground condition - medical assistance - physical fitness - technical - tactical - strategies - opponent's team - key player - dangerous players - strong and weak points of players - execution - feedback - chart - notational analysis

REFERENCES :

1. IHF coaches manual
2. IHF Rules book
3. International Academy - Part I & Part II

SEMESTER- V- PAPER CODE -UEN18DE504

PHILOSOPHY OF SPORTS COACHING

UNIT – I

Coaching philosophy: definition – meaning - objective - coaching - art – science - technique - skill - style- secret of successful coaching

UNIT - II

Effective practices - knowledge –what makes coach - functional activities of coach – fitness – rules – anatomy and physiology- sport psychology - bio mechanics – anthropometric – test and measurement

UNIT - III

Role and quality of coach- teacher – trainer - research - teacher - trainer - motivator - disciplinarian - scientist - social worker – student.

UNIT - IV

Coaching skill practice – coaching method – coaching path way - - Long Term Athlete Development (LTAD) - development model – other countries plan

UNIT - V

Performance management - coaching process – planning principles - Long term training conception - legal responsibilities - General Methodology psychological preparation Performance development

REFERENCES:

1. Coaching Manual I & II FIVB
2. Football Coaching -1, (1983), BLV Veriagsgesellschaft, Munich
3. Hockey coaches manual
4. Athletics – Coaches manual
5. Kabaddi - coach manual

DISCIPLINE SPECIFIC ELECTIVE

FUNDAMENTALS OF SPORTS MANAGEMENT

UNIT – I

Sports Management - meaning - organization - administration - importance - guiding principles

UNIT - II

Planning - budgeting - organizing - directing - controlling - coordinating sports - maintenance of records - registers - report

UNIT - III

Leadership - Definition - need - importance - nature - types - training - personal traits - behavior approach - contingency model –

UNIT - IV

Sports Organizations - SAI - SDAT - International –National - State - District level orgainsations

UNIT – V

Facility management – facility system - facility location - facility layout - features of facility

REFERENCES :

1. Stoner, et.al, Management, Prentice Hall
2. Koontz and O'Donnel, Management: A system Approach, Tata MCGraw Hill
3. John Argenti, Management Techniques : A Practical Guide

TEST AND MEASUREMENT

UNIT - I

Test - meaning - need - importance –Criteria of test - reliability - objectivity - validity - norms - administrative feasibility

UNIT – II

Measurement - meaning - need – importance – tools – technique – field – laboratory

UNIT – III

Physical fitness – AAHPER test – JCR test – Harvard step test – national physical efficiency test – Indiana motor fitness test – Scott motor ability test

UNIT - IV

Physical fitness test - field test – speed – strength – endurance – flexibility – reaction ability – balance – co ordination - lab test - physiology – VO2max – bio mechanical test - anthropometrical test – psychology test -

UNIT – V

Posture test – IOWA – foot print ankle test – woodruff alignment posture - Sport and games – specific skill test – Football /athletics/ volleyball

REFERENCES:

1. Manddell L.S Computer and Data processing today West publishing Co.St Paul 1988
2. D.L. and et.al Computer and application – An introduction to data processing D.C. health and Co.
3. Thompson A.L. Fujumoto K. The Art of Using Computer. Boyd & Fraser Publishing Co. Boston, 1986
4. Bovard J.F. Cpzens E.W. and Hagman P.E Test and Measurement in Physical Education W.B. Sunders company, Philadephia, 1949

TALENT IDENTIFICATION

UNIT – I

Talent identification – aim - nature – importance –definition – methods

UNIT – II

profiling one dimension - multi dimensions - single sport – multi sport prediction

UNIT – III

Identifying physical attributes - speed – strength – endurance – flexibility – agility - reaction –power - importance - vision - assessing physical attributes

UNIT - IV

participating stages - sampling year - specializing year - perfection year- age – sex – parental support -

UNIT - V

Test – assessment – name of the test - - speed – strength – endurance – flexibility – agility - reaction – power- testing procedures

REFERENCE :

Sports Talent : how to identify and develop outstanding sportsman. Jim Brown Human Kinetics

Identifying Exceptional Talent: 1999 Georgia tech sports Medicine and performance news letter

Andras S. Science of pedagogy ICC Semmelweis University Hungary

COMPETER APPLICATIUONS AND SPORTS COMMUNICATION SKILL

UNIT – I

Computer – meaning – need - importance – types – maintenance - components – hardware - input - output – control unit - memory - storageData entry - magnetic and tape – output devices - MS – Office - MS - Word – Excel – creating documents

UNIT – II

Career rules : psychological position - better human values – time management - leadership quality

UNIT - III

Yoga : meaning - definition - hastangayoga - benifita : physiological - psychological – therapeutical value

UNIT – IV

Communication skill : meaning – definition - need - importance - basic communication – theories of motivation - goals

UNIT - V

Communication principles – barriers - real communication listening - audience and psychology - presentation technique.

REFERENCES :

1. Abraham.R, (1995). Personality Development, communication skills and Public speaking, Saint Catherine Press, Chennai
2. Gharote. M.L, (1982). Guidelines for Yoga practice, Lonawala Medha Publications

DOPING AND ITS CLASSIFICATION

UNIT - I

Doping – WADA – NADA – meaning – Definition - importance –

UNIT – II

Classification – stimulant – meaning - benefits – harmful effect – Narcotics - meaning - benefits – harmful effect

UNIT _ III

Classification – Anabolic steroid – meaning - benefits – harmful effect – Diuretics - meaning - benefits – harmful effect

UNIT - IV

Classification - beta - blockers –- meaning - benefits – harmful effect –

Blood doping – method –types - benefits – harmful effects

UNIT – V

Classification of drugs – certain restriction - Alcohol - Marijuana - Local Anesthetics - Cortico steroids

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

Melakottaiyur, Chennai – 127

M.Sc. SPORTS COACHING

REGULATION AND SYLLABUS 2018-19

Dr. R. SUBRAMANIAN
Member-VC Convener Committee &
Professor & Head
Department of Advanced Training and Technology
Tamil Nadu Physical Education & Sports University
Chennai - 600 127.

DEPARTMENT OF ADVANCED TRAINING AND COACHING

TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY
CHENNAI

DEPARTMENT OF ADVANCED SPORTS TRAINING AND COACHING

M.SC., SPORTS COACHING (REGULAR)

CHOICE BASED CREDIT SYSTEM (CBCS)
SUBJECT MATTER AND EVALUATING SYSTEM

NORMS RULES AND REGULATIONS

1. PREAMBLE

The Master of Sports Coaching M.Sc., (Sports Coaching) programme in meant for candidates desirous of pursuing Master degree in Sports Coaching and for preparing a professional and scientific support for the sports person by the Sports Coaches.

2. REGULATION

The syllabus is for three year M.Sc., Degree programme under CBCS system – Regular will be implemented form the academic year 2018-19onwards.

3. ELIGIBILITY FOR ADMISSION

Candidates shall be admitted to the M.Sc., degree in Sports Coaching in he/she produces satisfactory evidence to the effect that he/she has successfully completed any degree examinations or is equivalent approved by the syndicate of the Tamil Nadu Physical Education and Sports University, Chennai in addition to that he/she has to pass the diploma /P.G. diploma in sports coaching from SAI/NIS/TNPESU/ LNIPE or its equivalent approved by the syndicate of Tamil Nadu Physical Education and Sports University

4. SCHEME OF SELECTION

Entrance Examination will be conducted and those who are qualified will be admitted for the Master degree programme. The test will objective types of 50 questions will carry one mark each questions. Those who are securing more than 50% marks will qualify to admit in the M.Scprogramme. The Rank list will be prepared accordingly. Maximum number of seats will be restricted to 15 students.

5. COURSE OF STUDY

M. Sc., (Sports Coaching), Programme shall be of duration of two Academic years with four semesters. A student should complete. M. Sc., (Sports Coaching) Programme within four years after registration. The total working days of each semester shall be 90 days exclusive of the period of the admission and examination etc., the medium of Instruction and examination shall be English.

6. SEMESTERS

An academic year is of two semesters.

First Semester	-	July to November
Second Semester	-	December to April

In each semester, the courses are taught for 18 weeks with each week having 5 working days.

7. CHOICE BASED CREDIT SYSTEM (CBCS)

The CBCS in MSc, (Sports Coaching) programme would have the following components and the minimum credit requirements for each component to be completed in two years are.

Core subject	-	**40 Credits**
Core Practical	-	**20 Credits**
Discipline specific Elective	-	**16credits**
Ability Enhancement compulsory course(AECC)	-	**02 Credits**
Extra curricular	-	**06 Credits**
skill Enhancement course	-	**04 Credits**
Generic elective	-	**8 credits**
Thesis	-	**6 Credits**
Total	-	**102 Credits**

8. COURSE WEIGHT

Course will be designed with weight agedepending upon the content, duration and specialization.

9. MARKS/CREDIT DISTRIBUTION

I Semester

	Subject code		L	C	Int	Ext	Total
I - Core - Theory		Science of Sports Training	4	4	25	75	100
		Anatomy and Exercises Physiology	4	4	25	75	100
		Specified sports -Theory	4	4	25	75	100
Discipline Specific Elective		Choose any one of the subject from the odd semester pool	4	4	25	75	100
II - Core – Practical		Specific Sports – Practical	10	5	25	75	100
III - Ability Enhancement Course		Sports Communication	2	2	25	75	100
Total Credit/ marks				23			600

II SEMESTER

	Subject code		L	C	Int	Ext	Total
I - Core – Theory		Sports Medicine & Nutrition	4	4	25	75	100
		Exercise Psychology	4	4	25	75	100
		Specified sport – Theory	4	4	25	75	100
Discipline Specific Elective		Choose any one of the subject from the even semester pool	4	4	25	75	100
II - Core Practical		Specified Sports Practical	10	5	25	75	100
III - Skill Enhancement Course (SEC)		Fundamentals of Information and Technology (FIT)	2	2	25	75	100
Co curricular activities		Sports stadia/ Industrial visit		2			
Total Credits/ marks				25			600

III SEMESTER

	Subject code		L	C	Int	Ext	Total
Core - Theory Discipline		Kinesiology & Bio – Mechanics	4	4	25	75	100
		Specific sports - Theory	4	4	25	75	100
Specific Elective		Choose any one of the subject from the odd semester pool	4	4	25	75	100
II - Core Practical		Specific Sports Practical	10	5	25	75	100
III - Generic Electives		List enclosed	4	4	25	75	100
Skill Enhancement Course (SEC)		Human rights	2	2	25	75	100
Co- curricular		Village placement Programme		2			
Total Credits/ Marks				25			600

IV SEMESTER

	Subject code		L	C	Int	Ext	Total
CORE PAPER		Research Methodology and Statistics in Advanced Training and Coaching	4	4	25	75	100
		Test and measurement in Training and Coaching	4	4	25	75	100
Discipline Specific Elective		Choose any one of the subject from the even semester pool	4	4	25	75	100
Core Practical		Specific sports practical	10	5	25	75	100
Generic elective		List enclosed	4	4	25	75	100
Co curricular		Disaster management		2	--	--	---
Thesis			6	6	25	75	100
Total credit / Marks				29			600

CREDIT AND MARKS ABSTRACT

SEMESTER	CREDITS	TOTAL MARKS
I	23	600
II	25	600
III	25	600
IV	29	600
Grand Total	102	2300

CREDIT ABSTRACT

Semester – Credits Subject	I	II	III	IV	Total Credit
Core –Theory	12	12	8	8	40
Core – Practical	5	5	5	5	20
Specific Elective	4	4	4	4	16
Ability Enhancement compulsory course (AECC)	2	-	-	-	02
Skill enhancement course	-	2	2	-	04
Generic elective	-	-	4	4	08
Co curricular	-	2	2	2	06
Thesis	-	-	-	6	06
Grand Total	**23**	**25**	**25**	**29**	**102**

MARKS ABSTRACT

Semester – Credits Subject	I	II	III	IV	Total Credit
Core –Theory	300	300	200	200	1000
Core – Practical	100	100	100	100	400
Specific Elective	100	100	100	100	400
Ability Enhancement compulsory course (AECC)	100	--	-	-	100
Skill enhancement course	-	100	100	-	200
Generic elective	-	-	100	100	200
Co curricular	-	-	-	--	--
Thesis	-	-	-	100	100
Grand Total	**600**	**600**	**600**	**600**	**2400**

GENERIC ELECTIVE PAPER

1. Doping in Sports
2. Strength and Conditioning
3. Philosophy of Sports Coaching
4. Age group training
5. Implementation of training programme

DISCIPLINE SPECIFIC ELECTIVE

ODD SEMESTER	EVEN SEMESTER
Testing of Players fitness	Talent Identification and Sports Pedagogy
Women Participation in Olympic Movement	Sports Forensic Science
Requirement of the sports and games	Careers in the sports Industries
Science of sports Kinanthropometry	Environment and Nutrition of the player

10. ASSESSMENT

Assessment of the students is consists of continuous Internal Assessment (CIA) and End Semester Examination (ESE). The ratio between CIA and ESE will normally be 25:75.

11. CONTINUOUS INTERNAL ASSESSMENT (CIA)

The CIA marks shall be awarded based on the following:

THEORY	MARKS
Best Scores of two test out of three test	20
Model Exam	20
Seminar	05
Attendance	05
Total	50

50 percentage of CIA marks will be taken for scoring.

13. END SEMESTER EXAMINATION (ESE)

Except in the case of internship and exclusively practical/field placement courses, the ESE will consist of a written examination of three hours duration for a maximum score of 75. Practical examination for 75 marks will be conducted with external examiner during Even semester of all the three years.

14. EVALUATION

The following procedure will be followed for evaluation

a) The answer scripts are evaluated by internal/external examiners

b) Theory papers : Duration Three Hours – External

Part A (10 x 2)	- 20 (Question Type)
Part B (5 x 5)	- 25 (Either or Type)
Part C(3 x 10)	-30 (Essay type – 3 Question)
Total	**75 Marks**

For a pass in each paper, the candidate is required to secure at least 50% in semester examination.

15. ATTNEDANCE

Attendance is compulsory minimum of 80%. If the attendance is less than between 80% to 70%, he has to move to the next year but he is not allowed to write the examination provided he has to complete the shortage of attendance in the next academic session and allow to write the examination in the next semester. If any student is Less than 70% he has redo the course.

16. THESIS

Every student who is studying M.Sc., Sports Coaching Programme has to submit the thesis in the prescribed format by the Department of Advanced Training and coaching before May 31st of every final academic year.

17. The Award of Grades is as follows

MARKS	GRADE	DESCRIPTION	GRADE POINTS
90 and above	S	Superior	9.0 - 10.0
80 to 89	A	Very Good	8.0 - 8.9
70 to 79	B	Good	7.0 - 7.9
60 to 69	C	Very Fair	6.0 - 6.9
50 to 59	D	Satisfactory	5.0 – 5.9
Less than 50	F	Failure	

If a student has any grievance relating to his/her CIA, he/she may, within seven working days of the declaration of the Score/thereof, prefer an appeal through his/her class advisor to appear committee, which will consist of the HOD, class Advisor and course teacher. The Appeals committee will review/peruse the student's records work. Any appeal should be made along with an appeal fee of Rs.1000/-per paper. The decision of the appeals committee shall be final.

16 CAREER OPPORTUNITIES

This course will support scientific support to the coaches for high level performance. It enables the coaches higher performance for their trainees and gives moral support by the sports sciences. These include roles as coach educators and sport development officers in national organizations, community groups and sporting federations, managerial and development roles skills trainer, exercise scientists, and sports officers.

17 FURTHER STUDY

Doctoral studies will opportunities exist here in Tamil Nadu Physical Education and Sports University, Chennai, in areas of Sports Coaching and teaching faculty.

SEMESTER I

SCIENCE OF SPORTS TRAINING

UNIT-I

Sports Training –Definition –Aim –Characteristic- Sports Performance: Definition-Model Structure- Factors- Performance Structure- Performance Capacity – Training Structure- General Principles Of Sports Training –Training Load- Definition –Load- Load And Adaptation- Super Compensation –Over Load –Means And Methods Of Sports Training –Symptoms Of Over Load –Recovery.

Unit-II

Development of Motor Qualities- Strength its Development –Speed its Development-Endurance its Development –Flexibility its Development –Coordinative Ability and its Development.

Unit-III

Techniques Skill- Style-Acquisition Process - Training Implication – Motor Coordinative –Aim Of Technique In Sports-Motor Learning –Phases Of Motor Learning –Implication–Relearning –Transfer of Motor Learning - Method Of Technique Training –Teaching Procedure - Tactics: Aim Of Tactics – Tactical Action – Structure of Tactical Action – Phases of Tactical Action –Training For Tactics –Tactical Knowledge- Tactical Skill-Tactical Skill – Tactical Abilities –Principle of Tactical Preparation –Strategy- Aim And Objective.

Unit-IV

Periodisation : Single-Double-Triple-Pre-Season Competition –off Season- Long Term Plan- Micro,Mesco,Macro Cycle- Schedules –Step Involved In Preparation of Schedule. Planning: Importance –Principles-Types—Performance-Load Indices-Formulation of Plan-Control of Sports Training –Training Session- Principles of Teaching –Long Term Training Process - Diet For Different Seasons –

UNIT -V

Talent Identification-- Principles of Talent Identification- Preparation for Competition In General –Psychological Preparation-Individual Differences-Requirement-Doping-Classification Of Doping –Drugs-Effects Motor Development-Growth and Development-Principles –Stages-General Behaviour and Development-Training Implications-.

REFERENCE

2.Singh.H.(1995) `` SPORTS TRAINING, GENERAL THEORY AND METHOD" ; New Delhi DVS Publications.

3.Cart.E.Klafs,Daniel .D.Arnheim,(1994) ``MODERN PRINCIPLES OF ATHLETIC TRAINING ", C.V Mosphy Company, St.Louis

4.Bunn,J.N(1996) `` SCIENTIFIC PRINCIPLES OF COACHING" Prentice Hall, New Jerssy: Engle Wood Cliffs.

5. Jensen, C,R. And Fisher, A.G (2000) `` Scientific Basic Of Athletic Conditioning". Philadelphia.

ANATOMY AND EXERCISE PHYSIOLOGY

UNIT-I

Anatomy – definition – importance in sports - Location –Plans And Axes- Fundamental Movements – Auxiliary Movements-Analysis of Sports Movements- Muscular Analysis of Movements at different Joints – Muscular Analysis of Movement of Walking - Running - Jumping.

UNIT-II

Muscular System- Structure And Functions of Skeletal Muscle – Mechanism of Muscular Contraction –Role of Fast And Slow Twitch Fibres- Types of Muscular Contraction – Adaptation and Muscular Skeletal System to Training –Concept Of Muscle Fibres Types and its importance in Sports Performance.

UNIT-III

Cardio Muscular System – Heart –Structure - Functions – - stroke volume - Cardiac Cycle- cardiac out put - training – physiological response to the training – adaptation

UNIT-IV

– Mechanism Of Respiratory System –Principle Of Gas Exchange- Transport Of Oxygen And Carbon Di-Oxide In The Blood And Body-Regulation Of Respiration – Adaptation Pf Respiratory System To The Training –High Altitude Training – Physiological Responses At High Altitude- Acclimatization- Recent Trends In Altitude Training.

UNIT-V

Endocrine system – nervous system – skin - Creatinine bodies- Introduction of Hormones – Nature and Mechanism of Hormones Bio-Energetics-Genetic- Anaerobic Energy Release Pathway-Mechanics of Regulation of Body Temperatures -Heat And Cold Acclimatization.

Reference books:

1. Principles of Anatomy & psychology: Harper Collins pub.
2. Human Physiological work capacity by Shepard: Cambridge University
3. Sports psychology by E.L. Fox W.B. Sauders Co., Philaphia.
4. A Study of Bioenergetics by F.M.Harald: W.H. Freeman & Co
5. Olympic Book of Sports Madicine by Dirixet.al., Blackwell publications London.

SPECIFIED SPORTS THEORY

SEMESTER II - SPORTS MEDICINE & NUTRITION

UNIT-I

Definition And Scope Of Sports Medicine –History-Development-Aimand Objective – Olympic Movement-Roles And Activities Of IOC And IOC Medical Committee, Role Of Sports Medicine In General Population And Mass Fitness – Sports Medical Evaluation – Performance Diagnostics –Safety And Hygiene-First Aid Management-Care Of Athlete Training And Competition –Creation Rhythm-Travel And Acclimatization.

