Learning Outcomes-Based Curriculum Framework (LOCF)

Department of Physical Education and Sports

School of Education

M.P.Ed. Programme

Central University of Haryana

Mahendergarh

Scheme and Syllabus

M.P.Ed
(Master of Physical Education)

Depart of Physical Education and Sports
School of Education

Academic Session 2026-27

M.P.Ed Semester- I

S. No.	Course Credit	Course Code	Course Title	Credits (Theory)	Credits (Tutorial/ Practicum)	Credits (Practical)	Class Teaching / Field Based Activity Hours per week
1	4	SOE PES 010101 C3104	Information and Communication Technology (ICT) in Physical Education	3	1	0	4
2	4	SOE PES 010102 C4004	Theory of Athletics	4	0	0	4
3	4	SOE PES 010103 C4004	Physiology of Exercise	4	0	0	4
Practicum							
4	4	SOE PES 010104 C0134	Teaching of Athletics-Track Events-I	0	1	3	4
5	4	SOE PES 010105 C0134	Specialization Teaching, Coaching and Officiating of Game-I	0	1	3	4
6	1	SOE PES 010106 AE0011	Introduction of Classroom Teaching-I	0	0	1	1
Discipline Centric Elective Courses (DCEC)							
7	3	SOE PES 010101 E3003	Yogic Science	3	0	0	3
8	3	SOE PES 010102 E3003	Adapted Physical Education	3	0	0	3
Total	**24**						
	4	**To take Generic Elective Courses (GEC) / MOOCs from another departments/Platform over a four-semester period.**					

Note: -

1. Minimum 5 Students are compulsory for Specialization Teaching, Coaching and Officiating of Game-I.
2. Students have to select sports specialization of game out of following games **(Volleyball, Kabaddi, Cricket and Gymnastics).**

M.P.Ed Semester- II

S. No.	Course Credit	Course Code	Course Title	Credits (Theory)	Credits (Tutorial/ Practicum)	Credits (Practical)	Class Teaching / Field Based Activity Hours per week
9	4	SOE PES 010207 C4004	Applied Statistics in Physical Education	4	0	0	4
10	4	SOE PES 010208 C4004	Sports Medicine, Athletic care and Rehabilitation	4	0	0	4
11	4	SOE PES 010209 C4004	Research Methodology in Physical Education	4	0	0	4
Practicum							
12	4	SOE PES 010210 C0134	Advance Coaching and Officiating of Athletics-Track Events-II	0	1	3	4
13	4	SOE PES 010211 C0134	Specialization Teaching, Coaching and Officiating of Game-II	0	1	3	4
14	1	SOE PES 010212 AE0011	Methods of Classroom Teaching-II	0	0	1	1
Discipline Centric Elective Courses (DCEC)							
15	3	SOE PES 010203 E3003	Value and Environmental Education in Physical Education	3	0	0	3
16	3	SOE PES 010204 E3003	Sports Engineering	3	0	0	3
Total	**24**						

Note: -

1. Minimum 5 Students are compulsory for Specialization Teaching, Coaching and Officiating of Game-II.
2. Students have to select sports specialization of game out of following games **(Basketball, Kho-Kho, Table Tennis and Netball).**

M.P.Ed Semester- III

S. No.	Course Credit	Course Code	Course Title	Credits (Theory)	Credits (Tutorial/ Practicum)	Credits (Practical)	Class Teaching / Field Based Activity Hours per week
17	4	SOE PES 010313 C4004	Science of Sports Training	4	0	0	4
18	4	SOE PES 010314 C4004	Sports Management and Curriculum Design in Physical Education	4	0	0	4
19	4	SOE PES 010315 C4004	Sports Biomechanics and Kinesiology	4	0	0	4
Practicum							
20	4	SOE PES 010316 C0134	Teaching of Athletics-Field Events-III	0	1	3	4
21	4	SOE PES 010317 C0134	Specialization Teaching, Coaching and Officiating of Game-III	0	1	3	4
22	1	SOE PES 010318 I0011	Classroom Teaching-III, Internship and Field Visit	0	0	1	1
Discipline Centric Elective Courses (DCEC)							
23	3	SOE PES 010305 E3003	Research Proposal and Preparation of Synopsis.	3	0	0	3
24	3	SOE PES 010306 E3003	Sports Journalism and Mass Media	3	0	0	3
Total	**24**						
	4	**To take Generic Elective Courses (GEC) / MOOCs from another departments/Platform over a four-semester period.**					

Note: -

1. Minimum 5 Students are compulsory for Specialization Teaching, Coaching and Officiating of Game-III.
2. Students have to select sports specialization of game out of following games **(Football, Badminton, Hockey and Wrestling).**

3. The students opting for Research Proposal as Discipline Centric Elective Course will be encouraged to take Dissertation as a Discipline Centric Elective Course (DCEC) in the fourth semester.

M.P.Ed Semester- IV

S. No.	Course Credit	Course Code	Course Title	Credits (Theory)	Credits (Tutorial/ Practicum)	Credits (Practical)	Class Teaching / Field Based Activity Hours per week
25	4	SOE PES 010419 C4004	Sports Psychology	4	0	0	4
26	4	SOE PES 010420 C4004	Health Education and Sports Nutrition	4	0	0	4
27	4	SOE PES 010421 C4004	Test, Measurement and Evaluation in Physical Education	4	0	0	4
Practicum							
28	4	SOE PES 010422 C0134	Advance Coaching and Officiating of Athletics-Filed Events-IV	0	1	3	4
29	4	SOE PES 010423 C0134	Specialization Teaching, Coaching and Officiating of Game-IV	0	1	3	4
30	1	SOE PES 010424 SE0011	Classroom Teaching –IV and Leadership Training Program	0	0	1	1
Discipline Centric Elective Courses (DCEC)							
31	3	SOE PES 010407 E0303	Dissertation	0	3	0	3
32	3	SOE PES 010408 E3003	Physical Fitness and Wellness	3	0	0	3
Total	**24**						

Note: -

1. Minimum 5 Students are compulsory for Specialization Teaching, Coaching and Officiating of Game-IV.
2. Students have to select sports specialization of game out of following games **(Handball, Gym Training, Tennis and Boxing)**
3. For more details regarding Credit and other Academic Requirements Ordinance No-XV revised of the University may be referred.

Number of credits per semester

Semester	Core Course	Practicum Course	Discipline Centric Elective Courses (DCEC)	To take Generic Elective Courses (GEC) / MOOCs from another departments/Platform over a four-semester period.	Total
I	12	9	3	4+4 = 8	24
II	12	9	3		24
III	12	9	3		24
IV	12	9	3		24
I-IV GEC					08
				Total	104

Generic Elective Courses (GEC)

S. No.	Semester	Course Code	Course Title	Credits (Theory)	Credits (Tutorial/ Practicum)	Credits (Practical)	Class Teaching / Field Based Activity Hours per week
1	**First**	SOE PES 010101 GEC3014	Wellness through Games and Sports	3	0	1	4
2	**Second**	SOE PES 010202 GEC3014	Health Education and Nutrition	3	0	1	4
3	**Third**	SOE PES 010303 GEC3014	Physical Fitness and Conditioning	3	0	1	4
4	**Fourth**	SOE PES 010404 GEC3014	Exercise and Rehabilitation	3	0	1	4

Semester-I

<table>
<tr><td>Year</td><td>I</td><td rowspan="2">INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN PHYSICAL EDUCATION</td><td>Credits</td><td>4</td></tr>
<tr><td>Semester</td><td>I</td><td>Course Code</td><td>SOE PES 010101 C4004</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
• Acquire knowledge of functionalities of computers in terms of its hardware and software.
• Appraise the importance of information & teaching learning process.
• Explain the usage of MS-Word, MS-Excel and MS- PowerPoint.
• Formulate E-Learning and web-based learning programs.</td></tr>
<tr><td colspan="5">Course Content</td></tr>
<tr><td colspan="2" rowspan="2">Unit -1</td><td colspan="3">Communication through ICT</td></tr>
<tr><td colspan="3">• Concept, Elements, Process & Types of Communication and its Barriers & Facilitators.
• Communicative skills of English-Listening, Speaking, Reading & Writing.
• Scope, Concept, Need & Importance of ICT in Physical Education.
• Administration Challenges in Integrating ICT in Physical Education. Advance AI Tools and Its Benefits.</td></tr>
<tr><td colspan="2" rowspan="2">Unit -2</td><td colspan="3">Computer Networks and its applications</td></tr>
<tr><td colspan="3">• Introduction to various Generation of Computers.
• Applications of Computers Software & hardware, Input, Output & Storage Devices of Computer:
• Computer Memory: Concept & Types Viruses & its Management.
• Types and Functions of Computer Networks, Applications of Web Browsers, Search Engines, Legal & Ethical Issues.</td></tr>
</table>

Unit -3	**Introduction of MS Office and Windows Accessories**
	• MS Word, MS Excel Power Point: Main Features & it's Uses in Physical Education. • MS Access: Creating a Database, Creating a Table, Queries, Forms & Reports on Tables and its Uses in Physical Education. • MS Publisher: Newsletter & Brochure. • Windows Accessories: Notepad, Word pad, Paint and Calculator.
Unit -4	**Web Based Learning & E-Facilities**
	• E-Learning & Web Based Learning (LMS, MOOC, SWAYAM and E-Library) • Video-communication service-Online Class Room (Google Meet, Zoom, Webex, Microsoft Teams) • Google Applications (Google Doc, Google Sheet, Google Slides, Google Form, Jam Board, Google Drive and Google Earth). • Using grammar, Plagiarism, Spell check utilities and printing a document.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming.
Suggested Readings	• Ambekar, A. (2019). *Advanced computing & ICT in physical education* (1st ed., 170 pp.). Sports Educational Technologies. ISBN: 9789384603724. • Gupta, R. (2019). *Education technology in physical education: M.P.Ed textbook as per syllabus* (Hardcover ed.). Friends Publications (India). ISBN: 9789392790027. • Gupta, R. (2021). *Information and communication technology in physical education* (248 pp.). Friends Publications (India). ISBN: 9788172165499. • Singh, D. (2020). *Educational technology and methods of teaching in physical education* (155 pp.). Friends Publications (India). ISBN: 9789388159623.

- Singh, T. N. (2019). *Computer application in physical education: B.P.Ed textbook as per syllabus* (Hardcover ed.). Friends Publications (India). ISBN: 9789388159624.
- Derri, V., & Papadopoulou, S. (2016). *Information and communication technology in physical education*. Journal of Physical Education and Sport, 16(1), 1-5. https://doi.org/10.7752/jpes.2016.01001
- Casey, A., & Goodyear, V. A. (2015). *Digital technologies and learning in physical education: Pedagogical cases*. Routledge.
- Goodyear, V. A., & Armour, K. M. (2018). *The professional learning of physical education teachers: From research to practice*. Routledge.
- Leight, J. (2014). *Using technology in physical education*. Human Kinetics.
- Thomas, K., & Stratton, G. (2006). *What we know about ICT in PE*. British Journal of Teaching Physical Education, 37(1), 6–9.
- Papastergiou, M. (2009). *Exploring the potential of computer and video games for health and physical education: A literature review*. Computers & Education, 53(3), 603–622. https://doi.org/10.1016/j.compedu.2009.04.001
- Kirk, D. (2010). *Physical education futures*. Routledge.
- O'Connor, J., & Dyson, B. (2020). *Students' perspectives on technology use in physical education*. Physical Education and Sport Pedagogy, 25(5), 453–467. https://doi.org/10.1080/17408989.2020.1752646
- Williamson, B., & Piattoeva, N. (2022). *Education governance and datafication*. Routledge.
- Stolz, S. A. (2014). *The philosophy of physical education: A new perspective*. Routledge.

