APPENDIX - BL

MADURAIKAMARAJUNIVERSITY

(University with Potential for Excellence)

B.Sc. Physical Education

CHOICE BASED CREDIT SYSTEM

SYLLABUS

(For the candidates admitted from the academic 2023-2024 onwards)

1. Introduction

We live in an era where people have realized the importance of sports and fitness**.** This field is expanding exponentially each passing day. Physical activity must be learned; hence there is a need for thinking on the part of the intellectual mechanism, with a resulting acquisition of knowledge. Physical activities are essential for the development of a student's scientific insight, intelligence and superior type of reflective thinking. **Playing sports at the college or school level** need no longer be just a hobby. Today we can shape the students future in the field by sticking around with **physical fitness and pursuing their career in Physical Education.**

B.Sc., Physical Education is an undergraduate Physical Education programme. The programme defines that encourages psychomotor learning in a play or movement exploration setting. There are some components which are to be covered during time such as physical fitness components like: speed, endurance, agility, flexibility, co-ordinative abilities and body composition etc.

This programme teaches and provides the students to know-how of that how scientific methods are used to examine physical activity and exercise. The students are introduced that how important physical activity and exercise are for a healthy life. The main subjects studied are Foundations, Organisation & Administration in Physical Education, Anatomy & Exercise Physiology, Test & Measurements Concepts in Physical Education, Yoga Education, Statistics & Computer

Applications in Physical Education, etc. Besides the students are more exposed to practical learning on yoga, athletics and various games & sports.

2. Eligibility for Admission :

Candidates must have passed the Higher Secondary Examinations, Government of Tamilnadu or any other examination accepted by the Syndicate as its equivalent.

2.1 DURATION OF THE COURSE

The students shall undergo the prescribed course of study for a period of three academic years (Six semesters).

2.2 MEDIUM OF INSTRUCTION

English

3. 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.

LEARNING OUTCOMES-BASED CURRICULUM FRAMEWORK GUIDELINES BASED REGULATIONS FOR UNDER GRADUATE PROGRAMME	
Programme:	**B.Sc. PHYSICAL EDUCATION**
Programme Code:	
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 glob al 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 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.

	PSO5: Research related skills: Formulate research questions, conduct literature reviews, design and execute research studies, communicate research findings and collaborate in research projects. **PSO6: Self-directed & Lifelong Learning:** Set learning goals, manage their own learning, reflect on their learning, adapt to new contexts, seek out new knowledge, collaborate with others and to continuously improve their skills and knowledge, through ongoing learning and professional development, and contribute to the growth and development of their field.

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 interdisciplinary nature are incorporated as Elective courses, covering conventional topics.

Value additions in the Revamped Curriculum:

Semester	Newly introduced Components	Outcome / Benefits
I	**Foundation Course** To ease the transition of learning from higher secondary to higher education, providing an overview of the pedagogy of learning abstract Statistics and simulating mathematical concepts to real world.	• Instil confidence among students • Create interest for the subject
I, II, III, IV	**Skill Enhancement papers** (Discipline centric / Generic / Entrepreneurial)	• Industry ready graduates • Skilled human resource • Students are equipped with essential skills to make them employable
		• Training on Computing / Computational skills enable the students gain knowledge and exposure on latest computational aspects
		• Data analytical skills will enable students gain internships, apprenticeships, field work involving data collection, compilation, analysis etc.
		• Entrepreneurial skill training will provide an opportunity for independent livelihood • Generates self – employment • Create small scale entrepreneurs • Training to girls leads to women empowerment
		• Discipline centric skill will improve the Technical knowhow of solving real life problems using ICT tools
III, IV, V & VI	Elective papers- An open choice of topics categorized under Generic and Discipline Centric	• Strengthening the domain knowledge • Introducing the stakeholders to the State-of Art techniques from the streams of multi-disciplinary, cross disciplinary and inter disciplinary nature • Students are exposed to Latest topics on Physical Education and Sports, that require a strong sports science back ground. • Emerging topics in higher education / industry /