UNIT-II

Injuries-Types Of Injuries –Conclusion –Fracture-Types –Laceration- Abrarion-Dislocation-Sports Specific Injuries- Jogging and Running-Weight Training –Swimming And Diving-Combat Sport, Racket Sport-Field Game –Head Injury-Cardio Pulmonary Resuscitation- Spine Injury-Injury Management.

UNIT-III

Women In Sports –Biological Factors Affecting Sports Performance-Anatomical Physiological, Biochemical-Psychological, Sociological And Genetics-Hormonal Change In The Menstrual Cycle Due To Physical Stress-Special Problem- Delayed Menarchy, Athletic Amenorrhea- Athletic Triad And Anemia- Exercise During Pregnancy.

UNIT-IV

General Principle Of Physiotherapy-Massage And Its Importance-Principle-Types Indication – Contradictions Of Message-Sauna-Steam Bath-Doping- Definition-Classification-Advantages Disadvantages-IOC Rules-WADA .

UNIT-V

Nutritional –Classification ,Sources – Requirements Of Carbohydrate – Fat-Proteins For Sports Person –Vitamin –Minerals-Natural-Supplement-Pre Game Meal-Composition Of Meal-Timing-Carbohydrate Loading .

Reference:

1. Physiology of Sports, T. Reilly. N. Secher, P . Snell C. Williams.
2. Exercise physiology, William D. MC.Ardle, Frank, I katch, Victor. L. Katch
3. The physiological Basis of Physical Education and Athletics Edward L. Fox., Richard, W. Bowere, Mexi L. Foss.
4. Stawish and Lyle J.Micheli
5. Sports Medicine by Richard H. Strauss.

EXERCISE PSYCHOLOGY

UNIT-I

Introduction to Sports Psychology-Definition-Importance of Sports Psychology-Branches of Psychology-Development of Sports Psychology in India and Abroad-Dimension of Human Behaviour.

UNIT-II

Learning and its Definition –Concept of Motion Learning –Acquisition of Motor Skills-Theories of Learning –Law- of Learning –Transfer of Training- Application in Sports – Learning Curves – Phenomenon of Plateau in Motor Learning –Causes- Remedies.

UNIT-III

Essential Process-Meaning –Psychophysiology of Emotion-Optimal Arousal in Emotional Aspects –Theories Application-Pre Competition Anxiety- Aggression in Sports-Motivation and Arousal –Self Efficacy –Peak Performance and Flow-Techniques of Motivation.

UNIT-IV

Meaning and Definition of Personality –Concept of Athletic Personality –Psycho-Diagnostic in Sports –Types and Functions of Psychological Traits- Meaning and Importance of Psycho Regulation –Relaxation Techniques –Role of Imagery.

UNIT-V

Nature and Scope of Psychological Dimension –Nature, Types of Sports Performance-Sports aims and importance of Psychological Research in Sports-Nature – Current Areas Of Research In Sports Psychology.

Reference:

1. Hon Thelma (2002) Advanced in Sports psychology Human kinetic publisher
2. Mideffer, Robert. M 1992 Motivation in sports and exercise Human kinetic Books
3. Weiberg and Gould 2002 Sports and exercise physiology. Illinois – Human Kinetics
4. Gill Diane (1996) Psychological dimension of sports Human kinetic publisher
5. Suinn, Richard, M.P. (1982) Psychology in Sports.

SPECIFIED SPORTS THEORY

SEMESTER III

KINESIOLOGY AND BIOMECHANIS

UNIT-I

Fundamental And Auxiliary Movement In Kinesiology-Definition And Explanation Of Various Fundamentals And Auxiliary Movements-Major Morale Of The Body And Their Actions- Posture And Its Importance- Structure Of Motor Action- Cyclic-Cyclic And Movement Combination –Movement Practices-Kinesiological Analysis Of Basic Movement –Walk-Running-Jumping-Throwing-Catching.

UNIT-II

Forms of Motion- Reference System-Geometrical Law- Chronological Aims of Motion-Linear Kinematics-Definition of Terms In Linear Motion –Displacement-Speed-Relativity-Acceleration-Distance Speed-Free Body Diagram And Resolution of Vectors-Uniform Acceleration Motion-Projectile Motion And Its Importance ,Reference to The Sports .Linear Kinetics-Definition-Kinetic Energy –Potential Energy-Strain Energy-Newton's Law Of Motion –Newton's Law of gravitation.

UNIT-III

Concept of force –Types and Effect of force- Fluid Mechanism-Friction- Impact and Elasticity-Angular Kinematics- Definition of terms of Angular Motion Viz., Angular Distance –Angular Displacement-Angular Speed- Angular Velocity-Angular Acceleration- right thumb Rule And Resolution of Angular Vectors –Angular Kinetics-Definition –Angular Motion –Eccentric Force Concept –Moment of Inertia- Angular Momentum- Transfer of Momentum –Lever –Equilibrium.

UNIT-IV

Investigation Procedure Volume-Mass-Moment of Inertia-Measurement Techniques-Cadaver Studies – Computation Techniques- Reaction Change-Mathematical Technique-Segmentation Method-Imaging Measurement Techniques- Non cinematography Techniques- Use of Goniometry In Sports-Computer Simulation –Limitation of Human Motor Apparatus.

UNIT-V

Biomechanical Principles and Reflection –Movement-Style and Technique- Motor Abilities and Its Biomechanical Reflections-Max Strength. F max Index Exp Strength Force-Velocity Relationship-Ss Index T max Index –Speed Ability- Biomechanical

Principles of –Action And Reaction-Conservation of Angular Momentum-Optimum Path of Acceleration –Optimum Tendency in Acceleration –Coordination Partial Impulse.

Reference:

1. Bunn. J.W., Scientific Principles of Coaching
2. Dyson, G.H.G. The Mechanics of Athletics
3. Grieve and Miller. Technique for the analysis of human movement
4. Hay and Reid. Anatomy and mechanical aspects of human motion
5. Hochmuth, Biomechanics of athletics movements
6. James Hay. Text Book of Kinesiology
7. Miller, D. I and Welson. R.C Biomechanics of sports
8. Rai, Ramesh Biomechanics – Mechanical aspects of Human Motion

SPECIFIC SPORTS THEORY

SEMESTER IV

RESEARCH METHODOLOGY AND STATISTICS IN ADVANCED TRAINING AND COACHING

UNIT-I

Research Problem and Variables – Meaning –Definition of Research Qualities of Good Research – Characteristics of Scientific Research. Formulation of The Title-Statement of The Problem –Delimitations And Limitations – Hypothesis in Different Forms – Operational Definition –Significance of The Study .Internal and External Validity-Independent and Dependent Variables –Comparative, Relationship and Effect Studies.

UNIT-II

Area of Research and Experimental Design – Training Methods- Examine Physiology – Nutritional Aspect-Sports –Sports Psychology- Biomechanical Aspects- Measurement And Evaluation –Writing.

UNIT-III

Statistics- Definition, Aims-Scope-Limitation- Collection Of Statistical Data- Primary And Secondary Data-Sampling-Principles- Meaning-Characteristics-Merits And Demerits Of Sampling –Classification And Tabulation Data-Diagram Representation –Bar-Pie Diagram- Frequency Distribution- Measure Of Central Tendency-Measurement Of Variability.

UNIT-IV

Probability-Meaning-Random Variable-Bionomical Distribution-Normal Distribution-Principles Of Normal Curve(Distribution)-Properties Of Normal Curve-Std Normal Curve-Condition For Normality-Correlation-Bivariable Data-Meaning And Its Causation –Method Of Studying Correlation Through Scatter's Diagram-Correlation Coefficient Its Computation From Upgraded (Kart Pearson's Coefficient Of Correlation)And Its Interpretation And Preparation-Rank Correlation And Its Co-Efficient.

UNIT-V

Test Of Significance-Testing Hypothesis-Level Of Significance- Degree Of Freedom Are Tailed And Two Tailed Tests-Sampling Distribution Of T And F (Without Proof) – Assumption And Condition Of Validity-Test Of Significance For Large Sample-Test Of Significance Of Small Sample-Differences Of Mean –Variations-Correlation Coefficient – ANOVA-Sum Of Squares , One Way Analysis Of Variances, Pair wise Comparison Among Mean (Scheff's Test)Two Way Analysis Of Variance, Analysis Of Covariance

Reference:

1. S.P. Gupta: Statistical Methods
2. Vems J, Prakash: A Text Book of Sports Statistics
3. David H. Clark's. H. Harrison Clark: Research process in Physical Education.

TEST AND MEASUREMENT IN ADVANCED TRAINING AND COACHING

Unit – I:-

Meaning of measurement & evaluation – inter relationship of measurement & evaluation – Basic principle of measurement & Evaluation – Need for Selecting appropriate measurement & evaluation in Coaching –Criteria for selecting Measurement & Evaluation – Technical standards – Objectivity, Reliability, Validity, Norms – Administrative consideration: Equipment, time, money, utility, facility, feasibility.

UNIT – II:- Test of Physical Performance

Speed, Agility, Balance, Strength, endurance, flexibility, California perceptual motor ability, and Generality of components, Test of Physical Fitness: Basic Fitness test AAHPER Youth fitness test – Physical fitness index, National Physical Efficiency Tests. Indian Motor Fitness Test, Test for High School and college men, Kraus Weber Test.

UNIT – III:- Motor Fitness Test : J.C.R. Test – Origin Motor fitness Test- California Motor Fitness Test – Motor Ability Test – Barrow motor ability Test – carpenter motor ability test- scott motor ability Test – Latchaw motor ability test.

UNIT IV:- Motor Educability Test

OPNA Balance motor educability test – Johnson Metheny motor ability test – Cardio – Vascular Test: Callageher & Brouha Harvard step for secondary boys – Tuttle pulse ratio test, Schneider Cardio – vascular test – postural test – IOWA postural test – Woodruff body alignment posture test – foot print angel test.

UNIT – V:- Test of Specific Sports Skills

Badminton – Miilar wall Volly test- French short service test – Basket ball – Knox basketball test, Leilich Basket ball Test – Hockey – Field Hockey Test, Friedal Field Hockey test – Soccer – Warner Soccer skill test – AAPHER Football skill test – Tennis test, Broer- Miller Forehead, backhand drive test, Volleyball – LIBA – STAUFF Test, Brady Volleyball test.

Reference books:

1. Nilgose, Erle: Evaluation in Health Education and Physical Education", New York, McGra-Eill Book Co., Inc.
2. Cureton, Thomas K. Physical Fitness Appraise and Guidence – ST.Luis, The mosby company, 1947.
3. Bovard Jhon F. Frederich We., Hagman, Parecia E., "Test and Measurement in Physical Education" Philadelphia, W.B., Souners Company, 1949.
4. Campell, W.R. and Tauker, N.M., "An Introduction to Test and Measurement in Physical Education", London, C. Bellk & Sons LTD., 1967.

GENERIC ELECTIVE PAPER

DOPING IN SPORTS

UNIT - I

Doping – WADA – NADA – meaning – Definition - importance –

UNIT – II

Classification – stimulant – meaning - benefits – harmful effect – Narcotics - meaning - benefits – harmful effect

UNIT _ III

Classification – Anabolic steroid – meaning - benefits – harmful effect – Diuretics - meaning - benefits – harmful effect

UNIT - IV

Classification - beta - blockers -- meaning - benefits – harmful effect –

Blood doping – method –types - benefits – harmful effects

UNIT – V

Classification of drugs – certain restriction - Alcohol - Marijuana - Local Anesthetics - Cortico steroids

STRENGTH AND CONDITIONING

UNIT-I

Strength - definition – types – max. strength – explosive strength – power – strength endurance - 1 RM - means and methods of developing strength – factors determining strength – benefits pre cautions – recovery .

UNIT-II

Health Related Conditioning : (HRC) Definition –Meaning –Aims-Objective-Importance Of HRC –Conditioning For Fitness –Wellness-Performance Related- Conditioning- - Exercises For General Conditioning –Specific Conditioning-Physical Activity - Benefits for Mental Health-Bones and Joints –Muscles-Heart-Vascular system-Metabolism. Classification Of Physical Exercises –-Preparatory Exercises-Competitive Exercises – Special Exercises- Conditioning Around The Clock -Warm-Up-Exercises- Cool down Exercises.

UNIT-III

Analysis Of Exercises –Purpose-Importance-Expectations-Methods-Benefits-Structural Analysis Of Exercises –Space-Time-Force. Types Of Muscles Force-Warm-Up Exercises Structure –Motor Co-Ordination-Guide For Rhythm Sense Development.

UNIT-IV

Simplified Muscle Map-Axis Of Rotation-Exercises-Target Heart Rate Calculation-Warm-Up-Aerobic-Anaerobic Training –Relationship Of Energy Regeneration And Various Activities-Dominant Energy Supply System- Activity Intensity And Energy System – Advantageous Of Aerobic And Anaerobic Exercises.

UNIT-V

Physiological Effects of Aerobic Training-Anaerobic Endurance Development Programme Short Interval-Long Interval -Strength Development-Flexibility Pre Stretching Guidelines-Exercises Leadership-Major Anterior-Posterior Bones And Joints-Major Posterior Muscles.

Reference:

1. MetzingMiklo'sExerecise and conditioning , international coaching course , smmelweis University, Hungary.
2. Singh H. Science of Sports Training, DVS publications, New Delhi
3. Beachle, T.R: Earle , R.W. Essentials of strength Training and conditioning NSCA, 2000
4. Micheal Kent: The Oxford Dictionary of Sports Science and Medicine , Oxford University press. Inc New York 1994.

PHILOSOPHY OF SPORTS COACHING

UNIT – I

Coaching philosophy - coach - coaching - art – science - technique - skill - style- secret of successful coaching

UNIT - II

Effective practices - knowledge –what makes coach - functional activities of coach – who is coach - teacher - trainer - motivator - disciplinarian - scientist - social worker

UNIT - III

Coaching skill practice – coaching method – coaching path way - - Long Term Athlete Development (LTAD) - development model

UNIT - IV

Performance development - Performance management - coaching process – planning principles

UNIT - V

Long term training conception - legal responsibilities - General Methodology psychological preparation

REFERENCES:

1. Coaching Manual I & II FIVB
2. Football Coaching -1, (1983), BLV Veriagsgesellschaft, Munich

AGE GROUP TRAINING

Unit-I

Age Group Training – Meaning and Importance – Criteria for Age Group Training-Parents Support – Laws to Necessity- Development of Phase - Learning Process.

Unit-II

Under-6 - Under-8 - Criteria for Age Group Training – Technical –Tactics - Physical Conditioning — Environment - Parents Supports – Psychological Preparation.

Unit-III

Under-8 - Under-10 - Criteria for age Group Training – Technical –Tactics - Physical Conditioning — Environment - Parents Supports – Psychological Preparation.

Unit-IV

Under-12 - Under-14 - Criteria for Age Group Training – Technical –Tactics - Physical Conditioning — Environment - Parents Supports – Psychological Preparation.

Unit-V

Under-16 - Under-18 - Under-20 - Criteria for age Group Training –Technical – Tactics - Physical Conditioning — Environment - Parents Supports – Psychological Preparation.

IMPLEMENTATION OF TRAINING PROGRAMME

UNIT – I

Training - aim – need – importance – different training programme – training effect – seasonal participation - off season – pre season – in – season

UNIT – II

Off – season training phase –– endurance based – strength based – power based – training- means – methods – duration – training – intensity – volume – repetition- effects

UNIT – III

Pre season training phase –– endurance - longer slower interval training - shorter longer interval training – aerobic energy system –strength – power - speed – flexibility – agility – means – methods – duration – intensity – volume – repetition – recovery - training schedule – effects

UNIT – IV

In season training phase – endurance – shorter faster interval training – power – strength – speed - flexibility – agility –– means – methods – duration – intensity – volume – repetition – recovery

UNIT – V

Training session – warm up – technique and skill – fitness work – effects of fatigue - cool down – length of training session – time between session – individual training session – purpose - programme

DISCIPLINE SPECIFIC ELECTIVE – ODD SEMESTER

TESTING OF PLAYERS FITNESS

UNIT – I

Test – aim – importance – need –meaning – criteria for test - measurement – need – placement – importance – validity-Reliability – objectivity - norms –administrative feasibility

UNIT - II

Aerobic power – field test – cooper test – Harvard step test –beep test - lab test – maximal oxygen uptake test – Astrand Rhyming test – Physical working capacity 170-recommendation

UNIT – III

Anaerobic alactic power – muscular strength field test – 1RM – lab test – cable tensiometry – dynamometry - computer assisted iso kinetic method – recommendation

UNIT – IV

Power and alactic work capacity – field test – standing broad jump – vertical jump – 40yds sprint – lab test – 10 sec bicycle sprint – macariakalamen power test – recommendation

UNIT – V

Anaerobic lactic power – field test – 400 mts run – lab test – 60 sec bicycle sprint – recommendation – flexibility – sit and reach test – bend and reach test – body composition test - recommendation

Reference :

1. Reilly .T and Thomas " A motion analysis of work rate in differenct positional role on professional football play , Journal of Human movement studies Vol.- 2 1976
2. Sinclair david" Human growth after birth, Oxford medical pub: London 1978.
3. Universal Gym Machine training Manual 1978, Appendix – B
4. Australian representative, Journal of sports Med. 1977
5. Saltin. B et.al , Intermittent Exercise physiology Karger, Basel 1976.

WOMEN PARTICIPATION IN THE OLYMPIC MOVEMENT

UNIT - I

Participation of women in the Olympics -mission-first women participate in Olympics- first Indian women participate in Olympics- education and training for women

UNIT - II

Women at the Olympic games- the roll of the women sports commission & responsibilities- Olympic solidarity women and sports programme

UNIT - III

Changing role of women in the Olympic games- IOC-World conference on women in sports- IOC-women and sports awards- sporting edge secrets

UNIT - IV

Struggle for gender equality in the Olympics- promotion of women in sport-advancing women in sport platform- hidden gender: women's sport in developing nations

UNIT - V

Key dates in the history of women in the Olympic movement- monitoring and evaluvation- statistics: women in leadership- the international Olympic committee executive board membere by gender- national Olympic committee executive board member by gender- Inter National& National federation by gender

REQUIREMENTS OF THE SPORTS AND GAME

UNIT – I

Physique - height – weight – anthropometry – definition – aim – importance – Body mass index

UNIT – II

Physical fitness - strength – speed – endurance – flexibility – co ordinative abilities - energy system – other factors

UNIT – III

Endurance – aerobic power – anaerobic capacity – high intensity work – anaerobic capacity and power

UNIT – IV

Strength and power –power – functional strength – strength and power link with endurance – anaerobic power – muscle requirement and synchronisation

UNIT – V

Speed – muscular power – reaction time – simple – complex – technique – agility – flexibility

SCIENCE OF SPORTS KINANTHROPOMETRY

UNIT-I

Kin anthropometry - meaning-defenition - difference between Kinanthropometry and Anthropometry- application of Kin Anthropometry in Sports-Scope of Kinanthropometry - physical adaptation- Body mass& weight-body density-Body fat percentage- fat mass& fat free mass- Body Mass Index

Unit-II

Kin Anthropometry and Sports Performance-Endo Morphy- MesoMorphy-EctoMorphy-physical growth, maturation & performance-strength training and Physical Adaptation during growth-Benefits and risk of strength training

Unit-III

Physical Activity and Body Composition in young adults-Anthropometry of Elite mountain climbers-Physical Adaptation During expeditions at High Altitude

Unit-IV

Role of Kinanthropometry - Body Composition and Somato Type - Sports Performance-Waist Hip Ratio - Definition - Concept - Measurement of Skinfolds-Purpose-Methods-Location of Skin fold sites

Unit-V

Estimation of Muscle Mass - Regional Muscularity- Estimation of Skeletal Mass-Anthropometric assessment-Sprint Performance - Strength Assessment- Goniometric Aspects of Movements-Assessment of Postures

DISCIPLINE SPECIFIC ELECTIVE – EVEN SEMESTER

TALENT IDENTIFICATION AND SCIENCE PEDAGOGIC

UNIT – I: -

Talent Identification: Nature – Importance – profiling – one dimensional talent – on esport – multisport talent – prediction of success.

UNIT – II: -

Identifying Physiological attributes – physical elements of talents – importance of attributes – vision assessing physical attributes – physical differences.

UNIT – III:-

Recognizing physiological skills – mental skills – motivational personality aspects – sporting the intangibles parenting and coaching the talented sportsman – participating stages – sampling years – specializing year – perfection year – parential involvement – testing the talent – recruiting and scouting.

UNIT – IV:-

Science of pedagogic: Definition – importance – Sports – significance – possibility and necessity if education – training – skills – ability and proficiency in teaching and training – organic development – reaction time and age – optional periods for development conditional and co coordinative abilities.