Year	I	THEORY OF ATHLETICS	Credits	4
Semester	I		Course Code	SOE PES 010102 C4004
Learning Outcomes	At the end of the course, the students will be able to: • Explain the general rules and regulations of Athletics defined by IAAF. • Draw a sketch of the standard and non-standard track with the markings of the different track and field events. • Explain and demonstrate the rules and regulations of various race events. • Explain and demonstrate the rules and regulations of various field events.			
Course Content				
Unit -1	**Introduction of Track and Fields** • General Rules and Regulations of Athletics and Officiating: Track, Field and Combined Events. • Introduction and Historical Development of Athletics, World Athletics (formerly IAAF): Structure and Functions • Tie breaking process. • Indian Achievements in Athletics.			
Unit -2	**Track and Field marking procedure** • Standard and Non-Standard Track Layout and Marking (Area in Acre & Square meter). • Marking Procedure for Track Events. • Field events Layout and Marking. • Measurement, equipment standards and safety guidelines.			
Unit -3	**Periodization for Athletic events** • Concept of Periodization. • Physical fitness components of performance in Track & Field. • Load, Recovery, Volume, Intensity			

	• **Sessions Micro, Meso & Macro Cycle.**
Unit -4	Teaching Pedagogy, Tactics and Strategy in Athletic Events, mechanical analysis of run, jump and throw
	• Principles and methods of teaching athletics • Tactile & Techniques preparation for track events • Tactile & Techniques preparation for field events • Athletic equipment's and uses, scoresheets.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Practicum	• Track and Field Lay out and marking. • Track and Field Rules and Regulation. • Track and Field Performance.
Suggested Readings	• Schneider, R. C. (2009). *Ethics of Sport and Athletics: Theory, Issues, and Application*. Wolters Kluwer Health/Lippincott Williams & Wilkins, xxi, 392 p.: ill.; 24 cm. • Zeigler, E. F., & Spaeth, M. J. (1975). *Administrative Theory and Practice in Physical Education and Athletics*. **Website** • https://www.worldathletics.org/about-iaaf/documents/book-of-rules • https://sportsauthorityofindia.nic.in/showimg.asp?ID=580

Year	I	PHYSIOLOGY OF EXERCISE	Credits	4
Semester	I		Course Code	SOE PES 010103 C4004
Learning Outcomes	At the end of the course, the students will be able to: • Explain the meaning of Exercise Physiology in Physical Education and Sports. • Classify the different energy systems of body. • Illustrate the effect of exercise on various systems of body. • Explain the effect of Ergogenic aids and Doping in Sports.			
Course Content				
Unit -1	**Introduction to Exercise Physiology** • Meaning and Definition of Exercise & exercise physiology. • Role & Importance of Exercise Physiology in the field of Physical Education & Sports. • Impact of Exercise on work at cellular level. • Muscle- its types, characteristics and functions. Microscopic structure of muscle fiber. Sliding filament theory of muscular contraction. Types of muscle fibers and sports performance. Muscular adaptations to exercise.			
Unit -2	**Energy System and Recovery Process** • The basic energy systems (carbohydrate metabolism). • Bio-chemical aspects of exercise a) Metabolism of food products. b) Direct and indirect methods of measuring energy cost of exercise. • Recovery process – Physiological aspects of fatigue and Restoration of energy stores. • Electrolyte balance & Water balance.			

Unit -3	**Effect of Exercise on Various System**
	• Work capacity under different environmental conditions a) Hot, Humid and Cold. b) High Altitude. • Immediate effect of exercise/work on various systems of body. • Cardio-respiratory, muscular and thermo-regulatory systems, Alveolar ventilation & second wind. • Physiological Factors influencing Sports Performance.
Unit -4	**Ergogenic Aids in Sports**
	• Ergogenic aids and Doping in Sports. • Effect of drugs & doping on athletic performances. • Diet before, during & after the athletic performance. • Exercise and training in females and older people, physiological aspects of development of strength, endurance, speed, agility & coordination.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming.
Practicum	• Measurement of heart rate and Estimation of Target Heart Rate. • Body composition analysis with various methods. • Measurement of VO2 Max (Field and Laboratory Method). • Blood Pressure measurement (Sphygmomanometer). • Anthropometric equipment's. • Measurement of various lung volumes through spirometer, peak flow meter.

Suggested Readings	• Brown, R. G.(2015). *Fundamentals of Exercise Physiology.* Friends Publication. • Chandi, C. C. (2018). *Human Physiology* (Vol. 12). CBS Publishers. • Fox Stuart Ira (2016). *Human Physiology* (15th Edition). McGraw-Hill Education. • Porcari, J., Bryant, C., & Comana, F. (2015). *Exercise Physiology*. FA Davis. • Varshney & Mona Bedi (2018). *Ghai's Textbook of Practical Physiology*. Jaypee Brothers Medical Publishers. • William D. McArdle (2014). *Exercise Physiology: Nutrition, Energy, And Human Performance* (8th Edition). Lippincott Williams and Wilkins.

<table>
<tr><td>Year</td><td>I</td><td rowspan="2">TEACHING OF ATHLETICS-TRACK EVENTS-I</td><td>Credits</td><td>4</td></tr>
<tr><td>Semester</td><td>I</td><td>Course Code</td><td>SOE PES 010104 C0134</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
Describe the fundamentals of short, medium and long-distance race events.
Design the make-up of standard athletic track.
Demonstrate the starting and finishing positions of different race events.</td></tr>
<tr><td colspan="2" rowspan="2">Course Content</td><td colspan="3">General out-line of the contents of Teaching of Athletic (Track Events)</td></tr>
<tr><td colspan="3">Introduction of the Athletics track events and historical development with special reference to India, Orientation of the students to the play area and equipment used in the athletics track events, Important track events held at National and International levels, distinguished athletic awards and personalities related to the athletics. Warming-up- General free hand exercises, specific work out using equipment. Fundamental skills, lead up activities, General rules and their interpretations, Duties of officials, officiating in class competencies and Intramurals, Marking of the play area. Fundamentals of the events, rules and regulations, measurements of fields.

Each student teacher is expected to take at least five lessons on track events during the course of the semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively.</td></tr>
</table>

Year	I	SPECIALIZATION TEACHING, COACHING AND OFFICIATING OF GAME-I	Credits	4
Semester	I		Course Code	SOE PES 010105 C0134
Learning Outcomes		At the end of the course, the students will be able to: • Explain the fundamentals of any one game opted by the student. • Sketch the ground markings of specific games. • Demonstrate and describe the rules and regulations of specific games. • Illustrate and interpret the rules and regulations of the selected game. • Mentor, officiate and perform other duties for the selected game. • Prepare the coaching lesson plan and design the coaching schedule.		
Course Content		**General out-line of the contents of advance teaching of theory, Coaching and Officiating of Games and Sports.** Introduction of the game/sport and historical development with special reference to India, Orientation of the students to the play area and equipment used in the game/sport, Important tournaments held at National and International levels, Distinguished sports awards and personalities related to the Game/sport. Warming-up- General free hand exercises, specific work out using equipment. Fundamental skills, lead up activities, General rules and their interpretations, Duties of officials, officiating in class competitions and Intramurals, Marking of the play area. Each student teacher is expected to take at least five lessons from any one games opted from **(Volleyball, Kabaddi, Cricket and Gymnastics)** during the course of the I semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively. The students of M.P.Ed. I Semester need to develop skill proficiency in taking officiating lesson on selected above discipline. In view of this, the students shall be provided with advance mechanism of officiating in selected discipline. The duration of the lesson to be conducted by these students shall be in the range of 30 to 45 minutes depending on the class time they are going to handle at school and college level. **Note: students have to select any one game from the above-mentioned games**		

Year	**I**	**INTRODUCTION OF CLASSROOM TEACHING-I**	**Credits**	**1**
Semester	**I**		**Course Code**	**SOE PES 010106 AC0011**
Learning Outcomes		At the end of the course, the students will be able to: • Practice of various teaching skills in real classroom situations and develop professional competencies for profession.		
Course Content		**General out-line of the contents of classroom teaching and practical of the core subjects**		
		Each student teacher is expected to take at least five lessons during the course of the semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively. **The students shall demonstrate teaching ability using various teaching methods. These Lessons should include practical teaching of the core subjects of the semester.**		
Teaching learning process/Transactional Strategies		Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming		

Elective Courses (DCEC)

<table>
<tr><td>Year</td><td>I</td><td rowspan="2">YOGIC SCIENCE</td><td>Credits</td><td>3</td></tr>
<tr><td>Semester</td><td>I</td><td>Course Code</td><td>SOE PES 010101 E3003</td></tr>
<tr><td>Learning Outcomes</td><td colspan="4">At the end of the course, the students will be able to:
State and exemplify the concept of ashtang yogic practices and relaxation techniques.
Demonstrate different types of asana and Pranayama Techniques.
Classify and exhibit various Kriyas and Mudras.
Utilize yoga for psychological and physiological preparation of an athlete.</td></tr>
<tr><td colspan="5">Course Content</td></tr>
<tr><td rowspan="2">Unit -1</td><td colspan="4">Introduction to Sports Medicine and Rehabilitation</td></tr>
<tr><td colspan="4">History, Meaning, Definition, Need and Importance of Yoga.
Various types of Yoga.
Limbs of Yoga -Yama, Niyama, Aasna, Pranayama, Prathyahara, Dharana, Dhyana, Samadhi.
Concept of Yogic Practices; Principles of Breathing– Awareness – Relaxation, Sequence – Counter pose – Time – Place – Clothes – Bathing – Emptying the bowels – Stomach – Diet – No Straining – Age – Contra- Indication – Inverted asana – Sunbathing.</td></tr>
<tr><td rowspan="2">Unit -2</td><td colspan="4">Asanas and Pranayama</td></tr>
<tr><td colspan="4">Loosening exercise: Techniques and benefits.
Asanas: Types- Techniques and Benefits, Surya Namaskar: Methods and benefits.
Pranayama: Types- Methods and benefits.
Nadis and Chakaras Meaning, methods and benefits.</td></tr>
</table>

Unit -3	**Kriyas, Bandhas and Mudras**
	• *Shat Kriyas*- Meaning, Techniques and Benefits of *Neti – Dhati – Kapalapathi- Trataka –Nauli – Basti.* • *Bandhas:* Meaning, Techniques and Benefits of *Jalendra Bandha, Jihva Bandha, Uddiyana Bandha, Mula Bandha.*Meaning, Techniques and Benefits of *Hasta.* • *Mudras, Asamyuktahastam, Samyuktahastam , Mana Mudra, Kaya Mudra, Banda Mudra, Adhara Mudra.* • Meditation: Meaning, Techniques and Benefits of Meditation – Passive and active, *Saguna* Meditation and *Nirguna* Meditation.
Unit -4	**Application of Yoga Exercise**
	• Yoga Supplemental Exercise – Yoga Compensation Exercise – Yoga Regeneration Exercise. • Role of Yoga in Psychological Preparation of athlete. • Effect of Yoga on Physiological System. • Role of Yoga in holistic and spiritual life.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Practicum	**Note:** Laboratory Practical be designed and arranged internally.

