

**MANONMANIAM SUNDARANAR UNIVERSITY,  
TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. Physical Education**

(Choice Based Credit System)

(With effect from the academic year 2024-2025 onwards)

**Preamble**

Physical Education is a form of one of the most effective means of education imparted through physical exercises, recreational activities and sports. It is an integral part of education. Which by mere participation in it gives the outcomes. These outcomes are both instant as well as have strong carry over values in the life. The children as well as the adult and the old enjoy physical activities & sports and gets benefit in the form of stronger muscles and bones, increased energy, coordination level and most importantly the decreased risk of developing chronic diseases.

The UNESCO in its General Conference in 1978 was convinced that, everyone should be free to develop and preserve his or her physical, intellectual and moral powers. Physical Education, Health Education and Sports should consequently be assured and guaranteed for all human beings. Physical Education is now a regular feature in the primary and secondary schools as well as it is gaining popularity in the higher education. The course opted for this is elective as well as the core at the college and the university level in India.

The graduate level course in Physical Education, Health Education and Sports contains subjects varying from foundation of Physical Education to Anatomy, Physiology, Kinesiology, Test & Measurement, Nutrition, Rehabilitation, Psychology, Sports Training, Sports Biomechanics, Methods of Teachings etc. which are aimed to give thorough knowledge and skills to the students. Students perusing physical education courses are fit to join the jobs as physical trainers, coaches, game officials, referees, umpires, curators, gym trainers, life guards, personal trainers etc. During their course of education, the students also develop the expertise to establish their own business as entrepreneurs in the field of sports, fitness, recreation, adventure sports, camping, event management etc.

**Learning Outcomes-Based Curriculum Framework**

The learning outcomes-based curriculum framework for a B.Sc degree in Physical Education is intended to provide a broad frame work with in which Physical Education programme responds to the needs of students and requirements. The framework is expected to assist in the maintenance of standard and uniformity of Physical Education degrees across the country. This will also help in periodic programmere view within a broad framework of agreed expected graduate attributes, qualification descriptors, programme learning outcomes and course-level learning outcomes. The frame work does seek to bring about uniformity in syllabi for a programme of study in Physical Education, teaching-learning process as well as learning assessment procedures. However, the framework is also intended to allow flexibility and innovation in programme design.

### **Nature and extent of the B.Sc.degree programme**

Physical Education is normally referred to as the science that aims to develop all-inclusive aspects of human personality through physical and sports activities. Physical education is a multidisciplinary subject that cannot be studied in seclusion under the scope of one or two subjects. The scope of Physical Education as a subject is very broad. It caters to the need for developing capability of the students on physical, mental and social aspects. Physical education also aims to develop activity as an alternate and prophylactic medicine. The key areas of study within the Physical Education are *'Exercise Physiology, Sports Psychology, Sports Sociology, Sports Management, Sports Journalism, Kinesiology- Biomechanics, Sports Training, Sports Medicine, Kinanthropometry etc.*

Degree program in Physical Education covers topics that overlap with the areas out lined above and that address the interfaces of Physical Education with other subjects such as Physiology, Bio-Chemistry, Physics, Physiotherapy, Psychology, Management, Sociology along with training pedagogy employed for enhancing the functional status of individuals with varied needs. As a part of the effort, to enhance the employability of graduates of Physical Education, programs include learning experiences that offer opportunities in various spheres of human existence.

### **Program Specific Outcomes (PSOs)**

This would lead the students to understand historical concept of physical education and relationship between Philosophy, Education and Physical Education. The student would further understand the theoretical implications of philosophies of physical education with modern development and social aspects of Physical Education.

1. To select the in merited talented children for various sports activities.
2. To orient children in schools with the fundamental skills of selected sports as per their in merited potential.
3. To devise training program for athlete seng aged in different ports activities
4. To officiate, supervise various sports tournaments and orient the minor ganizing sports events at all levels.
5. To be entrepreneur (to start their own fitness centre, gym, spa etc) and device appropriate fitness program for different genders and age groups of people.

6. To devise training program for physically challenged peoples.

**Eligibility for Admission to the programme B.Sc Physical Education, Health Education and Sports (3 Years)**

- A. Applicants should have passed the +2 examination of the Government of Tamil Nadu or any other equivalent examination recognized by the Government of Tam I Nadu or approved by the concerned University.
- B. School representation in any game or sports is preferred for the applicants. The procedure followed for the selection of B.P.Ed degree should be followed for B Sc. Physical Education, Health Education and Sports Degree candidates.
- C. The candidates should not have completed 21 years of age as on 1<sup>st</sup> July. However, relaxation of 3 years may be given for SC/ST.

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

|                                      |         |
|--------------------------------------|---------|
| 1. Qualifying Examination            | 25marks |
| 2. Participation in Sports and Games | 25marks |
| 3. Games skill test                  | 50marks |
| 4. Track and Field Skill test        | 50marks |

**Games and Sports participation: (MaximumMarks:25)**

|  |         |
|--|---------|
| 1. Representation for the Country/National placing                                     | 25marks |
| 2. State Representation (Form II/IV in games/Sports)                                   | 20marks |
| 3. Inter Division (Participation)BDS/RDS<br>Inter District (Participation)/CBSCCLUSTER | 15marks |
| 4. District (BDS/RDS)  | 10marks |
| 5. Inter-School Representation   | 05marks |

All other quota system and rule of reservation of the Government of Tamil Nadu shall be followed.

**Course-level learning outcomes**

The undergraduate degree program of Physical education will be of three years with six semesters. The Course-level learning outcomes for each course with in B.Sc degree programme in Physical Education are given below with content matter (detail syllabus of five unit)to be taught in each unit and semester for three years

| Sem | Part | Course | Title of the Paper | T/P | Cr. | Hrs./Week | Max. Marks |
|-----|------|--------|--------------------|-----|-----|-----------|------------|
|-----|------|--------|--------------------|-----|-----|-----------|------------|

MSU

|    |     | <b>Code</b>       |   |           |           |            | <b>Int.</b> | <b>Ext.</b> | <b>Total</b> |
|----|-----|-------------------|---|-----------|-----------|------------|-------------|-------------|--------------|
| I  | I   | T/OL              | Language--- Tamil   | T         | 3         | 6          | 25          | 75          | 100          |
|    | II  | E                 | English   | T         | 3         | 6          | 25          | 75          | 100          |
|    | III | CC                | Foundation of Physical Education and Sports   | T         | 5         | 5          | 25          | 75          | 100          |
|    |     | CC                | Theories of Major Games-I (Kabaddi, Kho-Kho)  | T         | 5         | 5          | 25          | 75          | 100          |
|    | IV  | Elective I        | a) Anatomy and Physiology<br>b) Sports Journalism   | T         | 3         | 4          | 25          | 75          | 100          |
|    |     | SEC-1             | Major Games-I (Kabaddi, Kho-Kho)  | P         | 2         | 2          | 50          | 50          | 100          |
|    |     | Foundation Course | Kin anthropometry   | P         | 2         | 2          | 50          | 50          | 100          |
|    |     | <b>Total</b>      |   | <b>23</b> | <b>30</b> | <b>225</b> | <b>475</b>  | <b>700</b>  |              |
| II | I   | T/OL              | Language Tamil  | T         | 3         | 6          | 25          | 75          | 100          |
|    | II  | E                 | English   | T         | 3         | 4          | 25          | 75          | 100          |
|    | III | CC                | Organization, Administration and Methods in Physical Education                            | T         | 5         | 5          | 25          | 75          | 100          |
|    |     | CC                | Theories of Major Games-II (Badminton, Ball Badminton)                                    | T         | 5         | 5          | 25          | 75          | 100          |
|    | IV  | Elective II       | a) Health Education, Safety Education and First aid<br>b) Principles of Motor Development | T         | 3         | 4          | 25          | 75          | 100          |
|    |     | SEC-2             | Major Games-II (Badminton, Ball Badminton)  | P         | 1         | 2          | 50          | 50          | 100          |
|    |     | SEC-3             | Fundamental Movement Skills   | P         | 1         | 2          | 50          | 50          | 100          |
|    |     |                   | Naan Mudhalvan Course / Yoga Education *  | T         | 2         | 2          |             | 100         | 100          |
|    |     |                   | <b>Total</b>  |           | <b>23</b> | <b>30</b>  | <b>225</b>  | <b>575</b>  | <b>800</b>   |

**Programme Structure 2024 – 2025**

| Sem   | Part | Course Code  | Title of the Paper                            | T/P          | Cr.       | Hrs./Week | Int.       | Ext.       | Total      |            |
|-------|------|--------------|---|--------------|-----------|-----------|------------|------------|------------|------------|
|       | I    | T/OL         | Language Tamil                                | T            | 3         | 6         | 25         | 75         | 100        |            |
|       | II   | E            | English                                       | T            | 3         | 6         | 25         | 75         | 100        |            |
|       |      | CC           | Sports Psychology and Sociology               | T            | 5         | 4         | 25         | 75         | 100        |            |
|       |      | CC           | Sports Biomechanics And Kinesiology           | T            | 5         | 4         | 25         | 75         | 100        |            |
|       |      | Elective III | Teaching Practice                             | P            | 3         | 4         | 50         | 50         | 100        |            |
|       | IV   | SEC-4        | Applied Sports Psychology                     | P            | 1         | 2         | 50         | 50         | 100        |            |
|       |      |              | Naan Mudhalvan Course / Fitness and Wellness* | T            | 2         | 2         |            | 100        | 100        |            |
|       |      | IV           | EVS   | T            | 2         | 2         | 25         | 75         | 100        |            |
|       |      |              | <b>Total</b>                                  |              | <b>24</b> | <b>30</b> | <b>225</b> | <b>575</b> | <b>800</b> |            |
| <hr/> |      |              |   |              |           |           |            |            |            |            |
| IV    | I    | T/OL         | Language Tamil                                | T            | 3         | 6         | 25         | 75         | 100        |            |
|       | II   | E            | English                                       | T            | 3         | 6         | 25         | 75         | 100        |            |
|       |      | CC           | Computer Application in Physical Education    | T            | 5         | 4         | 25         | 75         | 100        |            |
|       |      | CC           | Principles of Sports Training                 | T            | 5         | 4         | 25         | 75         | 100        |            |
|       |      | Elective IV  | Applied Principles for Sports Training        | P            | 3         | 4         | 50         | 50         | 100        |            |
|       | III  | SEC-5        | Computer Applications in Physical Education   | P            | 1         | 2         | 50         | 50         | 100        |            |
|       |      |              | Naan Mudhalvan Course / Olympic Movement *    | T            | 2         | 2         |            | 100        | 100        |            |
|       |      | IV           | VBE   | T            | 2         | 2         | 25         | 75         | 100        |            |
|       |      |              |   | <b>Total</b> |           | <b>24</b> | <b>30</b>  | <b>225</b> | <b>575</b> | <b>800</b> |