UNIT – V:-

Scientific system of approach – model – task analysis of different sports – methods of instructions – teaching and coaching philosophy – assessment – self evaluation.

Reference books:

1. Sports Talents: How to identify and develop outstanding sportsman: Jim Brwon: Human Kinetics.
2. Identifying Exceptional Talent: 1999. George tech sports Medical and Performance new letter.
3. Sands, Williams, and J.R. Mc Neal. 1999. Body size and sprinting character – stics of 1998 National to Athletes, Technique.
4. Bollettieri, Nick 1999. Identifying Talent. Audiotape United States Professional Tennis Association Convention Tape International.
5. Andras. S. Science of Pedagogy ICC International coaching course, Semmelweis Univ. Hungary.

Sports Forensic Science

UNIT - I

psychology- definition – meaning – branches – sports psychology – meaning – forensic psychology – meaning – definition – importance – child psychology – meaning – important factors –

UNIT - II

cyber security - meaning - importance –security measures – players identity - players profile – protection of players data – preventive care – post traumatic measures

UNIT - III

sports administration - meaning - importance – principles – planning – effective mechanism – man power – financial viability –potential resources – skill in marketing - organisation - various committees

UNIT - IV

Accounting - justice delivery system – technical method – financial fraudulences - ledger - bills – legal aspects of forensic accounting – substantive law – valuation - economic damages – internal auditing – means – methods

UNIT - V

Forensic Management - - - doping - latest development in foreign countries – India - forensic investigation – supplements – drugs – toxicologist – advanced mechanism to investigate – chemical substance -forensic psychology – psychophysiological – neurocognitive psychological crimes –child psychology - Nano technology- advanced level of infrastructure – equipment – theoretical - practical knowledge - technological applications - food technology – food safety – food quality – sports persons- forensic food analysis

CAREERS IN THE SPORTS INDUSTRIES

UNIT-1

Sports industries - meaning – aim – importance – business – manufacture – representatives - Sporting goods – store manager – sales person – team dealer – retail dealer .

UNIT – II

pro sports franchises - Olympic Games Coordination - Relations with other organizations – finance – marketing - finance – legal affairs – technology – operations – communications – medical staff

UNIT – III

Health and Fitness - jobs and sports careers - Athletic Trainer - Physical Therapist - Medical Assistant - Sports Medicine Aide -Assistant Athletic Trainer - Physical Therapy Assistant -Sports Massage Therapist -Sports and Fitness Nutritionist - Strength and Conditioning Coach - Exercise Physiologist - Sports Physician -Sports Psychologist - Kinesiotherapist - coach – assistant coach – athletic director – physical education instructor – athletic programme development director – sports information director

UNIT-IV

sports writing job - broadcasting career - sports-related Internet sites, - publications, and sports channels on television. - sports jobs:- Sports caster - Sports News Reporter - Television Sports Producer - Radio Sports Producer - Internet Sports Producer -Sports Writer - Sports Photographer - Sports Talk Show Host - Sports Columnist -Sports Television Talent Director – Editor–Publisher - Sports Journalism - Sports Announcer/Commentator - Sports Radio Show cast - -

UNIT-V

sports jobs in schools - professional sports teams - big businesses - opportunities - pro sports organizations:- Physical Education (P.E.) Teacher - Strength and Conditioning Coach – Scout - Team President - General Manager - Business Manager - Director of Minor League Operations - Marketing Director - Promotion Director - Director of Community Relations - Ticket Operations Manager - Traveling Secretary - Executive Director - Stadium Manager - Sports Events Coordinator - Equipment Manager - Scoreboard Operator - Public Address Announcer - Youth Program Director Jobs - Youth Staff Jobs - Recreational Manager Jobs - Performance management Certification - Digital marketing Certification

ENVIRONMENT AND NUTRITION OF THE PLAYER

UNIT –I

Environment – aim – importance - hot condition – cold conditions - high altitude – acclimatisation – body composition – physique - short term – long term

UNIT - II

Exercise in hot conditions - -environment – WBGT index – air temperature – radiant temperature – humidity – air movement player –physique – body composition – age – sex – acclimatisation - clothing – fluid replacement - 8 point guide to summer training

UNIT – III

Exercise in cold conditions - -environment – stress – air temperature – high wind – humidity – air movement - player –physique –vasoconstriction – magnitude of the player – endurance fitness – body composition - – age – sex – clothing – fluid replacement

UNIT – IV

Nutrition - aim – importance – need – objective – balanced diet – calories – dietary intake - carbohydrate – fat – protein – vitamins – minerals – growth and development

Unit – V

Pre game meal – composition of meal – timing of the meal – carbohydrate loading fluid replacement – during training - dietary intake after the game – list of - carbohydrate - fat - protein

TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY
CHENNAI-600 127

APPROVED SYLLABUS

(Applicable to the students admitted from the academic year 2023-2024 onwards)

Choice Based Credit System

M.TECH SPORTS TECHNOLOGY

DEGREE PROGRAMME OFFERED IN THE

DEPARTMENT OF SPORTS TECHNOLOGY

M.TECH. SPORTS TECHNOLOGY

Programme Educational Objectives (PEO)

- PEO-1 Graduate will have successful academic and research career.
- PEO-2 Graduates will have employment in public and private sectors and resolve economic, social and environmental issues.

Educational Program Outcomes (POs):

After completion of the program graduates will be able to

PROGRAMME OUTCOMES (PO'S)

The post graduates are able to

PO-1) Attain in–depth knowledge to solve Sports Engineering problems in current needs of stack holders at global perspective.

PO-2) Analyse complex Sports Engineering problems critically.

PO-3) Find optimal solutions for Sports Engineering and Technology problems considering social and environmental issues.

PO-4) Carryout researches in one or more domains of Sports Engineering and Technology

PO-5) Apply appropriate and upgraded tools like DARTFISH,CFD to solve present day Sports Engineering and Technology problems.

PO-6) Carryout projects & research using collaborative and multidisciplinary engineering to enhance sporting performance considering economic aspects.

PO-7) Communicate effectively socio-economic problems related to Sports Engineering and technology by appropriate documentations and presentations.

PO-8) Incline for independent life-long learning.

PO-9) Exhibit social responsibility adhering to ethical values.

PO-10) Make corrective measures based on their own experiences.

MAPPING OF PEO'S WITH PO'S

	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10
PEO-1	X	X	X	X	X	X	X	X	X	X
PEO-2						X	X		X	X

PROGRAM SPECIFIC OUTCOMES (PSO)

The post graduates are able to

PSO 1 Analyze, design and develop sports devices and players performance with latest available technologies.

PSO-2 Work on sports and interdisciplinary projects in their research and development activities.

I, II, III & IV TH SEMESTERS CURRICULUM AND SYLLABI

CURRICULUM 2023-CHOICE BASED CREDIT SYSTEM

M.TECH SPORTS TECHNOLOGY

I, II, III & IV TH SEMESTERS CURRICULUM AND SYLLABI

SEMESTER I

(Applicable to the students admitted from the academic year 2023-2024 onwards)

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
			Th	Tuto	Lab		IN	EX	
1	Core/ 23PH1CT101	Aerodynamics in sports	3	0	0	3	25	75	100
2	Core/ 23PH1C T102	Sports Materials Engineering and Design	3	0	0	3	25	75	100
3	Elective	Elective I	3	0	0	3	25	75	100
	Elective	Elective II	3	0	0	3	25	75	100
5	23PH1CL101	Sports Aerodynamics Lab	0	0	4	2	25	75	100
6	23PH1CL102	Numerical Analysis Lab	0	0	4	2	25	75	100
7	MLC/ 23PH1AE101	Research Methodology and IPR	2	0	0	2	25	75	100
8	Audit course 1	Audit course 1(Non GPA)	2	0	0	2	25	75	100
Total Credits for SGPA						18			
Total Credits Non SGPA						2			
Grand Total Credits						18			

(Th-Theory, Tuto- Tutorial, Lab – Laboratory)

SEMESTER II

(Applicable to the students admitted from the academic year 2023-2024 onwards)

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
			Th	Tuto	Lab		IN	EX	
1	Core/ 23PH1CT201	Biomechanical Analysis in Sports	3	0	0	3	25	75	100
2	Core/ 23PH1CT202	Applications of Sensors and Transducers in Sports	3	0	0	3	25	75	100
3	Programme Elective	Elective III	3	0	0	3	25	75	100
	Programme Elective	Elective IV	3	0	0	3	25	75	100
5	Core Lab 1/ 23PH1CL201	Sports Performance Analysis Lab	0	0	4	2	25	75	100
6	Core Lab 2/ 23PH1CL202	CFD and FEM Sports Simulation and Analysis Lab	0	0	4	2	25	75	100
7	Core/ 23PH1MP201	Mini Project	0	0	4	2	25	75	100
8	Audit course 2	Audit course 2 (Non GPA)	2	0	0	2	25	75	100
Total Credits for SGPA						18			
Total Credits for Non SGPA						2			
Grand Total Credits for SGPA						18			

(Th-Theory, Tuto- Tutorial, Lab – Laboratory)

Second Semester Summer Vacation

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
			Th	Tuto	Lab		IN	EX	
9	Core/ 23PH1IP201	Internship	0	0	0	2	25	75	100
Total Credits for SGPA						2			

Total Second Semester Credit - 18 + 2 = 20

SEMESTER III

(Applicable to the students admitted from the academic year 2023-2024 onwards)

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
			Th	Tuto	Lab		IN	EX	
1	Programme Elective 23PH1DE301	Elective V	3	0	0	3	25	75	100
2	Open Elective 23--1GE---	Open Elective I	3	0	0	3	25	75	100
3	Dissertation / 23PH1DP301	Dissertation Phas eI	0	0	20	10	50	150	200
4	Core/ 23PH1IP301	Internship	0	0	0	2	25	75	100
Total Credits for SGPA						18			

(Th-Theory, Tuto- Tutorial, Lab – Laboratory)

Total Third Semester Credit = 18

SEMESTER IV

(Applicable to the students admitted from the academic year 2023-2024 onwards)

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
							IN	EX	
3	Dissertation/ 23PH1DP401	Dissertation Phase II	0	0	34	16	200	300	500
Total Credits for SGPA						16			

Total Credits for the programme for Calculating CGPA = 18+20+18+16 = 72

Total Non CGPA Credits for the entire programme = 2+2 = 4

List of Elective Courses Offered in I, II & III Semesters

(Applicable to the students admitted from the academic year 2023-2024 onwards)

Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
		Th	Tuto	Lab		IN	EX	
23PH1DE001	Robotics and Machine vision system	3	0	0	3	25	75	100
23PH1DE002	Digital Image Processing	3	0	0	3	25	75	100
23PH1DE003	Digital Video Processing	3	0	0	3	25	75	100
23PH1DE004	Computer Vision	3	0	0	3	25	75	100
23PH1DE005	Mobile Computing	3	0	0	3	25	75	100
23PH1DE006	Principles and Design of Sports Turf	3	0	0	3	25	75	100
23PH1DE007	Polymer Engineering	3	0	0	3	25	75	100
23PH1DE008	Surveying And Construction Materials	3	0	0	3	25	75	100
23PH1DE009	Reverse Engineering	3	0	0	3	25	75	100
23PH1DE010	Introduction to Embedded Systems	3	0	0	3	25	75	100
23PH1DE011	Introduction to Internet of Things(IOT)	3	0	0	3	25	75	100
23PH1DE012	Product Design and Development	3	0	0	3	25	75	100
23PH1DE013	Sports And Event Management	3	0	0	3	25	75	100
23PH1DE014	Additive Manufacturing Processes and Applications	3	0	0	3	25	75	100
23PH1DE015	CFD and FEM simulation for Sports Engineering	3	0	0	3	25	75	100
23PH1DE016	Motor Sports Application	3	0	0	3	25	75	100
23PH1DE017	Wind Engineering for Sports	3	0	0	3	25	75	100
23PH1DE018	Applications of Statistics in Sports	3	0	0	3	25	75	100
23PH1DE019	Aerodynamics in Automobile	3	0	0	3	25	75	100
23PH1DE020	Soil And Ground Improvement Techniques	3	0	0	3	25	75	100

(Th-Theory, Tuto- Tutorial, Lab – Laboratory)

List of Generic Elective Courses Offered for other Department Students

Course code	Course	Teaching Scheme			Credits	Marks		Total Marks
		Th	Tuto	Lab		IN	EX	
23PH1GE001	Fundamentals of Sports Technology	3	0	0	3	25	75	100
23PH1GE002	Intellectual Properties Rights	3	0	0	3	25	75	100
23PH1GE003	Design of Experiments and Research Applications	3	0	0	3	25	75	100
23PH1GE004	Industrial Safety	3	0	0	3	25	75	100
23PH1GE005	Physics of Sports	3	0	0	3	25	75	100

(Th-Theory, Tuto- Tutorial, Lab – Laboratory)

AUDIT COURSE 1 & 2

Course code	Course	Teaching Scheme			Credits	Evaluation
		Th	Tuto	Lab		
23PH1SE101	English for Research Paper Writing	2	0	0	2	Evaluation is 100 % internal and Marks are awarded in term of Grades like Satisfactory, Good and Excellent based on students performance
23PH1SE102	Disaster Management	2	0	0	2	
23PH1SE103	Sanskrit for Technical Knowledge	2	0	0	2	
23PH1SE104	Value Education	2	0	0	2	
23PH1SE105	Constitution of India	2	0	0	2	
23PH1SE106	Pedagogy Studies	2	0	0	2	
23PH1SE107	Stress Management by Yoga	2	0	0	2	
23PH1SE108	Personality Development through Life Enlightenment Skills.	2	0	0	2	
23PH1SE109	Professional Ethics in Engineering	2	0	0	2	

List of Value Added Courses Offered to All Department Students

Course code	Course	Teaching Scheme			Credits	Marks		Total Marks
		Th	Tuto	Lab		IN	EX	
23PH1VA001	Software Application in Match Analysis (Theory and Practical)	3	0	1	3	25	75	100
23PH1VA002	Ms Excel for Sports Science (Theory and Practical)	3	0	1	3	25	75	100
23PH1VA003	Practical Application of LaTeX (Theory and Practical)	3	0	1	3	25	75	100

SEMESTER I

(Applicable to the students admitted from the academic year 2021-2022 onwards)

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
			Th	Tuto	Lab		IN	EX	
1	Core/ 23PH1CT101	Aerodynamics in sports	3	0	0	3	25	75	100
2	Core/ 23PH1C T102	Sports Materials Engineering and Design	3	0	0	3	25	75	100
3	Elective	Elective I	3	0	0	3	25	75	100
	Elective	Elective II	3	0	0	3	25	75	100
5	23PH1CL101	Sports Aerodynamics Lab	0	0	4	2	25	75	100
6	23PH1CL102	Numerical Analysis Lab	0	0	4	2	25	75	100
7	MLC/ 23PH1AE101	Research Methodology and IPR	2	0	0	2	25	75	100
8	Audit course 1	Audit course 1(Non GPA)	2	0	0	2	25	75	100
Total Credits for SGPA						18			
Total Credits Non SGPA						2			
Grand Total Credits						18			

(Th-Theory, Tuto- Tutorial, Lab – Laboratory)

23PH1 CT101	AERODYNAMICS IN SPORTS
	Instruction : 3hr / week *Credits : 3* *Assessment : 25 + 75*
1	**SYLLABUS**

Course Objectives:

- To impart knowledge on Theory and Experimental knowledge in the application of the aerodynamics in sports to design the high performance equipments and to optimize the performance of the athlete.

UNIT I BASIC AERODYNMICS 9

Aerodynamic terminologies, aerodynamic force and moment , drag and lift, one and two dimensional flow, momentum equation, energy equation, Navier –stock equation, angular velocity.

UNIT II POTENTIONAL AND AXISYMMETRIC (INVISCID INCOMPRESSIBLE) FLOW 9

Laplace equation, Bernoulli's equation for rotational flow, Fundamentals of Invicid incompressible flow, sources of flow, Non lifting and lifting of flow over a cylinder, kutta-Joukowski theorem, vortex system and laws of vortex motion, incompressible flow, pitot tube equation, normal shock waves, Mach and shock waves in two dimensional flow.

UNIT III VISCOUS FLOW AND BOUNDARY LAYER 9

Development of boundary layer, boundary layer equation, laminar and turbulent flow, boundary layer separation, momentum integral equation, Reynolds number, Performance factors in bicycling- Human power, drag and rolling resistance.

UNIT IV AERODYNAMICS ON SPORTS EVENTS 9

Cycling aerodynamics, Factors influencing on running and running aerodynamics ,Skin suit aerodynamics, aerodynamics in cross country skiing and speed skiing. Performance factors in ski jumping, case studies ski jumping, Ski jumping aerodynamics.

UNIT V SPORTS BALL AERODYNAMICS AND MEASURMENT 9

Sports Ball Aerodynamics- aerodynamics on Base ball, Golf ball, tennis ball, cricket ball, volley ball , soccer ball , magnus effect, effect of velocity and spin, Case studies,CFD simulations and wind tunnel test.

Total No.of periods : 45

	Reference 1. Aerodynamics for Engineering students , E.L. Houghton, P.W.Carpenter, BH, 2003 2. Sports Aerodynamics, Noerstrud, Helge (Ed.), Springer, 2008 3. Projectile Dynamics in Sport: Principles and Applications, By Colin White, Routledge, 2010 4. Aerodynamic Measurements , G P Russo, Woodhead Publishing, 2011.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand and attain knowledge on Theory and Experimental knowledge of aerodynamics in sports
	CO-2	Apply Theory and Experimental knowledge of aerodynamics in sports
	CO-3	Design the high performance equipments and to optimize the performance of the athlete.

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3			3						2
2		3		2						3
3			3		3	3				2

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	2	3
3	1	1

23PH1CT102– SPORTS MATERIALS ENGINEERING AND DESIGN

Course Objectives:

- To impart knowledge on material science and advance materials for the design and manufacture of the different sports apparel and equipments to increase the athlete performance and to avoid the sports injury.

UNIT I SPORTS EQUIPMENT AND PHILOSOPHY OF DESIGN 9

Materials in sports- Factors determining sports performance, role of bioengineering in sports equipment, Advanced materials in the design of sports equipment, materials selection in design of pole vaulting, Bicycle construction , relationship between advanced materials technology in designing sports equipments and performance.

UNIT II FUNDAMENTALS OF ADVANCED MATERIALS 9

Composite materials , Nano and smart materials, Comparing and selecting materials , Basis of sports shoe design , Cycle mechanics from bamboo to fibre composites, Space frame Materials The wheels, Case studies and Future trends .

UNIT III MATERIALS FOR TENNIS SQUASH RACKETS 9

String types, function of string in a racquet, frame stiffness loss in a string, perception of string properties, Racket mechanics: the sweet spot, Influence of materials on racket technology, Specific designs and tests on racket, frame materials, Ball construction , tennis and squash ball ,Case studies.

UNIT IV MATERIALS IN BOATS AND BOARDS AND MOUNTAINEERING 9

Materials for racing hulls, Canoes and Kayaks , Surfboards, Testing ski properties , Materials in boots and bindings , Ski-sticks, Advanced materials and design in skis, materials for ropes in mountaineering, harnesses and slings karabiners, belay, descending and ascending devices, rock protection, ice climbing equipment,

UNIT V MATERIALS FOR SPORTS BALLS AND HELMET 9

Materials for golf club and golf ball, cricket ball, baseball, soccer and volleyball, discus, javelin, archery, fencing and foam materials, material selection and design of helmets. Case studies on helmet materials selection.

Total No.of periods : 45

Reference

1. Mike Jenkins, Aleksandar Subic, "Materials in sports equipment" published by Woodhead publishing.
2. Easterling**, E.A.,** Advanced Materials for Sports Equipment, Springer, 1993
3. *A. Subic,* Materials in Sports Equipment ,Volume 2 , Woodhead, 2007

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand various kinds of materials and its properties
	CO-2	Apply specific materials for the design and manufacture of the different sports apparel and equipments
	CO-3	Modify suitable materials/ design to increase athlete performance and to avoid the injury.

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3			2	1	2				1
2		3	2						2	
3		2		3		3			2	1

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	1	2
3	1	3

23PH1AE101- Research Methodology and IPR

Course Objectives:

- To impart knowledge to the students to Understand research problem formulation, Analyze research related information and follow research ethics.

- To impart knowledge on understanding Intellectual Property Rights
- To create awareness among students about IPR

Syllabus Contents:

UNIT 1 **9**

Meaning of research problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem. Approaches of investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations.