Suggested Readings	• Anatharaman, T.N., (1996). *Ancient Yoga and Modern Science.Project of History of Indian Sciences Philosophy & Culture*. • Arya, K. (2011). *Yogic Science*. Friends Publication. • Arya, K. (2013). *Yogic Education*. Friends Publication. • Debnath, K. K. (2010). *Yogic Sciences*. Friends Publication. • Horovitz, E. G., & Elgelid, S. (2015). *Yoga Therapy: Theory and Practice*. Routledge. • Kotecha, Vaidya Rajesh. (2016). *A Beginner's Guide to Ayurveda.* Chakrapani Publications. • Kumar, Dr. Kamakhya, (2008). *Super Science of Yoga.* Standard Publications. Leslie Kamin off & Amy Matthews (2011). *Yoga Anatomy*. Human Kinetics. • Nathial, M. S. (2013). *Yogic Education*. Friends Publication. • Niranjanananda Saraswati, Swami (2012). *Gherenda Samhita*. • Pramod Kumar Sethi (2017). *Yoga and Skin Diseases*. Sports Publication. • Saini, N. (2011). *Yogic and Stress Management.* Friends Publication. • Swami Vivekananda, (2019). *The Complete Book of Yoga : Karma Yoga, Bhakti Yoga, Raja Yoga, Jnana Yoga*. Fingerprint! Publishing. • Tarak Nath Pramanik (2018). *Yoga Education*. Sports Publication.

Year	I	ADAPTED PHYSICAL EDUCATION	Credits	3
Semester	I		Course Code	SOE PES 010102 E3003
Learning Outcomes		At the end of the course, the students will be able to: • Explain the various aspects of Adapted Physical Education and develop understanding on different types of disability. • Articulate special adapted programs for various categories of physical disability. • Explain the use of various aquatic activity programme for disabled. • Classify different rehabilitation programs.		
Course Content				
Unit -1		**Role of Adapted Physical Education** • Meaning & definitions, Aims and objectives, Need and Importance of Adapted Physical Education. • Role of physical education in adapted physical education. • Specific learning disabilities: Common types of learning disabilities their causes, treatment and intervention. • Integration of NEP-2020 principles in Adapted Physical Education.		
Unit -2		**Understanding and Managing the Disability** • Physical Education Programme for disabled of: - Elementary School, Middle School and High School. • Class organization strategies: identifying the cause, embrace special needs, setting high expectations and goals. • Autism Spectrum Disorders (ASD) and attention deficit hyperactivity disorder (ADHD) – features and management through adapted PE. • Unified Sports concept and inclusion strategies.		

Unit -3	**Value of Disability Events**
	• History of Paralympics, Special Olympics and their events. • Aquatic activity programme for disabled. • Adventure-based inclusive recreational adapted yoga for special populations • Importance of Young Athletic Programme (YAP) in early intervention.
Unit -4	**Concept of Rehabilitation and Adapted Games**
	• Meaning, Aims & objectives and Functions of rehabilitation. • Classification of rehabilitation- Occupational rehabilitation, psychological rehabilitation. • Role of physical education in mental health rehabilitation and community-based sports • Role of Artificial Intelligence, Robotics, and Sensor-based devices in rehabilitation
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming.
Suggested Readings	• Auxter, H. (2001). *Adapted Physical Education and Reactions.* Morbey- St: Louis Mirrauri. • Auxter, D., & Pyfer, J. (1989). *Principles and Methods of Adapted Physical Education and Recreation.* Times Mirror Magazine. • Clarke, H. H., & Clarke, D. H. (1978). *Developmental and Adapted Physical Education.* • Kasser, Susan (2013). *Inclusive Physical Activity* (2nd Edition). Knowledge Warehouse Khel. • Kumar, P., Singh, R. M., & Ratnakar, A. (2018). "Role of physical education research activities and their impact in modern day life". *Asian Journal of Multidimensional Research*, 7(2), 420-425. • Sahitya Kendra (2017). *A Text Book of Adapted Physical Education & Sports.* • Sharma, S.R (2019). *Adapted Physical Education*, Friends Publication. • Thind, M. N. (2010), *Special Olympics Bharat Trainer Manuel*. Special Olympics Bharat. • Winnick, J., & Porretta, D. L. (2016). *Adapted Physical Education and Sport* (Ed. 15). Human Kinetics.

Semester-II

Year	I	APPLIED STATISTICS IN PHYSICAL EDUCATION	Credits	4
Semester	II		Course Code	SOE PES 010207 C4004
Learning Outcomes		At the end of the course, the students will be able to: • Explain the importance of statistics in the field of physical education and illustrate the graphical representation of data. • Compute Mean, Median and Mode for grouped and ungrouped data, compute parametric statistical techniques to solve various problems. • Computation of correlation matrix and regression. • Calculation of the One Way ANOVA with equal & unequal sample sizes and define type-I and Type-II errors.		
Course Content				
Unit -1		**Importance of Statistics and types of data** • Meaning of Statistics and Importance of Statistics in Physical Education. • Type of statistical process – descriptive, inferential, comparative, relationship and predictive. • Parametric and Non parametric statistics, Four Levels of Data – Nominal, Ordinal, Interval & Ratio. • Meaning of raw data, single score, grouped data and Discrete & continuous Variables. Graphical representation of Data: Line Diagram, Pie Diagram and Bar Diagram, Frequency Polygon, Frequency Curve, Histogram and Ogives.		
Unit -2		**Data distribution and Construction of norms** • Construction of frequency table – Range of score, Number of intervals, intervals size, tabulation of frequency table. • Application of Measures of Central tendency- Mean, Median and Mode and Application of Measures of Variability- Range, Quartile deviation, Mean deviation, Standard deviation and absolute & relative variability. • Meaning and Properties of Normal Curve and relationship of normal curve to binomial distribution and divergence from normality – Skewness and Kurtosis. • Developing norms in the form of grading, Percentile Scale, T- Scale, Scales based on difficulty ratings		

Unit -3	**Introduction of Correlation and Regression**
	• Concept of correlation & regression: Scatter diagram, linear correlation, rank correlation. • Partial correlation coefficients of first and second order. • Multiple correlation coefficients involving three variables. • Sampling Distribution of Means, Standard Error of Mean, Interval estimates and Point estimates; Coefficients interval for mean.
Unit -4	**Application of different statistical tools**
	• Testing of Hypothesis: Region of Acceptance & Region of Rejection null & alternative Hypotheses: Level of Significance, type I & Type II errors, one tailed & two tailed Tests, degrees of freedom, procedure in testing of hypothesis. • Large Sample test (z-test) for means for one sample and two samples; Small sample test (t-test) for means for one sample and two samples – dependent and independent samples**,** F-test and interpretation of results. • Chi- Square Test for goodness of fit and testing independence of attributes with interpretation of results. • One way Analysis of Variance (ANOVA), One Way Analysis of Co-variance (ANCOVA) Post- hoc Tests – LSD & Scheffe with interpretation of results using SPSS.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming

Practicum	• To prepare the class intervals & write the frequencies by using the tally counts. • Computation of Correlation matrix. • Calculation of partial correlation and multiple correlation. • Calculation of t- ratio for related and unrelated groups. • Calculation of Z- ratio for testing the hypothesis. • Preparing the Percentile Scale. • Calculation of Chi-Square. • Calculation of the One Way ANOVA with equal & unequal sample sizes. • Calculation of the One Way ANCOVA.
Suggested Readings	• Bhunia, A. (2013). "Statistical methods for practice and research (A guide to data analysis using SPSS)". *South Asian Journal of Management*, 20(1), 154. • Cooke, D., & Clarke, G. M. (1989). *A Basic Course in Statistics*. Arnold. • De Muth, J. E. (2014). *Basic Statistics and Pharmaceutical Statistical Applications.* CRC Press. • Dhinu, M.R. (2017). *Applied Statistics in Physical Education & Sports.* Friends Publications. • Gaur Ajai S & Sanjaya S (2009). *Statistical Methods for Practice and Research: A Guide to Data Analysis Using SPSS.* SAGE Publications Pv.t Ltd. • Gupta, B. C., & Walker, H. F. (2005). *Applied Statistics for the Six Sigma Green Belt.* ASQ Press. • Kaur, S. (2017). *Research & Statistics in Physical Education*. Friends Publications. • Rajalakshmi, D. (2018). *Advanced Statistics for Physical Education*. Friends Publications. • Verma, J.P. (2011). *Statistical Methods for Sports and Physical Education*. Tata McGraw Hill Education.

<table>
<tr><td>Year</td><td>I</td><td rowspan="2">SPORTS MEDICINE, ATHLETIC CARE AND REHABILITATION</td><td>Credits</td><td>4</td></tr>
<tr><td>Semester</td><td>II</td><td>Course Code</td><td>SOE PES 010208 C4004</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
Explain the concept, meaning and significance of sports medicine and rehabilitation.
Develop the concept and usage of various therapeutic modalities.
List out different massage techniques and their effects on Sports performance.
Explain the management of sports injuries and demonstrate various therapeutic exercises.</td></tr>
<tr><td colspan="5">Course Content</td></tr>
<tr><td colspan="2" rowspan="2">Unit -1</td><td colspan="3">Introduction to Sports Medicine and Rehabilitation</td></tr>
<tr><td colspan="3">Definition, Need & importance and Concept of Sports Medicine.
Role of Sports Physician and Athletic Trainer in Sports Medicine.
Categories of Athletic Injuries: Traumatic and Overuse and Signs and Symptoms of Inflammation and Stages of Healing.
Introduction to Athletic Rehabilitation, Role of Therapeutic Exercises in Rehabilitation of musculo-skeletal athletic injuries.</td></tr>
<tr><td colspan="2" rowspan="2">Unit -2</td><td colspan="3">Concept of Therapeutic Modalities</td></tr>
<tr><td colspan="3">Meaning and Concept of Therapeutic Modalities.
Therapeutic effects, uses, and contraindications of following therapeutic modalities- Cryotherapy (Ice Therapy) and Short-Wave Diathermy.
Ultra sound Therapy, Transcutaneous Nerve Stimulation (TNS), and LASER Therapy.
Contrast Bath and Paraffin.</td></tr>
</table>

Unit -3	**Massage and its Importance**
	• Meaning, Definition and the role of massage in treatment and rehabilitation of sports injuries. • Massage and Prevention of sports injuries. • Massage and Sports Performance, Pre-Competition, during and Post-Competition phase. • Psychological Aspect of Sports Massage.
Unit -4	**Tools for Rehabilitation**
	• Importance of rehabilitation equipment (Traction units, sliding sheet, shoulder wheel, quadriceps table, wrist rotators, leg curl, wall pulley, finger board). • Bandage –Types of Bandages –strapping/tapping - Application of strapping/tapping and bandage for major joints and body parts. • Low back pain, Common causes, General Care, Stretching and strengthening exercises for low back pain. • Classification of Therapeutic exercise- Active and passive exercise and Balance training, gait training, gym bell exercise.
Teaching learning process/Transactional Strategies	Lecture cum discussion, Power Point presentations, assignments, school observation and report, case study, and problem solving, brainstorming.
Practicum	• Visit to Physiotherapy Centre and Orientation of most commonly used Therapeutic Modalities (Ultrasound, Short wave Diathermy, TNS, and LASER Therapy). • Orientation of most commonly used Massage Techniques in the treatment of sports injuries.