**B.Sc. PHYSICAL EDUCATION  
Programme Structure 2024 – 2025**

| Sem. | Part | Course Code   | Title of the Paper   | T/P | Cr.        | Hrs./Week | Int.       | Ext.       | Total       |
|------|------|---------------|--|-----|------------|-----------|------------|------------|-------------|
| V    | III  | CC            | Test, Measurement & Evaluation in Physical Education                                 | T   | 4          | 5         | 25         | 75         | 100         |
|      |      | CC            | Exercise Physiology  | T   | 4          | 5         | 25         | 75         | 100         |
|      |      | CC            | Sports Nutrition   | T   | 4          | 5         | 25         | 75         | 100         |
|      |      | CC            | Theories of Track and Field  | T   | 3          | 5         | 25         | 75         | 100         |
|      |      | Elective V    | Measurement and Evaluation in Human Performance                                      | P   | 3          | 4         | 50         | 50         | 100         |
|      |      | Elective VI   | Track and Field  | P   | 3          | 4         | 50         | 50         | 100         |
|      |      |               | Naan Mudhalvan Course / Physical Literacy *  | T   | 2          | 2         |            | 100        | 100         |
|      |      |               | Field Visit  |     | 2          |           |            |            |             |
|      |      |               | <b>Total</b>   |     | <b>25</b>  | <b>30</b> | <b>200</b> | <b>500</b> | <b>700</b>  |
| VI   |      | CC            | Care, Prevention of Athletic Injuries and Rehabilitation                             | T   | 4          | 6         | 25         | 75         | 100         |
|      |      | CC            | Theories of Major Games - III (Cricket, Basketball, Volleyball, Football and Hockey) | T   | 4          | 6         | 25         | 75         | 100         |
|      |      | CC            | Research and Elementary Statistics   | T   | 4          | 6         | 25         | 75         | 100         |
|      |      | Elective VII  | Major Games - III (Cricket, Basketball, Volleyball, Football and Hockey)             | P   | 3          | 5         | 50         | 50         | 100         |
|      |      | Elective VIII | Project  |     | 3          | 5         | 50         | 50         | 100         |
|      |      |               | Naan Mudhalvan Course / Sports Technology *  |     | 2          | 2         |            | 100        | 100         |
|      |      |               | Extension Activity   |     | 1          |           | 100        | 100        |             |
|      |      |               | <b>Total</b>   |     | <b>21</b>  | <b>30</b> | <b>175</b> | <b>525</b> | <b>700</b>  |
|      |      |               | <b>Grand Total</b>   |     | <b>140</b> | <b>--</b> | <b>--</b>  | <b>--</b>  | <b>4500</b> |

\*Only for Naan Mudhalvan Course arrear Students



| Semester-I   |  |     |         |       |
|--|--|-----|---------|-------|
|  | CORE COURSE-I  | T/P | Credits | Hours |
|  | FOUNDATION OF PHYSICAL EDUCATION AND SPORTS  |     |         |       |
|  |  | T   | 5       | 5     |
|  | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>To compare the relationship between general education and physical education</li> <li>To know recent developments and academic foundation of Physical Education.</li> <li>To able to identify and relate with the History of Physical Education.</li> <li>To able to identify the History of sports.</li> </ol> |     |         |       |
| <b>Unit-I</b>  | Meaning and Definition of Education and Physical Education–Need, Nature and Scope of Physical Education – Physical Training and Physical Culture.  |     |         |       |
| <b>Unit-II</b>   | Aim and Objectives of Physical Education–Development of Physical, Cognitive, Neuro-muscular, Affective, Social, Emotional, Spiritual and Recreational–Theories of Learning–Laws of Learning.   |     |         |       |
| <b>Unit-III</b>  | Scientific basis of Physical Education – Contribution of Allied Sciences–Anatomy, Physiology, Biomechanics, Kinesiology, Sports Medicine, Psychology, Sociology and Computer Science.  |     |         |       |
| <b>Unit-IV</b>   | History of Physical Education in Sparta and Athens – Olympic Games: Ancient, Modern – Origin – Organisation and conduct of the game – Olympic Flag, Torch, Oath, Emblem and Motto.   |     |         |       |
| <b>Unit-V</b>  | Recent development in India: SAI, NSNIS, SNIPES, LNIPE, Sports Academics –Award and Scholarships: Arjuna Award, Dhronochariya Award, Khela Ratna Award –International and National Competitions: Asian Games, SAF, SGF, RDS and BDS.   |     |         |       |
| <b>Books for References:</b>   |  |     |         |       |
| <ol style="list-style-type: none"> <li>Bucher Charles A., <i>Foundations of Physical Education</i>, St. Louis the C. V. Mosby Company, 1983. Kamlesh M. L., <i>Physical Education: Facts and Foundation</i>, New Delhi, P. B. Publications, 1988.</li> <li>Thirunarayanan, C. and Hariharan, S., <i>Analytical History of Physical Education</i>, Karaikudi, C. T. &amp; S. H., Publications, 1990.</li> <li>Sharma, O. P., <i>History of Physical Education</i>, New Delhi, Khel Shitya Kendra, 1998.</li> <li>Wakharkar D. G., <i>Manual of Physical Education in India</i>, Pearl Publications Pvt. Ltd., Bombay, 1967. Wuest, D. eborah, A. and Charles A. Bucher, <i>Foundations of Physical Education and Sport</i>, New Delhi</li> <li>:BL. Publication Pvt., Ltd.</li> <li>Wellman and Cowell, <i>Philosophy and Principles of Physical Education</i>, Amarvati: Suyog Prakasan. Jackson Sharman/ <i>Modern Principles of Physical Education</i>, New York: A. A. Barnes &amp; Co.</li> <li>Khan, Eraj Ahmed, <i>History of Physical Education</i>, Patna Scientific Book Co.</li> </ol> |  |     |         |       |

**Course Out comes**

On completion of the course, the students will be able to

| CO.No. | <b>CORE COURSE-I<br/>FOUNDATION OF PHYSICAL EDUCATION AND SPORTS</b>                         | <b>Cognitive Level</b> |
|--------|--|------------------------|
| CO1    | Discuss the historical review of physical education and sports activities of Indian heritage | K2                     |
| CO2    | Understand the basic principles and foundation of physical                                   | K2                     |
| CO3    | Identify and relate with the History of Physical Education.                                  | K2                     |
| CO4    | Describe the History of Sports.  | K2                     |
| CO5    | Estimate the Recent development in India   | K3                     |

Remember(K1); Understand (K2); Apply (K3); Analyze(K4); Evaluate(K5); Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

| Semester-I   |  |     |         |       |
|--|--|-----|---------|-------|
|  | CORE COURSE-II   | T/P | Credits | Hours |
|  | THEORIES OF MAJOR GAMES-I<br>(KABADDI, KHO KHO)  | T   | 5       | 5     |
|  | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>Trace the history of sports and games in India learn the strategy and tactics in sports</li> <li>learn various skills in kabaddi and Kho Kho.</li> <li>To be familiar with rules and regulations</li> <li>learn the method of officiating for all kabaddi and kho - kho.</li> </ol> |     |         |       |
| <b>Unit-I</b>  | Origin, History and Development of the Game–International, National and State Level Organization   |     |         |       |
| <b>Unit-II</b>   | Fundamental Skills–Lead–Up Games, Various Symptoms of Play–Selection of Players.   |     |         |       |
| <b>Unit-III</b>  | Training: Technical Training–Tactical Training–Coaching Programme  |     |         |       |
| <b>Unit-IV</b>   | Training: Warm-up, Warming down, Essential fitness components, conditioning load   |     |         |       |
| <b>Unit-V</b>  | Rules of the Game <ol style="list-style-type: none"> <li>Rules and their Interpretations</li> <li>Method of officiating and Scoring</li> <li>Layout and Maintenance of play fields</li> </ol>  |     |         |       |
| <b>Books for References:</b> <ol style="list-style-type: none"> <li>Dr. Anil Sharma O.P. Sharma. Rules of games, sports publication, An sari Road New Delhi.</li> <li>Dr. P. Mariayah. Sports &amp; Games, Sports Publication Raja Street, Coimbatore.</li> <li>Rao C.V. (1971). Kabaddi. Patiala NIS Publication.</li> <li>Monika, A., 2005, “Kabaddi”, Sports Publications, First edition, New Delhi</li> <li>Thakur, J.K., 2013 “Measurement of Playing Field”, Sports Publications, New Delhi</li> </ol> |  |     |         |       |