UNIT 2: **9**

Effective literature studies approaches, analysis Plagiarism, Research ethics Effective technical writing, how to write report, Paper Developing a Research Proposal, Format of research proposal, a presentation and assessment by a review committee

UNIT 3: **9**

Nature of Intellectual Property: Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development. International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT.

UNIT 4: **9**

Patent Rights: Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications.

UNIT 5: **9**

New Developments in IPR: Administration of Patent System. New developments in IPR; IPR of Biological Systems, Computer Software etc. Traditional knowledge Case Studies, IPR and IITs.

References:

Stuart Melville and Wayne Goddard, "Research methodology: an introduction for science & engineering students'"

Wayne Goddard and Stuart Melville, "Research Methodology: An Introduction"

Ranjit Kumar, 2nd Edition , “Research Methodology: A Step by Step Guide for beginners”

Halbert, “Resisting Intellectual Property”, Taylor & Francis Ltd ,2007.

Mayall , “Industrial Design”, McGraw Hill, 1992.

Niebel , “Product Design”, McGraw Hill, 1974.

Asimov , “Introduction to Design”, Prentice Hall, 1962.

Robert P. Merges, Peter S. Menell, Mark A. Lemley, “ Intellectual Property in New Technological Age”, 2016.
T. Ramappa, “Intellectual Property Rights Under WTO”, S. Chand, 2008

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand research problem formulation
	CO-2	Analyze research related information
	CO-3	. Follow research ethics
	CO4	Understand that today’s world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.
	CO5	Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular.
	CO6	Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.
3	**MAPPING (CO’s and PO’s)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3			3		2				
2						3				

3									3	
4					3					
5								2	1	
6		3	2	1			3			

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		1
2	2	1
3	3	1
4	3	2
5	2	1
6	3	1

23PH1CL101 Sports Aerodynamics Lab

LIST OF EXPERIMENTS

1. Study on wind tunnel basis and low speed sub sonic wind tunnel
2. Finding Drag and lift coefficient of different sports balls using wind tunnel Test
3. Comparing drag coefficient various sports balls
4. Calculating side force and pressure distribution on various balls

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand the influence of air on various sports.
	CO-2	Develop specific models for testing the effect of air
	CO-3	Modify the position of the models to increase athlete performance

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3	1								
2				3		2				
3			3						2	

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	1	2
3	1	3

23PH1CL102 - NUMERICAL ANALYSIS LAB

LIST OF EXPERIMENTS

1- Expression and Variable command
2- Vector operation
3- Matrix operation
4- Conditional Branching
5- Interation 'for' statement Syntex
6- script and functioning
7- Plotting 2D graphs
8- user defined input and output
9- Numerical integration algorithm
10- Solving non linear equations
11- Linear equation Gaussian method
12- linear equations interactive method
13- Numerical Interpolation algorithms
14- ODEs using Euler Methods
15- ODEs Application

Reference

1. Introduction to Scilab: For Engineers and Scientists Book by Sandeep Nagar
2. IITB Spoken tutorial - https://spoken-tutorial.org/

SEMESTER II

(Applicable to the students admitted from the academic year 2021-2022 onwards)

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
			Th	Tuto	Lab		IN	EX	
1	Core/ 23PH1CT201	Biomechanical Analysis in Sports	3	0	0	3	25	75	100
2	Core/ 23PH1CT202	Applications of Sensors and Transducers in Sports	3	0	0	3	25	75	100
3	Programme Elective	Elective III	3	0	0	3	25	75	100
	Programme Elective	Elective IV	3	0	0	3	25	75	100
5	Core Lab 1/ 23PH1CL201	Sports Performance Analysis Lab	0	0	4	2	25	75	100
6	Core Lab 2/ 23PH1CL202	CFD and FEM Sports Simulation and Analysis Lab	0	0	4	2	25	75	100
7	Core/ 23PH1MP201	Mini Project	0	0	4	2	25	75	100
8	Audit course 2	Audit course 2 (Non GPA)	2	0	0	2	25	75	100
Total Credits for SGPA						18			
Total Credits for Non SGPA						2			
Grand Total Credits for SGPA						18			

(Th-Theory, Tuto- Tutorial, Lab – Laboratory)

Second Semester Summer Vacation

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
			Th	Tuto	Lab		IN	EX	
1	Core/ 23PH1IP201	Internship	0	0	0	2	25	75	100
Total Credits for SGPA						2			

Total Credits in Second Semester - 18 + 2 = 20

23PH1CT201- Biomechanical Analysis in Sports

Course Objectives

- To learn the basic idea to integrate the Medical and Engineering science to study the motion of the athlete to optimize the performance and safety.

UNIT I BASIC TERMINOLOGY AND MOVEMENT PATTERN 9

Basic Terminologies in biomechanics , Movement patterns – walking, jumping , throwing, planes and axes of movement and postures, qualitative and quantitative analysis of sports movements, stages in a structured approach to analysis of human movement in sport,

UNIT II QUANTITATIVE ANALYSIS OF MOVEMENT 9

Quantitative video analysis of a sports technique, important features of video equipment for recording movements in sports, advantages and limitations of two- and three-dimensional recording of sports movements , two- and three-dimensional recording procedure , possible sources of error in recorded movement data, data processing, data smoothening, filtering and differentiation, Fourier series truncation Electromyography , force plates.

UNIT III FUNCTIONAL ANATOMY OF THE UPPER AND LOWER EXTREMITY9

Anatomical and Functional Characteristics of the Joints of the Shoulder, Combined Movement Characteristics , Muscular Actions, Injury Potential of the Shoulder, Elbow and Radioulnar Joints, Wrist and Fingers, Contribution of Upper Extremity Musculature to Sports Skills or Movements, External Forces and Moments Acting at Joints in the Upper Extremity, Pelvis and Hip Complex, Knee Joint, Ankle and Foot Movement Characteristics, muscle Actions, Contribution of Lower Extremity Musculature to Sports Skills or Movements, Forces Acting on Joints in the Lower Extremity, Vertebral Column, Muscular Actions, Contribution of the Trunk Musculature to Sports Skills or Movements, Stricture and mechanical properties of bone.

UNIT IV LINEAR AND ANGULAR KINEMATICS 9

Collection of Kinematic Data, Position and Displacement, Velocity and Speed, Acceleration, Differentiation and Integration, Linear Kinematics of Walking and Running, Linear Kinematics of the Golf Swing, Linear Kinematics of Wheelchair Propulsion Projectile Motion, Equations of Constant Acceleration, Angular Motion, Measurement of Angles, Lower Extremity Joint Angles, Representation of Angular Motion Vectors, Angular Motion Relationships, Relationship between Angular and Linear Motions, Angle–Angle Diagrams, Angular Kinematics of Walking and Running, Lower Extremity Angles, Angular Kinematics of the Golf Swing, Angular Kinematics of Wheelchair Propulsion. Case studies.

UNIT V LINEAR AND ANGULAR KINETICS 9

Force**,** types of forces, laws of motion, representation of Forces Acting on a System, Special Force Applications, Linear Kinetics of Locomotion, Linear Kinetics of the Golf Swing ,

Linear Kinetics of Wheelchair Propulsion, case studies, torque, types of torque, Newton's Laws of Motion: Angular Analogs, centre of mass, Rotation and Leverage, Representation of Torques Acting on a System, Analysis Using Newton's Laws of Motion, Special Torque Applications, Cinematography and video analysis, mathematical modelling.

References

1. Y.C. Fung, "Bio-Mechanics- Mechanical Properties of Tissues", Springer-Verlag, 1998
2. Subrata Pal, "Textbook of Biomechanics", Viva Books Private Limited, 2009.
3. Introduction to Sports Biomechanics Analysing Human Movement Patterns, Roger Bartlett, published in the USA and Canada by Routledge

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand the concepts of biomechanics in sports
	CO-2	Modify suitable body positions and movements to increase athlete performance and to avoid injury.
	CO-3	Optimize the performance and safety of athletes using the principles of biomechanics.
3	**MAPPING (CO's and PO's)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3	1		2						
2		2		3						
3			3	2		3				

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	1	2
3	1	3

23PH1CT202- Applications of Sensors and Transducers in Sports

Course Objectives:

• To understand the concepts of measurement technology.
• To learn the various sensors used to measure various physical parameters.
• To learn the fundamentals of signal conditioning, data acquisition and communication systems

UNIT I INTRODUCTION **9**

Basics of Measurement – Classification of errors – Error analysis – Static and dynamic characteristics of transducers – Performance measures of sensors – Classification of sensors – Sensor calibration techniques – Sensor Output Signal Types.

UNIT II MOTION, PROXIMITY AND RANGING SENSORS **9**

Motion Sensors – Potentiometers, Resolver, Encoders – Optical, Magnetic, Inductive, Capacitive, LVDT – RVDT – Synchro – Microsyn, Accelerometer.,– GPS, Bluetooth, Range Sensors – RF beacons, Ultrasonic Ranging, Reflective beacons, Laser Range Sensor (LIDAR).

UNIT III FORCE, MAGNETIC AND HEADING SENSORS **9**

Strain Gage, Load Cell, Magnetic Sensors –types, principle, requirement and advantages: Magneto resistive – Hall Effect – Current sensor Heading Sensors – Compass, Gyroscope, Inclinometers.

UNIT IV OPTICAL, PRESSURE AND TEMPERATURE SENSORS **9**

Photo conductive cell, photo voltaic, Photo resistive, LDR – Fiber optic sensors – Pressure – Diaphragm, Bellows, Piezoelectric – Tactile sensors, Temperature – IC, Thermistor, RTD, Thermocouple. Acoustic Sensors – flow and level measurement, Radiation Sensors - Smart Sensors - Film sensor, MEMS & Nano Sensors, LASER sensors.

UNIT V SIGNAL CONDITIONING and DAQ SYSTEMS **9**

Amplification – Filtering – Sample and Hold circuits – Data Acquisition: Single channel and multi channel data acquisition – Data logging - applications - Automobile, Aerospace, Home appliances, Manufacturing, Environmental monitoring.

Total No of periods: 45

Course Outcomes:

The students will be able to

- Expertise in various calibration techniques and signal types for sensors.
- Apply the various sensors in the sports applications
- Study the basic principles of various smart sensors.

References

- ***1..*** Franz Konstantin Fuss**,** Aleksandar Subic**,** Sadayuki Ujihashi "*The Impact of Technology on Sport II"* Taylor and Francis 2007
- *2. Craig J.J., " Introduction to Robotics Mechanics and Control ", Addison-Wesley, 1999.*
- *Murty, D.v.s. Transducers And Instrumentation Prentice Hall of India, 2008*

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Gain knowledge of the electronics and sensor technology
	CO-2	Measure performance of the athlete error free
	CO-3	increase athlete performance and to avoid injury by providing with feed to the players/athletes

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3					2				
2		2								
3			3	3		3				

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	1	2
3	1	3

23PH1MP201 MINI PROJECT

Teaching Scheme
Lectures: 2 hrs/week

Syllabus Contents:

- Students can take up small problems in the field of design engineering as mini project. It can be related to solution to an engineering problem, verification and analysis of experimental data available, conducting experiments on various engineering subjects, material characterization, studying a software tool for the solution of an engineering problem etc.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Work in actual industrial environment if they opt for internship.
	CO-2	Solve a live problem using software/analytical/computational tools.
	CO-3	Write technical reports.
	CO-4	Present and defend their work in front of technically qualified audience.

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1		2	2	3		1				
2					3	2				
3	2					2	3			
4						3	3	2	3	1

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	1	2
3	1	3

23PH1CL201Sports Performance Analysis Lab

Course Objectives:

- To apply movement analysis through image capturing through high resolution camera and motion analysis software to evaluate and optimize the sports performance.

LIST OF EXPERIMENTS

1 - Tagging using default setup

2 - Tagging panel creation and Analysis for basketball

3 - Tagging panel creation and Analysis for volleyball

4 - Tagging panel creation and Analysis for Circket

5 - knee angle analysis for cyclist

6 - Basketball shoot analysis in stroMo

7 - Chucking analysis of the bowler in Dartfish

8 - Data generation and analysis from the Dartfish

Reference

1. Dartfish feedback and support - https://support.dartfish.tv/support/solutions/folders/27000053999

LIST OF EQUIPMENTS AND SOFTWARES REQUIRED

1.Computers with latest configuration 30 Nos.

2.Power back up for the required capacity

3.Colour printer

4. High resolution camera

5.Motion analysis software like Dartfish and SportCAD etc .

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Acquire knowledge on Athletes movement capturing using high resolution camera Movement analysis software
	CO-2	Capture and analyse movements in various sports and athletic events
	CO-3	Optimize players performance

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3				3					
2					3	3	2			
3			3						2	

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	1	2
3	1	3

23PH1CL202 CFD and FEM Sports Simulation and Analysis Lab

Course Objectives:

- To implement the CFD and FEM simulation for the Sports engineering problems

1. Flow over laminar and turbulent pipe
2. Flow over a cylinder and 2D Airfoil
3. Flow over a cyclist
4. Flow over a Golf ball
5. Cross ventilation study at indoor stadium
6. Plate with hole
7. Bike Crank FEM simulation
8. Cantilever beam FEM analysiss
9. Plane frame FEM analysis
10. A step shaft in axial teny FEM analysis.

Outcome

- Increasing the sports performance through the CFD and FEM simulation
- To design and implementation of the CFD and FEM Analysis for sports apparel and infrastructure

Reference

1. EDX - A Hands-on Introduction to Engineering Simulations
https://www.edx.org/course/a-hands-on-introduction-to-engineering-simulations

LIST OF SOFTWARES REQUIRED

1. **Any latest modelling software like ProE, CATIA, CAD etc.,**
2. **Analysis package such as ANSYS ,MATLAB etc**

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Classify a given problem on the basis of its dimensionality as 1-D, 2-D, or 3-D, time-dependence as Static or Dynamic, Linear or Non-linear.
	CO-2	Develop system level matrix equations from a given mathematical model of a problem following the Galerkin weighted residual method or principle of stationary potential.
	CO-3	While demonstrating the process mentioned in 2 above, he will be able to identify the primary and secondary variables of the problem and choose correct nodal degrees of freedom and develop suitable shape functions for an element, implement Gauss-Legendre scheme of numerical integration to evaluate integrals at element level, and assemble the element level equations to get the system level matrix equations. He will also be able to substitute the essential boundary conditions correctly and obtain the solution to system level matrix equations to get the values of the field variable at the global nodes.
	CO-4	state three sources of errors in implementing FEM and suggest remedies to minimize the same for a given problem, viz. Modeling errors, Approximation errors, and numerical errors.
	CO-5	Obtain consistent and lumped mass matrices for axial vibration of bar sand transverse vibration of beams and obtain fundamental frequency of natural vibration using the methods mentioned in the curricula.
	CO-6	use MATLAB for implementation of FEM to obtain elongations at nodes of a bar subjected to traction and concentrated loads and prescribed boundary conditions
	CO-7	use commercial software like ANSYS or ABAQUS for implementation of FEM to obtain stress concentration due to a small hole in a rectangular plate subjected to traction on edges and concentrated loads at points on the edges and prescribed boundary conditions and present his/her work using the above software in a conference or publish the work in a peer reviewed journal 3
3	**MAPPING (CO's and PO's)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	1	3								
2	2	2								
3	3	3								
4					3					
5	3	3								

6					3					
7						3	3	3	2	

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	2	
3		
4		2
5	1	
6	3	
7		3

SEMESTER III

(Applicable to the students admitted from the academic year 2021-2022 onwards)

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
			Th	Tuto	Lab		IN	EX	
1	Programme Elective/ 23PH1DE301	Elective V	3	0	0	3	25	75	100
2	Open Elective/ 23--1GE---	Open Elective I	3	0	0	3	25	75	100
3	Dissertation / 23PH1DP301	Dissertation Phase I	0	0	20	10	50	150	200
4	Core/ 23PH1IP301	Internship	0	0	0	2	25	75	100
Total Credits for SGPA						18			

(Th-Theory, Tuto- Tutorial, Lab – Laboratory)

Total Credits in Third Semester=18

23PH1DP301 Dissertation Phase-1

Teaching Scheme
Lectures: 20 hr/week

Guidelines:

- The Project Work will start in semester III and should preferably be a problem with research potential and should involve scientific research, design, generation/collection and analysis of data, determining solution and must preferably bring out the individual contribution.
- Seminar should be based on the area in which the candidate has undertaken the dissertation work as per the common instructions for all branches of M. Tech.
- The examination shall consist of the preparation of report consisting of a detailed problem statement and a literature review.
- The preliminary results (if available) of the problem may also be discussed in the report.
- The work has to be presented in front of the examiners panel set by Head and PG coordinator.
- The candidate has to be in regular contact with his guide and the topic of dissertation must be mutually decided by the guide and student.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Exposed to self-learning various topics.
	CO-2	Survey the literature such as books, national /international refereed journals and contact resource persons for the selected topic of research.
	CO-3	Write technical reports.
	CO-4	Develop oral and written communication skills to present and defend their work in front of technically qualified audience.
3	**MAPPING (CO's and PO's)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3	2	1	2				3		3

	2					2	3				
	3							3			
	4							3	1	3	2

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	2	
2	1	2
3		1
4	3	

SEMESTER IV

(Applicable to the students admitted from the academic year 2018-2019 onwards)

Sl.No.	Course type &Code No.	Course Title	Teaching Scheme			Credits	Assessment
			Th	Tuto	Lab		
1	Dissertation 23PH1DP401	Dissertation Phase II	0	0	34	16	100+200
Total Credits						16	

Total Credits for the programme for Calculating CGPA = 18+20+18+16 = 72

Total Non CGPA Credits for the entire programme = 2+2 = 4

23PH1DP401Dissertation Phase- II

Teaching Scheme

Lectures: 32 hr/week

Guidelines:

- It is a continuation of Project work started in semester III. He has to submit the report in prescribed format and also present a seminar.
- The dissertation should be presented in standard format as provided by the department.
- The candidate has to prepare a detailed project report consisting of introduction of the problem, problem statement, literature review, objectives of the work, methodology (experimental set up or numerical details as the case may be) of solution and results and discussion.
- The report must bring out the conclusions of the work and future scope for the study.
- The work has to be presented in front of the examiners panel consisting of an approved external examiner, an internal examiner and a guide, co-guide etc. as decided by the Head and PG coordinator.
- The candidate has to be in regular contact with his guide.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Prepare comprehensive report based on literature survey and Use different experimental techniques
	CO-2	Use different software/ computational/analytical tools.
	CO-3	Design and develop an experimental set up/ equipment/test rig relevant to sports technology
	CO-4	Conduct tests on existing set ups/equipments and draw logical conclusions from the results after analyzing them.
	CO-5	Either work in a research environment or in an industrial environment.
	CO-6	Conversant with technical report writing.
	CO-7	Present and convince their topic of study to the engineering community or to publish the work in a peer reviewed journal/conference.

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3		3				3	3	3	1
2	3	3	3		3	3	3	2	3	3
3	3	3	3	1	2	3		3	3	3
4	3	3	3		3	3		3	3	3
5	3	3	3	2	2	3		1	3	1
6	1						3		2	
7	3			3			3		3	3

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	2	

2		1
3	2	
4		3
5		
6		2
7	3	

List of Elective Courses Offered in I, II & III Semesters

(Applicable to the students admitted from the academic year 2021-2022 onwards)

Code No.	Course Title	Teaching Scheme			Credits	Marks		Total Marks
		Th	Tuto	Lab		IN	EX	
23PH1DE001	Robotics and Machine vision system	3	0	0	3	25	75	100
23PH1DE002	Digital Image Processing	3	0	0	3	25	75	100
23PH1DE003	Digital Video Processing	3	0	0	3	25	75	100
23PH1DE004	Computer Vision	3	0	0	3	25	75	100
23PH1DE005	Mobile Computing	3	0	0	3	25	75	100
23PH1DE006	Principles and Design of Sports Turf	3	0	0	3	25	75	100
23PH1DE007	Polymer Engineering	3	0	0	3	25	75	100
23PH1DE008	Surveying And Construction Materials	3	0	0	3	25	75	100
23PH1DE009	Reverse Engineering	3	0	0	3	25	75	100
23PH1DE010	Introduction to Embedded Systems	3	0	0	3	25	75	100
23PH1DE011	Introduction to Internet of Things(IOT)	3	0	0	3	25	75	100
23PH1DE012	Product Design and Development	3	0	0	3	25	75	100
23PH1DE013	Sports And Event Management	3	0	0	3	25	75	100
23PH1DE014	Additive Manufacturing Processes and Applications	3	0	0	3	25	75	100
23PH1DE015	CFD and FEM simulation for Sports Engineering	3	0	0	3	25	75	100
23PH1DE016	Motor Sports Application	3	0	0	3	25	75	100
23PH1DE017	Wind Engineering for Sports	3	0	0	3	25	75	100
23PH1DE018	Applications of Statistics in Sports	3	0	0	3	25	75	100
23PH1DE019	Aerodynamics in Automobile	3	0	0	3	25	75	100
23PH1DE020	Soil And Ground Improvement Techniques	3	0	0	3	25	75	100

(Th-Theory, Tuto- Tutorial, Lab – Laboratory)

23PH1DE001– ROBOTICS AND MACHINE VISION SYSTEM

OBJECTIVES:

- Students will learn about basics of robots
- programming and Machine vision applications in robots

UNIT I BASICS OF ROBOTICS **9**

Introduction- Basic components of robot-Laws of robotics- classification of robot-work spaceaccuracy-resolution –repeatability of robot. Power transmission system: Rotary to rotary motion,Rotary to linear motion, Harmonics drives

UNIT II ROBOT END EFFECTORS **9**

Robot End effectors: Introduction- types of End effectors- Mechanical gripper- types of gripper mechanism- gripper force analysis- other types of gripper- special purpose grippers.