Suggested Readings	• American College of Sports Medicine (2019). ACSM's Body Composition Assessment with Web Resource. Knowledge Warehouse. • Bindal, V.D. (2016). *Therapeutic and Sports Massage*. Agra: Associated Publishing House. • Johnson, J. C. (2011). *Postural Assessment.* Human Kinetics. • Kumar, P. (2019). "Management of Obesity Induced Forward Head Posture Deformities Through Sports". *International Journal of Physical Education, Sports and Health* 6(3): 106-107. • Madden, C. & Netter, F. (2010). *Netter's Sports Medicine*. PA: Philadelphia. Saunders/Elsevier. • Norris, C. M. (2018). *Sports and Soft Tissue Injuries: A Guide for Students and Therapists.* Routledge. • Singh, A. (2014). *Complete Guide to Sports Injuries*. Friends Publications. • Singh, A. (2016). *Athletic Care and Rehabilitation*. Friends Publications. • Uppal, A. K. (2015). *Posture, Athletic Care and First Aid.* Friends Publications.

Year	I	RESEARCH METHODOLOGY IN PHYSICAL EDUCATION	Credits	4
Semester	II		Course Code	SOE PES 010209 C4004
Learning Outcomes		At the end of the course, the students will be able to: • Explain the meaning, nature and scope of research in physical education. • Classify and formulate the different methods of research. • Choose the right techniques for data collection. • Prepare the research proposal and summarize the thesis writing.		
Course Content				
Unit -1		**Introduction of Research** • Meaning and Definition of Research – Need, Nature and Scope of research in Physical Education, Scientific and Unscientific method of Problem Solving. • Review of Related Literature. • Identification of Research Problem and Criteria for selecting research problem. • Characteristics of a good research and good researcher.		
Unit -2		**Classification of Research** • Formulation and Classification of Research Hypothesis. • Limitations and Delimitations. • Various Classification of Research. • Analytical Research, Descriptive Research and Case Study.		
Unit -3		**Sampling and Population** • Meaning and Definition of Sample and Population. • Types of Sampling Techniques: a) Probability Sampling Techniques. b) Non-Probability Sampling Techniques. • Construction and Development of Questionnaire. • Data Collection Tools & Techniques, Measuring Research Variables and its classifications.		

Unit -4	**Development of Research Proposal** • The Proposal Process and Research Process. • Preparation and uses of tables and figures and Guidelines for Writing Research Report. • Writing Formats: a) Traditional Format. b) Journal Format. • Format of writing abstracts, Oral and poster presentation. Ethical & Copyright Issues in Research.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming.
Suggested Readings	• Ahlawat, R. P. (2018). *Research process in physical education and sports sciences* (1st ed., 260 pp.). Friends Publications (India). ISBN: 9788172165239. • Flick, U. (2017). *Introducing research methodology: A beginner's guide to doing a research project* (2nd ed., 320 pp.). SAGE Publications. ISBN: 9781473919389. • Best, J. W., & Kahn, J. V. (2016). *Research in education* (10th ed., 520 pp.). Pearson Education Inc. ISBN: 9789332574517. • Kamlesh, M. L. (2019). *Methodology of research in physical education and sports* (4th ed., 381 pp.). Sports Publication. ISBN: 9788178798417. • Kothari, C. R., & Garg, G. (2019). *Research methodology: Methods and techniques* (4th ed., 460 pp.). New Age International Publishers. ISBN: 9789386649225. • Mishra, S. (2018). *Research and statistics in physical education (B.P.Ed. new syllabus)* (1st ed., 248 pp.). Sports Publication. ISBN: 9788178799988. • Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2015). *Research methods in physical activity* (7th ed., 496 pp.). Human Kinetics. ISBN: 9781450470445.

Year	I	ADVANCE COACHING AND OFFICIATING OF ATHLETICS-TRACK EVENTS-II	Credits	4
Semester	II		Course Code	SOE PES 010210 C0134
Learning Outcomes		At the end of the course, the students will be able to: • Demonstrate advance skills and techniques of track events. • Mentor, officiate and perform various duties of track events in Athletics. • Prepare the advance coaching lesson plans for track events.		
Course Content		**General out-line of the contents of Coaching and Officiating of Athletic**		
		The students of M.P.Ed. II Semester need to develop skill proficiency in taking officiating lesson on selected above discipline. In view of this, the students shall be provided with advance mechanism of officiating in selected discipline. The duration of the lesson to be conducted by these students shall be in the range of 30 to 45 minutes depending on the class time they are going to handle at school and college level. Each student teacher is expected to take at least five lessons during the course of the second semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these officiating lessons, the duration should slowly increase and all the parts of the lesson covered progressively.		
Teaching learning process/Transactional Strategies		Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming		

<table>
<tr><td>Year</td><td>I</td><td rowspan="2">SPECIALIZATION TEACHING, COACHING AND OFFICIATING OF GAME-II</td><td>Credits</td><td>4</td></tr>
<tr><td>Semester</td><td>II</td><td>Course Code</td><td>SOE PES 010211 C0134</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
Explain the fundamentals of any one game opted by the student.
Sketch the ground markings of specific games.
Demonstrate and describe the rules and regulations of specific games.
Illustrate and interpret the rules and regulations of the selected game.
Mentor, officiate and perform other duties for the selected game.
Prepare the coaching lesson plan and design the coaching schedule.</td></tr>
<tr><td colspan="2" rowspan="2">Course Content</td><td colspan="3">General out-line of the contents of advance teaching of theory, Coaching and Officiating of Games and Sports.</td></tr>
<tr><td colspan="3">Introduction of the game/sport and historical development with special reference to India, Orientation of the students to the play area and equipment used in the game/sport, Important tournaments held at National and International levels, Distinguished sports awards and personalities related to the Game/sport. Warming-up- General free hand exercises, specific work out using equipment. Fundamental skills, lead up activities, General rules and their interpretations, Duties of officials, officiating in class competitions and Intramurals, Marking of the play area. Each student teacher is expected to take at least five lessons from any one games opted from (Basketball, Kho-Kho, Table Tennis and Netball) during the course of the II semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

The students of M.P.Ed. II Semester need to develop skill proficiency in taking officiating lesson on selected above discipline. In view of this, the students shall be provided with advance mechanism of officiating in selected discipline. The duration of the lesson to be conducted by these students shall be in the range of 30 to 45 minutes depending on the class time they are going to handle at school and college level. Note: students have to select any one game from the above-mentioned games.</td></tr>
</table>

Year	I	METHODS OF CLASSROOM TEACHING-II	Credits	1
Semester	II		Course Code	SOE PES 010212 AE0011
Learning Outcomes		At the end of the course, the students will be able to: • Demonstrate the class room teaching ability to teach different topics of the core subjects using various teaching methods.		
Course Content		**General out-line of the contents of classroom teaching and practical of the core subjects**		
		Each student teacher is expected to take at least five lessons during the course of the semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively. **The students shall demonstrate teaching ability using various teaching methods. These Lessons should include practical teaching of the core subjects of the semester.**		
Teaching learning process/Transactional Strategies		Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming		

Elective Courses (DCEC)

Year	I	VALUE AND ENVIRONMENTAL EDUCATION IN PHYSICAL EDUCATION	Credits	3
Semester	II		Course Code	SOE PES 010203 E3003
Learning Outcomes		At the end of the course, the students will be able to: • Explain the meaning, objectives and importance of value education. • Define personal and communal value system and explain the concept of commitment to values. • Restate the background of environmental education and sustainable development in schools. • Classify and appraise the rural and urban health problems.		
Course Content				
Unit -1		**Introduction of Value Education** • Meaning and Definition, Need, Importance and Objectives of Value Education. • Need and Theories of Moral Values. • Human Value foundation. • Classification of Values: Basic Values of Religions.		
Unit -2		**Value System** • Meaning and Definition of Value System. • Personal Values - Consistency, internally consistent, internally in consistent, Judging Value System. • Communal Values - Consistency, internally consistent, internally in consistent, Judging Value System. • Commitment and commitment to values.		

Unit -3	**Environmental Education**
	• Historical background, Meaning, Definition, Scope and Importance of Environmental Education. • Celebration of various days in relation with environment. • Plastic recycling & prohibition of plastic bag/cover. • Role of school in environmental conservation and sustainable development, Pollution free eco- system.
Unit -4	**Concept of Rural and Urban areas**
	• Rural and Urban Health Problems and improvement of Rural Sanitation. • Education Activity and Services of Urban and Rural Area. • Fairs & Festivals of Rural and Urban Area. • Meaning, Causes and Prevention of various pollutions.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Suggested Readings	• Athman, J., & Monroe, M. (2004). The Effects of Environment-Based Education on Students' Achievement Motivation. *Journal of Interpretation Research*. 9(1), 9-25. • Jadhav, H., & Bhosale, V. M. (1995). *Environmental Protection and Laws*. Himalaya Pub. House. • Jitendra Kumar Thakur (2019). *Value and Environmental Education.* Sports Publication. • Mohit Chakrabarti (2008). *Value Education: Changing Perspective.* Kanishka Publication. • Singh, B. (2018). *Value and Environmental Education.* Friends Publications. • Vandana MeshramIngle (2017). *Value and Environmental Education.* Educational Publishers and Distributors.

<table>
<tr><td>Year</td><td>I</td><td colspan="2" rowspan="2">SPORTS ENGINEERING</td><td>Credits</td><td>3</td></tr>
<tr><td>Semester</td><td>II</td><td>Course Code</td><td>SOE PES 010204 E3003</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="4">At the end of the course, the students will be able to:
• Explain sports engineering, equipment and facility designing of sports related instruments in Physical Education.
• Define the mechanical principles in general body movements.
• Define Kinematics and Kinetics of particles and develop understanding of theoretical analysis of various components of cost and taxation.
• Formulate the design and development, requirements, building process, and maintenance policy of the sports infrastructure.</td></tr>
<tr><td colspan="6">Course Content</td></tr>
<tr><td rowspan="2">Unit -1</td><td colspan="5">Introduction to Sports Engineering and Technology</td></tr>
<tr><td colspan="5">• Meaning of sports engineering.
• Human motion detection and recording.
• Human performance, assessment, equipment and facility designing
• Smart training devices and digital monitoring tools used in modern sports.</td></tr>
<tr><td rowspan="2">Unit -2</td><td colspan="5">Mechanics of Engineering</td></tr>
<tr><td colspan="5">• Concept of internal force, axial force, shear force, bending movement, torsion.
• Energy method to find displacement of structure and strain energy.
• Biomechanics of daily and common activities – Gait, Posture, Body levers and Ergonomics.
• Application of AI and computer simulation in motion analysis.</td></tr>
</table>

Unit -3	**Sports Dynamics and Facility life cycle costing**
	• Basics of theoretical analysis of cost, total life cost concepts, maintenance costs, energy cost, capital cost and taxation. • Material Selection for sports Equipment: Metals, Polymers Composites, and Smart Materials. • Kinetics of particles – Newton's laws of Motion, Work, Energy, Impulse and momentum • Role of nanotechnology in sports surfaces and performance wear.
Unit -4	**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, etc • Building process: - design phase (including brief documentation), construction phase functional (occupational) life, Re-evaluation, refurnish, demolish • Maintenance staff, financial consideration, Maintenance policy, preventive maintenance, corrective maintenance, record and register for maintenance • Barrier-free and inclusive design standards (as per RPWD Act 2016)
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Suggested Readings	• Charles J.A. Crane, F.A.A. and Furness, J.A.G. (1987). *Selection of Engineering Materials*. Butterworth Heiremann. • Eric C. (2010). *Sports Facility Operations Management* . Routledge. • Finn, R.A. and Trojan P.K. (1999). *Engineering Materials and Their Applications*. Jaico Publisher. • Franz K. F (2007). *The Impact of Technology on Sports II*. Springer Science & Business Media. • Franz K. F(2013). *Routledge Handbook of Sports Technology and Engineering.* Routledge.