#### Course Out comes

On completion of the course, the students will be able to

| CO.No. | CORE COURSE-II<br>THEORIES OF MAJOR GAMES-I (KABADDI, KHO-KHO) | Cognitive Level |
|--------|--|-----------------|
| CO1    | Find the basic rules and regulations of various games          | K4              |
| CO2    | Demonstrate the basic skills of various games                  | K2              |
| CO3    | Motivate himself towards international level                   | K2              |
| CO4    | Estimate the performance of the players                        | K5              |
| CO5    | Construct the play fields of various games                     | K3              |

Remember(K1); Understand (K2); Apply (K3); Analyze (K4); Evaluate(K5); Create (K6)

#### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

| Semester-I      |   |  |  |     |         |       |
|-----------------|---|--|--|-----|---------|-------|
|                 | Elective I<br>ANATOMY AND PHYSIOLOGY  |  |  | T/P | Credits | Hours |
|                 |   |  |  | T   | 3       | 4     |
|                 | <b>Learning outcomes:</b>   |  |  |     |         |       |
|                 | <ol style="list-style-type: none"> <li>Understand the basic concept of Anatomy and Physiology</li> <li>Know about structure and function of muscles and bones</li> <li>Learn the structure and functions of heart and lungs</li> <li>Know about the structure of brain and glands</li> <li>Acquire knowledge about digestive and excretory systems</li> </ol> |  |  |     |         |       |
| <b>Unit-I</b>   | Meaning of Anatomy and Physiology – Need and Scope of Anatomy and Physiology in Physical Education–Cell–Structure and Functions–Tissues –Types and Function-Muscular System–Types of Muscles: Skeletal Muscle, Cardiac Muscle, and smooth muscle.   |  |  |     |         |       |
| <b>Unit-II</b>  | Skeleton: Meaning and Functions – Bones: Classification and Functions –General Features of Various Bones: Vertebral Column, Pelvic Bone, Radius and Ulna, Sacula, Femer and Bones of Skull–Joints: Definition and Classification of Joints  |  |  |     |         |       |
| <b>Unit-III</b> | Nervous System: Neuron–Central Nervous System (CNS): Brain and Spinal Cord –Peripheral Nervous System (PNS): cranial Nerves and Spinal Nerves–Digestive System: Structure & Functions–Digestive Process–Liver, Pancreas–Functions   |  |  |     |         |       |
| <b>Unit-IV</b>  | Respiratory System–Respiration– Respiratory Track–Alveoli–Lungs: Structure & Functions–Gas Exchange–Vital Capacity.<br>Circulatory System–Heart: Structure & Functions–Cardiac Cycle, Cardiac Output, Stroke Volume.  |  |  |     |         |       |
| <b>Unit-V</b>   | Endocrine Glands–Functions of Endocrine Glands: Pituitary, Thyroid, Para-Thyroid, Thymus, Pancreas, Adrenal & Sex–their role, in growth, Development and regulations of body functions.   |  |  |     |         |       |

**Books for References:**

- Guyton A.C., 1969, *Functions of the Human Body*, London, W.B. Saunders Company,
- Dr. V. Selvam "Anatomy and Physiology" Bodinayakanur.
- Dr. N.M. MUTHAYYA "Physiology" J.J. Publications, Madurai. SEELEY et. al *Anatomy and Physiology* McGrawHill.
- Srivastava et. 1976, All, Text Book of Practical Physiology, Calcutta Scientific Book Agency,

**Course Outcomes**

On completion of the course, the students will be able to

| <b>CO.No.</b> | <b>Elective-I<br/>ANATOMY AND PHYSIOLOGY</b>         | <b>Cognitive Level</b> |
|---------------|--|------------------------|
| CO1           | Indicate the different parts of human body           | K2                     |
| CO2           | Demonstrate the functions of the human body          | K2                     |
| CO3           | Inspect the different systems of the human body      | K2                     |
| CO4           | Classify the physiological fitness of the human body | K3                     |
| CO5           | Report the structures functions and its parts        | K2                     |

Remember(K1); Understand (K2); Apply (K3); Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| <b>COs</b> | <b>POs</b> |          |          |          |          |          | <b>PSOs</b> |          |          |          |          |          |
|------------|------------|----------|----------|----------|----------|----------|-------------|----------|----------|----------|----------|----------|
|            | <b>1</b>   | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>1</b>    | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
| <b>1</b>   | H          | L        | M        | M        | L        | H        | L           | M        | H        | H        | L        | M        |
| <b>2</b>   | H          | L        | M        | M        | H        | H        | L           | M        | H        | H        | L        | M        |
| <b>3</b>   | H          | L        | M        | L        | M        | H        | L           | M        | H        | H        | L        | M        |
| <b>4</b>   | H          | L        | M        | H        | L        | H        | L           | M        | H        | H        | L        | M        |
| <b>5</b>   | H          | L        | M        | H        | H        | H        | L           | M        | H        | H        | L        | M        |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

| <b>Semester-I</b> |   |            |                |              |
|-------------------|---|------------|----------------|--------------|
|                   | <b>Elective I<br/>SPORTS JOURNALISM</b>   | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|                   |   | <b>T</b>   | <b>3</b>       | <b>4</b>     |
|                   | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. The students will be oriented in basic art of mass communication and reporting of sports events through various mediums.</li> <li>2. Understand the importance and needs of Sports Journalism</li> <li>3. To discuss about the principles of general news reporting and Sport reporting</li> <li>4. To explain about the learn techniques of proof reading</li> <li>5. To develop the skills of commentary skills</li> <li>6. To develop the skills of organization and advertising techniques</li> </ol> |            |                |              |
| <b>Unit-I</b>     | Meaning and Definition of Journalism - Ethics of Journalism - Sports Ethics and Sportsmanship - Reporting Sports Events - National and International Sports News Agencies.  |            |                |              |
| <b>Unit-II</b>    | Concept of Sports Bulletin - Types of bullet in - Journalism and sports education - Structure of sports bulletin – Compiling a bulletin - General news reporting and sports reporting.  |            |                |              |
| <b>Unit-III</b>   | Mass Media in Journalism: Radio and T.V - Commentary – Running commentary on the radio – Sports expert’s comments - Role of Advertisement in Journalism - Sports Photography - Editing and Publishing.  |            |                |              |
| <b>Unit-IV</b>    | Brief review of Olympic Games, Asian Games, Common Wealth Games World Cup, National Games and Indian Traditional Games - Preparing report of an Annual Sports Meet for Publication in Newspaper.  |            |                |              |
| <b>Unit-V</b>     | Organization of Press Meet - Practical assignments to observe the matches and prepare report and news of the same - Visit to News Paper office and TV Centre to know various departments and their working  |            |                |              |

**Books for References:**

1. Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi: Surjeet Publications
2. Ahiya B.N. Chobra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication
3. Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication
4. Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press.
5. Kannan K (2009) Soft Skills, Madurai: Madurai: Yadava College Publication
6. MohitChakrabarti(2008):Value Education: Changing Perspective, New Delhi: Kanishka Publication,.
7. Padmanabhan. A &Perumal A (2009), Science and Art of Living, Madurai: Pakavathi Publication
8. Shiv Khera (2002), You Can Win, New Delhi: Macmillan India Limited.
9. Varma A.K. (1993) Journalism in India from Earliest Times to the Present Period. Sterling publication Pvt. Ltd.
10. Venkataiah. N (2009) Value Education,- New Delhi: APH Publishing Corporation. 43

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No | Elective I –Sports Journalism   | Cognitive Level |
|-------|---|-----------------|
| CO1   | Identify the scope of journalism and in particular sports journalism and discover the open and hidden power structures/ opportunities in sports journalism.   | K2              |
| CO2   | Criticize the scams, ethics and inculcate professionalism. Use the Theoretical knowledge as a sports journalist and get news-sources of news and write in an unbiased, factual manner   | K3              |
| CO3   | Apply these concepts and techniques to sports communications: reporting, research, writing news, match reports, scripts and press releases, interviewing, Feature writing, live reporting etc   | K3              |
| CO4   | Understand and demonstrate the ability to communicate effectively and persuasively to develop professional relationships with sports bodies, coaches, players and other journalists thus gets proficiency to work invariousprofessionalsettingsandworkeffectivelywithdiversegroupsandorganizations. | K4              |
| CO5   | Develop an appreciation of how sport journalism can promote equity and social justice at the global, national, Regional, state and local levels.  | K4              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

| Semester-I      |  |          |          |          |
|-----------------|--|----------|----------|----------|
|                 | SEC-1  | T/P      | Credits  | Hours    |
|                 | <b>Practical - I: Major Games-I<br/>(Kabaddi, Kho-Kho)</b>   | <b>P</b> | <b>2</b> | <b>2</b> |
|                 | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>Trace the history of sports and games in India</li> <li>learn the strategy and tactics in sports</li> <li>learn various skills in kabaddi, Kho-Kho.</li> <li>Be familiar with rules and regulations</li> <li>learn the method of officiating for all kabaddi, Kho-Kho.</li> </ol> |          |          |          |
| <b>Unit-I</b>   | General and Specific Conditioning Exercises  |          |          |          |
| <b>Unit-II</b>  | Fundamental Skills (Offensive Skills, Defensive Skills)  |          |          |          |
| <b>Unit-III</b> | Techniques and Tactics   |          |          |          |
| <b>Unit-IV</b>  | Lead up games and System of Play   |          |          |          |
| <b>Unit-V</b>   | Method of Officiating Play field, Equipment specifications and Scoring   |          |          |          |



**Books for References:**

1. Dr. Anil Sharma O.P. Sharma. Rules of games, sports publication, An sari Road New Delhi.
2. Dr. P. Mariayah. Sports & Games, Sports Publication Raja Street, Coimbatore.
3. Rao C.V. (1971). Kabaddi. Patiala NIS Publication.
4. Monika, A., 2005, "Kabaddi", Sports Publications, First edition, New Delhi
5. Thakur, J.K., 2013 "Measurement of Playing Field", Sports Publications, New Delhi