UNIT III ROBOT MECHANICS **9**

Robot kinematics: Introduction- Matrix representation- rigid motion & homogeneous transformation- forward & inverse kinematics- trajectory planning. Robot Dynamics: Introduction - Manipulator dynamics – Lagrange - Euler formulation- Newton - Euler formulation

UNIT IV MACHINE VISION FUNDAMENTALS **9**

Machine vision: image acquisition, digital images-sampling and quantization-levels of computation Feature extraction-windowing technique- segmentation- Thresholding- edge detection- binary morphology - grey morphology

UNIT V ROBOT PROGRAMMING **9**

Robot programming: Robot Languages- Classification of robot language-Computer control and robot software-Val system and Languages- application of robots.

OUTCOMES:

- knowledge for the design of robotics
- Upon completion of this course, the students can able to apply the basic engineering

TEXT BOOKS:

1. M.P.Groover, M.Weiss ,R.N. Nagal, N.G.Odrey, "Industrial Robotics - Technology, programming and Applications" Tata , McGraw-Hill Education Pvt Limited, 2008

REFERENCES

1. Sathya Ranjan Deb, robotics Technology & flexible Automation Sixth edition, Tata Mcgraw-Hill Publication, 2003.
2. Gorden M.Dair, Industrial Robotics, PHI 1988.
3. K.S.Fu, R.C.Gonzalez, C.S.G.Lee, Robotics: Sensing, Vision& Intelligence, Tata Mcgraw-Hill Publication, 1987.
4. John.J.Craig, Introduction to Robotics: Mechanics & control, Second edition-2002.
5. M.P.Groover, Industrial robotics- Technology, programming and Applications, McGraw-Hill, 1986

23PH1DE002–Digital Image Processing

OBJECTIVES:

- To become familiar with digital image fundamentals
- To get exposed to simple image enhancement techniques in Spatial and Frequency domain.
- To learn concepts of degradation function and restoration techniques.
- To study the image segmentation and representation techniques.
- To become familiar with image compression and recognition methods

UNIT IDIGITAL IMAGE FUNDAMENTALS 9

Steps in Digital Image Processing – Components – Elements of Visual Perception – Image Sensing and Acquisition – Image Sampling and Quantization – Relationships between pixels – Colour fundamentals and Colour models.

UNIT IIIMAGE ENHANCEMENT 9

Spatial Domain: Basics of intensity transformation – Histogram processing – Basics of Spatial Filtering–Smoothing and Sharpening Spatial Filtering – Frequency Domain: Preliminary concepts.

UNIT III IMAGE RESTORATION 9

Image Restoration – degradation model, properties, noise models – Mean Filters – Order Statistics – Adaptive filters – Band reject Filters – Band pass Filters – Notch Filters – Optimum Notch Filtering – Inverse Filtering – Wiener filtering.

UNIT IV IMAGE SEGMENTATION 9

Edge detection – Edge models and basic edge detection thresholding – Foundation, basic global thresholding - Region based segmentation – Region growing – Region splitting and merging – Use of motion segmentation.

UNIT V IMAGE COMPRESSION 9

Need for data compression, fundamentals of compression – Coding redundancy, Spatial and temporal redundancy, irrelevant information, image compression – Basic compression methods – Huffman, Coulomb, Arithmetic and Run Length coding.

OUTCOMES:

At the end of the course, the students should be able to:

- Know and understand the basics and fundamentals of digital image processing, such as digitization, sampling, quantization, and 2D-transforms.
- Operate on images using the techniques of smoothing, sharpening and enhancement.
- Understand the restoration concepts and filtering techniques.
- Learn the basics of segmentation, features extraction, compression and recognition methods for color models.

TEXT BOOKS:

1. Rafael C. Gonzalez, Richard E. Woods,Digital Image Processing, Pearson, Third Edition, 2010.
2. Anil K. Jain,Fundamentals of Digital Image Processing Pearson, 2002.

REFERENCES:

1. Kenneth R. Castleman,Digital Image Processing Pearson, 2006.
2. Rafael C. Gonzalez, Richard E. Woods, Steven Eddins,Digital Image Processing using MATLAB Pearson Education, Inc., 2011.
3. D,E. Dudgeon and RM. Mersereau,Multidimensional Digital Signal Processing Prentice Hall Professional Technical Reference, 1990.
4. William K. Pratt,Digital Image Processing John Wiley, New York, 2002
5. Milan Sonka et al Image processing, analysis and machine vision Brookes/Cole, Vikas Publishing House, 2nd edition, 1999

23PH1DE003– Digital Video Processing

COURSE OBJECTIVE:

- To introduce the fundamentals of digital video representation, filtering and compression,
- Popular algorithms for 2-D and 3-D motion estimation,
- Object tracking, frame rate conversion, deinterlacing, image enhancement,

the emerging international standards for image

- video compression, with such applications as digital TV, web-based multimedia, videoconferencing,

videophone and mobile image communications.

- more advanced image compression techniques such as entropy coding, subband coding and object-based coding.

UNIT IDIGITAL VIDEO FUNDAMENTALS 9

Basics of Video – Analog video, digital video, digital video processing – Time varying image formation models – Three dimensional motion models, geometric image formation, photometric image formation, observation noise.

UNIT IISPATIO-TEMPORAL SAMPLING 9

Sampling structures – Two dimensional rectangular sampling – Two dimensional periodic sampling – Sampling on 3D structures – Reconstruction from samples.

UNIT III MOTION DETECTION AND ESTIMATION 9

Introduction – Notations and preliminaries – Motion detection methods – Hypothesis testing and MAP detection – Motion estimation – Models, estimation and search – Practical motion estimation algorithms.

UNIT IV VIDEO SEGMENTATION 9

Introduction – Change detection – Dominant motion segmentation – Multiple motion segmentation – Simultaneous estimation and segmentation – Semantic video object segmentation.

UNIT V VIDEO COMPRESSION 9

Introduction – Application requirements – Digital video signals and formats – Video compression techniques – Video encoding standards and H.261

TEXT BOOKS:

1. A.Murat Tekalp, Digital Video Processing, Prentice Hall,Signal Processing Series, 1995.
2. Al Bovik, Hand book of Image and Video Processing, Academic Press, 2000.

References:

1."Multimedia Communication Technology", J.R.Ohm, Springer Publication.
2. "Video Coding for Mobile Communications" David Bull et al, Academic Press.
3. "Handbook on Image and Video Processing", A.I.Bovik, Academic Press.

23PH1DE004– Computer Vision

Objectives:

- Students will learn basic principles of image formation
- image processing algorithms and different algorithms for 3D reconstruction and recognition from single or multiple images (video). This course
- Emphasizes the core vision tasks of scene understanding and recognition.
- Applications to 3D modelling, video analysis, video surveillance, object recognition and vision based control will be discussed.

UNIT I IMAGE FORMATION 9

Geometric primitives and transformations – 2D transformations, 3D transformations, 3D rotations, 3D to 2D projections and lens distortion.

UNIT IIFEATURE DETECTION AND MATCHING 9

Points and patches – Feature detectors and descriptors – Edges – Detection and linking – Lines – Successive approximation, Hough transforms and vanishing points.

UNIT III SEGMENTATION 9

Active contours – Snakes, Scissors, level sets – Split and Merge – Watershed, region splitting, region merging, graph-based segmentation – Mean shifting and mode finding.

UNIT IV FEATURE BASED ALIGNMENT 9

2D and 3D feature based alignment – Alignment using least squares, Iterative algorithms, 3D alignment – Pose estimation algorithms – Geometric intrinsic calibration.

UNIT V TRACKING 9

Simple tracking strategies – Tracking using matching – Tracking linear dynamical models using Kalman filters – Data association – Particle filtering – The simplest particle filter.

Course Outcome:

After learning the course the students should be able to:

1. To implement fundamental image processing techniques required for computer vision
2. Understand Image formation process
3. To perform shape analysis
4. Extract features form Images and do analysis of Images
5. Generate 3D model from images
6. To develop applications using computer vision techniques
7. Understand video processing, motion computation and 3D vision and geometry

TEXT BOOKS:

1. Richard Szeliski, Computer Vision: Algorithms and applications, Springer, 2010.
2. David A.Forysyth & Jean Ponce, Computer Vision : A Modern Approach, Second Edition,Pearson, 2012.

23PH1DE005– Mobile Computing

OBJECTIVES:

- To understand the basic concepts of mobile computing.
  - To learn the basics of mobile telecommunication system .
  - To be familiar with the network layer protocols and Ad-Hoc networks.
  - To know the basis of transport and application layer protocols.
  - To gain knowledge about different mobile platforms and application development.

UNIT I INTRODUCTION **9**

Introduction to Mobile Computing – Applications of Mobile Computing- Generations of Mobile Communication Technologies- Multiplexing – Spread spectrum -MAC Protocols – SDMA- TDMA- FDMA- CDMA

UNIT II MOBILE TELECOMMUNICATION SYSTEM **9**

Introduction to Cellular Systems - GSM – Services & Architecture – Protocols – Connection Establishment – Frequency Allocation – Routing – Mobility Management – Security – GPRSUMTS – Architecture – Handover - Security

UNIT III MOBILE NETWORK LAYER **9**

Mobile IP – DHCP – AdHoc– Proactive protocol-DSDV, Reactive Routing Protocols – DSR, AODV , Hybrid routing –ZRP, Multicast Routing- ODMRP, Vehicular Ad Hoc networks (VANET) –MANET Vs VANET – Security.

UNIT IV MOBILE TRANSPORT AND APPLICATION LAYER **9**

Mobile TCP– WAP – Architecture – WDP – WTLS – WTP –WSP – WAE – WTA Architecture – WML

UNIT V MOBILE PLATFORMS AND APPLICATIONS **9**

Mobile Device Operating Systems – Special Constraints & Requirements – Commercial Mobile Operating Systems – Software Development Kit: iOS, Android, BlackBerry, Windows Phone – MCommerce – Structure – Pros & Cons – Mobile Payment System – Security Issues

OUTCOMES:

At the end of the course, the students should be able to:

- Explain the basics of mobile telecommunication systems
- Illustrate the generations of telecommunication systems in wireless networks
- Determine the functionality of MAC, network layer and Identify a routing protocol for a given Ad hoc network
- Explain the functionality of Transport and Application layers
- Develop a mobile application using android/blackberry/ios/Windows SDK

TEXT BOOKS:

1. Jochen Schiller, ―Mobile Communications‖, PHI, Second Edition, 2003.
2. Prasant Kumar Pattnaik, Rajib Mall, ―Fundamentals of Mobile Computing‖, PHI Learning Pvt.Ltd, New Delhi – 2012

REFERENCES

1. Dharma Prakash Agarval, Qing and An Zeng, "Introduction to Wireless and Mobile systems",Thomson Asia Pvt Ltd, 2005.
2. Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, ―Principles of Mobile Computing‖, Springer, 2003.
3. William.C.Y.Lee,―Mobile Cellular Telecommunications-Analog and Digital Systems‖, Second Edition,TataMcGraw Hill Edition ,2006.
4. C.K.Toh, ―AdHoc Mobile Wireless Networks‖, First Edition, Pearson Education, 2002.
5. Android Developers : http://developer.android.com/index.html
6. Apple Developer : https://developer.apple.com/
7. Windows Phone DevCenter : http://developer.windowsphone.com
8. BlackBerry Developer : http://developer.blackberry.com

23PH1DE006– Principles and Design of Sports Turf

UNIT I INTRODUCTION **9**

Turf grasses Biology and identification- Turf grass selection, Planting times and rates, soil preparation, Planting techniques, establishment, overseeding warm season fields, Soils and soil science, soil as a medium for turfgrass, soil for hard surfaces, fertility and fertilizers, nutrient requirements, nutrient uptake, soil reaction, fertilizer analysis, fertilizer sources, application rates and frequencies, micro nutrients.

UNIT II AERATION, MOWING AND IRRIGATION **9**

Aeration- Aeration for optimum Turf responses, aeration equipment, topdressing. Thatch-definition of thatch, advantages and disvantages of thatch in sports turf, how thatch develops, maintaining a managed thatch layer, reducing excessive thatch buildings, Mowing- types of mowers, Turf response, height and frequency, pattern, clipping removal, equipment and safety, chemical regulators. Irrigation – Irrigation and turf grass culture, general principles of turf grass irrigation, Portable irrigation systems, Installed irrigation systems.

UNIT III DRAINAGE

Drainage – Surface drainage, internal drainage, Installed drainage systems, Other drain system practices. Turf grass stresses and remedies, Mechanical stresses, environmental stresses, weeds, insects and disease, wise use of chemicals, the label is the law, Planning and performance applications, record keepings.

UNIT IV APPLICATION IN DIFFERENT FIELDS I **9**

Base ball and softball fields, Rugby, Lacrosse and Field hockey fields, Lawn Bowling Greens and croquet courts - Design, construction and reconstruction, renovation, maintenance and management procedures, Rules and regulations.

UNIT V APPLICATION IN DIFFERENT FIELDS I **9**

Tennis courts, Track and field facilities, sand volleyball courts, playgrounds, Bocce courts - Design, construction and reconstruction, renovation, maintenance and management procedures, Rules and regulations.

Total No.of Periods: 45

Reference

1 .Jim Puhalla, Jeff Krans, Mike Goatley, ”Sports Fields – A manual for design, construction and maintenance.” John Wiley and Sons

23PH1DE007– Polymer Engineering

UNIT I Introduction **9**

Importance of polymers in sports, types and Classification of polymers, Concept of functionality, Polydispersity and Molecular weight [MW], Molecular Weight Distribution [MWD], various methods of determination of MWD.

UNIT II Kinetics and Mechanism: **9**

Polymerization Kinetics Free radical polymerization, Mechanism of Polycondensation Techniques of Polymerization and nanocomposites:

UNIT III Techniques of Polymerization and nanocomposites **9**

Techniques of polymerization, bulk, emulsion, suspension, Polymer composites and nano-composites.

UNIT IV Polymer Processing **9**

Methods of spinning for additive manufacturing: Wet spinning, Dry spinning. Biopolymers, Compatibility issues with polymers. Moulding and casting of polymers, Polymer processing techniques and the effect of these processing techniques on polymer structure,

UNIT V Designing of polymeric devices and application of polymers for Sports: 9

Aspects of designing polymeric devices and polymer additives, Polymers used for sports goods and equipment manufacturing: polyamide, PF resin, polyesters and case studies.

REFERENCES

1. F.W. Billmeyer Jr Text book of Polymer Science, Inter science Publisher John Wiley and Sons, 3rd edition 1999
2. G Odian Principles of Polymerization, Wiley Inerscience John Wiley and Sons, 4th edition, 2005
3. V.R. Gowarikar Polymer Science, , New Age Int., 2002

23PH1DE008– Surveying and Construction Materials

Course Objectives:

- To attain the better sound in development of the different sports facility and the infrastructure

UNIT I – INTRODUCTION AND CHAIN SURVEYING **9**

Definition - Principles - Classification - Field and office work - Scales - Conventional signs - Survey instruments, their care and adjustment - Ranging and chaining - Reciprocal ranging - Setting perpendiculars - well - conditioned triangles - Traversing - Plotting - Enlarging and reducing figures.

UNIT II – COMPASS SURVEYING, LEVELLING AND APPLICATIONS **9**

Prismatic compass - Surveyor's compass - Bearing - Systems and conversions - Local attraction - Magnetic declination - Dip - Traversing - Plotting - Adjustment of errors - Level line - Horizontal line - Levels and Staves - Spirit level - Sensitiveness - Bench marks - Temporary and permanent adjustments - Fly and check levelling - Booking - Reduction - Curvature and refraction - Reciprocal levelling - Longitudinal and cross sections - Plotting - Calculation of areas and volumes - Contouring - Methods - Characteristics and uses of contours - Plotting - Earth work volume

UNIT III – ENGINEERING SURVEYS **9**

Reconnaissance, preliminary and location surveys for engineering projects - Lay out - Setting out works - Route Surveys for highways, railways and waterways - Curve ranging - Horizontal and vertical curves - Simple curves - Setting with chain and tapes, tangential angles by theodolite, double theodolite - Compound and reverse curves - Transition curves - Functions and requirements - Setting out by offsets and angles - Vertical curves - Sight distances

UNIT IV – CONSTRUCTION MATERIALS I **9**

Stone as building material – Criteria for selection – Tests on stones – Deterioration and Preservation of stone work – Bricks – Classification – Manufacture of clay bricks – Tests on bricks – Compressive Strength - Water Absorption – Efflorescence –Bricks for special use – Refractory bricks

UNIT V**– CONSTRUCTION MATERIALS II** **9**

Cement and Concrete hollow blocks – Light weight concrete blocks -Lime – Preparation of lime mortar – Cement. Ingredients – Manufacturing process – Types and Grades – Properties of cement and Cement mortar – Aggregates – Natural stone aggregates – Industrial by products – Crushing strength – Impact strength – Grading – Sand – Bulking .

Reference:

1) R. K. Rajput, "Engineering Materials", S. Chand & Company Ltd., 2000.
2) M. S. Shetty, "Concrete Technology (Theory and Practice)", S. Chand & Company

Ltd., 2003
3) Kanetkar T.P., Surveying and Levelling, Vols. I and II, United Book Corporation, Pune, 1994.
4) Punmia B.C. Surveying, Vols. I, II and III, Laxmi Publications, 1989

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand the significance of various kinds of tools used for development of sports facility and infrastructure
	CO-2	Apply various tools for development of different sports facility and infrastructure
	CO-3	Gain knowledge on construction materials to increase athlete performance and to avoid the injury.

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3	1		1						
2		3		2		3				1
3			3				2		2	

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	3	
2		2
3	2	

23PH1DE009– Reverse Engineering

Course Objective:

• Understand basic engineering systems.
• Understand the terminologies related to re-engineering, forward engineering, and reverse engineering.
• Disassemble products and specify the interactions between its subsystems and their functionality
• Understand Reverse Engineering methodologies.
• Understand Reverse engineering of Systems, Mechanical RE, Electronic RE, and Computer RE.

UNIT I Introduction to reverse engineering: 9

Reverse Engineering–The Generic Process Methodologies and Techniques for Reverse Engineering – The Potential for Automation with 3-D Laser Scanners, What Is Not Reverse Engineering, Computer-aided (Forward) Engineering, Computer-aided Reverse Engineering.

UNIT II Reverse Engineering–Hardware and Software: 9

Contact Methods Noncontact Methods, Destructive Method ,Computer Vision and Reverse Engineering, reverse engineering verses forward engineering

UNIT III Selecting a Reverse Engineering System: 9

The Selection Process, Some Additional Complexities, Point Capture Devices, Triangulation Approaches, "Time-of-flight" or Ranging Systems, Structured-light and Stereoscopic Imaging Systems, issues with Light-based Approaches, Tracking Systems, Internal Measurement Systems, X-ray Tomography, Destructive Systems, Some Comments on Accuracy, Positioning the Probe, Post processing the Captured Data, Handling Data Points, Curve and Surface Creation, Inspection Applications, Manufacturing Approaches

UNITIV Integration Between Reverse Engineering and Additive manufacturing 9

Modeling Cloud Data in Reverse Engineering, Data Processing for Rapid Prototyping, Integration of RE and RP for Layer-based Model Generation, he Adaptive Slicing Approach for Cloud Data Modeling, Planar Polygon Curve Construction for a Layer, Determination of Adaptive Layer Thickness

UNIT V Reverse Engineering in Sports, Medical, Automotive, Aerospace sectors: 9

Legal Aspects of Reverse Engineering: Copyright Law, Reverse Engineering, Recent Case Law Barriers to Adopting Reverse Engineering, case studies.