	• Jenkins M.,(2003). *Materials in Sports Equipment* (Vol. I). Elsevier. • Steve Hake, (1996). *The Engineering of Sport*. CRC Press. • Verma, A.(2015). *Sports Engineering*. Friends Publications. • White, C. (2010). *Projectile Dynamics in Sport: Principles and Applications.* Routledge.

Semester-III

<table>
<tr><td>Year</td><td>II</td><td rowspan="2">SCIENCE OF SPORTS TRAINING</td><td>Credits</td><td>4</td></tr>
<tr><td>Semester</td><td>III</td><td>Course Code</td><td>SOE PES 010313 C4004</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
• Define the concept of sports training and explain the causes, symptoms and remedial measures of overload.
• Recall the characteristics, types, determining factors and development of various physical fitness components.
• Distinguish technique and skill and classify tactical and technical training.
• Define the concept of periodization, types of competition and talent identification at early stage.</td></tr>
<tr><td colspan="5">Course Content</td></tr>
<tr><td colspan="2" rowspan="2">Unit -1</td><td colspan="3">Introduction of Sports Training</td></tr>
<tr><td colspan="3">• Sports training- its characteristics and principles.
• Training load, its features, principles and adaptation process.
• Means and methods of executing training load.
• Overload its Causes, symptoms and remedial measures.</td></tr>
<tr><td colspan="2" rowspan="2">Unit -2</td><td colspan="3">Training Components</td></tr>
<tr><td colspan="3">• Strength- its characteristics, types of strength, factors determining strength and strength development.
• Endurance- its characteristics, types of endurance, factors determining endurance and endurance development.
• Speed- its characteristics, types of Speed, factors determining Speed and speed development.
• Flexibility and Coordinative abilities- its characteristics, types, factors determining and development.</td></tr>
</table>

Unit -3	**Technique, Skill and Planning**
	• Technique and skill- its characteristics and importance. • Different stages of technique development and technique training. (Online) • Tactics and strategy. • Planning principles and importance.
Unit -4	**Periodization and Competition**
	• Periodization- its importance, types and different phases (Preparatory, Competition and Transitional). • Competition and types of competition. • Talent identification- process and procedure. • Preparation of training schedule.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Suggested Readings	• Bompa, T. O., & Buzzichelli, C. (2018). *Periodization-: Theory and Methodology of Training*. Human kinetics. • Bompa, T., Bompa, T. O., & Carrera, M. (2005). *Periodization Training for Sports*(Ed. 2). Human Kinetics. • Jesudoss,S. J. (2015). *Principles of Sports Training.* Friends Publications. • Kurz, T. (2001). *Science of Sports Training: How to Plan and Control Training for Peak Performance*. Stadion. • Loehr, J. E. (1995). *PDF The New Toughness Training for Sports: Mental Emotional Physical Conditioning From One of the Worlds Premier Sports Psychologists Online Book.* • OBE, F. W. D. (2014). *Sports Training Principles: An Introduction to Sports Science*. Bloomsbury Publishing. • Singh, H. (1984). *Sports Training: General Theory & Methods*. Netaji Subhas. Nat. Inst. of Sports. • Viru, A. (2017). *Adaptation in Sports Training*. Routledge.

<table>
<tr><td>Year</td><td>II</td><td rowspan="2">SPORTS MANAGEMENT AND CURRICULUM DESIGN IN PHYSICAL EDUCATION</td><td>Credits</td><td>4</td></tr>
<tr><td>Semester</td><td>III</td><td>Course Code</td><td>SOE PES 010314 C4004</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
• Explain the scope, principles and functions of sports management and identity the roles of manager.
• Describe the role of financial and class management.
• Describe different types of tournaments.
• Formulate curriculum development and define the role of a teacher in curriculum development.</td></tr>
<tr><td colspan="5">Course Content</td></tr>
<tr><td rowspan="2">Unit -1</td><td colspan="4">Introduction of Sports Management</td></tr>
<tr><td colspan="4">• Sports Management: Meaning, Definition, Scope and Principles.
• Functions of management. Planning, Organizing, Staffing, Directing, Coordinating, Reporting, and Budgeting (POSDCORB).
• Roles of manager: Interpersonal roles, Informational roles, Decisional roles.
• Digital and E-management systems in sports administration.</td></tr>
<tr><td rowspan="2">Unit -2</td><td colspan="4">Planning and Management</td></tr>
<tr><td colspan="4">• Programme Planning, Steps in programme planning, Principles of programme planning, Evaluation of physical education programme.
• Public Relations: Meaning, Definitions, Principles, Planning and organizing public relations programme.
• Financial management: Need for financial management, Principles of financial Management, preparation of budget, Sources of funds, Expenditure.</td></tr>
</table>

	• Class management: Meaning, Principle, Steps in class management: Strength of class, Place and time, Uniform, Class formation, Safety measures and Discipline. Smart classroom and online learning management in physical Education.
Unit -3	**Tournament and Competitions**
	• Facilities and Equipment management: Types of facility/infrastructure-indoor, outdoor, Purchase, Care and Maintenance. • Tournament organization: Types of tournament-Knock out or Elimination, League or Round Robin, Combination, Consolation, Challenge Tournaments. • Role of AI and analytics in event planning and performance tracking. • Process of organizing sports events, Notifications, Invitations, Selection of officials, Monitoring, writing reports, maintaining records.
Unit -4	**Framework of Curriculum Development**
	• Meaning and importance of Curriculum Development. • Principles of Curriculum Construction: Students centered, Activity centered, Community centered, forward-looking principle, Principles of integration. • The Role of the teacher in curriculum development. • NEP-2020 and CBCS Framework in Physical Education Curriculum.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming.

Suggested Readings	• Dhull, D. S. & Goel, M. (2015). *Handbook of Sports Management and Administration*. Friends Publications. • Lisa P. M. (2018). *Principles and Practice of Sport Management* (6th Edition). Jones & Bartlett Learning. • NCERT (2018). *National Curriculum Framework for School Education.* NCERT. • Pargaonkar, G. V. (2016). *Sports Management.* Friends Publications. • Sahil K. (2017). *Organization and Administration in Physical Education.* Sports Publication. • Singh, D. (2015). *Sports Management and Curriculum Designs in Phy Edu.* Friends Publications. • Vandana Meshram (2017). *Sports Management and Curriculum Designs in Physical Education.* Khel Sahitya Kendra.

Year	II	SPORTS BIOMECHANICS AND KINESIOLOGY	Credits	4
Semester	III		Course Code	SOE PES 010315 C4004
Learning Outcomes	At the end of the course, the students will be able to: • Explain the meaning, scope and importance of applied kinesiology and sports biomechanics. • Categorize and explain the action of muscles and forces. • Classify lever according to its types and define guiding principles of stability. • Explain the methods for the analysis of human movements.			
Course Content				
Unit -1	**Introduction of Kinesiology and Sports Biomechanics** • Meaning, nature, role and scope of applied kinesiology and Sports Biomechanics. • Meaning of Axis, Planes, Plane of the body and axis of motion. • Static, Dynamics, Kinematics, Kinetics, Centre of gravity & Line of gravity. • Meaning and definition of Motion and its types (Linear motion, angular motion, circular motion, uniform motion).			
Unit -2	**Muscle Action and force** • Origin, Insertion and action of upper and lower extremities muscles. • Meaning and definition of force and its type. • Muscle size, shape and its force production. • Force applied at an angle Pressure -Friction -Buoyancy, Spin.			
Unit -3	**Projectile and Lever** • Freely falling bodies and projectiles -equation of projectiles stability. • 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 - practical application and water resistance, air resistance & aerodynamics.			

Unit -4	**Methods of Analysis of Human Movements**

	• Analysis of static positions of the body -Sitting, Standing. • Analysis of static positions of the body –Lying. • Analysis of Locomotion- Walking, Running. • Analysis of Locomotion - Jumping, Throwing.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Practicum	• Determination of center of Gravity, Centre of gravity, line of gravity. • Anatomical standing position and fundamental standing position. • Handling of various equipment and software related to Sports Biomechanics. • Mechanical analysis of techniques skills of major sports/games. • Action of muscles of upper and lower extremities by palpations method. • Stick diagram (basic techniques; anatomical posture, walking, push up, sit ups etc). • Goniometry – measurement of joint ROM / Elgon.

Suggested Readings	• Ackland, T. R., Elliott, B., & Bloomfield, J. (2009). *Applied Anatomy and Biomechanics in Sport*. Human Kinetics. • Bartlett, R. (2014). *Introduction to Sports Biomechanics: Analysing Human Movement Patterns*. Routledge. • Chapman, A. E. (2008). *Biomechanical Analysis of Fundamental Human Movements*. Human Kinetics. Knowledge Warehouse. • Kumar, P. (2019). "Biomechanical Analysis of Forward Head Posture among Pondicherry University Research Scholars Based On the Laptop Working Hours: An Analytical Study". *International Journal of Emerging Technologies and Innovative Research*, 6 (6), 463-466. • Kumar, P., & Singh, R. R. M. (2019). "Biomechanical analysis of anisomeric among the young children's in Puducherry". *Discrepancy (LLD)*, 330, 19. • Singh, R. R. M. (2019). "Biomechanical Analysis of Footprint Measurement among School Boys: A Positive Approach to Posture". *Journal of the Gujarat Research Society*, 21(1), 167-169. • Uppal, A. K. (2018). *Kinesiology and Biomechanics.* Friends Publications.

Year	**II**	**TEACHING OF ATHLETICS-FIELD EVENTS-III**	**Credits**	**4**
Semester	**III**		**Course Code**	**SOE PES 010316 C0134**

Learning Outcomes	At the end of the course, the students will be able to: • Describe the fundamentals of field and throwing events in Athletics. • Prepare the sketch of various field events. • Demonstrate the holding and releasing stances in various throwing events, and takeoff and landing position in various jumping events of Athletics.
Course Content	**General out-line of the contents of Teaching of Athletic (Field Events)**
	Introduction of the Athletics filed events and historical development with special reference to India, Orientation of the students to the play area and equipment used in the athletics field events, Important field events held at National and International levels, distinguished athletic awards and personalities related to the athletics. Warming-up- General free hand exercises, specific work out using equipment. Fundamental skills, lead up activities, General rules and their interpretations, Duties of officials, officiating in class competencies and Intramurals, Marking of the play area. Fundamentals of the events, rules and regulations, measurements of fields. Each student teacher is expected to take at least five lessons on athletic field events during the course of the semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

Year	**II**		**Credits**	**4**

Semester	III	SPECIALIZATION TEACHING, COACHING AND OFFICIATING OF GAME-III	Course Code	SOE PES 010317 C0134
Learning Outcomes	At the end of the course, the students will be able to: • Explain the fundamentals of any one game opted by the student. • Sketch the ground markings of specific games. • Demonstrate and describe the rules and regulations of specific games. • Illustrate and interpret the rules and regulations of the selected game. • Mentor, officiate and perform other duties for the selected game. • Prepare the coaching lesson plan and design the coaching schedule.			
Course Content	**General out-line of the contents of advance teaching of theory, Coaching and Officiating of Games and Sports.**			
	Introduction of the game/sport and historical development with special reference to India, Orientation of the students to the play area and equipment used in the game/sport, Important tournaments held at National and International levels, Distinguished sports awards and personalities related to the Game/sport. Warming-up- General free hand exercises, specific work out using equipment. Fundamental skills, lead up activities, General rules and their interpretations, Duties of officials, officiating in class competitions and Intramurals, Marking of the play area. Each student teacher is expected to take at least five lessons from any one games opted from **(Football, Badminton, Hockey and Wrestling)** during the course of the III semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively. The students of M.P.Ed. III Semester need to develop skill proficiency in taking officiating lesson on selected above discipline. In view of this, the students shall be provided with advance mechanism of officiating in selected discipline. The duration of the lesson to be conducted by these students shall be in the range of 30 to 45 minutes depending on the class time they are going to handle at school and college level. **Note: students have to select any one game from the above-mentioned games**		

<table>
<tr><td>Year</td><td>II</td><td rowspan="2">CLASSROOM TEACHING-III, INTERNSHIP AND FIELD VISIT</td><td>Credit</td><td>1</td></tr>
<tr><td>Semester</td><td>III</td><td>Course Code</td><td>SOE PES 010318 I0021</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
• Demonstrate the class room teaching ability using various teaching methods.
• Demonstrate industry specific knowledge and practical application of theoretical knowledge</td></tr>
<tr><td colspan="2" rowspan="2">Course Content</td><td colspan="3">General out-line of the contents of classroom teaching and practical of the core subjects</td></tr>
<tr><td colspan="3">Each student teacher is expected to take at least five lessons during the course of the semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

Field Visit to various Renowned Sports Academies/ High Altitude Training Centers/ Mega Sports Tournament venues/ Higher Education Institution where Physical Education Teacher Training Program are being run, shall be organized by the Department and the Students shall prepare a brief report.