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Practical - I Major Games-I (Kabaddi, Kho-Kho,)            | Cognitive Level |
|--------|--|-----------------|
| CO1    | Find the basic General and Specific Conditioning Exercises | K4              |
| CO2    | Demonstrate the basic skills of various games              | K2              |
| CO3    | Motivate himself towards international level               | K2              |
| CO4    | Estimate the performance of the players                    | K5              |
| CO5    | Construct the playfields of various games                  | K3              |

Remember(K1); Understand(K2); Apply(K3); Analyze(K4); Evaluate(K5); Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

**Semester-I**

|                 | Foundation Course   |         |       |
|-----------------|---|---------|-------|
|                 | T/P   | Credits | Hours |
|                 | P   | 2       | 2     |
| <b>Unit-I</b>   | Stadiometer, weighing scales, anthropometric tape, skinfold caliper   |         |       |
| <b>Unit-II</b>  | anthropometer, large sliding caliper, bone calipers,  |         |       |
| <b>Unit-III</b> | Segmometer, wide-spread caliper, small sliding caliper,   |         |       |
| <b>Unit-IV</b>  | footplate, anthropometric rod anthropometric box  |         |       |
| <b>Unit-V</b>   | Length measurements – Height, Arm length, Leg length, Hand length, Palm length;<br>Breadth measurements –Forearm girth, Chest girth, waist girth, Hip girth, Thigh girth and Calf girth. Other measurement: BMI & waist circumference |         |       |

**Books for References:**

1. Curton, A.C." Function of the Human Body", London W.B. Saunders Company 1986.

2. Srivastava, etc. "Text book of practical Physiology", Calcutta, Scientific Book Agency, 1976.
3. Morehouse and Miller, "Physiology of Exercise", St. Louis the C.V. Mosby Company, Latest (ed.).
4. Kapovich and Sinnser, "Physiology of Muscular Activity", London W.B. Saunders company 1965.
5. Anderson T.Mc. CLurg, "Human Kinetics and Analysing Body Measurements, London. William Heinmann Medical Books Ltd., 1961.
6. Davis, D.V. "Gray's Anatomy", London Longman Green and Company Ltd., 1967.
7. Dail, Ellen Neil Kinesiology. The Anatomy of motion.
8. Pearse Evelyn, B., "Anatomy and Physiology for Nurses" London, Faber and Faber Ltd., 1967.
9. Pearce J.W., "Anatomy for Students and Teachers of Physical Education, London, Edward Arnold and Company, 1959.
10. Marfell-Jones, Michael, Olds, Tim., Stewart, Arthur., Carter, Lidsay., (2006). International Standards for Anthropometric Assessment. Potchefstroom: The International Society for the Advancement of Kinanthropometry
11. The International Society for the Advancement of Kinanthropometry (2010) Retrieved January 20, 2011

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Practical –II Kinanthropometry  | Cognitive Level |
|--------|---|-----------------|
| CO1    | Learn the palpation technique of bones, bony land marks, skeletal muscles and tendons of human body | K2              |
| CO2    | Understand the concepts of human body measurement   | K2              |
| CO3    | Identify the body and marks of human body   | K2              |
| CO4    | Acquire the technique of measuring human body segments length, girth, and breadth                   | K3              |
| CO5    | Learn the technique of measuring percent body fat using skin fold measurement                       | K2              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester-II   |   |     |         |       |
|---|---|-----|---------|-------|
|   | Core Course III<br>ORGANIZATION ADMINISTRATION AND<br>METHODS IN PHYSICAL EDUCATION | T/P | Credits | Hours |
|   |   | T   | 5       | 5     |
| <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. Students, after successful completion of the course, will be able to</li> <li>2. Learn the scheme of Physical Education</li> <li>3. To understand the Layout of playfields</li> <li>4. Learn about the management.</li> <li>5. Understand the methods of evaluation.</li> </ol> |   |     |         |       |

|  |  |
|--|--|
| <b>Unit-I</b>  | Meaning and Importance of Organization and administration – Scheme of Physical Education in: Schools, Colleges, Universities, Districts State and National Level.  |
| <b>Unit-II</b>   | Facilities – Track, Play Grounds, Gymnasium, Swimming Pole – Layout of Playfields (Basketball, Kabbadi, Hockey, Volleyball, Cricket) Care and Maintenance of Playfields.   |
| <b>Unit-III</b>  | Method in Physical Education–meaning–Factors influencing Method Presentation Technique–Teaching Aids–Principles of Class Management.<br>Teaching of activities: Marching, Calisthenics, light apparatus (Wands, Hooks, Poles) Lezium, Folkdance–Minor Games–Leadup activities. |
| <b>Unit-IV</b>   | Teaching activities of minor games, major games track and field, Yogic Practice, Suryanamaskar, Calisthenics, Light apparatus, Rhythmic activities, Commands, Marching.  |
| <b>Unit-V</b>  | Tournaments – Types of Tournament, Knock out, League, Combination<br>Tournament, Methods of drawing Fixtures.  |
| <b>Books for References:</b>   |  |
| <ol style="list-style-type: none"> <li>1. Kamlesh M.L. Scientific “Art of Teaching Physical Education” New Delhi Metropolitan 1994.</li> <li>2. Thiru. Narayanan C and Harishara Sharma “Methods in Physical Education” Karaikudi CJ and S.H. 1989</li> <li>3. Joseph. P.M. “Organization of Physical Education”.</li> </ol> |  |

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Core- III-Organization and Administration in Physical Education         | Cognitive Level |
|--------|---|-----------------|
| CO1    | Learn organization and administration strategies in physical education. | K3              |
| CO2    | Learn to know various playfield in sports and games.                    | K4              |
| CO3    | Know the various methods in supervision.                                | K4              |

|     |   |    |
|-----|---|----|
| CO4 | Learn the efficiency in class management and equipment maintains. | K3 |
| CO5 | Prepare a good budget with the sources of income and expenditure. | K6 |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

| Semester-II   |   |     |         |       |
|---|---|-----|---------|-------|
|   | Core Course-IV<br>Theories of Major Games-II<br>(Badminton, Ball Badminton) | T/P | Credits | Hours |
|   |   | T   | 5       | 5     |
| <b>Learning outcomes:</b><br>1. The pass out would be oriented with the rules and regulations of the chosen game. |   |     |         |       |

|  |  |
|--|--|
|  | <ol style="list-style-type: none"> <li>2. The pass out would be able to lay-out and mark the dimensions of the court.</li> <li>3. Students would be able to organize the concerned sports event and officiate in it.</li> <li>4. Students would be oriented in the art of coaching the sports team.</li> </ol> |
| <b>Unit-I</b>  | Origin, History and Development of the Game–International, National and State Level Organization   |
| <b>Unit-II</b>   | Fundamental Skills–Lead–Up Games, Various Symptoms of Play–Selection of Players.   |
| <b>Unit-III</b>  | Training: Technical Training–Tactical Training–Coaching Programme  |
| <b>Unit-IV</b>   | Training: Warm-up, Warming down, Essential fitness components, conditioning load   |
| <b>Unit-V</b>  | Rules of the Game <ol style="list-style-type: none"> <li>a) Rules and their Interpretations</li> <li>b) Method of officiating and Scoring</li> <li>c) Layout and Maintenance of play fields</li> </ol>   |
| <b>Books for References:</b>   |  |
| <ol style="list-style-type: none"> <li>1. Dr. Anil Sharma O.P. Sharma. Rules of games, sports publication, An sari Road New Delhi.</li> <li>2. Dr. P. Mariayah. Sports &amp; Games, Sports Publication Raja Street, Coimbatore.</li> <li>3. Kirubakar, and S. Gladly., 2009, “Tennis Skills: A Teacher's Guide”, First edition, S.S. Publications, Chennai</li> <li>4. Thakur, J.K., 2013 “Measurement of Playing Field”, Sports Publications, New Delhi</li> <li>5. Dr. I. Karikalan. 2017 Hand Book on Play Field Manual”, SShree Publications, Tuticorin</li> </ol> |  |

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Core Course–IV-Theories of Games-II<br>(Badminton, Ball Badminton) | Cognitive Level |
|--------|--|-----------------|
|--------|--|-----------------|

|     |   |    |
|-----|---|----|
| CO1 | Learn the fundamental skills, rules and regulation in various games and sports.         | K3 |
| CO2 | Know to prepare and maintain of various play field and specification                    | K6 |
| CO3 | Learn to adapt team tactics and techniques of various sports.                           | K3 |
| CO4 | Develop evaluation of skills and performance of the players.                            | K5 |
| CO5 | Learn the rules and regulations and current interpretation of new changes in the games. | K3 |