Outcomes:

1. The basic understanding of engineering systems. - Understanding the terminologies related to re-engineering, forward engineering, and reverse engineering.

2. The Understanding of Reverse Engineering methodologies. - Understanding of Reverse engineering of Systems, Mechanical RE, Electronic RE, and Computer RE.

REFERENCES

1. K. Otto and K. Wood, Product Design: Techniques in Reverse Engineering and New Product Development, Prentice Hall, 2001.
2. Reverse Engineering: An Industrial Perspective by Raja and Fernandes, Springer-Verlag 2008.

23PH1DE010– Introduction to Embedded Systems

OBJECTIVES:

- To introduce the Building Blocks of Embedded System
- To Educate in Various Embedded Development Strategies
- To Introduce Bus Communication in processors, Input/output interfacing.
- To impart knowledge in Various processor scheduling algorithms.
- To introduce Basics of Real time operating system and example tutorials to discuss on one
- real-time operating system tool

UNIT I INTRODUCTION TO EMBEDDED SYSTEMS 9

Introduction to Embedded Systems – The build process for embedded systems- Structural units in Embedded processor , selection of processor & memory devices- DMA – Memory management methods- Timer and Counting devices, Watchdog Timer, Real Time Clock, In circuit emulator, Target Hardware Debugging.

UNIT II EMBEDDED NETWORKING 9

Embedded Networking: Introduction, I/O Device Ports & Buses– Serial Bus communication protocols -RS232 standard – RS422 – RS485 - CAN Bus -Serial Peripheral Interface (SPI) – Inter Integrated Circuits (I2C) –need for device drivers.

UNIT III EMBEDDED FIRMWARE DEVELOPMENT ENVIRONMENT 9

Embedded Product Development Life Cycle- objectives, different phases of EDLC, Modelling of EDLC; issues in Hardware-software Co-design, Data Flow Graph, state machine model, Sequential Program Model, concurrent Model, object oriented Model.

UNIT IV RTOS BASED EMBEDDED SYSTEM DESIGN 9

Introduction to basic concepts of RTOS- Task, process & threads, interrupt routines in RTOS, Multiprocessing and Multitasking, Preemptive and non-preemptive scheduling, Task communication-shared memory, message passing-, Inter process Communication – synchronization between processes-semaphores, Mailbox, pipes, priority inversion, priority inheritance, comparison of Real time Operating systems: Vx Works, ЧC/OS-II, RT Linux.

UNIT V EMBEDDED SYSTEM APPLICATION DEVELOPMENT 9

Case Study of Washing Machine- Automotive Application- Smart card System Application,.

TOTAL: 45

Course Outcomes:

1. Ability to understand and analyse, linear and digital electronic circuits.
2. Apply the concepts studied in sports engineering applications

TEXT BOOKS:

1. Rajkamal, 'Embedded System-Architecture, Programming, Design', Mc Graw Hill, 2013.
2. Peckol, "Embedded system Design", John Wiley & Sons,2010
3. Lyla B Das," Embedded Systems-An Integrated Approach", Pearson, 2013

REFERENCES:

1. Shibu. K.V, “Introduction to Embedded Systems”, Tata Mcgraw Hill,2009.
2. Elicia White,” Making Embedded Systems”, O’ Reilly Series,SPD,2011.
3. Tammy Noergaard, “Embedded Systems Architecture”, Elsevier, 2006.
4. Han-Way Huang, ”Embedded system Design Using C8051”, Cengage Learning,2009.
5. Rajib Mall “Real-Time systems Theory and Practice” Pearson Education, 2007

23PH1DE011– Introduction to Internet of Things (IOT)

Objectives

- Describe what IoT is and how it works today
- Recognise the factors that contributed to the emergence of IoT
- Design and program IoT devices
- Use real IoT protocols for communication
- Secure the elements of an IoT device 6. Design an IoT device to work with a Cloud Computing infrastructure.
- Transfer IoT data to the cloud and in between cloud providers
- Define the infrastructure for supporting IoT deployments

UNIT I INTRODUCTION TO IoT 9

Introduction - Physical Design- Logical Design- IoT Enabling Technologies - IoT Levels & Deployment Templates - Domain Specific IoTs- Health and lifestyle

UNIT II IoTand M2M **9**

Introduction-M2M –Difference between IoT and M2M –SDN and NFV for IoT-IoT System Management with NETCONF-YANG

UNIT III IOT PLATFORMS DESIGN METHODOLOGY **9**

Introduction- purpose and requirement specification- process, domain model, information model and service specification- IoT level, functional view, operational view specification- device and component integration- application development- case study on IoT system for weather monitoring

UNIT IVLOGICAL DESIGN USING PYTHON **9**

Installing python- python data types and data structures- control flow- function- modules – packages- file handling- date time operations- classes- python packages of interest for IoT

UNITV IOT PHYSICAL DEVICES AND ENDPOINTS **9**

Building blocks of an IoT device- Rasperry Pi- Linux on Raspberry Pi- Raspberry Pi Interfaces -Programming Raspberry Pi with Python - Other IoT Platforms - Arduino.

OUTCOMES:

Upon completion of the course, the students will be able to Identify and design the new models for market strategic interaction

- Design business intelligence and information security for WoB

- Analyze various protocols for IoT
- Design a middleware for IoT
- Analyze and design different models for network dynamics

REFERENCES:

1. ArshdeepBahga, Vijay Madisetti, “Internet of Things – A hands-on approach”, Universities Press, 2015
2. Dieter Uckelmann, Mark Harrison, Michahelles, Florian (Eds), “Architecting the Internet of Things”, Springer, 2011.
3. Olivier Hersent, David Boswarthick, Omar Elloumi , “The Internet of Things – Key applications and Protocols”, Wiley, 2012.

23PH1DE012– Product Design and Development

OBJECTIVE

- The course aims at providing the basic concepts of product design, product features and its architecture so that student can have a basic knowledge in the common features a product has and how to incorporate them suitably in product.

UNIT I INTRODUCTION **9**

Modern Product development and design theories: Understanding the opportunity, Develop a concept, Implement a concept, Reverse engineering and redesign methodology. Product development process tools: Product development teams, Planning Process, Planning and scheduling tools.

UNIT II CUSTOMER NEEDS AND ANALYSIS **9**

Understanding customer needs: Kano diagram of customer satisfaction, Prioritising Customer needs Establishing product function: Function analysis system technique, Function structure. Product tear down and experimentation: Tear down process, methods, applications, Post teardown reporting.

UNIT III BENCHMARKING AND CONCEPT GENERATION **9**

Benchmarking and establishing engineering specifications:
Product Portfolios and portfolio Architecture: Portfolio architecture types and choice, Product modularity, Clustering.Generating concepts and concept selection: Information gathering, Brainstorming, TRIZ, Morphological Evaluation, Concept selection Process, Numerical Concept scoring.

UNIT IV CONCEPT EMBODEMENT **9**

Concept embodiment: System modeling and embodiment principles. Modelling of Product metrics: Modelling approaches and case studies.

UNIT V DESIGN FOR ENVIRONMENT **9**

Design for the environment: DFE methods, Life cycle assessment, Techniques to reduce environmental impact. Analytical and Numerical model solutions: Simulation and optimization techniques. Design for robustness: Robust Design model construction, methods.

OUTCOMES:

On completion of the course the student will be able to understand the integration of customer requirements in product design

Apply structural approach to concept generation, selection and testing

- Understand various aspects of design such as industrial design , design for manufacture , economic analysis and product architecture

REFERENCES

1. Kevin N. Otto, Kristin L. Wood, Product Design, Pearson Education, 2004.
2. Gahl, W Beitz J Feldhusun, K. G. Grote, Engineering Design, 3rd Edition, Springer 2007.
3. W. Ernest Eder, S. Hosendl., Design Engineering, CRC Press, 2008.
4. Ali K. Kamrani and Emad Abouel Nasr, "Engineering Design and Rapid Prototyping", Springer, 2010

23PH1DE013– Sports and Event Management

UNIT I INTRODUCTION **9**

Parameters and definition, history of sports, trends in sports paorticipation, pricing of sports participation, the economic impact of sports, sports clubs. Sports club's effectiveness, issues facing sport, trends affecting sports. The role and importance of sport in our society, the benefit of sports, the aim and objectgivees of sport, current issues, sports and society, sport and health.

UNIT II THE VOLUNTARY SECTOR AND LEADERSHIP **9**

Voluntary organizations, sports is a voluntary concept, voluntary ethos, voluntary sports organizations, management of sports organizations, the nature of voluntary organizations, organizsational structures and personalities, governing bodies volunteerism and change, voluntary commitment paid staff dynamic, to retain volunteers, the many roel of sports development officer. Leadership – Transactional or transroamationa, leadership qualities in sports situation. Partnership ana liasions, agenecies involved in sports.

UNIT III PEOPLE AND ORGANISATIONAL MANAGEMENT **9**

Performance appraisal, managing people, what makes a manager, staff app;raisal, staff motivation, delegation, communication, getting the right people, team building team development, personel management. The role of the sports manager, general management approaches, quality management, strategic management, measuring performance, the complexity of sports management, plannint, objectives, control, organizational changers, the management of change, decision making.

UNIT IV MANAGEMENT IN PRACTICE AND CHALLENGES **9**

Management process, financial management, legislation, management of safety, health and safety at work, managing support services, administration, the management of sport as a public service. Challenges – citizens charter, competition, best value, financial control, national standards, pressure for change, voluntary input and management, philosophical challenges, investors in people, leisure trusts, ageing facilities, performance indication.

UNIT V MARKETING, EVENT MANAGEMENT, EDUCATION AND TRAINING AND PERSONAL SKILLS **9**

Marketing ethics, maketing participation, implementing the marketing process, marketing activites, public relations, fund raising, sports spornsorship. Event management – Event feasibility, event planning, event requirements, characteristics of the best events, event evaluation. Education and training – Coaching awards, education versus training, sports management education, running sport, volunteering in sports. Personal Skills – Time management, time management action plan, managing meetings, meetings in practice, personal management.

Total No.of Periods : 45

Reference

1. Hans Westerbeek, Aaron Smith, Paul Turner, Paul Emery, Christine Green, Linda van Leeuwen "Managing Sport Facilities and Major Events", Routledge July 2006

2. David C Watt "Sports Management and Administration", Routledge, Taylor & Francis Group, 2003

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand various kinds of management concepts
	CO-2	Apply specific leadership styles different state
	CO-3	Modify suitable management skills for different sports event organization
3	**MAPPING (CO's and PO's)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3									
2										
3										

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	3	
2		
3		3

23PH1DE014– Additive Manufacturing Processes and Applications

Unit I Introduction **9**

Introduction to AM, AM evolution, Distinction between AM & CNC machining, Advantages of AM, AM process chain: Conceptualization, CAD, conversion to STL, Transfer to AM, STL file manipulation, Machine setup, build , removal and clean up, post processing.

Unit II Classification of AM processes and Design **9**

Liquid polymer system, discrete particle system, molten material systems, solid sheet system.Design for AM: Motivation, DFMA concepts and objectives, AM unique capabilities, Exploring design freedoms, Design tools for AM, Part Orientation, Removal of Supports, Hollowing out parts, Inclusion of Undercuts and Other Manufacturing Constraining Features, Interlocking Features, Reduction of Part Count in an Assembly, Identification of markings/ numbers etc.

Unit III AM process selection and applications **9**

Guidelines for process selection: Introduction, selection methods for a part, challenges of selection, example system for preliminary selection, production planning and control AM Applications: Functional models, Pattern for investment and vacuum casting, Medical models, art models, Engineering analysis models, Rapid tooling, new materials development, Bi-metallic parts, Re-manufacturing. Application examples for Sports, Aerospace, defense, automobile, Bio-medical and general engineering industries

Unit IV :Post processing of AM parts **9**

Post processing of AM parts: Support material removal, surface texture improvement, accuracy improvement, aesthetic improvement, preparation for use as a pattern, property enhancements using non-thermal and thermal techniques.

Unit V Future Directions of AM **9**

Future Directions of AM: Introduction, new types of products and employment and digiproneurship. Current research on sports products.

REFERENCES

1. Chua Chee Kai, Leong Kah Fai, “Rapid Prototyping: Principles & Applications”, World Scientific, 2003.
2. Ian Gibson, David W Rosen, Brent Stucker., “Additive Manufacturing Technologies: Rapid Prototyping to Direct Digital Manufacturing”, Springer, 2010
3. Ali K. Kamrani, EmandAbouel Nasr, “Rapid Prototyping: Theory & Practice”, Springer, 2006.
4. D.T. Pham, S.S. Dimov, Rapid Manufacturing: The Technologies and Applications of Rapid Prototyping and Rapid Tooling, Springer 2001

23PH1DE015– CFD and FEM simulation for Sports Engineering

Unit 1. Introduction to engineering simulation **9**

History of engineering simulation - Why we need simulation - Experiment vs simulation - Need of Verification and validation - Problem solving through simulation - Simulation accuracy vs Experimental cost - challenges in sports

Unit 2. CFD Equations and Process **9**

Continuity equation, momentum equation, energy equation - Steps involved in the CFD - Equation of state - Navier stoke equation - Boundary condition - RANS, URANS, LES, DES - Introduction to discretisation - structured and unstructured Grid - Grid independent study - Types of errors in CFD - Verification and validation with case study - FDM VS FEM - Guide line and best practices in CFD

Unit 3. FEM Equations and Process **9**

Introduction to FEM - FEM governing equations - 1D FEM analysis - linear and quadratic bar elements - beam and frame elements - 2D FEM analysis - 3, 4 & 6 node elements - Natural coordination and transformation coordination

Unit 4. Heat transfer Simulation **9**

Introduction to Heat transfer Simulations - Types of heat transfer - heat transfer in fluid and related CFD Equations - heat transfer in solids and FEM 1D heat transfer problem.

Unit 5. CFD and FEM application in sports with case studies **9**

Sport's engineering CFD and FEM applications - Stadium and athletes CFD simulation case study - Sport ball and cycle crank FEM simulation case study - athletes helmet heat transfer Simulation case study - Simulation documentation

Text Books

1. An Introduction to Computational Fluid Dynamics: The Finite Volume Method Book by H. K. Versteeg and W. Malalasekera
2. TEXTBOOK OF FINITE ELEMENT ANALYSISTextbook by P. SESHU

References

3. A Hands-on Introduction to Engineering Simulations - https://www.edx.org/course/a-hands-on-introduction-to-engineering-simulations
4. Routledge Handbook of Sports Technology and Engineering. Edited By Franz Konstantin Fuss, Aleksandar Subic, Martin Strangwood, Rabindra Mehta

23PH1DE016– Motor Sports Application

UNIT I SPORTS INJURY 9

Definition and meaning of sports injury – Classification of injuries. Definition, Causes, Features, Management and Prevention of the following injuries : Contusion – Abrasion – Laceration – Sprain – Strain – Fracture – Subluxation – Dislocation – Punctured wounds – Heat Cramp – Heat exhaustion – Heat Stroke – Frost Bite.

UNIT II INFECTIVE DISORDERS IN SPORTS 9

Infection – Types of infection – Mode of transmission – Definition, Causative Organism, Signs & Symptoms , Management and Prevention of Common Cold – Amoebiasis – Salmonellasis – Tetanus - Typhoid – Cholera – Tuberculosis - Malaria - Filariasis – Hepatitis B - Hepatitis A - AIDS.

UNIT III FIRST AID IN SPORTS 9

Definition of first aid - Qualities of good first aider - Principles of first aid - Contents of first aid box - Safety and accident prevention in sports – Definition, types and management of Shock - First aid measures in Head injury and Spine Injury, Bleeding, Burns, Drowning, Epilepsy, Electrical shock – Cardio Pulmonary Resuscitation.

UNIT IV SPORTS INJURY REHABILITATION 9

Principles of injury prevention – Warm up and cool down – Stretching – Static, Dynamic, Ballistic, PNF stretching. Principles of rehabilitation – Muscle conditioning – Flexibility – Proprioceptive sports skills – Cardiovascular fitness – Progression and stages of rehabilitation. Physiotherapy – Exercise Therapy, Electrotherapy, Hydrotherapy, Massage Therapy, Manual Therapy.

UNIT V PROTECTIVE EQUIPMENTS IN SPORTS 9

Protective Equipments – Materials used – Helmets – Protective Equipments of Face – Neck Protection – Shoulder pads – Rib and flank pads – Chest protection – Hip pads –Thigh Pads – Knee protection – Shin Guards – Ankle braces – Hand pads – Footwear – Orthotics and Prosthetics in sports.

Total No. of periods : 45

References :

1. Lars Peterson and Per Renstron: Sports Injuries – Their prevention and treatment, Dunitz.
2. Richard B. Birrer: Sports Medicine for the primary care Physician, CRC Press.
3. Bahr, Clinical Guide to Sports Injuries – Human Kinetics
4. Norris, Sports injuries Diagnosis and Management - Butterworth
5. Brukner and Khan: Clinical Sports Medicine, McGraw Hill.
6. Reed: Sports Injuries – Assessment and Rehabilitation, W.B. Saunders

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand various kinds of sports injuries and its prevention
	CO-2	Acquire knowledge on different protective device on sports equipments

3 MAPPING (CO's and PO's)

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	2			1			1			
2		2	3			2	2		1	

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	2	
2		2

23PH1DE017– Wind Engineering for Sports

Objectives:

- Understanding the wind importance and effect in the sports and infrastructure
- Understand the building aerodynamics
- Effect of wind in the sports performance

Unit 1 - Introduction to Wind Engineering **9**

Wind science - atmosphere composition and layers - wind and aerodynamics - wind classification - wind atmosphere boundary layer - ground level measurements.

Unit 2 - Wind action and effect of structure **9**

Evolution of suspension bridge, skycrapter and tower - Design wind speed - Building aerodynamics - Dynamic response to turbulent wind - vortex shedding - galloping - flutter

Unit 3 - Wind measurements in sports and Boundary layer wind tunnel **9**

Measurements of wind speed in sports (100m sprint and long jump) - Effect of wind in the different stadium in running track - ultrasonic anemometer - Wind tunnel - ABL Wind tunnel

Unit 4 - Wind effect in the sports **9**

Effect of wind in the 100 m sprint - wind effect in the field sports - need of indoor stadium

Unit 5 - Wind Engineering Infrastructure and Arena **9**

Building aerodynamics - wind effect on sports infrastructure (long span roof and long High Poles) - stadium cross ventilation - wind comfort and pollution - bioclimatic city planning and architecture

Outcome

1. Optimization of the sports athletes performance from the wind effect
2. Applying the wind science to design the effective and efficient sports infrastructure

Reference

1. Wind Science and Engineering: Origins, Developments, Fundamentals and Advancements (Springer Tracts in Civil Engineering) written by Giovanni Solari
2. MOOC :- Sports and Building Aerodynamics by Eindhoven University of Technology https://www.coursera.org/

23PH1DE018- APPLICATIONS OF STATISTICS IN SPORTS

Course Objectives:

- To attain the skill in applying the maths especially statistics in the different sports to predict the success and maximum chance of winning technique.

UNIT I STATISTICS IN FOOTBALL **9**

Introduction use of sports in teaching statistics . Football articles, Geometry model for NFL fixed goal kickers .predictions for NFL games via linear – model methodology , probability of winning a football game

UNIT II STATISTICS IN BASEBALL **9**

Introduction to baseball articles – exploring baseball hitting data – player game percentage, estimation with selected binomial information – progress of the score during a baseball game

UNIT III - STATISTICS IN BASKETBALL **9**

Introduction to basketball articles – Improved NCAA basketball Tournament modeling via point spread and team strength information, probability models for basketball tournaments

UNIT IV – STATISTICS IN ICE HOCKEY & MISCELLANEOUS SPORTS **9**

Introduction to ice hockey articles – statistical methods for rating college hockey teams ,deciding ties in hockey rating skating, estimating the effect of a red card in soccer, heavy defeats in tennis – psychological momentum or random effect.

UNIT V – STATISTICAL METHODOLOGIES AND MULTIPLE SPORTS **9**

Introduction to the methodologies and multiple sports articles, bridging different Eras in sports, Data analysis using stein's estimator and its generalizations, assigning probabilities to outcomes of multi – entry competitions, basketball, baseball and the null hypothesis lessons from sports statistics, TQM in athletic performance, Brownian motion model for the progress of sports scores.