		communication network / health sector etc. are introduced with hands-on-training, facilitates designing of statistical models in the respective sectors
IV	Computer Skills in Physical Education and Sports	• Exposure to industry moulds students into solution providers • Generates Industry ready graduates • Employment opportunities enhanced
II year Vacation activity	Internship / Industrial Training	• Practical training at the Industry/ Banking Sector / Private/ Public sector organizations / Educational institutions, enable the students gain professional experience and also become responsible citizens.
V Semester	Project with Viva – voce	• Self-learning is enhanced • Application of the concept to real situation is conceived resulting in tangible outcome
VI Semester	Introduction of Professional Competency component	• Curriculum design accommodates all categories of learners; the revised curriculum will comprise of advanced topics in Physical Education and Sports Sciences and allied fields, for those in the peer group / aspiring researchers. • 'Training for Competitive Examinations' –caters to the needs of the aspirants towards most sought - after services of the nation viz, UPSC, ISS, CDS, NDA, Banking Services, CAT, TNPSC group services, etc.
Extra Credits: **For Advanced Learners / Honors degree**		• To cater to the needs of peer learners / research aspirants

Skills acquired from the Courses	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

Credit Distribution for UG Programmes

Sem I	Credit	H	Sem II	Credit	H	Sem III	Credit	H	Sem IV	Credit	H	Sem V	Credit	H	Sem VI	Credit	H
Part 1. Language – Tamil	3	6	Part..1. Language – Tamil	3	6	Part..1. Language – Tamil	3	6	Part..1. Language – Tamil	3	6	5.1 Core Course – \CC IX	4	5	6.1 Core Course – CC XIII	4	6
Part.2 English	3	6	Part..2 English	3	6	Part..2 English	3	6	Part..2 English	3	6	5.2 Core Course – CC X	4	5	6.2 Core Course – CC XIV	4	6
1.3 Core Course – CC I	5	5	2..3 Core Course – CC III	5	5	3.3 Core Course – CC V	5	5	4.3 Core Course – CC VII Core Industry Module	5	5	5. 3.Core Course CC -XI	4	5	6.3 Core Course – CC XV	4	6
1.4 Core Course – CC II	5	5	2.4 Core Course – CC IV	5	5	3.4 Core Course – CC VI	5	5	4.4 Core Course – CC VIII	5	5	5. 4.Core Course –/ Project with viva-voce CC -XII	4	5	6.4 Elective -VII Generic/ Discipline Specific	3	5
1.5 Elective I Generic/ Discipline Specific	3	4	2.5 Elective II Generic/ Discipline Specific	3	4	3.5 Elective III Generic/ Discipline Specific	3	4	4.5 Elective IV Generic/ Discipline Specific	3	3	5.5 Elective V Generic/ Discipline Specific	3	4	6.5 Elective VIII Generic/ Discipline Specific	3	5
1.6 Skill Enhancement Course SEC-1	2	2	2.6 Skill Enhancement Course SEC-2	2	2	3.6 Skill Enhancement Course SEC-4, (Entrepreneurial Skill)	1	1	4.6 Skill Enhancement Course SEC-6	2	2	5.6 Elective VI Generic/ Discipline Specific	3	4	6.6 Extension Activity	1	-
1.7 Skill Enhancement -(Foundation Course)	2	2	2.7 Skill Enhancement Course –SEC-3	2	2	3.7 Skill Enhancement Course SEC-5	2	2	4.7 Skill Enhancement Course SEC-7	2	2	5.7 Value Education	2	2	6.7 Professional Competency Skill	2	2
						3.8 E.V.S.	-	1	4.8 E.V.S	2	1	5.8 Summer Internship /Industrial Training	2				
	23	**30**		**23**	**30**		**22**	**30**		**25**	**30**		**26**	**30**		**21**	**30**
Total – 140 Credits																	

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

First Year – Semester-I

Part	List of Courses	Credit	No. of Hours
Part-1	Language – Tamil	3	6
Part-2	English	3	6
Part-3	Core Courses & Elective Courses [in Total]	13	14
	Skill Enhancement Course SEC-1	2	2
Part-4	Foundation Course	2	2
		23	**30**

Semester-II

Part	List of Courses	Credit	No. of Hours
Part-1	Language – Tamil	3	6
Part-2	English	3	6
Part-3	Core Courses & Elective Courses including laboratory [in Total]	13	14
Part-4	Skill Enhancement Course -SEC-2	2	2
	Skill Enhancement Course -SEC-3 (Discipline / Subject Specific)	2	2
		23	**30**