Remember(K1);Understand (K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester- I I |               |     |         |       |
|---------------|---------------|-----|---------|-------|
|               | ELECTIVE - II | T/P | Credits | Hours |

| <b>HEALTH EDUCATION, SAFETY EDUCATION AND FIRST AID</b>  |  | <b>T</b> | <b>3</b> | <b>4</b> |
|--|--|----------|----------|----------|
|  | <p><b>1. Learning outcomes:</b></p> <p>2. The student will be able to identify and synthesize the factors that influence health</p> <p>3. The student will be able to recognize the health related challenges in current time and able to apply the preventive measures.</p> <p>4. The student will be able to identify the role of peers, community and median health promotion and protection.</p> <p>5. The student will be able to demonstrate the expertise in above stated domains in a school setup.</p> <p>6. The student will be able to value the knowledge and skills required to preserve community health and well-being.</p> |          |          |          |
| <b>Unit-I</b>  | Meaning, Nature, Need and Scope of health Education. Factors influencing Health. State, National and International health organization. Meaning of wellness and Health-components of Health-Physical and Mental Health. Community health, Environment health, Occupational health. Personal hygiene School health programme.   |          |          |          |
| <b>Unit-II</b>   | Communicable diseases-agent, causative organism, Incubation period-Mode of spread, sign and symptoms and preventive measure of typhoid, Cholera, Pulmonary Tuberculosis, Amoebiasis, Malaria, Tetanus, Polio myelitis, Non - Communicable diseases-Symptoms and Prevention of Peptic ulcer, Malignancy, Cancer, Hypertension, Diabetic mellitus.   |          |          |          |
| <b>Unit-III</b>  | Definition-Characteristics-Principles of safety Education-Need for Safety Education in Physical Education. Factors affecting safety-Need and Importance of safety for preventing injuries.   |          |          |          |
| <b>Unit-IV</b>   | Definition and importance of first aid-first aid for Athletic injuries-sprain, strain-dislocation-cramp-fracture and its types.  |          |          |          |
| <b>Unit-V</b>  | Sign, Symptoms and first aid for Poisoning, Drowning, Dog Bit and Burns. Types of Bleeding-Wound and its type-Contusion-Abrasion-Puncher wound-Laceration .Artificial respiration.   |          |          |          |
| <b>Book for References:</b>  |  |          |          |          |
| <ol style="list-style-type: none"> <li>1. Mangal SK and Chandra, P.C. (1979) Health and Physical Education, Ludhiana Tandon Brothers Publication.</li> <li>2. Neimiah (1978) School Health Education, New York: Harper and Brothers Royappa, Daisy Joseph and Govind arajulu, J.K. (1972) Safety Education First Aid to the Injured, New Delhi: St. John Ambulance Association</li> <li>3. School Safety Policies, Washington: America Association for Health, Physical Education and Recreation.</li> <li>4. Florio, A. E. and Stafford, G. T., (1969) Safety Education, New York: McGraw Hill Book Company.</li> <li>5. William, Evans, A., (1952) Everyday Safety, Lyons and Carnahan</li> <li>6. Miller, David. E., (1976) Occupational Safety, Health and Fire Index, New York: Marcel Dekker Inc.</li> </ol> |  |          |          |          |



**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | <b>ELECTIVE II</b><br><b>Health Education, Safety Education and First aid</b> | <b>Cognitive Level</b> |
|--------|---|------------------------|
| CO1    | Explain the factors influencing health and safety                             |                        |
| CO2    | Build the knowledge on hygiene and various health programme                   |                        |
| CO3    | Analyze the pollutions, various diseases and find their remedies              |                        |
| CO4    | Assess the mental health, community health and family life education          |                        |
| CO5    | Build and follow the principles of health education and safety measures       |                        |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Semester-II</b>  |   |                 |                |              |
|---|---|-----------------|----------------|--------------|
|   | <b>ELECTIVE- II<br/>PRINCIPLES OF MOTOR DEVELOPMENT</b>   | <b>T/<br/>P</b> | <b>Credits</b> | <b>Hours</b> |
|   |   | <b>T</b>        | <b>3</b>       | <b>4</b>     |
|   | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. Understand the basic Motor development</li> <li>2. Know about physical growth, maturation and aging</li> <li>3. Understand and study the motor skills and movement concepts</li> <li>4. Understanding the concept of Constraints in Motor Development.</li> </ol> |                 |                |              |
| <b>Unit-I</b>   | Definition: Motor Development, Motor Learning, Motor Control–Theoretical perspectives of Motor Development-Concept of Physical Literacy-Age classification.   |                 |                |              |
| <b>Unit-II</b>  | Physical growth, maturation and Aging – Types of Motor Skills – Movement milestones in children, Long Term Athlete Development (LTAD).  |                 |                |              |
| <b>Unit-III</b>   | Basic Movements in Human Body–Axis and Plane–Movements in axis and planes–Movements at various joints   |                 |                |              |
| <b>Unit-IV</b>  | Classification of Motor Skills: Fundamental (Locomotor, Non-locomotor, Manipulative Skill), Specialized (Manipulative, Rhythmic Movement, Game & Sport Skills).   |                 |                |              |
| <b>Unit-V</b>   | Movement Concepts: Space Awareness, Effort Concepts, Relationships -Postural control and balance.   |                 |                |              |
| <b>Books for References:</b>  |   |                 |                |              |
| <ol style="list-style-type: none"> <li>1. Kathleen M. Haywood., &amp; Nancy Getchell., (2009). Life Span motor Development (5th Ed.), Champaign, IL: Human Kinetics,</li> <li>2. Robert M. Malina., Claude Bouchard &amp; Oded Bar-Or., (2004). Growth, Maturity and Physical Activity (2nd Ed.), Champaign, IL: Human Kinetics.</li> <li>3. NAPSE., (2005). Physical Education for Lifelong Fitness (2nd Ed.), Champaign, IL: Human Kinetics.</li> <li>4. Allen W. Jackson., James R. Morrow., Jr. David W. Hill &amp; Rod K. Dishman., (2004). Physical Activity for Health and Fitness, Champaign, IL: Human Kinetics.</li> <li>5. Cratty Bryant, J. (1975). Movement Behaviour and Motor Learning. Philadelphia Lea &amp; Febiger.</li> </ol> |   |                 |                |              |

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | <b>ELECTIVE II<br/>PRINCIPLES OF MOTOR DEVELOPMENT</b>  | <b>Cognitive Level</b> |
|--------|---|------------------------|
| CO1    | Identify the differences between motor learning, performance, control, and development and discuss the assessment and classification of motor skills.   |                        |
| CO2    | Discuss the role of motor learning and skill performance within the general framework of Kinesiology.   |                        |
| CO3    | Identify and discuss concepts associated with sensation, perception, and movement preparation   |                        |
| CO4    | Discuss the differences between open-loop and closed-loop accounts of movement control as well as demonstrate an understanding of the speed-accuracy principle in light of open and closed-loop accounts of motor control and learning. |                        |
| CO5    | Discuss concepts related to motor learning including stages of learning, retention, transfer, the role of instructions, motivation, and instruction.  |                        |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester-II   |  |  |  |     |         |       |
|---|--|--|--|-----|---------|-------|
|   | SEC-2  |  |  | T/P | Credits | Hours |
|   | Practical - III: Major Games-II<br>(Badminton, Ball Badminton)         |  |  | P   | 1       | 2     |
| <b>Unit-I</b>   | General and Specific Conditioning Exercises                            |  |  |     |         |       |
| <b>Unit-II</b>  | Fundamental Skills (Offensive Skills, Defensive Skills)                |  |  |     |         |       |
| <b>Unit-III</b>   | Techniques and Tactics   |  |  |     |         |       |
| <b>Unit-IV</b>  | Lead up games and System of Play                                       |  |  |     |         |       |
| <b>Unit-V</b>   | Method of Officiating Play field, Equipment specifications and Scoring |  |  |     |         |       |
| <b>Books for References:</b>  |  |  |  |     |         |       |
| 1. Dr. Anil Sharma O.P. Sharma. Rules of games, sports publication, An sari Road New Delhi. |  |  |  |     |         |       |
| 2. Dr. P. Mariayah. Sports & Games, Sports Publication Raja Street, Coimbatore.             |  |  |  |     |         |       |
| 3. Rao C.V. (1971). Kabaddi. Patiala NIS Publication.                                       |  |  |  |     |         |       |
| 4. Monika, A., 2005, "Kabaddi", Sports Publications, First edition, New Delhi               |  |  |  |     |         |       |
| 5. Thakur, J.K., 2013 "Measurement of Playing Field", Sports Publications, New Delhi        |  |  |  |     |         |       |

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Practical - III: Major Games-II<br>(Badminton, Ball Badminton)                          | Cognitive Level |
|--------|---|-----------------|
| CO1    | Learn the fundamental skills, rules and regulation in various Games and sports.         | K3              |
| CO2    | Know to prepare and maintain of various play field and specification                    | K6              |
| CO3    | Learn to adapt team tactics and techniques of various sports.                           | K3              |
| CO4    | Develop evaluation of skills and performance of the players.                            | K5              |
| CO5    | Learn the rules and regulations and current interpretation of new changes in The games. | K3              |

Remember(K1); Understand(K2); Apply(K3); Analyze(K4); Evaluate(K5); Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |

|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | H | M | L | L | H | L | M | M | H | M | H | L |
| 5 | H | M | L | L | H | L | L | M | H | M | H | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester-II   |   |  |  |     |         |       |
|---|---|--|--|-----|---------|-------|
|   | SEC-3   |  |  | T/P | Credits | Hours |
|   | Practical - VI: Fundamental Movement Skills                                 |  |  | P   | 1       | 2     |
| <b>Unit-I</b>   | Non-Locomotor Skills (Twisting, Turning, Balancing, Bending, Curling etc.,) |  |  |     |         |       |
| <b>Unit-II</b>  | Locomotor Skills (Walking, Running, Jumping, Sliding, Skipping, Etc.,)      |  |  |     |         |       |
| <b>Unit-III</b>   | Manipulative Skills (Throwing, Hitting, Catching, Kicking, Dribbling etc.,) |  |  |     |         |       |
| <b>Unit-IV</b>  | Total Gross Motor Development-2-Test  |  |  |     |         |       |
| <b>Unit-V</b>   | Functional Movement Screening Test (8 Test Items)                           |  |  |     |         |       |
| <b>Books for References:</b>  |   |  |  |     |         |       |
| 1. Kathleen M. Haywood, & Nancy Getchell, (2009). Life Span motor Development (5th Ed.), Champaign, IL: Human Kinetics,                       |   |  |  |     |         |       |
| 2. Robert M. Malina, Claude Bouchard & David Bar-Or, (2004). Growth, Maturity and Physical Activity (2nd Ed.), Champaign, IL: Human Kinetics. |   |  |  |     |         |       |
| 3. NAPSE, (2005). Physical Education for Lifelong Fitness (2nd Ed.), Champaign, IL: Human Kinetics.   |   |  |  |     |         |       |