Total No. of Periods: 45

Course Outcomes:

- Application of statistics in different games
- Detailed in depth understand of statistics in sports

Reference :

1. Jim Albert, Jay Bennett, James J.cochran, "Anthology of statistics in sports" – Cambridge university press – 2005
2.Jim Albert, "Teaching statistics using baseball", mathematical association of America

1. Jim Albert, Jay Bennett, "Curve Ball Baseball statistics and the role of chance in the game" Springer - 2005

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Acquire the knowledge of basic statistics concepts and planning aspects
	CO-2	Apply TQM in athletic performance
	CO-3	Derive mathematical model for different sports activities and assess the reliability of the modeled sports activities
	CO-4	Apply the knowledge of reliability and planning concepts to the practical and real time systems.
3	**MAPPING (CO's and PO's)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3	2								
2		3								
3			3		2		1			
4				3		3	2			

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	3	
3		3
4	2	

23PH1DE019– Aerodynamics in Automobile

Objectives

- To understand the sports car design and vehicle aerodynamics in sports race.
- To understand the Aerodynamics of different vehicles

Unit 1. Introduction to Basic concepts **9**

Introduction to aerodynamics - 1-D frictionless flow (venturi, pitot tube, orifice, nozzle and injector) - high Reynolds number flow and turbulence - Types of drag - drag in different shape - lifting surface - effect of Reynolds number in drag and lift.

Unit 2. Automobile Aerodynamics **9**

Ground effect, Generic automobile shape and vortix, Downflow and vehicle performance, Expected results in CFD, wind tunnel and road (measurements techniques)

Unit 3. Aerodynamics devices and vehicle example **9**

Variable and adaptive devices, passenger car, pickup truck, motorcycle, comparative cars and open wheel race cars

Unit 4. Automobile Aero - Acoustic **9**

Introduction - sound as pressure wave - sound loudness scale - 1D linear wave equation - sound radiation, transmission, reflection, absorption - vortex sound - buffeting - sound and flow control.

Unit 5 Supersonic Aerodynamics - high speed cars **9**

Compressible flow - Normal shock equation- expansion and oblique shock relations - flow over a wedge and cone - Detached shock wave - supersonic nozzle - turbojet engine - thrust SSC land speed record

Outcome

- To design a power efficient and less drag race cars for Sports
- To design environmental friendly race car with less Emission and sound.

Reference

1. Automotive Aerodynamics Book by Joseph Katz
2. Fundamentals of Aerodynamics Book by John D. Anderson
3. Meet the fastest cars in the world 20 years after Thrust SSC's land speed record By Craig Glenday
Published 15 October 2018
https://www.guinnessworldrecords.com/news/2018/10/meet-the-fastest-cars-in-the-world-20-years-after-thrust-sscs-land-speed-record-544103

23PH1DE020– Soil and Ground Improvement Techniques

Course Objectives:

- To aware of the different sports surface engineering technique for the good performance of the athlete and to avoid the sports injury.

UNIT 1 SOIL PROPERTIES **9**

Soil formation – Geotechnical engineering – Soil formation – Soil profile. Soil Composition –Water content determination – Determination of specific gravity of solids. Index properties of soil – Shape and size of particle –Shrinkage ratio - Volumetric shrinkage – Atterberg indices – Classification of soil.

UNIT II – PROBLEMATIC SOIL AND IMPROVEMENT TECHNIQUES **9**

Role of ground improvement in foundation engineering – methods of ground improvement – Geotechnical problems in alluvial, lateritic and black cotton soils – Selection of suitable ground improvement techniques based on soil conditions.

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UNIT III – DEWATERING **9**

Dewatering Techniques - Well points – Vacuum and electroosmotic methods – Seepage analysis for two – dimensional flow for fully and partially penetrated slots in homogeneous deposits (Simple cases only).

UNIT IV – INSITU TREATMENT OF COHESIONLESS AND COHESIVE SOILS **9**

In-situ densification of cohesion-less soils and consolidation of cohesive soils: Dynamic compaction Vibroflotation, Sand compaction piles and deep compaction. Consolidation: Preloading with sand drains, and fabric drains, Stone columns and Lime piles-installation techniques only – relative merits of above methods and their limitations - stabilization of expansive soils.

UNIT V – GROUT TECHNIQUES **9**

Types of grouts – Grouting equipments and machinery – injection methods – Grout monitoring – stabilization with cement, lime and chemicals.

Referance:

1. Purushothama Raj, P.Ground Improvement Techniques, Laxmi Publications (P) Ltd. New Delhi, 1999.
2. Koerner, R.M. Construction and Geotechnical Methods in Foundation Engineering, McGraw Hill, 1994.
3. Moseley, M.P., Ground Improvement Blockie Academic and Professional, Chapman and Hall, Glassgow, 1998.

4. Jones J.E.P. Earth Reinfocement and Soil Structure, Butterworths, London, 1985

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand various kinds of soils and ground improvement technique and its properties
	CO-2	Aware of the different sports surface engineering technique for the good performance of the athlete and to avoid sports injury.
	CO-3	Apply ground improvement techniques to improve players performance

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3	2								
2	3	3								
3			3	2		3	1			

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	3	
2		
3		2

List of Generic Elective Courses Offered for other Department Students

Course code	Course	Teaching Scheme			Credits	Marks		Total Marks
		Th	Tuto	Lab		IN	EX	
23PH1GE001	Fundamentals of Sports Technology	**3**	**0**	**0**	**3**	**25**	**75**	**100**
23PH1GE002	Intellectual Properties rights	**3**	**0**	**0**	**3**	**25**	**75**	**100**
23PH1GE003	Design of Experiments and Research Applications	**3**	**0**	**0**	**3**	**25**	**75**	**100**
23PH1GE004	Industrial Safety	**3**	**0**	**0**	**3**	**25**	**75**	**100**
23PH1GE005	Physics of Sports	**3**	**0**	**0**	**3**	**25**	**75**	**100**

23PH1GE001- FUNDAMENTALS OF SPORTS TECHNOLOGY

Course Objectives:

At the end of the course, students will be able to:
Appreciate the different technological advances available for application in sports domain.

UNIT I SPORTS TECHNOLOGY BASIC CONCEPTS 9

History of Engineering in Sports, The relationship between sports engineering and sports science, need , scope and objectives , advantages and applications of Sports Technology, Sports Technology terminologies, carrier opportunities.

UNIT II IMPACT OF ENGINEERING IN SPORTS 9

Concepts of human engineering , Impact of various modern technologies in Materials engineering, role of technology in equipments design and development, importance of Ergonomics in sports equipments. Recent technological advancements in various sports goods.

UNIT III COMPUTER AND INSTRUMENTATION IN SPORTS 9

Role and importance of computer and instrumentation technology in various sports, computer simulation for sports, applications and advantages, video technology, hawk-eye technology in sports.

UNIT IV VARIOUS ENGINEERING APPLICATIONS IN SPORTS 9

Aerodynamics and sports applications, Nano technology and its sports applications, sensor technology and its sports applications, software based sports performance analysis, Sport analytics, and Internet of Things.

UNIT V BUSINESS AND RESEARCH APPLICATIONS IN SPORTS ENGINEERING 9

Entrepreneurial skills and business opportunities in sports, Research opportunities in sports technological research, Recent Research trend in various sports equipment design, ball sports, tennis racket technology, and water sports, various Sports Engineering research groups, and journals in sports technology.

Course Outcomes:

Students will be able to appreciate the opportunities available in the domain of sport technology, innovation and entrepreneurship, and be able to act upon it.

Reference.

1. An overview of sports engineering: history, impact and research, Zahari Taha, Mohd Hasnun Arif , Hassan Anwar P.P., Abdul Majeed , Mohd Azri, Aris Nina, Nadia Sahim, Movement, Health & Exercise, 2, 1-14, 2013
2. Ross, S. (2012). Sports technology. Mankato, Minn: Smart Apple Media.
3. Fuss, F. K. (2014). Routledge handbook of sports technology and engineering. New York: Routledge.
4. Ciletti, D., & Chadwick, S. (2012). Sports entrepreneurship: Theory and practice. Morgantown, WV: Fitness Information Technology.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Acquire knowledge on • Sports Science and Sports Engineering • Applications of Engineering in Sports
	CO-2	Understand engineering concepts and techniques used in different sports .
	CO-3	Understand business opportunities in sports engineering.

3 MAPPING (CO's and PO's)

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3									
2	3	2					1		2	
3		3								1

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	2	
2		1
3	3	

23PH1GE002 INTELLECTUAL PROPERTIES RIGHTS

UNIT 1: **3**

Nature of Intellectual Property: Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development.

UNIT 2: **3**

International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT.

UNIT 3: **3**

Patent Rights: Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications.

UNIT 4: **3**

New Developments in IPR: Administration of Patent System. New developments in IPR; IPR of Biological Systems, Computer Software etc.

UNIT 5: **3**

Traditional knowledge Case Studies, IPR and IITs.

References:

Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd ,2007.

Mayall , "Industrial Design", McGraw Hill, 1992.

Niebel , "Product Design", McGraw Hill, 1974.

Asimov , "Introduction to Design", Prentice Hall, 1962.

Robert P. Merges, Peter S. Menell, Mark A. Lemley, " Intellectual Property in New Technological Age", 2016.

T. Ramappa, "Intellectual Property Rights Under WTO", S. Chand, 2008

2	**COURSE OUTCOMES: Students are able to**	
	CO1	Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.
	CO2	Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular.
	CO3	Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3	2								
2	3	3				2				
3				2		3			2	1

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	2	
2		2
3	3	1

23PH1GE003- DESIGN OF EXPERIMENTS AND RESEARCH APPLICATIONS

Course Objectives:

• To impart knowledge about Design of Experiments, Taguchi's Methods and Robust Design.

UNIT- I: INTRODUCTION **9**

Importance of experiments, experimental strategies, Planning of Experiments- Experimental design-basic principles of Experimental design, terminology, steps in experimentation, sample size, normal probability plot, Simple linear regression models, Analysis of variance (ANOVA) – one way and two way.

UNIT- II: SINGLE FACTOR EXPERIMENTS **9**

Completely randomized design, Randomized block design, Latin square design, Statistical analysis and estimation of model parameters, model adequacy checking, pair wise comparison tests.

UNIT-III: MULTIFACTOR EXPERIMENTS **9**

Two and three factor full factorial experiments, Randomized block factorial design, Experiments with random factors, rules for expected mean squares, approximate F- tests. 2K factorial Experiments.

UNIT- IV: ROBUST DESIGN PROCESS **9**

Classical design of Experiments- Taguchi's design of experiments –Comparison of classical and Taguchi' approach- Factor selection-variability due to noise factors- Principle of robustization, classification of quality characteristics and parameters, objective function in robust design, S/N ratios.

UNIT- V: TAGUCHI METHODS AND PRODUCT / PROCESS OPTIMIZATION **9**

Orthogonal Arrays, Variable data analysis, Robust design- control and noise factors, S/N ratios, parameter design, Multi-level experiments, Inner and outer OA experiments, Optimization using S/N ratios, attribute date analysis, a critique of robust design.

Course Outcomes:

• At the end of the course students can able to apply Design of Experiments, Taguchi's Methods and Robust Design techniques in research.

Reference

1. Krishnaiah, K. and Shahabudeen, P. Applied Design of Experiments and Taguchi Methods, PHI learning private Ltd., 2012.

2. Montgomery, D.C., Design and Analysis of experiments, John Wiley and Sons, Eighth edition, 2012.

3. Nicolo Belavendram, Quality by Design; Taguchi techniques for industrial experimentation, Prentice Hall, 1995.

4. Phillip J.Rose, Taguchi techniques for quality engineering, McGraw Hill, 1996.

5. Montgomery, D.C., Design and Analysis of Experiments, Minitab Manual, John Wiley and Sons, Seventh edition, 2010

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Acquire knowledge on • Design of Experiments • Taguchi's Methods and • Robust Design techniques.
	CO-2	Understand Design of Experiments, Taguchi's Methods and Robust Design techniques in research
	CO-3	Apply Design of Experiments, Taguchi's Methods and Robust Design techniques in research
3	**MAPPING (CO's and PO's)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3	2								
2		2	3	3						
3				3		3			2	1

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	2	
2		1
3	1	2

23PH1GE004- INDUSTRIAL SAFETY

Lecture: - 3 h/week

Course objectives:

- To aware of the safety procedure during accident and the maintenance of the machinery and the production sit to avoid the accident.

UNIT-I: INDUSTRIAL SAFETY 9

Accident, causes, types, results and control, mechanical and electrical hazards, types, causes and preventive steps/procedure, describe salient points of factories act 1948 for health and safety, wash rooms, drinking water layouts, light, cleanliness, fire, guarding, pressure vessels, etc, Safety color codes. Fire prevention and firefighting, equipment and methods.

UNIT-II: FUNDAMENTALS OF MAINTENANCE ENGINEERING 9

Definition and aim of maintenance engineering, Primary and secondary functions and responsibility of maintenance department, Types of maintenance, Types and applications of tools used for maintenance, Maintenance cost & its relation with replacement economy, Service life of equipment.

UNIT-III: WEAR AND CORROSION AND THEIR PREVENTION 9

Wear- types, causes, effects, wear reduction methods, lubricants-types and applications, Lubrication methods, general sketch, workingand applications, i. Screw down grease cup, ii. Pressure grease gun, iii. Splash lubrication, iv. Gravity lubrication, v. Wick feed lubrication vi. Side feed lubrication, vii. Ring lubrication, Definition, principle and factors affecting the corrosion. Types of corrosion, corrosion prevention methods.

UNIT-IV: FAULT TRACING 9

Fault tracing-concept and importance, decision tree concept, need and applications, sequence of fault finding activities, show as decision tree, draw decision tree for problems in machine tools, hydraulic, pneumatic, automotive, thermal and electrical equipment's like, I. Any one machine tool, ii. Pump iii. Air compressor, iv. Internal combustion engine, v. Boiler, vi. Electrical motors, Types of faults in machine tools and their general causes.

UNIT-V: PERIODIC AND PREVENTIVE MAINTENANCE 9

Periodic inspection-concept and need, degreasing, cleaning and repairing schemes, overhauling of mechanical components, overhauling of electrical motor, common troubles and remedies of electric motor, repair complexities and its use, definition, need, steps and advantages of preventive maintenance. Steps/procedure for periodic and preventive maintenance of: I. Machine tools, ii. Pumps, iii. Air compressors, iv. Diesel generating (DG) sets, Program and schedule of preventive maintenance of mechanical and electrical equipment, advantages of preventive maintenance. Repair cycle concept and importance

Reference:

1.Maintenance Engineering Handbook, Higgins & Morrow, Da Information Services.
2.Maintenance Engineering, H. P. Garg, S. Chand and Company.

3. Pump-hydraulic Co mpressors, Audels, Mcgrew Hill Publicat ion.
4. Foundation Engineering Handbook, Winterkorn, Hans, Chapman & Hall London.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Acquire knowledge on • Industrial safety • Maintenance engineering
	CO-2	Apply safety and the maintenance to avoid the accident and injury.
	CO-3	Plant efficiency improved

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	3						1			1
2		3						1	3	
3			3			1		1		

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		3
2	2	
3	3	2

23PH1GE005 PHYSICS OF SPORTS

Objectives

- To understand the Physics begin the sports action and apparels

Unit 1 Physics Foundation

Measurements and units - fundamental and derived quantity - S.I unit system - Theory of error - Types of error - error reduction - rules of significant figures and round off - Dimensional formula - Kinematics: rest and motion - types of motion - Distance and displacement - velocity and acceleration - Relative velocity - average acceleration - Equation of motion under gravity: falling object, vertically throwing upward - Projectile motion: Horizontal and angular projection - Circular motion.

Unit 2 law of motion, Work, power and energy

Newton's laws of motion - application of Newton law in sports - 2 body contact in horizontal surface - Motion of connected bodies - Lami's theory - conservation of momentum - impulse - Friction - centrifugal and centripetal force

Unit 3 Physics of Field and track sports

Physics of sprint take off and running aerodynamics - wind and altitude effect in the 100 m sprint - Physics of shot put - Physics of high jump

Unit 4 Physics of ball sports

Basic fluid flow - Reynolds number - laminar and turbulent - boundary layer - cricket ball swings - golf ball dimple effect - football banana shot

Unit 5 Physics of water and winter sports

Water resistance, Physics of swimming and sailing- Physics of skiing and ice hockey

Outcome

- Applying the Physics concepts to the sports for coaching and Analysis
- Increasing the athletic performance using Physics

Reference

1. For the love of Physics by Walter Lewin
2. An introduction to Physics of sports by VassiliosMacInnes.
3. The Physics Of Sports
https://www.real-world-physics-problems.com/physics-of-sports.html

AUDIT COURSE 1 & 2

Course code	Course	Teaching Scheme			Credits
		Th	Tuto	Lab	
23PH1SE101	English for Research Paper Writing	2	0	0	0
23PH1SE102	Disaster Management	2	0	0	0
23PH1SE103	Sanskrit for Technical Knowledge	2	0	0	0
23PH1SE104	Value Education	2	0	0	0
23PH1SE105	Constitution of India	2	0	0	0
23PH1SE106	Pedagogy Studies	2	0	0	0
23PH1SE107	Stress Management by Yoga	2	0	0	0
23PH1SE108	Personality Development through Life Enlightenment Skills.	2	0	0	0
23PH1SE109	Professional Ethics in Engineering	2	0	0	0

23PH1SE101: ENGLISH FOR RESEARCH PAPER WRITING

Course objectives:

Students will be able to:

1.Understand that how to improve your writing skills and level of readability
2.Learn about what to write in each section
3.Understand the skills needed when writing a Title
4.Ensure the good quality of paper at very first-time submission

Syllabus

Units	Content	Hrs
1	Planning and Preparation, Word Order, Breaking up long sentences, Structuring Paragraphs and Sentences, Being Concise and Removing Redundancy, Avoiding Ambiguity and Vagueness	4
2	Clarifying Who Did What, Highlighting Your Findings, Hedging and Criticising, Paraphrasing and Plagiarism, Sections of a Paper, Abstracts. Introduction	4
3	Review of the Literature, Methods, Results, Discussion, Conclusions, The Final Check.	4
4	key skills are needed when writing a Title, key skills are needed when writing an Abstract, key skills are needed when writing an Introduction, skills needed when writing a Review of the Literature.	4
5	skills are needed when writing the Methods, skills needed when writing the Results, skills are needed when writing the Discussion, skills are needed when writing the Conclusions	4
6	useful phrases, how to ensure paper is as good as it could possibly be the first- time submission	4

Suggested Studies:

1.Goldbort R (2006) Writing for Science, Yale University Press (available on Google Books)

2. Day R (2006) How to Write and Publish a Scientific Paper, Cambridge University Press

3. Highman N (1998), Handbook of Writing for the Mathematical Sciences, SIAM. Highman's book .
4. Adrian Wallwork , English for Writing Research Papers, Springer New York Dordrecht Heidelberg London, 2011

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Improve your writing skills and level of readability
	CO-2	Understand what to write in each section
	CO-3	Submit good quality of paper at very first-time

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	1						3			2
2		2		3					2	
3				3		3				

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	2	
2		2
3		

23PH1SE102 : DISASTER MANAGEMENT

Course Objectives:

Students will be able to:

1. learn to demonstrate a critical understanding of key concepts in disaster risk reduction and humanitarian response.
2. critically evaluate disaster risk reduction and humanitarian response policy and practice from multiple perspectives.
3. develop an understanding of standards of humanitarian response and practical relevance in specific types of disasters and conflict situations.
4. critically understand the strengths and weaknesses of disaster management approaches, planning and programming in different countries, particularly their home country or the countries they work in.

Syllabus

Units	Content	Hrs
1	Introduction Disaster: Definition, Factors And Significance; Difference Between Hazard And Disaster; Natural And Manmade Disasters: Difference, Nature, Types And Magnitude.	4
2	**Repercussions Of Disasters And Hazards:** Economic Damage, Loss Of Human And Animal Life, Destruction Of Ecosystem. Natural Disasters: Earthquakes, Volcanisms, Cyclones, Tsunamis, Floods, Droughts And Famines, Landslides And Avalanches, Man-made disaster: Nuclear Reactor Meltdown, Industrial Accidents, Oil Slicks And Spills, Outbreaks Of Disease And Epidemics, War And Conflicts.	4
3	**Disaster Prone Areas In India** Study Of Seismic Zones; Areas Prone To Floods And Droughts, Landslides And Avalanches; Areas Prone To Cyclonic And Coastal Hazards With Special Reference To Tsunami; Post-Disaster Diseases And Epidemics	4
4	**Disaster Preparedness And Management** Preparedness: Monitoring Of Phenomena Triggering A Disaster Or Hazard; Evaluation Of Risk: Application Of Remote Sensing, Data From Meteorological And Other Agencies, Media Reports: Governmental And Community Preparedness.	4
5	**Risk Assessment** Disaster Risk: Concept And Elements, Disaster Risk Reduction, Global And National Disaster Risk Situation. Techniques Of Risk Assessment,Global Co-Operation In Risk Assessment And Warning, People's Participation In Risk Assessment. Strategies for Survival.	4
6	**Disaster Mitigation**	4

	Meaning, Concept And Strategies Of Disaster Mitigation, Emerging Trends In Mitigation. Structural Mitigation And Non-Structural Mitigation, Programs Of Disaster Mitigation In India.	