Second Year – Semester-III

Part	List of Courses	Credit	No. of Hours
Part-1	Language - Tamil	3	6
Part-2	English	3	6
Part-3	Core Courses & Elective Courses including laboratory [in Total]	13	14
Part-4	Skill Enhancement Course -SEC-4 (Entrepreneurial Based)	1	1
	Skill Enhancement Course -SEC-5 (Discipline / Subject Specific)	2	2
	E.V.S	-	1
		22	**30**

Semester-IV

Part	List of Courses	Credit	No. of Hours
Part-1	Language - Tamil	3	6
Part-2	English	3	6
Part-3	Core Courses & Elective Courses including laboratory [in Total]	13	13
Part-4	Skill Enhancement Course -SEC-6 (Discipline / Subject Specific)	2	2
	Skill Enhancement Course -SEC-7 (Discipline / Subject Specific)	2	2
	E.V.S	2	1

		25	**30**

Third Year
Semester-V

Part	List of Courses	Credit	No. of Hours
Part-3	Core Courses including Project / Elective Based	22	26
Part-4	Value Education	2	2
	Internship / Industrial Visit / Field Visit	2	2
		26	**30**

Semester-VI

Part	List of Courses	Credit	No. of Hours
Part-3	Core Courses including Project / Elective Based & LAB	18	28
Part-4	Extension Activity	1	-
	Professional Competency Skill	2	2
		21	**30**

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	13	13	13	13	22	18	92
Part IV	4	4	3	6	4	1	22
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.**

Methods of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	25 Marks
	Assignments	
	Seminars	
	Attendance and Class Participation	
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	

B.Sc. PHYSICAL EDUCATION
Programme Structure

Sem.	Part	Course Code	Title of the Paper	T/P	Cr.	Hrs./ Week	Max. Marks		
							Int.	Ext.	Total
I	I	T/OL	Language--- Tamil	T	3	6	25	75	100
	II	E	English	T	3	6	25	75	100
	III	CC	Theory–I: Foundation of Physical Education and Sports	T	5	5	25	75	100
		CC	Theory - II: Anatomy and Physiology	T	5	5	25	75	100
		AL - IA	Yoga Education	T	3	4	25	75	100
		AL - IA	Practical – Yoga Education	P	2	2	25	75	100
	IV	SEC -I	Value Education	T	2	2	25	75	100
			Total		**23**	**30**	**175**	**525**	**700**
II	I	T/OL	Language Tamil	T	3	6	25	75	100
	II	E	English	T	3	6	25	75	100
	III	CC	Theory–III: Theories of Major Games - I	T	5	5	25	75	100
		CC	Practical-I: Theories of Major Games - I	P	5	5	25	75	100
		AL - IB	Theories of Track & Field- I	T	3	4	25	75	100
		AL - IB	Practical – Theories of Track & Field- I	P	2	2	25	75	100
	IV	SEC -II	Environmental Studies	T	2	2	25	75	100
			Total		**23**	**30**	205	495	**700**

III	I	T/OL	Language Tamil	T	3	6	25	75	100
	II	E	English	T	3	6	25	75	100
	III	CC	Theory-IV: Organisation Administration and Methods in Physical Education	T	3	6	25	75	100
		CC	Theory-V: Scientific Principles of Sports Training	T	5	5	25	75	100
		CC	Theory – VI : Test and Measurement & Evaluation	T	5	5	25	75	100
		AL -IIA	Theories of Track & Field- II	T	3	4	25	75	100

		AL -IIA	Practical – Theories of Track & Field- II	P	1	1	25	75	100
	IV	SEC -III	Entrepreneurship	T	2	1	25	75	100
			Total		**25**	**30**	**255**	**645**	**900**
IV	I	T/OL	Language Tamil	T	3	6	25	75	100
	II	E	English	T	3	6	25	75	100
	III	CC	Theory–VII: Exercise Physiology	T	5	5	25	75	100
		CC	Theory-VIII: Theories of Major Games - II	T	5	5	25	75	100
		CC	Practical –II: Theories of Major Games - II	P	3	3	25	75	100
		AL - IIB	Theory – Sports Talent Identification	T	2	2	25	75	100
		AL - IIB	Practical – Sports Talent Identification	P	2	2	25	75	100
	IV	NME- II	1.Adipadai Tamil 2.Advance Tamil 3. Small Business Management / MOOC'S		2	1	25	75	100
			Total		**25**	**30**	**230**	**570**	**800**
V	III	CC	Theory-IX: Sports Biomechanics and Kinesiology	T	4	5	25	75	100
		CC	Theory-X: Sports Psychology and Sociology	T	4	5	25	75	100
		CC	Theory–XI: Computer Application in Physical Education	T	4	5	25	75	100
		CC	Theory-XII: Research and Elementary Statistics	T	4	5	25	75	100
		CC	Theory- XIII: Sports Medicine and Physiotherapy	T	3	4	25	75	100
		CC	Theory- XIV: Sports Nutrition	T	3	4	25	75	100
			Career development/ employability skills		2	2	25	75	100
			Internship		2				
			Total		**26**	**30**	**180**	**420**	**600**
VI	III	DSE					**150**	**250**	**400**
			Or						
			Theory I: Sports Management	T	6	6	25	75	100
			Theory II: Health Education and First Aid	T	6	6	25	75	100
			Theory III: Theories Major of Games - III	T	6	6	25	75	100
			Practical III : Theories of Major	P	6	6	25	75	100