The students shall demonstrate teaching ability using various teaching methods. These Lessons should include practical teaching of the core subjects of the semester.</td></tr>
<tr><td colspan="2">Teaching learning process/Transactional Strategies</td><td colspan="3">Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming</td></tr>
</table>

Elective Courses (DCEC)

<table>
<tr><td>Year</td><td>II</td><td rowspan="2">RESEARCH PROPOSAL AND PREPARATION OF SYNOPSIS</td><td>Credits</td><td>3</td></tr>
<tr><td>Semester</td><td>III</td><td>Course Code</td><td>SOE PES 010305 E3003</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
Critically think, reflect and analyze and identify an appropriate methodology for a research problem.
Understand the importance of limitation and delimitation for the research.
Formulation and classification of research hypothesis.
Utilize various library resources for review and research proposal and prepare a research proposal.</td></tr>
<tr><td colspan="2" rowspan="2">Course Content</td><td colspan="3">Outline of Syllabus</td></tr>
<tr><td colspan="3">Identifying an appropriate methodology for a research problem. Effective use of library resources for research.
Developing a conceptual model relevant to research.
Construction of tools for different types of research.
Formulation and classification of research hypothesis.
Developing a research proposal.
Different writing format in preparing the research proposal.
Identifying and reducing/eliminating barriers which may interfere with the development of a high-quality thesis/dissertation.
Developing and following an appropriate timeline for completion of the thesis/dissertation.
Format for writing abstract.
Oral and poster presentation.
Academic dishonesty.</td></tr>
</table>

Suggested Readings	• Kamlesh, D. M. (2019). Methodology of Research in Physical Education and Sports. Sports Publication. • Klopper, H. (2008). The Qualitative Research Proposal. Curationis, 31(4), 62-72. • Kothari, C. (2019). Research Methodology: Methods and Techniques. New Age International Publishers. • Mishra, P. D. (2018). Research and Statistics in Physical Education. Sports Publication. • Vivar, C. G., McQueen, A., Whyte, D. A., & Armayor, N. C. (2007). Getting Started With Qualitative Research: Developing a Research Proposal. Nurse researcher, 14(3).

Note: -

1. Research Proposal and Dissertation would be evaluated as per the University Ordinance No-XV.
2. The distribution of weightage for the evaluation of semester Research Proposal shall be:

1. Originality	:	15%
2. Innovation	:	15%
3. Application (Research Tools)	:	10%
4. Periodic Presentation	:	15%
5. Proposal Report	:	15%
Total	:	70% weightage evaluate procedure decided by the Board of Studies of the Departmental concerned.

Year	II	SPORTS JOURNALISM AND MASS MEDIA	Credits	3
Semester	III		Course Code	SOE PES 010306 E3003
Learning Outcomes	At the end of the course, the students will be able to: • Explain the meaning, definition, mode and news agencies of sports journalism. • Critically analyze the importance of media in sports. • Construct reviews and articles for Sports Journals, and articulate commenting and interviewing of Sports personalities. • Explain the role of advertisement in Sports Journalism.			
Course Content				
Unit -1	**Introduction of Sports Journalism** • Sports Journalism: Meaning, Definition and Historical Background. • National and International Sports News Agencies. • Mode of Sport Journalism: Print, Electronic and Informal Media. • Canons and Ethics of Journalism.			
Unit -2	**Event Organization and Coverage** • News: Definition, basic news elements, organization of sports news desk, Pitfalls in use of language, Proof Reading. • Qualities and responsibilities of sports news reporters. • Organization of Pre & Post Sports Event Press Meet. • Coverage: Covering Local / National/ International sports competitions and writing of press release.			

Unit -3	**Art of Review Writing, Commentating and Interviewing**
	• Review Writing: Brief review of Olympic Games, Asian Games, Common Wealth Games, World Cup, National Games and Indian Traditional Games. • Writing Sports Features: Types of sports features, sports personalities and their thumb nail sketches, Writing Sports Editorials, Blogs & Column. • Art of Commentating: Commentating sports for radio and television channels. • Art of interviewing: Interview with and elite Players and Coaches.
Unit -4	**Role and Career in Sports Journalism**
	• Amateurism v/s professionalism: Invasion of private life, emphasis on winning, sports for charity. • Role of Advertisement in Sports Journalism. • Career in Sports Photography: Equipment's, Editing and Publishing. • Structure of Sports Bulletin and its types.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Suggested Readings	• Dhananjay Joshi (2010). *Value Education in Global Perspective*. Lotus Press. • Kathryn T. Stofer, James R. Schaffer (2019). *Sports Journalism: An Introduction to Reporting And Writing*. Rowman & Littlefield Publishers. • Koak, S & Sharma, R. (2015). *Media and Career in Phy Edu*. Friends Publications. • Lal, R. (2013). *Sports Journalism*. Friends Publications. • Malik, (2010). *Sports Journalism and Mass Media*. Friends Publications. • Phil Andrews (2013). *Sports Journalism* (Ed. 2). SAGE Publications Ltd.

***Note: -**

1. In Part-B, Minimum strength required of the students selecting any of the game will be 10 Students.

2. The students opting for Research Proposal as Discipline Centric Elective Course will be encouraged to take Dissertation in Discipline Centric Elective Course (DCEC) in the fourth semester.

3. Research Proposal and Dissertation would be evaluated as per the University Ordinance No-XV.

Semester-IV

Year	II	SPORTS PSYCHOLOGY	Credits	4
Semester	IV		Course Code	SOE PES 010419 C4004
Learning Outcomes	At the end of the course, the students will be able to: • Explain the concept, meaning, importance and scope of sports psychology. • Recall various learning theories and describe the types, theories and techniques of motivation. • Illustrate and identify the psychological factors affecting sports performance. • Appraise and measure team cohesion, group dynamics and leadership capabilities.			
Course Content				
Unit -1	**Role of Sports Psychology** • History, Meaning, Definition, Scope and Importance of Sports Psychology. • Meaning and types of Motivation – Theories and Techniques for Development of motivation. • Introduction to various psychological variables. • Goal Setting Interventions, Principles, Program			
Unit -2	**Psychological Learning** • Meaning and Definition of Motor Learning, Activity & Skill. • Meaning of Learning -Theories of Learning and their implication in teaching Learning Process. • Sports Psychological Questionnaires (SCAT, CSAI-2, ACSI-28, Sport Motivation Scale) • Meaning of Psychological Skill Training (PST) & its interventions, advance scientific psychological assessment tools (VTS), neurofeedback			
Unit -3	**Importance of Personality** • Meaning and Definition of Personality and Personality Traits. • Theories and Role of Personality in Sports and Exercise. • Measurement of Personality.			

	• Areas of Individual Difference and its types.
Unit -4	**Leadership and Cohesion**
	• Concept of Group Dynamics of Sports Performance and Team Cohesion. • Meaning of Leadership, Component of Effective Leadership and its Measurement. • Problems and issues working with Individual and Team Sports. • Career Transition in Athletes and Retirement Issues, Developing Life Skills in Athletes.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Practicum	• Assessment of Reaction Time (Hard-Eye). • Assessment of Coordination (Foot-Eye). • Analysis of Personality (Eysenck Personality Questionnaire), Big Five Personality Test. • Assessment of Achievement Motivation. • Assessment of Sport competitive anxiety test. • Inventory for factors influencing sports. • Assessment of Sociometry Questionnaire.
Suggested Readings	• Horn, Thelma (2008). *Advances in Sport Psychology*. Champaign IL : Human Kinetics Publishers, Inc. • Huber, Jeffrey (2012). *Applying Educational Psychology in Coaching Athletes*. Knowledge Warehouse. • Kamlesh, M.L. (2011). *Psychology in Physical Education and Sport* (Ed. 3). Delhi : Metropolitan Book Co. Pvt. Ltd. • Pargonkar, G. V (2015). *Sports Psychology*. Friends Publications. • Taylor, Jim (2017). *Assessment in Applied Sport Psychology*. Knowledge Warehouse. • Weinberg, R.S & Gould, Daniel (2015). *Foundations of Sport and Exercise Psychology* (Ed. 6). Champaign IL: Human Kinetics Publishers, Inc.

Year	II	HEALTH EDUCATION AND SPORTS NUTRITION	Credits	4
Semester	IV		Course Code	SOE PES 010420 C4004
Learning Outcomes	At the end of the course, the students will be able to: • Explain the meaning, aims and objectives of health education and classify communicable disease, their transmission and prevention. • Recall the concept of non-communicable diseases and list out various programs for controlling diseases. • List out various school health services and define the role of International Organization in the Development of Health. • Plan and prepare a nutritional diet intake for various games and sports.			
Course Content				
Unit -1	**Introduction of Health Education** • Concept of Health and Health Education. • Dimension of health and wellness. • Latest trends in Health Education and global strategy in the field of Health. • Role of physical Education Professional on Individual and family in relation to Health and Health Education.			
Unit -2	**Epidemiology of Diseases** • Epidemiology of Communicable Diseases: Agent factor, Host factor, Environment factors, Mode of Transmission and Prevention of following diseases: • Health Hazards and its types. • Epidemiology of Non-Communicable Diseases: Risk factors and Prevention of following diseases: • Personal Health & Hygiene care system.			