SUGGESTED READINGS:

1. R. Nishith, Singh AK, "Disaster Management in India: Perspectives, issues and strategies "'New Royal book Company.
2. Sahni, Pardeep Et.Al. (Eds.)," Disaster Mitigation Experiences And Reflections", Prentice Hall Of India, New Delhi.
3. Goel S. L. , Disaster Administration And Management Text And Case Studies" ,Deep &Deep Publication Pvt. Ltd., New Delhi.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understand key concepts in disaster risk reduction and humanitarian response.
	CO-2	Evaluate disaster risk reduction and humanitarian response policy and practice from multiple perspectives.
	CO-3	Understand the strengths and weaknesses of disaster management approaches.

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	2								2	1
2		2							3	2
3		3						2		1

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		3
2	2	
3		2

23PH1SE103 SANSKRIT FOR TECHNICAL KNOWLEDGE

Course Objectives :

1.To get a working knowledge in illustrious Sanskrit, the scientific language in the world
2.Learning of Sanskrit to improve brain functioning
3.Learning of Sanskrit to develop the logic in mathematics, science & other subjects enhancing the memory power
4.The engineering scholars equipped with Sanskrit will be able to explore the huge knowledge from ancient literature

Syllabus

Units	Content	Hrs
1	• Alphabets in Sanskrit, • Past/Present/Future Tense, • Simple Sentences	8
2	• Order • Introduction of roots • Technical information about Sanskrit Literature	8
3	• Technical concepts of Engineering-Electrical, Mechanical, Architecture, Mathematics	8

Suggested reading

1. “Abhyaspustakam” – Dr.Vishwas, Samskrita-Bharti Publication, New Delhi
2. “Teach Yourself Sanskrit” Prathama Deeksha-Vempati Kutumbshastri, Rashtriya Sanskrit Sansthanam, New Delhi Publication
3. “India’s Glorious Scientific Tradition” Suresh Soni, Ocean books (P) Ltd., New Delhi.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Understanding basic Sanskrit language
	CO-2	Ancient Sanskrit literature about science & technology can be understood
	CO-3	Being a logical language will help to develop logic in students

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1								2		2
2								2	2	
3						2				1

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2		3
3		

23PH1SE104: VALUE EDUCATION

Course Objectives

Students will be able to

1. Understand value of education and self- development
2. Imbibe good values in students
3. Let the should know about the importance of character

Syllabus

Units	Content	Hrs
1	• Values and self-development –Social values and individual attitudes. Work ethics, Indian vision of humanism. • Moral and non- moral valuat ion. Standards and principles. • Value judgements	4
2	• Importance of cultivation of values. • Sense of duty. Devotion, Self-reliance. Confidence, Concentration. Truthfulness, Cleanliness. • Honesty, Humanity. Power of faith, National Unity. • Patriotism. Love for nature ,Discipline	6
3	• Personality and Behavior Development - Soul and Scientific attitude. Positive Thinking. Integrity and discipline. • Punctuality, Love and Kindness. • Avoid fault Thinking. • Free from anger, Dignity of labour. • Universal brotherhood and religious tolerance. • True friendship. • Happiness Vs suffering, love for truth. • Aware of self-destructive habits. • Association and Cooperation. • Doing best for saving nature	6
4	• Character and Competence –Holy books vs Blind faith.	6

	• Self-management and Good health. • Science of reincarnation. • Equality, Nonvio lence , Humilit y, Role of Women. • All religions and same message. • Mind your Mind, Self-control. • Honesty, Studying effectively	

Suggested reading

1 Chakroborty, S.K. "Values and Ethics for organizations Theory and practice", Oxford University Press, New Delhi

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Knowledge of self-development
	CO-2	Learn the importance of Human values
	CO-3	Developing the overall personality

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1								3	1	1
2						1			2	2
3								2		3

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	2	
2		2
3		2

23PH1SE105: CONSTITUTION OF INDIA

Course Objectives:

Students will be able to:

1. Understand the premises informing the twin themes of liberty and freedom from a civil rights perspective.
2. To address the growth of Indian opinion regarding modern Indian intellectuals' constitutional role and entitlement to civil and economic rights as well as the emergence of nationhood in the early years of Indian nationalism.
3. To address the role of socialism in India after the commencement of the Bolshevik Revolution in 1917 and its impact on the initial drafting of the Indian Constitution.

Syllabus

Units	Content	Hrs
1	**History of Making of the Indian Constitution:** • History • Drafting Committee, (Composition & Working)	4
2	**Philosophy of the Indian Constitution:** • Preamble • Salient Features	4
3	**Contours of Constitutional Rights & Duties:** • Fundamental Rights • Right to Equality • Right to Freedom • Right against Exploitation • Right to Freedom of Religion • Cultural and Educational Rights • Right to Constitutional Remedies • Directive Principles of State Policy • Fundamental Duties.	4
4	**Organs of Governance:** • Parliament • Composition • Qualifications and Disqualifications • Powers and Functions • Executive • President • Governor • Council of Ministers • Judiciary, Appointment and Transfer of Judges, Qualifications • Powers and Functions	4

5	**Local Administration:** • District's Administration head: Role and Importance, • Municipalities: Introduction, Mayor and role of Elected • Representative, CEO of Municipal Corporation. • Pachayati raj: Introduction, PRI: Zila Pachayat. • Elected officials and their roles, CEO Zila Pachayat: Position and role. • Block level: Organizational Hierarchy (Different departments), • Village level: Role of Elected and Appointed officials, • Importance of grass root democracy	4
6	**Election Commission:** • Election Commission: Role and Functioning. • Chief Election Commissioner and Election Commissioners. • State Election Commission: Role and Functioning. • Institute and Bodies for the welfare of SC/ST/OBC and women.	4

Suggested reading

1. The Constitution of India, 1950 (Bare Act), Government Publication.
2. Dr. S. N. Busi, Dr. B. R. Ambedkar framing of Indian Constitution, 1st Edition, 2015.
3. M. P. Jain, Indian Constitution Law, 7th Edn., Lexis Nexis, 2014.
4. D.D. Basu, Introduction to the Constitution of India, Lexis Nexis, 2015.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Acquire knowledge about • fundamental of Indian constitution • Constitutional Rights & Duties:
	CO-2	Understand civil and economic rights and social justice in India
	CO-3	Acquire knowledge about • Local Administration • Election commission
3	**MAPPING (CO's and PO's)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1							2	3		
2									3	2
3									3	1

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1	2	
2		2
3	2	

23PH1SE106: PEDAGOGY STUDIES

Course Objectives:

Students will be able to:

1.Review existing evidence on the review topic to inform programme design and policy making undertaken by the DfID, other agencies and researchers.
2.Identify critical evidence gaps to guide the development.
Syllabus

Syllabus

Units	Content	Hrs
1	**Introduction and Methodology:** • Aims and rationale, Policy background, Conceptual framework and terminology • Theories of learning, Curriculum, Teacher education. • Conceptual framework, Research questions • Overview of methodology and Searching.	4
2	**Thematic overview:** Pedagogical practices are being used by teachers in formal and informal classrooms in developing countries. • Curriculum, Teacher education.	2
3	• Evidence on the effectiveness of pedagogical practices • Methodology for the in depth stage: quality assessment of included studies. • How can teacher education (curriculum and practicum) and the school curriculum and guidance materials best support effective pedagogy? • Theory of change. • Strength and nature of the body of evidence for effective pedagogical practices. • Pedagogic theory and pedagogical approaches. • Teachers' attitudes and beliefs and Pedagogic strategies.	4
4	• Professional development: alignment with classroom practices and follow-up support • Peer support • Support from the head teacher and the community. • Curriculum and assessment • Barriers to learning: limited resources and large class sizes	4
5	**Research gaps and future directions** • Research design • Contexts • Pedagogy • Teacher education	2

	• Curriculum and assessment • Dissemination and research impact.	

Suggested reading

1. Ackers J, Hardman F (2001) Classroom interaction in Kenyan primary schools, Compare, 31 (2): 245-261.
2. Agrawal M (2004) Curricular reform in schools: The importance of evaluation, Journal of Curriculum Studies, 36 (3): 361-379.
3. Akyeampong K (2003) Teacher training in Ghana - does it count? Multi-site teacher education research project (MUSTER) country report 1. London: DFID.
4. Akyeampong K, Lussier K, PryorJ, Westbrook J (2013) Improving teaching and learning of basic maths and reading in Africa: Does teacher preparation count? International Journal Educational Development, 33 (3): 272–282.
5. Alexander RJ (2001) Culture and pedagogy: International comparisons in primary education. Oxford and Boston: Blackwell.
6. Chavan M (2003) Read India: A mass scale, rapid, 'learning to read' campaign.
7. www.pratham.org/images/resource%20working%20paper%202.pdf

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2	**COURSE OUTCOMES: Students are able to**	
	CO-1	What pedagogical practices are being used by teachers in formal and informal classrooms in developing countries?
	CO-2	What is the evidence on the effectiveness of these pedagogical practices, in what conditions, and with what population of learners?
	CO-3	How can teacher education (curriculum and practicum) and the school curriculum and guidance materials best support effective pedagogy?
3	**MAPPING (CO's and PO's)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1	1									2
2		2					1			
3								2	2	

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2

1	2	
2		2
3	2	3

23PH1SE107 : STRESS MANAGEMENT BY YOGA

Course Objectives:

1. To achieve overall health of body and mind
2. To overcome stress

Syllabus

Units	Content	Hrs
1	• Definitions of Eight parts of yog. (Ashtanga)	8
2	• Yam and Niyam. Do`s and Don't's in life. i) Ahinsa, satya, astheya, bramhacharya and aparigraha ii) Shaucha, santosh, tapa, swadhyay, ishwarpranidhan	8
3	• Asan and Pranayam i) Various yog poses and their benefits for mind & body ii)Regularization of breathing techniques and its effects- Types of pranayam	8

Suggested reading

1. 'Yogic Asanas for Group Tarining-Part-I" : Janardan Swami Yogabhyasi Mandal, Nagpur
2. "Rajayoga or conquering the Internal Nature" by Swami Vivekananda, Advaita Ashrama (Publication Department), Kolkata

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Develop healthy mind in a healthy body thus improving social health also.
	CO-2	Improve efficiency.

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1				2				2	3	1
2				2		2				

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		3
2	3	

23PH1SE108 PERSONALITY DEVELOPMENT THROUGH LIFE ENLIGHTENMENT SKILLS

Course Objectives:

1. To learn to achieve the highest goal happily
2. To become a person with stable mind, pleasing personality and determination
3. To awaken wisdom in students

Syllabus

Units	Content	Hrs
1	• Neetisatakam-Holistic development of personality • Verses- 19,20,21,22 (wisdom) • Verses- 29,31,32 (pride & heroism) • Verses- 26,28,63,65 (virtue) • Verses- 52,53,59 (dont's) • Verses- 71,73,75,78 (do's)	8
2	• Approach to day to day work and duties. • Shrimad Bhagwad Geeta : Chapter 2-Verses 41, 47,48, • Chapter 3-Verses 13, 21, 27, 35, Chapter 6-Verses 5,13,17, • 23, 35, • Chapter 18-Verses 45, 46, 48.	8
3	• Statements of basic knowledge. • Shrimad Bhagwad Geeta: Chapter2-Verses 56, 62, 68 • Chapter 12 -Verses 13, 14, 15, 16,17, 18 • Personalit y o f Ro le model. Shrimad Bhagwad Geeta: • Chapter2-Verses 17, Chapter 3-Verses 36,37,42, • Chapter 4-Verses 18, 38,39 • Chapter18 – Verses 37,38,63	8

Suggested reading

1. "Srimad Bhagavad Gita" by Swami Swarupananda Advaita Ashram (Publication Department), Kolkata
2. Bhartrihari's Three Satakam (Niti-sringar-vairagya) by P.Gopinath,Rashtriya Sanskrit Sansthanam, New Delhi.

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	Study of Shrimad-Bhagwad-Geeta will help the student in developing his personality and achieve the highest goal in life .
	CO-2	The person who has studied Geeta will lead the nation and mankind to peace and prosperity .
	CO-3	Study of Neetishatakam will help in developing versatile personality of students.

3 **MAPPING (CO's and PO's)**

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1								2	2	2
2								1	2	3
3								2	2	3

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	3	
3		3

23PH1SE109: PROFESSIONAL ETHICS IN ENGINEERING

COURSE OBJECTIVES

- Provide basic knowledge about engineering Ethics, Variety of moral issues and Moral dilemmas, Professional Ideals and Virtues
- To provide knowledge about Engineers as responsible Experimenters, Research Ethics, Codes of Ethics, Industrial Standards, Exposure to Safety and Risk, Risk Benefit Analysis
- To Have an idea about the Collegiality and Loyalty, Collective Bargaining, Confidentiality, Occupational Crime, Professional, Employee
- To Have an adequate knowledge about MNC's, Business, Environmental, Computer Ethics, Honesty, Moral Leadership, sample Code of Conduct.

UNIT I HUMAN VALUES

Concepts on morals, values and Ethics – Integrity – Work ethic – Service learning – Civic virtue – Respect for others – Living peacefully – Caring – Sharing – Honesty – Courage – Valuing time – Cooperation – Commitment – Empathy – Self confidence – Character – Spirituality – Introduction to Yoga and meditation for professional excellence and stress management.

UNIT II ENGINEERING ETHICS

Senses of 'Engineering Ethics' – Variety of moral issues – Types of inquiry – Moral dilemmas – Moral Autonomy – Kohlberg's theory – Gilligan's theory – Consensus and Controversy – Models of professional roles - Theories about right action – Self-interest – Customs and Religion – Uses of Ethical Theories.

UNIT III ENGINEERING AS SOCIAL EXPERIMENTATION

Engineering as Experimentation – Engineers as responsible Experimenters – Codes of Ethics – A Balanced Outlook on Law.

UNIT IV COMMERCIAL AWARENES

Commercial awareness and business acumen, Planning ahead and future proofing, Professional self-awareness, Data analysis and manipulation

UNIT V GLOBAL ISSUES

Multinational Corporations – Environmental Ethics – Computer Ethics – Weapons Development – Engineers as Managers – Consulting Engineers – Engineers as Expert Witnesses and Advisors – Moral Leadership –Code of Conduct – Corporate Social Responsibility.

REFERENCES :

1. Mike Martin and Roland Schinzinger, "Ethics in Engineering", McGraw Hill, New York (2005).
2. Charles E Harris, Michael S Pritchard and Michael J Rabins, "Engineering Ethics – Concepts and Cases", Thompson Learning, (2000).

3. Charles D Fleddermann, "Engineering Ethics", Prentice Hall, New Mexico, (1999).
4. John R Boatright, "Ethics and the Conduct of Business", Pearson Education, (2003)
5. Edmund G Seebauer and Robert L Barry, "Fundamentals of Ethics for Scientists and Engineers", Oxford University Press, (2001)
6. Prof. (Col) P S Bajaj and Dr. Raj Agrawal, "Business Ethics – An Indian Perspective", Biztantra, New Delhi, (2004)
7. David Ermann and Michele S Shauf, "Computers, Ethics and Society", Oxford University *Press, (2003)*

2	**COURSE OUTCOMES: Students are able to**	
	CO-1	The students will understand the basic perception of profession, professional ethics, various moral & social issues, industrial standards, code of ethics and role of professional ethics in engineering field.
	CO-2	The students will aware of professional rights and responsibilities of an engineer, responsibilities of an engineer for safety and risk benefit analysis.
	CO-3	The students will acquire knowledge about various roles of engineers in variety of global issues and able to apply ethical principles to resolve situations that arise in their professional lives.
3	**MAPPING (CO's and PO's)**	

Course Outcomes	Program Outcomes									
	1	2	3	4	5	6	7	8	9	10
1							1	2	3	
2									3	2
3									3	2

MAPPING (CO's and PSO's)

Course Outcomes (CO)	Program Specific Outcomes (PSO)	
	1	2
1		
2	3	2
3	1	3

List of Value Added Courses Offered to All Department Students

Course code	Course	Teaching Scheme			Credits	Marks		Total Marks
		Th	Tuto	Lab		IN	EX	
23PH1VA001	Software Application in Match Analysis (Theory and Practical)	**3**	**0**	**6**	**6**	**50**	**150**	**200**
23PH1VA002	Ms Excel for Sports science (Theory and Practical)	**3**	**0**	**6**	**6**	**50**	**150**	**200**
23PH1VA003	Practical Application of LaTeX (Theory and Practical)	**3**	**0**	**6**	**6**	**50**	**150**	**200**

23PH1VA001 Software Application in Match Analysis

Unit 1: Introduction to Match Analysis **9**

Match Analysis - Rules, notation and variable of the Cricket, Volley ball and Basketball Match - Case study: Score sheet for any sports in university

Unit 2: Match Analysis in Excel **9**

Introduction to Excel - Creating the tagging table in the Excel sheet - Case Study: Tagging in Excel any international matches (Cricket, volleyball, football and basketball)

Unit 3: Dartfish tagging panel creation **9**

Introduction to Dartfish - Panel creation and key features

Unit 4: Tagging the match **9**

Case Study: Tagging in Dartfish any international matches (Cricket, volleyball, football and basketball)

Unit 5: Documentation and presentation **9**

Dartfish analysis - Exporting the data in Excel - Analysing the data through graphs comparison of the 2 teams - Presentation the post match Analysis

Reference

1. How to Code Sport with Microsoft Excel
https://thevideoanalyst.com/code-sport-microsoft-excel/
2. Dartfish feedback and support
https://support.dartfish.tv/support/solutions/folders/27000053999
3. Excel for Analysts
http://thevideoanalyst.com/courses/excel-for-analysts/
4. Handbook of Soccer Match Analysis: A Systematic Approach to Improving Performance Book by A. Mark Williams, Christopher Carling, and Thomas Reilly

23PH1VA002 Ms Excel for Sports science

Objective

- Implementation of the MS Excel Analysis skill in the Sports data

Unit 1: Basic Excel operation **9**

Introduction to Excel - creating and saving spreadsheet - Basic formula's - Sum, Average, Count, CountTA, IF, TRIM, Max & Min, Case study - collecting sports information from the class students and perform the formula

Unit 2: Database in Excel **9**

Database - Collecting sports Database from the Google form - filters operation - DAVERAGE - DCOUNT - DCOUNTA - DGET - DMAX - DMIN - DPRODUCT - DSTDEV - DSYSEVP - DSUM - DVAR - DVARP - Case study: Analysing the Database of the sports event

Unit 3: Analysis through charts **9**

Bar chart - column chart - pictograph - line graph - pie.
chart - area chart - XY graphs - Histogram - Case study: Analysis the the sports performance of the class students

Unit 4: Advanced Analysis **9**

Pivot table, VLOOKUP, XLOOKUP, Tool park in excel Case study: performance of Sports Retail store

Unit 5: Documentation and presentation **9**

Microsoft excel in cloud, Google spreadsheet, E-mailing the data, presentation of the data and output analysis, Case study: 3 Students in group will Presentation of the sports project using Excel

Outcome

- Understanding the MS EXCEL formulas and tool for sports data analysis
- Implementation for charts and graphs to represent the data output for Analysis documentation and presentation

Reference

1. Excel 2019 Bible
Book by John Walkenbach, Michael Alexander, and Richard Kusleika
2. Excel for dummies Book by Greg Harvey
3. Statistical Sports Models in Excel book by Andrew Mack

23PH1VA003 Practical application of LaTeX

Objective

1. To learn the LaTeX programming for the report and documentation for research

Outcome

1. Research thesis and journals can be created through LaTeX software

List of Experiments

1 - Report writing
2 - Letter writing
3 - Mathematical typesetting
4 - Equations and Numbering equation
5 - Tables and figures
6 - Presentation using Beamer
7- Bibilography
8 - Feedback diagram with maths

Outcome

1. Research thesis and journals can be created through LaTeX software

Reference

1. Latex Document Preparation System Users
Book by Leslie Lamport
2. ITB Spoken tutorial https://spoken-tutorial.org/