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Practical - VI: Fundamental Movement Skills   | Cognitive Level |
|--------|---|-----------------|
| CO1    | Detect and correct basic errors for fundamental movement skills in participants so they have a choice to adopt a healthy, active lifestyle;       | K3              |
| CO2    | Apply a teaching process to fundamental movement skills;  | K6              |
| CO3    | Adapt fundamental movement skills for participants with intellectual, physical, sensory or behavioural disabilities;                              | K3              |
| CO4    | Lead activities that will promote the development of fundamental movement skills in a safe, responsible manner while interacting with others; and | K5              |
| CO5    | Provide stage-appropriate feedback to encourage and develop fundamental movement skills in participants.  | K3              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs | PSOs |
|-----|-----|------|
|-----|-----|------|

|          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|          | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
| <b>1</b> | H        | M        | M        | M        | L        | H        | L        | M        | H        | M        | H        | L        |
| <b>2</b> | H        | M        | M        | M        | H        | H        | M        | H        | H        | M        | H        | L        |
| <b>3</b> | H        | M        | L        | L        | M        | L        | M        | H        | H        | M        | H        | L        |
| <b>4</b> | H        | M        | L        | L        | H        | L        | M        | M        | H        | M        | H        | L        |
| <b>5</b> | H        | M        | L        | L        | H        | L        | L        | M        | H        | M        | H        | M        |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Semester - V</b> |  |            |                |              |
|---------------------|--|------------|----------------|--------------|
|                     | <b>Naan Mudhalvan Course / YOGA EDUCATION</b>  | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|                     |  | <b>T</b>   | <b>2</b>       | <b>2</b>     |
|                     | <b>Learning outcomes:</b>  |            |                |              |
|                     | <ol style="list-style-type: none"> <li>1. Compare a yoga training and identify for each group</li> <li>2. Judge the values and importance of suryanamaskar.</li> <li>3. Differentiate the different type of yogasanas and solve the health problems.</li> <li>4. Diagnose the breathing problem through pranayama practices.</li> <li>5. Explain the usage of kriya practices.</li> </ol>  |            |                |              |
| <b>Unit-I</b>       | Yoga: Meaning, Definition – Concept of Yoga – Aim and Objectives of Yoga – History of Yoga – Systems of yoga : Bhakthi yoga – Jnana yoga – Hatha yoga – Karma yoga – Kundalini yoga – mantra yoga – Raja yoga – Ashtanga yoga : Yama – Niyama – Asana – Pranayama – Pratyahara – Dharana – Dhayana – Samathi.  |            |                |              |
| <b>Unit-II</b>      | Asanas: Meaning and Definition – Classification of asanas: Meditative, Relaxative, Cultural – Guidelines for practicing asanas – Various types of asanas and their benefits – Difference between physical exercise and yogic asanas.   |            |                |              |
| <b>Unit-III</b>     | Pranayama: Meaning and Definition – Concept of Pranayama – Nadis – Ida nadi – Pingala Nadi – Sushumna nadi – Controlling of breath: Puraka – Kumbhaka – Rechaka – Guidelines for practicing Pranayama – Benefits of Pranayama – Types of Pranayama: Nadi Suddhi – Nadi Shodhana – Surya Bhedana – Kapalabhati – Bhastrika – Sitkari – Sitali – Bhramari – Ujjayi. Bandhas: Meaning and Definition – Types: Jalandra – Uddiyana – Mula. |            |                |              |
| <b>Unit-IV</b>      | Kriyas – Types of Kriyas – Procedures and Benefits of: Kapalabhati – Tratakka – Neti (Jala neti, Sutra neti) – Dhauti; Vamana Dhauti – Vastra Dhauti – Nauli – Bhasti.<br>Mudra: Meaning – Types : Chin Mudra – Chinmaya Mudra – Yoga Mudra – Brahma Mudra – Appana Mudra.   |            |                |              |
| <b>Unit -V</b>      | Meditation: Meaning and Definition – Concept of meditation – Types of meditation – Physiological benefits of meditation – yoga and competition – Principles of yogic Diet – Integration of Yoga with modern education – yoga institutions in India and Abroad – General Yogic Schedule.  |            |                |              |

**Books for References:**

1. Iyengar B.K.S. (1989), Light on Yoga. London: Unwin Publishers New Delhi. Chandrasekaran K.(1999) Sound Health through Yoga, Sedapatti: Prem Kalyan Publicaions.Moorthy, A.M. and S. Alagesan(2004), Yoga Therapy, Coimbatore
2. Swami Sivananda (1983), Practical Lessons I Yoga, Shivananda Nagar : The Devine LifeSociety.

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Naan Mudhalvan Course / YOGA EDUCATION                                     | Cognitive Level |
|--------|--|-----------------|
| CO1    | Understand the fundamental skills and history of Yoga                      | K3              |
| CO2    | To attain the knowledge about various Asanas and Medication                | K6              |
| CO3    | Develop the muscles and the body, mainly to the internal organs and glands | K3              |
| CO4    | Develops agility, balance, endurance and greater vitality                  | K5              |
| CO5    | Helps to develop sound health and eternal peace of mind                    | K3              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Semester-III</b>  |  |            |                |              |
|--|--|------------|----------------|--------------|
| <b>Core Course-VI</b>  |  | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
| <b>SPORTS PSYCHOLOGY &amp; SOCIOLOGY</b>   |  | <b>T</b>   | <b>5</b>       | <b>4</b>     |
| <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. Orient the student in basic concepts of psychology.</li> <li>2. Identify the factors determining one's over all personality.</li> <li>3. Understand various laws of learning and their relevance in teaching and learning process.</li> <li>4. Study about the concept of Sports Sociology.</li> </ol> |  |            |                |              |
| <b>Unit-I</b>  | Meaning and Definition of Psychology and sports Psychology–Development of sports Psychology in India – Need and importance of sports Psychology in the field Physical Education and sports.  |            |                |              |
| <b>Unit-II</b>   | Definition Motor Learning – Physical and Motor considerations – Body Build, Height and Weight, Strength, Muscular, Endurance, Flexibility, Balance Co-Ordination, Reaction time, Movement time and Reflex time Cognitive–Affective–Psychomotor |            |                |              |
| <b>Unit-III</b>  | Definition of Perception – Theory of Perception Gestult Theory, Palror Theory and witkin's Theory emotional effects tension, anxiety and stress–its role in Physical education and sports.   |            |                |              |
| <b>Unit-IV</b>   | Personality traits of sports person–composition of personality–Aggression–theories of Aggression–Psycho-regulative procedures. Autogenic training, yoga and Music's.   |            |                |              |
| <b>Unit-V</b>  | Meaning, Nature and Scope of Sociology in Physical education and sports –social factors in sports–Leadership in sports spectators and fans group cohesion social Integration.  |            |                |              |



**Book for References:**

1. Alderman A.B. Psychology  
Behavior in sports W.B. Saundar company Saundar 1974. Puni A.T. Sports Psychology Chanduga NIS.
2. Alderman Psychology Behavior
3. Cratty B.J. Psychology and Physical activity. Singer R.N. Coaching, Athletics and Physiology.

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Core Course–VI<br>Sports Psychology and Sociology                     | Cognitive Level |
|--------|---|-----------------|
| CO1    | Understand the basic knowledge of sports psychology.                  | K2              |
| CO2    | Learn the principles of motivation and theories of learning.          | K3              |
| CO3    | Understand the psychological factors important of sports performance. | K2              |
| CO4    | Learn the need and importance of social wellbeing.                    | K3              |
| CO5    | Understand the game knowledge the role of media in sports.            | K2              |

Remember(K1); Understand(K2); Apply(K3); Analyze(K4); Evaluate (K5); Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Semester-III</b>  |   |            |                |              |
|--|---|------------|----------------|--------------|
| <b>Core Course-VII</b>   |   | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
| <b>SPORTS BIOMECHANICS &amp; KINESIOLOGY</b>   |   | <b>T</b>   | <b>5</b>       | <b>4</b>     |
| <b>Learning outcomes:</b>  |   |            |                |              |
| <ol style="list-style-type: none"> <li>1. The student would be Oriented with the skeletal structure of human body by identifying the origin and insertion of various muscles.</li> <li>2. Orient the students in basic structure and functions of primary joints of the body.</li> <li>3. Relate and interpret the role of various mechanical principles in human movement.</li> </ol> |   |            |                |              |
| <b>Unit-I</b>  | Meaning and Definition–aim, Need and Importance of Bio-Mechanics in the field of Physical education and sports–Types of motion-linear and angular motion–Function –air and Water resistance.  |            |                |              |
| <b>Unit-II</b>   | Linear Kinematics – Distance and Displacement, Speed, Velocity and Acceleration and Projectile–Angular Kinematics–Angular distance and Displacement, Angular speed, Velocity and acceleration.  |            |                |              |
| <b>Unit-III</b>  | Center of Gravity Equilibrium – Stages of equilibrium – Factors affecting –equilibrium. Centrifugal and Centripetal, Force-Direction-angle, Point of application –Lever–Principles and its types-Mechanical Advantage–Application of Levers in Physical Education & Sports. |            |                |              |

|                |   |
|----------------|---|
| <b>Unit-IV</b> | Inertia-Mass and Weight–Force-Factors affecting force-Types of force–<br>Work, Power and Energy-Impact and Elasticity–Newton’s Law of motion. |
| <b>Unit-V</b>  | Use of the above scientific principles in: Track& Field events–Running, throwing, Jumping–<br>Basketball, football, Volleyball.               |

**Book for References:**

1. Greiremiller, Paul & Smith, Techniques for the analysis of human movement lapse books London 1975.
2. Bunn John W “Scientific Principles of coaching”.
3. Charles “Fundamental of Sports Bio-Mechanics Techniques .Hay, James G “The Biomechanics of Sports”.
4. T. McClurg Anderson Bio Mechanics of Human Motion.