			Games - III						
			Library / Yoga etc			2			
			Career development /employability skills/Field trip		-	4	-	-	
					24	**30**	**100**	**300**	**400**
			Or						
			Project		6	10	25	75	100
			Theory I: Care and Prevention of Athletic Injuries	T	6	6	25	75	100
			Theory II: Theories of Major Games - IV	T	6	6	25	75	100
			Practical III: Theories of Major Games - IV	P	6	6	25	75	100
			Library / Yoga / Career development /employability skills/Field trip etc			2			
			Total		**24**	**30**	**100**	**300**	**400**
			Grand Total		**140**	**--**	**--**	**--**	**4100**

Remarks: English Soft Skill Two Hours Will be handled by English Teachers (4+2 = 6 hours for English).

Sem.	Part	Title of the Paper	Cr.	Hrs./ Week	Max. Marks		
					Int.	Ext.	Total
I	III	Professional English for Physical Education -I	4	5	25	75	100
II		Professional English for Physical Education -II	4	5	25	75	100

- 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 – I				
	CORE COUSE - 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				
	YOGA EDUCATION	**T/P**	**Credits**	**Hours**
		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 - I				
		T/P	Credits	Hours
	PRACTICAL – Yoga Education	**P**	**2**	**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				
	Core Course – III	**T/P**	**Credits**	**Hours**
	THEORIES OF MAJOR GAMES – I	**T**	**5**	**5**
(Major Games: Football, Basket Ball & Volleyball)				
Unit-I	Origin, History and Development of the Game – International, National and State Level Organization.			
Unit-II	Fundamental Skills – Lead – Up Games, Various Symptoms of Play – Selection of Players.			
Unit-III	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
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, Sports Publications, Raja Street, Coimbatore.

Dr. P.Mariayyah, Volleyball, 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 - II				
	Practical - THEORIES OF MAJOR GAMES – I (Football, Basket Ball & Volleyball)	**T/P**	**Credits**	**Hours**
		p	**5**	**5**

Testing on:

1. Fundamental Skills
2. Finer Skills
3. Playing Ability / Performance
4. Officiating Techniques

Scheme of Assessment:

5.	Fundamental Skill & Defensive and Offensive Skill	-	35
6.	Playing ability / Performance	-	20
7.	Officiating Technique	-	10
8.	Record note	-	10
	TOTAL	-	75

Books for Reference:

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

Dr. P. Mariayyah, volleyball, Sports Publication, 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 - II				
	THEORIES OF TRACK & FIELD – I	**T/P**	**Credits**	**Hours**
		T	**3**	**4**
(Sprint, Middle Distance and Long Distance Race)				
Unit-I	Origin, History and Development of the Game – International, National and State Level Organization.			
Unit-II	Fundamental Skills – Lead – Up Games,– Selection ofPlayers.			
Unit-III	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
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:

Conling David, Athletics, London, Robert Hale, 1980

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

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

Conling David, (1980). *Athletics,* London Robert Hale.

Semester - II				
		T/P	**Credits**	**Hours**
	Practical - THEORIES OF TRACK & FIELD – I (Sprint, Middle Distance and Long Distance Race)	**p**	**2**	**2**

Testing on:

1. Fundamental Skill.
2. Finer Skill.
3. Skill Ability / Performance
4. Officiating Techniques

Scheme of Assessment:

5.	Fundamental Skill.	-	35
6.	Skill Ability / Performance	-	20
7.	Officiating Technique	-	10
8.	Record note	-	10
	TOTAL	-	75

Books for Reference:

Conling David, Athletics, London, Robert Hale, 1980

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

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

Conling David, (1980). *Athletics,* London Robert Hale.