Unit -3	**School Health Services**
	• Meaning & Objective of School Health Service and Health Problem of School Child. • Role of health education in schools. • Health record, Healthful school environment, first- aid and emergency care, Mid-day School Programme. • Role of National and International Organization in the Development of Health.
Unit -4	**Nutrition for various games and sports**
	• Nutrition, Training Adaptations and Immune Function in Athletes. • Nutrition for popular team sports (Basketball, Hockey, Football, Volleyball, Kabaddi and Cricket). • Nutrition for Athletics and Endurance Sports (Long distance Swimming, Cycling and Marathon). • Nutrition for Strength and Combat sport (Wrestling, Weightlifting, Judo, Boxing, Taekwondo and Fencing).
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Suggested Readings	• Campbell, B. (2013). *Sports Nutrition: Enhancing Athletic Performance*. CRC Press. • Eberle, S. G. (2013). *Endurance Sports Nutrition* (Ed. 3). Human Kinetics. • Fink, H. H., & Mikesky, A. E. (2017). *Practical Applications in Sports Nutrition*. Jones & Bartlett Learning. • Kumar.P (2020). "Changing The Lifestyle of Present Health Care: A Much Required Step for A Secured Future The Transmission or Reminder of Ancestor's Way of Life once again".*AlochanaChakra Journal*. Vol. IX. Issue-V. Pg-2789-2793. doi:10.01011.ACJ.2020.V9I5.00068749.01683. • Maughan, R. J., & Shirreffs, S. M. (Eds.). (2013). *Food, Nutrition and Sports Performance Iii*. Routledge. • Reaburn, P. R. (Ed.). (2014). *Nutrition and Performance In Masters Athletes*. CRC Press. • Ryan, M. (2012). *Sports Nutrition for Endurance Athletes*. Velo Press. • Sharma, O.P., (2010). *Handbook of Health Education & Sports*. Khel Sahitya Kendra . • Zinner, C., & Sperlich, B. (Eds.). (2016). *Marathon Running: Physiology, Psychology, Nutrition and Training Aspects* (pp. 1-171). Springer.

Year	II	TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION	Credits	4
Semester	IV		Course Code	SOE PES 010421 C4004
Learning Outcomes		At the end of the course, the students will be able to: • Explain the meaning and principles of Test, Measurement and Evaluation. • Construct knowledge and specific fitness test. • Illustrate various physical fitness and motor fitness test. • Explain the difference Anthropometric Measurements.		
Course Content				
Unit -1		**Concept of Test and Measurement and Evaluation in Physical Education**		
		• Meaning of Test, Measurement and Evaluation. • Principles of Measurement and Evaluation. • Domains of Human Performance - cognitive, affective and psychomotor. • Meaning and establishing Validity, Reliability and Objectivity, Norm referenced and Criterion referenced standards.		
Unit -2		**Guidelines for construction of test**		
		• Criteria of test selection. • Factors Affecting Scientific Authenticity. • Procedure to Establish Scientific Authenticity. • Guidelines for constructing knowledge test and steps for construction of skill test / specific fitness test.		

Unit -3	**Assessment through Various Skill Tests**
	• Concepts and Assessment of Physical Fitness: a) AAHPERD Health Related Fitness Test and Tuttle Pulse ratio test, b) Roger's PFI. • Test for fitness components- strength, endurance, speed, flexibility and coordinative abilities. • Motor Fitness Test, Motor Ability Test and Motor Educability Test. • Skill Test of various Games/ Sports.
Unit -4	**Individual Assessment Methods**
	• Basic Concept of Psychological Traits. • Basic concept of Anthropometric Measurements. • Assessment of Body Composition. • Self-Assessment.
Teaching learning process/Transactional Strategies	Lecture cum discussion, Power Point presentations, assignments, school observation and report, case study, and problem solving, brainstorming.
Practicum	The conducted practicals should be written in a Practical Note-Book and must be signed by the Supervisor. For practical's there will be a Practical Test and Viva-Voce Examination. • Assessment of endurance through twelve-minute run/walk test; six hundred yards run walk test; Harvard step test. • Assessment of resting physiological parameters- Heart rate, Respiratory rate. • Anthropometric measurement. • Somatotyping, somato charts & indices. • Various Sports / Games (Basketball, Volleyball, Hockey, Football, Badminton, Tennis).

Suggested Readings	• Alan C. Lacy & Skip M. Williams (2018). *Measurement and Evaluation in Physical Education and Exercise Science* (Ed. 8). Routledge. • American College of Sports Medicine (2013). *ACSM's Health-Related Physical Fitness Assessment Manual*. Lippincott Williams & Wilkins. • American College of Sports Medicine (2017). *ACSM's Health-Related Physical Fitness Assessment Manual*. Lippincott Williams & Wilkins. • Karad, P.L. (2017). *Test, Measurement and Evaluation in Physical Education.* Khel Sahitya Kendra. • Lacy, A. C., & Williams, S. M. (2018). *Measurement and Evaluation in Physical Education and Exercise Science*. Routledge. • Miller, D. (2019). *Measurement by the Physical Educator Why and How* (8th Edition). McGraw-Hill Higher Education. • Yobu, A. (2010). *Test, Measurement and Evaluation in Physical Education in Physical Education and Sports*. Friends Publications.

<table>
<tr><td>Year</td><td>II</td><td rowspan="2">ADVANCE COACHING AND OFFICIATING OF ATHLETICS-FILED EVENTS-IV</td><td>Credits</td><td>4</td></tr>
<tr><td>Semester</td><td>IV</td><td>Course Code</td><td>SOE PES 010422 C0134</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
Demonstrate advance skills and techniques of field events.
Mentor, officiate and perform various duties of field events in Athletics.
Prepare the advance coaching lesson plans for field events.</td></tr>
<tr><td colspan="2" rowspan="2">Course Content</td><td colspan="3">General out-line of the contents of Coaching and Officiating of Athletics- Field Events</td></tr>
<tr><td colspan="3">The students of M.P.Ed. – IV Semester need to develop Athletics- Field Events and skill proficiency in taking officiating lesson on selected above discipline. In view of this, the students shall be provided with advance mechanism of officiating in selected discipline. The duration of the lesson to be conducted by these students shall be in the range of 30 to 45 minutes depending on the class time they are going to handle at school and college level.

Each student teacher is expected to take at least five lessons during the course of the fourth semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these officiating lessons, the duration should slowly increase and all the parts of the lesson covered progressively.</td></tr>
</table>

Year	II	SPECIALIZATION TEACHING, COACHING AND OFFICIATING OF GAME-IV	Credits	4
Semester	IV		Course Code	SOE PES 010423 C0134
Learning Outcomes	At the end of the course, the students will be able to: • Explain the fundamentals of any one game opted by the student. • Sketch the ground markings of specific games. • Demonstrate and describe the rules and regulations of specific games. • Illustrate and interpret the rules and regulations of the selected game. • Mentor, officiate and perform other duties for the selected game. • Prepare the coaching lesson plan and design the coaching schedule.			
Course Content	**General out-line of the contents of advance teaching of theory, Coaching and Officiating of Games and Sports.**			
	Introduction of the game/sport and historical development with special reference to India, Orientation of the students to the play area and equipment used in the game/sport, Important tournaments held at National and International levels, Distinguished sports awards and personalities related to the Game/sport. Warming-up- General free hand exercises, specific work out using equipment. Fundamental skills, lead up activities, General rules and their interpretations, Duties of officials, officiating in class competitions and Intramurals, Marking of the play area. Each student teacher is expected to take at least five lessons from any one games opted from **(Handball, Gym Training, Tennis and Boxing)** during the course of the IV semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively. The students of M.P.Ed. IV Semester need to develop skill proficiency in taking officiating lesson on selected above discipline. In view of this, the students shall be provided with advance mechanism of officiating in selected discipline. The duration of the lesson to be conducted by these students shall be in the range of 30 to 45 minutes depending on the class time they are going to handle at school and college level. **Note: students have to select any one game from the above-mentioned games**		

<table>
<tr><td>Year</td><td>II</td><td rowspan="2">CLASSROOM TEACHING-IV AND LEADERSHIP TRAINING PROGRAM</td><td>Credit</td><td>1</td></tr>
<tr><td>Semester</td><td>IV</td><td>Course Code</td><td>SOE PES 010424 SE0011</td></tr>
<tr><td colspan="2">Learning Outcomes</td><td colspan="3">At the end of the course, the students will be able to:
Demonstrate the class room teaching ability to teach different topics of the core subjects using various teaching methods.
Demonstrate leadership qualities, Strategic Thinking and Decision Making in organizing Camp Activities, Team Building and Collaboration.</td></tr>
<tr><td colspan="2" rowspan="2">Course Content</td><td colspan="3">General out-line of the contents of classroom teaching and practical of the core subjects</td></tr>
<tr><td colspan="3">Each student teacher is expected to take at least five lessons during the course of the semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively.
The students shall take part in outdoor leadership training camp of 7-10 days and submit a brief report.
The students shall demonstrate teaching ability using various teaching methods. These Lessons should include practical teaching of the core subjects of the semester.</td></tr>
</table>

Elective Courses (DCEC)

Year	II	DISSERTATION	Credits	3
Semester	IV		Course Code	SOE PES 010407 E0303
Learning Outcomes	At the end of the course, the students will be able to: **Develop competency in the process of conducting research** • A candidate shall have dissertation for M.P.Ed.– IV Semester and must submit his/her Synopsis in department and get it approved by the D.R.C. (Departmental Research Committee). • A candidate selecting dissertation must submit his/her dissertation not less than one week before the beginning of the IVth Semester Examination. • The candidate has to face the Viva-Voce conducted by D.R.C. (Departmental Research Committee) with external examiner.			

Note: -

1. Research Proposal and Dissertation would be evaluated as per the University Ordinance No-XV.

Year	II	PHYSICAL FITNESS AND WELLNESS	Credits	3
Semester	IV		Course Code	SOE PES 010408 E3003
Learning Outcomes	At the end of the course, the students will be able to: • Define the concept of physical fitness and wellness, and identify the components, techniques and principles of physical fitness. • Recall the importance of nutrition and calories requirements, and explain the influence of food on social cultural values. • Illustrate stress assessment and management techniques, and the concept of designing a fitness training programme. • Explain the Establishment and Management of Fitness Centre and describe the Qualification and qualities for a fitness trainer.			
Course Content				
Unit -1	**Introduction of Physical Fitness and Wellness** • Meaning & Definition, Principles and Components of Physical Fitness and Wellness. • Leisure time physical activity for community development. • Current trends in fitness and conditioning. • Role of technology and wearable fitness devices (smartwatches, trackers, fitness apps).			
Unit -2	**Importance of Nutrition** • Meaning and Definition of Nutrition. Nutritional strategies for special populations youth, elderly, athletes). • Food Guide Pyramid and Daily calories intake & burning. • Influences of food on social cultural values. • Smart diet tracking tools and AI- based nutrition analysis.			
	Stress Management			

Unit -3	• Stress assessment & its management, prominent health problem associated with inactivity. • Safety techniques (Spotting, proper body alignment, lifting techniques, spatial, awareness. and proper breathing techniques). • Concept of free weight vs. machine, variation of sets and repetitions, Exercise with Swiss & Medicine Ball, Thera-band and Tubing. • Mindfulness, Yoga, and Meditation for stress management. Gender- sensitive and age-appropriate fitness programming.
Unit -4	**Fitness Management** • Establishment and Management of Fitness Centre. • Principles of starting a fitness center-environment, location, policy, offer of programmes, record keeping, and public relation. • Role of AI-based performance monitoring and virtual coaching. • Safety aspects in a fitness center and Qualification and qualities for a fitness trainer.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Practicum	• Orientation and management of fitness center, various equipment's and wet zone. • Different methods of measuring Body Composition (BMI, Waist Hip Ratio, Skinfold Caliper). • Different Fitness Test (Cardio-respiratory Endurance, Strength, Strength Endurance, Flexibility, Body Composition, Anthropometric Measurements and Grip Dynamometer).