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Core Course–VII<br>Sports Biomechanics and Kinesiology         | Cognitive Level |
|--------|--|-----------------|
| CO1    | Know the need of kinesiology in sports training.               | K1              |
| CO2    | Understand the mechanism of joints and muscles movements       | K2              |
| CO3    | Understand the need of biomechanics prevention of injuries     | K4              |
| CO4    | Learn the concepts of mechanical principles and its field      | K3              |
| CO5    | Understand the application of mechanical principles in sports. | K4              |

Remember(K1); Understand(K2); Apply(K3); Analyze(K4); Evaluate(K5); Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |

|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | H | L | M | M | H | H | L | M | H | H | L | M |
| 3 | H | L | M | L | M | H | L | M | H | H | L | M |
| 4 | H | L | M | H | L | H | L | M | H | H | L | M |
| 5 | H | L | M | H | H | H | L | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester- III   |   |     |         |       |
|-----------------|---|-----|---------|-------|
| Elective<br>III | Practical– VI: Teaching Practice  | T/P | Credits | Hours |
|                 |   | P   | 3       | 4     |
|                 | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. To help the understand varied responsibilities of a teacher.</li> <li>2. To understand the concept of teaching styles, methods,&amp; approaches and to blend them judiciously in the teaching.</li> <li>3. To help the understand methods of communication &amp;its effective use in the teaching process.</li> <li>4. To help the understand the importance &amp;steps of planning. General lesson Plan and Particular Lesson Plan.</li> </ol> |     |         |       |

|   |  |
|---|--|
| <b>Unit-I</b>   | <b>Assembly and roll call</b><br>Class handling<br>Assembly and disposal<br>Marchpast  |
| <b>Unit-II</b>  | <b>Callisthenic Exercises (Free arm Exercises)</b><br>Standing exercises<br>Bending exercises<br>Stepping exercises<br>Moving exercises<br>Lunging exercises<br>Clapping exercises |
| <b>Unit-III</b>   | <b>Exercise with Equipment's</b><br>Dumb bells<br>Indian clups<br>Vands<br>Scoop<br>Ploe drill   |
| <b>Unit-IV</b>  | <b>Exercise without Equipment's</b><br>Baithaks<br>Dhands<br>Minor game  |
| <b>Unit-V</b>   | <b>Teaching skills on major games and athletic events</b><br>Demonstration<br>Teaching<br>Correcting the mistakes<br>Leadup activities   |
| <b>Book for References:</b>   |  |
| <ol style="list-style-type: none"> <li>1. Athicha, P., (2007). Methods in Physical Education. Chennai: South Indian Publication.</li> <li>2. Verma ,H., (2012). Methods and Management of Physical Education (1st Ed.,). Chennai: Sports Publications.</li> <li>3. Perinbaraj, B., (2013). Methods in Physical Education. Karaikudi: Vinci Agencies.</li> <li>4. Mojumdar, &amp; Mohum, R., (2009). Methods in Physical Education. New Delhi: Sports Publications.</li> <li>5. Gopalakrishnan, R. W., (2012). Teaching Methods of Physical Education. New Delhi: Sports Publications.</li> <li>6. Arumugam, S., (2018). Physical Education: Organization and Administration Methods. Madurai: Shanlax Publications.</li> <li>7. Karikalan, I., &amp; Alex, T. A., (2014). Fixtures for Tournaments. Tuticorin: Shree Publications</li> <li>8. Karikalan, I., (2017). Organization, Administration and Methods in Physical Education. Tuticorin: Shree Publications</li> </ol> |  |

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Practical VI-Teaching Practice  | Cognitive Level |
|--------|---|-----------------|
| CO1    | Understand varied responsibilities of a teacher.  |                 |
| CO2    | Understand the concept of teaching styles, methods, & approaches and to Blend them judiciously in the teaching. |                 |
| CO3    | Understand methods of communication & its effective use in the teaching process.                                |                 |
| CO4    | Understand the importance & steps of planning. General lesson Plan and Particular Lesson Plan.                  |                 |
| CO5    | Understand the Lesson Planning  |                 |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester – III |   |     |         |       |
|----------------|---|-----|---------|-------|
| SEC-4          | Practical– VII: Applied sports Psychology and Sociology   | T/P | Credits | Hours |
|                |   | P   | 1       | 2     |
| Unit-I         | Mindfulness, Stress & Anxiety Relaxation Methods<br>Relaxation Technique : Autogenic training, Meditation , Self Bio-feedback ,<br>Deep Breathing Technique : Sitali Pranayama , Nadi Shadhana Pranayama, Surya<br>Bhedana Pranayama, Chndara Bhedana Pranayama,<br>Media Techniques : Visualization , Music Play |     |         |       |
| Unit-II        | Motor – Learning<br>Object Memory Test (COMT), Motor Leraning Height Assessment , Weight Assessment,<br>Reaction time: Yard stick catch test & Respond Sound reaction test, Balance: Single leg<br>Standing test ,  |     |         |       |
| Unit-III       | Anxiety : Sports Competition anxiety test (SCAT) , Sports Anxiety Scale test ( SAS<br>Smith et.al2006), Likert Scale 5 point test, Perceived Stress Questionnaire (PSQ) ,   |     |         |       |

|   |   |
|---|---|
|   | Perceived Stress Scale (PSS-10),<br>Stress & Anxiety Relaxation Technique: <i>Shavasana</i> , Minor games , Breathing exercise ,<br>Inter – Sports game activates   |
| Unit-IV   | Meditation: Yoga , Concentration Exercise<br>Aggression : Buss-Perry Aggression Questionnaire (BPAQ), Body Classification<br>Assessment - BMI Technique, Observation Technique : Mesomorph, Ectomorph &<br>Endomorph  |
| Unit -V   | Specimen Identification:<br>Motivation : Rewards , Sports Awards: Major Dhyan Chand Khel Ratna Award, Arjuna<br>Award, Dronacharya Award, Gold Medal, Silver Medal, Bronze Medal, Major Dhyan<br>Chand Award, Rashtriya Khel Protsahan Puraskar,<br>Apparatus : Electronic Depth Perception Apparatus , Bassin Anticipation Timer , <i>GSR</i><br><i>Biofeedback Biotrainer</i> , Pulse Biofeedback Biotrainer, |
| <b>Books for References:</b>  |   |
| <ol style="list-style-type: none"> <li>1. Cohen, S., &amp; Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan &amp; S. Oskamp (Eds.), <i>The social psychology of health: Claremont Symposium on applied social psychology</i>. Newbury Park, CA: Sage.</li> <li>2. Van Reeth, O., Weibel, L., Spiegel, K., Leproult, R., Dugovic, C., &amp; Maccari, S. (2000). Interactions between stress and sleep: from basic research to clinical situations. <i>Sleep Medicine Reviews</i>, 4 (2), 201–219</li> <li>3. Levenstein, S., Prantera, C., Varvo, V., Scribano, M. L., Berto, E., Luzi, C., &amp; Andreoli, A. (1993). Development of the perceived stress questionnaire: a new tool for psychosomatic research. <i>Journal of Psychosomatic Research</i>, 37 (1), 19–32.</li> <li>4. Öhman, L., Bergdahl, J., Nyberg, L., &amp; Nilsson, L. G. (2007). Longitudinal analysis of the relation between moderate long-term stress and health. <i>Stress and Health</i>, 23 (2), 131–138.</li> <li>5. <a href="https://www.topendsports.com/health/tests/stress.htm">https://www.topendsports.com/health/tests/stress.htm</a></li> <li>6. Alderman Psychology Behavior</li> <li>7. Cratty B.J. Psychology and Physical activity.</li> </ol> |   |

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Practical– VII: Applied sports Psychology and Sociology               | Cognitive Level |
|--------|---|-----------------|
| CO1    | Understand the basic knowledge of sports psychology.                  | K2              |
| CO2    | Learn the principles of motivation and theories of learning.          | K3              |
| CO3    | Understand the psychological factors important of sports performance. | K2              |
| CO4    | Learn the need and importance of social wellbeing.                    | K3              |
| CO5    | Understand the game knowledge the role of media in sports.            | K2              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate (K5);Create(K6)

## Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester- III |  |     |         |       |
|---------------|--|-----|---------|-------|
|               | Naan Mudhalvan Course / Fitness and Wellness   | T/P | Credits | Hours |
|               |  | T   | 2       | 2     |
|               | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>Understand the essentials of life long wellness</li> <li>Understand the essentials of Physical fitness</li> <li>Overcome fitness barriers and involve in physical activity</li> <li>Know the procedure to assess the fitness</li> </ol> |     |         |       |



|                 |  |
|-----------------|--|
| <b>Unit-I</b>   | Definition, Meaning, Concept of Fitness and Wellness–Need for and importance of Fitness and Wellness.  |
| <b>Unit-II</b>  | Aging–Factors influence Aging–Healthy aging–Wellness–Sports as a hobby and Stress management through exercise.                               |
| <b>Unit-III</b> | Physical fitness–Physiological fitness-Functional fitness–Mental fitness–Social Fitness  |
| <b>Unit-IV</b>  | Obesity-Causes of Obesity-Weight Management–Diabetes–causes of diabetes  |
| <b>Unit-V</b>   | Teaching skills on major games and athletic events<br>Test for Endurance, Strength, Flexibility and Speed (Only one test from each category) |

**Book for References:**

1. Hoeger, Werner, W.K., & Hoeger, Sharon, A. (1990). Fitness and Wellness. Englewood: Morton publishing Company.
2. Hazedine, (1985). Fitness for Sports. Ramsburg: The Crowood Press Ltd.
3. James & Hart, L., (1983). 100% Fitness, New Delhi: Goodwill Publishing House.
4. Anspaugh, D.J., Hamrick, M.H., & Rosato, F.D. (1991). Wellness: Concepts and applications. New York: McGraw-Hill.
5. Arumugam, S., & Sivagnanam, P. (2019). Fitness and Wellness. Madurai: Shanlax Publications.