Semester - III				
	Core Course – IV	**T/P**	**Credits**	**Hours**
	ORGANIZATION ADMINSTRATION AND METHODS IN PHYSCIAL EDUCATION	**T**	**3**	**6**
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 – V	**T/P**	**Credits**	**Hours**
	SCENTIFIC PRINCIPLES OF SPORTS TRAINING	**T**	**5**	**5**
Unit-I	Introduction–Meaning and Definition of Sports Training – Principles of Sports Training.			
Unit-II	Training Load and Recovery – Factors of Load – Load intensity, Load Volume – judgement of Load – Relationship between Load and Adaptation Over Load.			
Unit-III	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-IV	Training plan – Periodisation – stages of periodisation – Types of Periodisation – Preparatory period – Competition period – Transitional period – long term and short term plans – Cyclic process of training.			
Unit -V	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.			

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 - III				
	Core Course – VI **TEST AND MEASUREMENT & EVALUATION**	**T/P**	**Credits**	**Hours**
		T	**5**	**5**
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				
	THEORIES OF TRACK & FIELD – II	**T/P**	**Credits**	**Hours**
		T	**3**	**4**
(Field Events: Jumps & Throws)				
Unit-I	Origin, History and Development of the Game – International, National and State Level Organization.			
Unit-II	Fundamental Skills – Lead – Up Games,– Selection ofPlayers.			
Unit-III	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
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:

Conling David, Athletics, London, Robert Hale, 1980

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

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

Conling David, (1980). *Athletics,* London Robert Hale.

Semester - III				
		T/P	**Credits**	**Hours**
	Practical - THEORIES OF TRACK & FIELD – II **(Field Events: Jumps & Throws)**	**p**	**1**	**1**

Testing on:

1. Fundamental Skill.
2. Finer Skill.
3. Skill Ability / Performance
4. Officiating Techniques

Scheme of Assessment:

5.	Fundamental Skill.	-	35
6.	Skill Ability / Performance	-	20
7.	Officiating Technique	-	10
8.	Record note	-	10
	TOTAL	-	75

Books for Reference:

Conling David, Athletics, London, Robert Hale, 1980

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

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

Conling David, (1980). *Athletics*, London Robert Hale.

Semester - IV				
	Core Course – VII	**T/P**	**Credits**	**Hours**
	EXERCISE PHYSIOLOGY	**T**	**5**	**5**
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 – VIII	**T/P**	**Credits**	**Hours**
	THEORIES OF MAJOR GAMES – II	**T**	**5**	**5**
(Major Games: BADMINTON, BALL BADMINTON, TENNIS)				
Unit-I	Origin, History and Development of the Game – International, National and State Level Organization.			
Unit-II	Fundamental Skills – Lead – Up Games, Various Symptoms of Play – Selection of Players.			
Unit-III	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
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:

Ball Badminton Federation of India". Archived from the original on 7 July 2011. Retrieved 11 May 2011.

Game history" on Ball Badminton Federation of India website". Archived from the original on 3 December 2009.

William J. Baker (1988). "Sports in the Western World". p. 182. University of Illinois Press,

"Tennis | Rules, History, Prominent Players, & Facts | Britannica". Encyclopædia Britannica, Inc. Retrieved 25 November 2021.

Badminton Collection – Special Collection (SPC.10) Archived 14 December 2007 at archive.today online at staffs.ac.uk (accessed 3 April 2008)"

Semester - IV				
	Core Course – III **Practical - THEORIES OF MAJOR GAMES – II** **(Major Games: BADMINTON, BALL BADMINTON, TENNIS)**	**T / P**	**Credits**	**Hours**
		p	**3**	**3**

Testing on:

1. Fundamental Skills
2. Finer Skills
3. Playing Ability / Performance
4. Officiating Techniques

Scheme of Assessment:

5.	Fundamental Skill & Defensive and Offensive Skill	-	35
6.	Playing ability / Performance	-	20
7.	Officiating Technique	-	10
8.	Record note	-	10
	TOTAL	-	75

Books for Reference:

Ball Badminton Federation of India". Archived from the original on 7 July 2011. Retrieved 11 May 2011.

Game history" on Ball Badminton Federation of India website". Archived from the original on 3 December 2009.