Suggested Readings	• Agrawal, M.(2016). *Aerobics Fitness & Style.* Friends Publications. • Corbin, C. (2011). *Concepts of Physical Fitness.* McGraw-Hill Higher Education. • Fahey D. Thomas(2005). *Weight Training Basis, A Complete Guide for Men and Women.* Mcgraw- Hill Companies. • Greenberg, J., Dintiman, G., & Myers Oakes, B. (2004). *Physical Fitness and Wellness.* Champaign, IL: Human Kinetics. • Hoeger, W., & Hoeger, S. (2013). *Fitness & Wellness.* Wadsworth, Cengage Learning. • Prabha, S.(2015). *Basic Fitness Assessment.* Friends Publications. • Rathee, S.(2017). *Physical Fitness and Wellness.* Friends Publications. • Robert Malt.(2001). *90-Day Fitness Plan*. D.K. publishing, Inc. 95, Madison Avenue. • The National Association for Sport and Physical Education (1900). *Concepts of Physical Education, What Every Student Needs to Know.* Association Drive Reston, VA 20191-1599 (703) 476-3410. • Uppal, A.K. (2016). *Physical Fitness and Wellness.* Friends Publications.

Generic Elective Course (GEC) Semester-I

Year	**I**	**WELLNESS THROUGH GAMES AND SPORTS**	**Credits**	**4**
Semester	**I**		**Course Code**	**SOE PES 010101 GEC 3014**
Learning Outcomes		At the end of the course, the students will be able to: • Explain the concept of Wellness, Recreation and develop understanding of various games organized at global platforms. • Define the facilities of different games and design the make-up of track and field events. • Classify warming-up and cooling down, distinguish aerobic and anaerobic exercises. • Define ergogenic aids and summarize the effects of doping and its types.		
Course Content				
Unit -1		**Introduction to Wellness and Olympic Games** • Meaning, definition and dimension of Health and Wellness. • Meaning, definition, Need and Importance of Physical Education and Recreation. • Meaning of the Physical Culture, Physical Training, Drill, Gymnastics, Athletics, and Aquatics. • Introduction of Olympic Games, Asian Games, Commonwealth games.		
Unit -2		**Facilities and Measurement of Sports and Games** • Introduction to track and field events. • Facilities and measurement of Track and fields. • Introduction to Sports and Games. • Facilities and measurement of play field: hockey, football, Volleyball, Basketball and badminton.		

Unit -3	**Concept of Aerobic and Anaerobic Training**
	• Meaning and methods of Warming-up and cooling down. • Aerobic and Anaerobic training. • Different methods of Aerobic and Anaerobic training. • Facilities required for Aerobic and Anaerobic training.
Unit -4	**Doping and Ergogenic aids**
	• Introduction of Ergogenic aids, Doping and its types. • Physiological and Psychological Effects of Doping. • Advantage and disadvantage of narcotics and drugs. • Role of doping agencies to control the use of drugs in sports.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming.
Suggested Readings	• Brymer, E. (2009). "The role of extreme sports in lifestyle enhancement and wellness". *In Proceedings of the 26th Achper International Conference: Creating Active Futures* (pp. 285-299). Australia: School of Human Movement Studies, Queensland University of Technology, Brisbane, QLD 4059. • Campbell, B. (2013). *Sports Nutrition: Enhancing Athletic Performance*. CRC Press. • Katz, L., Parker, J., Tyreman, H., Kopp, G., Levy, R., & Chang, E. (2006). "Virtual Reality in Sport and Wellness: Promise and Reality". *International Journal of Computer Science in Sport*, 4(1), 4-16. • Reaburn, P. R. (2014). *Nutrition and Performance in Masters Athletes*. CRC Press. • Sharma, O.P. (2010). *Handbook of Health Education & Sports*. Khel Sahitya Kendra.

Generic Elective Course (GEC) Semester-II

Year	**I**	**HEALTH EDUCATION AND NUTRITION**	**Credits**	**4**
Semester	**II**		**Course Code**	**SOE PES 010202 GEC 3014**
Learning Outcomes	At the end of the course, the students will be able to: • Explain the meaning, aims and objectives of health education and classify communicable disease, their transmission and prevention. • Recall the concept of non-communicable diseases and list out various programs for controlling diseases. • List out various school health services and define the role of International Organization in the Development of Health.			
Course Content				
Unit -1	**Health Education – Part I** • Health: definition/meaning and its dimensions • Wellness: definition/meaning and its dimensions • Health Education: definition/meaning, aims/objectives and need/importance • Malnutrition and Adulteration in food			
Unit -2	**Health Education – Part II** • Communicable Diseases: transmission and methods of prevention/control • Effect of tobacco and alcohol on health • First-aid/emergency care • Common postural defects and corrective measures			

Unit -3	**Weight management** • Benefits of physical activity, health risks of sedentary behavior • BMI (Body Mass Index): meaning/definition, use, calculation, interpretation of BMI for ordinary person and athlete • Eating disorders: Anorexia Nervosa and Bulimia Nervosa • Obesity: causes, consequences and management
Unit -4	**Sports Nutrition** • Nutrition: meaning/definition, role of nutrition in sports, nutrition before, during and after the competition • Nutrients: Macronutrients and Micronutrients (Carbohydrate, Protein and Fats and Vitamins, Minerals) • Balance diet and components of balanced diet • Performance enhancement drugs: positive and negative effects
Teaching learning process/ Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Suggested Readings	• Campbell, B. (2013). *Sports Nutrition: Enhancing Athletic Performance*. CRC Press. • Eberle, S. G. (2013). *Endurance Sports Nutrition* (Ed. 3). Human Kinetics. • Fink, H. H., & Mikesky, A. E. (2017). *Practical Applications in Sports Nutrition*. Jones & Bartlett Learning. • Maughan, R. J., & Shirreffs, S. M. (Eds.). (2013). *Food, Nutrition and Sports Performance Iii*. Routledge. • Reaburn, P. R. (Ed.). (2014). *Nutrition and Performance in Masters Athletes*. CRC Press. • Ryan, M. (2012). *Sports Nutrition for Endurance Athletes*. Velo Press. • Sharma, O.P., (2010). *Handbook of Health Education & Sports*. Khel Sahitya Kendra. • Punnya, L. (2017) *Health Education and Sports Nutrition.* Khel Sahitya Kendra.

Generic Elective Course (GEC) Semester-III

Year	**II**	**PHYSICAL FITNESS AND CONDITIONING**	**Credits**	**4**
Semester	**III**		**Course Code**	**SOE PES 010303 GEC3014**
Learning Outcomes		At the end of the course, the students will be able to: • Define the concept of warming up, cool down and calisthenics exercise. • Give a demonstration of weight training, Swiss ball training, medicine ball, thera-band and tubing exercises for various body parts. • Classify anthropometric measurements for assessing body composition. • Choose and suggest appropriate exercises for back pain and neck pain, and role of exercise during pregnancy.		
Course Content				
Unit -1		**Concept of Physical Fitness and Conditioning** • Introduction of Physical Fitness variables and Conditioning. • Assessment of Health-Related Fitness • Warming up and cool down exercise for body. • Aerobic and anaerobic exercise and its differences.		
Unit -2		**Importance of Training** • Variation of sets and repetitions and Intensity for weight training. • Exercise with Swiss & medicine ball, thera-band and tubing. • Different Types of Exercise for upper body and lower body. • Various Methods, Principles and Types of training.		

Unit -3	**Body types and Assessment**
	• Anthropometric measurement for somatotyping body type. • Assessing body composition, BMI. • Introduction of Posture and its type. • Posture Deformities and its treatment.
Unit -4	**Importance of Exercise in day today life**
	• Flexibility development Exercises. • Exercise during pregnancy and Exercise for Back and Neck Pain Management. • Method for determining 1-RM. • Concept of designing different fitness training programme for different age group.
Teaching learning process/Transactional Strategies	Lecture cum discussion, PowerPoint presentations, assignments, school observation and report, case study, and problem solving, brainstorming
Suggested Readings	• American Alliance for Health, Physical Education, Recreation and Dance (1999). *Physical Education for Lifelong Fitness, The Physical Best Teacher's Guide.* Human Kinetics, P.O. Box 5076, Champaign, IL 61825-5076 • Emily R. Foster, Karyn Hartiger & Katherine A. Smith.(2002). *Fitness Fun*, Human Kinetics Publishers. • Fahey D. Thomas (2005). *Weight Training Basis, A Complete Guide for Men and Women.* Mcgraw- Hill Companies.Getchell, B. (1979). *Physical Fitness: A Way of Life.* • Lawrence, Debbie. (1999). *Exercise to Music.* A & C Black Publishers Ltd. 37, Sohe Square. • Miller, D. K., & Allen, T. E. (1990). *Fitness: A Lifetime Commitment*. Macmillan Publishing Company. • Robert Malt. (2001). *90-Day Fitness Plan.* D.K. publishing, Inc. 95, Madison Avenue. • The National Association for Sport and Physical Education (1900). *Concepts of Physical Education, What Every Student Needs to Know*. Association Drive Reston, VA 20191-1599 (703) 476-3410.

Generic Elective Course (GEC) Semester-IV

Year	**II**	**EXERCISE AND REHABILITATION**	**Credits**	**4**
Semester	**IV**		**Course Code**	**SOE PES 010404 GEC 3014**
arning Outcomes		the end of the course, the students will be able to: • Understand the principles and objectives of exercise and rehabilitation. • Apply physiological and biomechanical concepts to exercise prescription for rehabilitation. • Design and implement exercise programs for musculoskeletal rehabilitation. • Evaluate the role of exercise in preventing and managing chronic conditions. • Analyze lifestyle factors and their impact on exercise and rehabilitation outcomes.		
urse Content				
Unit -1		**Introduction to rehabilitation and injuries** • Introduction to Exercise and Rehabilitation: Definitions, Purpose and Objectives. • Components of Rehabilitation. • General Principles of Prevention of Injuries • Injuries: Types, causes and prevention.		
Unit -2		**Common injuries and its rehabilitation** • Common Musculoskeletal Injuries: Causes, Assessment, and Diagnosis. • Type of Skin injuries and its rehabilitation • The Modalities of Sports Therapy • Rehabilitation Exercises: Passive, Active, Assisted Resisted exercise for Rehabilitation Stretching, PNF techniques.		

Unit -3	**Common rehabilitation equipment and its uses** • Thera Bands & Free Weights Exercise • Medicine Ball & Swiss Ball Exercise • First Aid Kit • Massage & Taping techniques
Unit -4	**Lifestyle Factors and Rehabilitation Outcomes** • Nutrition's Impact on Exercise and Rehabilitation. • Psychological Aspects in Exercise and Rehabilitation. • Effects of Alcohol & Smoking on rehabilitation • Emerging Trends in Exercise and Rehabilitation Research.
aching learning process/Transactional Strategies	Lecture cum discussion, Practical demonstrations of exercise techniques, Case studies illustrating exercise rehabilitation scenarios, Group projects designing personalized rehabilitation plans.
uggested Readings	• Prentice, W. E. (2014). Rehabilitation Techniques in Sports Medicine. • Kisner, C., & Colby, L. A. (2017). Therapeutic Exercise: Foundations and Techniques. • Shamus, E., & Shamus, J. (2019). Sports Injury Prevention and Rehabilitation. • American College of Sports Medicine. (2018). ACSM's Guidelines for Exercise Testing and Prescription. • Magee, D. J. (2014). Orthopedic Physical Assessment. • Barresi, V. (2017). Exercise-Based Interventions for Patients with Chronic Diseases. • Fiatarone Singh, M. A. (2018). Exercise, Nutrition and the Older Woman: Wellness for Women Over Fifty.