William J. Baker (1988). "Sports in the Western World". p. 182. University of Illinois Press,

"Tennis | Rules, History, Prominent Players, & Facts | Britannica". Encyclopædia Britannica, Inc. Retrieved 25 November 2021.

Badminton Collection – Special Collection (SPC.10) Archived 14 December 2007 at archive.today online at staffs.ac.uk (accessed 3 April 2008)"

Semester - IV				
		T/P	Credits	Hours
	SPORTS TALENT IDENTIFICATION	**T**	**2**	**2**
Unit-I	**Introduction to Talent Identification** Meaning: Talent identification - Need, importance and scope - Principles of talent identification. - Role of Physical Education teacher / coach in talent identification.			
Unit-II	**Understanding Human Body** Genetics and Environment and their role in sports performance. Body types and their relation to sports. Chronological, Anatomical, Mental and Physiological ages in individuals. Basic Anthropometric assessment – Physical Activity (IPAQ).			
Unit-III	**Fitness Tests** Fitness testing and Fitness education - Physical Efficiency and sports aptitude test (PESAT) Khelo India Battery test – World B Test (SDAT Test)			
Unit-IV	**Skill Tests for talent identification** Skill tests for Ballgames – Basketball, Volleyball, Football - Skill test for Racket games – Badminton, TennisSkill test for Athletic abilities – Running, Jumping, Throwing			
Unit -V	**Psychological and Technology based Fitness Testing** - Benefits of Technology based fitness app and psychological assessment. Mobile app Fitness assessment – Beep test, Skin fold, BMI - Psychological assessment – Anxiety, Aggression, mental toughness, self-efficacy, Personality Test, Strength Inventory Test.			

Books for References:

A.Yobu. Test, Measurement and Evaluation in Physical Education, Friends Publication, 2010.

Mahaboobjan, Test, Measurement and Evaluation in Physical Education, Kalpaz Pub, 2010

Joseph Baker, Steve, Jorg, Talent Identification and Development in Sport, Routledge publication, 2010.

Semester - IV				
		T/P	**Credits**	**Hours**
	PRACTICAL – SPORTS TALENT IDENTIFICATION	**P**	**2**	**2**

SPORTS TALENT IDENTIFICATION : Testing the Listed

1. Fitness Tests.
2. Skill Tests for talent identification.
3. Psychological and Technology based Fitness Testing.

Books for Reference:

A.Yobu. Test, Measurement and Evaluation in Physical Education, Friends Publication, 2010.

Mahaboobjan, Test, Measurement and Evaluation in Physical Education, Kalpaz Pub, 2010

Joseph Baker, Steve, Jorg, Talent Identification and Development in Sport, Routledge publication, 2010.

Semester - V				
	Core Course – IX	**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 – X	**T/P**	**Credits**	**Hours**
	SPORTS PSYCHOLOGY & SOCIOLOGY	**T**	**4**	**5**
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 - V				
	Core Course – XI **COMPUTER APPLICATION IN PHYSICAL EDUCATION**	**T/P** **T**	**Credits** **4**	**Hours** **5**
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), Flash drives, 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:

Cassel. P and Hart. M Windows 98, Techmedia , New Delhi, 1998

Norton. P, Complete Guide to Windows, BPB Publication, New Delhi, 1998

Teach Yourself Excel 97 for Windows, BPB Publication, New Delhi, 1998

Mastering Power Point for Windows, BPB Publication New Delhi, 1996

Computer Basics, BPBP Publications, New Delhi.

Computer Concepts and Facts, BPB Publication, New Delhi.

Handbook for Windows, Power Point and Excel.

National Institute for Computer Education, Chennai

Semester - V				
	Core Course –XII **RESEARCH AND ELEMENTARY STATISTIC**	**T/P**	**Credits**	**Hours**
		T	**4**	**5**
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 –XIII	**T/P**	**Credits**	**Hours**
	SPORTS MEDICINE AND PHYSIOTHERAPY	**T**	**3**	**4**
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 – XIV **SPORTS NUTRITION**	**T/P**	**Credits**	**Hours**
		T	**3**	**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 for thirsty 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.

Book for References:

William D. Mc Arodle Frank I. Katch Victor L Katch Exercise Physiology Energy, Nutrition and Human performance Lea & Febiger Philadelphia

Richard W. Bowers on 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. Mosby Company.

David H. Clarke exercise Physiology prentice – Hall, Inc. Englewood Cliffs, New Jersey.

Larry G. Shaver Essentials of Exercise Physiology subject publications.

Semester - VI				
	DSE	**T/P**	**Credits**	**Hours**
	SPORTS MANAGEMENT	**T**	**6**	**6**
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 (10^{th} 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				
	DSE	**T/P**	**Credits**	**Hours**
	HEALTH EDUCATION AND FIRST AID	**T**	**6**	**6**
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.

Semester - VI				
	DSE **THEORY III – THEROIRES OF MAJORGAMES - III** **(Major Games: Cricket, Hockey and Kho-Kho)**	**T/P** **T**	**Credits** **6**	**Hours** **6**
Unit-I	Origin, History and Development of the Game – International, National and State Level Organization.			
Unit-II	Fundamental Skills – Lead – Up Games, Various Symptoms of Play – Selection of Players.			
Unit-III	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
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. Anil Sharma, O.P. Sharma Rules of Sports, Sports Publication, 4264/3 Ansari Road New Delhi – 2.

Wein Harat "The Science of Hockey" London Pelham Books, 1979

Tyson Frank "The Cricket Coaching Manual", Calcutta, Rupa & Co, 1985 Text book of kho – kho :Dr. kavitha varma;2015 International E- publication

Semester - VI				
	DSE	**T/P**	**Credits**	**Hours**
	Practical - THEORIES OF MAJOR GAMES – III (Major Games: Cricket, Hockey and Kho-Kho)	**p**	**6**	**6**

Testing on:

1. Fundamental Skills
2. Finer Skills
3. Playing Ability / Performance
4. Officiating Techniques

Scheme of Assessment:

1. Fundamental Skill & Defensive and Offensive Skill	-	35
2. Playing ability / Performance	-	20
3. Officiating Technique	-	10
4. Record note	-	10
TOTAL	-	75

Books for Reference:

Dr. Anil Sharma, O.P. Sharma Rules of Sports, Sports Publication, 4264/3 Ansari Road New Delhi – 2.

Wein Harat "The Science of Hockey" London Pelham Books, 1979

Tyson Frank "The Cricket Coaching Manual", Calcutta, Rupa & Co, 1985 Text book of kho – kho :Dr. kavitha varma;2015 International E- publication

Semester - VI				
	DSE	**T/P**	**Credits**	**Hours**
	CARE AND PREVENTION OF ATHLETIC INJURIES	**T**	**6**	**6**
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 - VI				
	DSE	**T/P**	**Credits**	**Hours**
	THEORY III – THEROIRES OF MAJORGAMES - IV **(Major Games: Handball Kabaddi, Table Tennis)**	**T**	**6**	**6**
Unit-I	Origin, History and Development of the Game – International, National and State Level Organization.			
Unit-II	Fundamental Skills – Lead – Up Games, Various Symptoms of Play – Selection of Players.			
Unit-III	Training: Warm – up Technical Training – Tactical Training – Coaching Programme			
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:

1. Rao C.V. (1971). Kabaddi. Patiala NIS Publication.
2. Dr. P. Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.
3. Winning table tennis: Skill, drill and strategies;author:holowchak,04 june 2020
4. Table tennis :step to success; Author: Richard MacAfee,01 June 2009
5. Dr.P.Mariayyah, *Sports & Games,* Coimbatore. Teachers Publication.

Semester - VI				
	DSE	**T/P**	**Credits**	**Hours**
	Practical - THEORIES OF MAJOR GAMES – IV (Major Games: Cricket, Hockey and Kho-Kho, Table Tennis)	**p**	**6**	**6**

Testing on:

1. Fundamental Skills
2. Finer Skills
3. Playing Ability / Performance
4. Officiating Techniques

Scheme of Assessment:

5. Fundamental Skill & Defensive and Offensive Skill - 35
6. Playing ability / Performance - 20
7. Officiating Technique - 10
8. Record note - 10

TOTAL - 75

Books for Reference:

1. Rao C.V. (1971). Kabaddi. Patiala NIS Publication.
2. Dr. P. Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.
3. Winning table tennis: Skill, drill and strategies;author:holowchak,04 june 2020
4. Table tennis :step to success; Author: Richard MacAfee,01 June 2009
5. Dr.P.Mariayyah, *Sports & Games,* Coimbatore. Teachers Publication.