**Course Outcomes**

On completion of the course, the students will be able to

| <b>CO.No.</b> | <b>Naan Mudhalvan Course / Fitness and Wellness</b>     | <b>Cognitive Level</b> |
|---------------|---|------------------------|
| CO1           | Understand the basic knowledge of fitness and wellness. | K2                     |

|     |   |    |
|-----|---|----|
| CO2 | Demonstrate an awareness of fact and fiction with regard to relationships between people's health, Activity and fitness | K3 |
| CO3 | Adapt the concept of skill and the range of techniques needed in physical training.                                     | K2 |
| CO4 | Learn the need and importance of social wellbeing.  | K3 |
| CO5 | Demonstrate an understanding of health problems associated with in adequate fitness levels.                             | K2 |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate (K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

|                     |                         |            |                |              |
|---------------------|-------------------------|------------|----------------|--------------|
| <b>Semester- IV</b> |                         |            |                |              |
|                     | <b>Core Course–VIII</b> | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |

| COMPUTER APPLICATION IN PHYSICAL EDUCATION   |   | T | 5 | 4 |
|--|---|---|---|---|
|  | <p><b>Learning outcomes:</b></p> <ol style="list-style-type: none"> <li>1. obtain the knowledge of computer application in physical education.</li> <li>2. understand the basic knowledge of computer</li> <li>3. learn the MS word, MS excel &amp; MS power point.</li> </ol>  |   |   |   |
| <b>Unit-I</b>  | <ol style="list-style-type: none"> <li>i. Meaning, need and importance of information and communication technology (ICT).</li> <li>ii. Components of computer: input and output device</li> </ol>   |   |   |   |
| <b>Unit-II</b>   | <p>Introduction to MS Word</p> <ol style="list-style-type: none"> <li>ii. Creating, saving and opening a document</li> <li>iii. Formatting, page setup, paragraph alignment, spelling and grammar check, printing option, inserting: page number, graph, footnote and notes.</li> <li>iv. Drawing table, inserting row and column, deleting row and column</li> </ol> |   |   |   |
| <b>Unit-III</b>  | <p>Introduction to MS Excel</p> <ol style="list-style-type: none"> <li>ii. Inserting data in to excel sheet</li> <li>iii. Creating, saving and opening worksheet</li> <li>iv. Preparing bar Diagrams</li> <li>v. Format and editing features adjusting columns width and row height understanding charts.</li> </ol>  |   |   |   |
| <b>Unit-IV</b>   | <p>Introduction to MS Power Point</p> <ol style="list-style-type: none"> <li>ii. Creating, saving and opening a ppt. file</li> <li>iii. Format and editing features: design, inserting slide number, picture, graph and table.</li> <li>iv. Stating slide show, Animations in the slides show</li> <li>v. Preparation of Power point presentations</li> </ol>         |   |   |   |
| <b>Unit-V</b>  | Computer Applications in Physical Education – Office Management Teaching, learning and coaching modules. Application software used in Physical Education and sport  |   |   |   |
| <b>Book for References:</b>  |   |   |   |   |
| <ol style="list-style-type: none"> <li>1. Cassel.PandHart.MWindows98,Techmedia,NewDelhi,1998</li> <li>2. Norton.P,CompleteGuidetoWindows,BPBPpublication,NewDelhi,1998TeachYourselfExcel97forWindows,BPBPpublication,NewDelhi,1998MasteringPowerPointforWindows,BPBPpublicationNewDelhi,1996ComputerBasics,BPBPpublications,NewDelhi.</li> <li>3. ComputerConceptsandFacts,BPBPpublication,NewDelhi.HandbookforWindows,PowerPointandExcel.</li> <li>4. National Institute for Computer Education, Chennai</li> </ol> |   |   |   |   |

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Core Course–VIII<br>COMPUTER APPLICATION IN PHYSICAL EDUCATION                                  | Cognitive Level |
|--------|---|-----------------|
| CO1    | Appraise the application of MS Office in Physical Education. K5                                 | K2              |
| CO2    | Compare the computer application in Physical Education and its influence in Sports Achievements | K3              |
| CO3    | Gain knowledge about Format and Editing features.   | K2              |
| CO4    | Gain knowledge about MS Power Point   | K3              |
| CO5    | Students will be able to make ppt. file.  | K2              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate (K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Core Course-IX</b>  |  |            |                |              |
|--|--|------------|----------------|--------------|
|  | <b>PRINCIPLES OF SPORTS TRAINING</b>   | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|  |  | <b>T</b>   | <b>5</b>       | <b>4</b>     |
|  | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. The learners will be able to identify the fundamental concepts, theories and principles of human body training related to sports performance.</li> <li>2. The learners will be able to demonstrate the skills to train different fitness components and related planning.</li> <li>3. The learners will be able to understand the organization to achieve high performance in sports.</li> </ol> |            |                |              |
| <b>Unit-I</b>  | Introduction–Meaning and Definition of Sports Training–Principles of Sports Training.  |            |                |              |
| <b>Unit-II</b>   | Training Load and Recovery–Factors of Load–Load intensity, Load Volume<br>– Judgement of Load–Relationship between Load and Adaptation Over Load.  |            |                |              |
| <b>Unit-III</b>  | Training of Motor qualities:<br>Strength: Forms–Means and Methods to improve strength<br>Speed: Forms–Means and Methods to improve<br>Speed Endurance: Forms–Means and Methods to improve<br>Endurance Flexibility:Forms–Means and Methods to improve flexibility.<br>Coordination: Forms–Means and Methods to Improve Coordination.   |            |                |              |
| <b>Unit-IV</b>   | Training plan – Periodisation – stages of periodisation – Types of Periodisation –Preparatory period–Competition period–Transitional period–long term and short term plans–Cyclic process of training.   |            |                |              |
| <b>Unit-V</b>  | Techniques preparation – Aims to techniques in sports – Fundamentals and methods for development of techniques in sports – stages of techniques development. Aims of Tactics–Methods of tactical development.  |            |                |              |
| <b>Books for References:</b>   |  |            |                |              |
| <ol style="list-style-type: none"> <li>1. Hardayal Singh(1991)Science of sports Training, NewDelhi: DVS Publications.</li> <li>2. JohnBunn, Scientific Principles of Coaching.</li> <li>3. Miler, Fundamental of Track and Field Coaching.</li> <li>4. Dr M.Elango, M.Kandasamy,P.Sivagnanam Fundamentals of Sports Training</li> <li>5. Dr.S.Arumugam (2018), Sports Training and System of Coaching, Shanlax Publications, Madurai</li> <li>6. Dr.J.Karthikeyan, Dr.C.Esakkiappan (2014) Training Methods. Krishna Publications, Tirunelveli.</li> </ol> |  |            |                |              |

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Core Course–IX<br>Principles of Sports Training          | Cognitive Level |
|--------|--|-----------------|
| CO1    | Understand the characteristics of sports training.       | K4              |
| CO2    | Learn the various components of sports training.         | K3              |
| CO3    | Apply the principles of the training load.               | K4              |
| CO4    | Learn to plan the training program for different sports. | K3              |
| CO5    | Identify the talent, techniques and tactics of training. | K4              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester –IV |  |     |         |       |
|--------------|--|-----|---------|-------|
| Elective IV  | Practical – VIII - Applied Scientific Sports Training  | T/P | Credits | Hours |
|              |  | P   | 3       | 4     |
| Unit-I       | Basic Sports Training Strategies:<br>Static Stretching Upper Body & Lower Body, Dynamic Stretching, Warm up & Warm Down exercise.<br>Safety Handling Methods & Specimen Identification: Dumbbells, Barbells, Iron plates, Space Marker, Cone, Yoga Mat, Medicine ball, wands, Hoops, Iron barbells.  |     |         |       |
| Unit-II      | Formulation and fixation Method of 1RM for Strength – Biceps: Biceps Curl, Triceps: Triceps extension, Hamstrings & Quadriceps: Full Squat, Pectoralis Major: Bench Press, Grip Strength : Hand Grip – <i>Dynamometer</i> , <i>Back Strength : Dynamometer</i>   |     |         |       |
| Unit-III     | Teaching, Training coaching pedagogy and fixation of Load , Intensity , Repetition , Set , Frequency and Rest for bellow Exercise : Push-ups ( Normal , Wide, Diamond, Sphinx Push-Up Staggered Hands Push-Up, Power and Clap Push-Ups ) , Pull ups, Kneeling Superman, Plank, Abdominal crunches, Full Squat, Half Squat , Skipping.  |     |         |       |
| Unit-IV      | Circuit Training – Training method to developing Maximum Strength, Explosive Strength & Strength Endurance<br>Stair/ Step Training - Training method to developing Strength Endurance, Hamstrings & Quadriceps workout , Strengthening for Knee & Angle Workout<br>Plyometric Training - Training method to developing Explosive Strength for Lower Body & Upper Body  |     |         |       |
| Unit -V      | Pressure Training for Specific Game Skills :<br>Badminton - Back hand Short Serve , Long Serve. Smash. Net Drop.<br>Ball Badminton - Long serve, Net Drop, Smash.<br>Kabaddi- Cant , Bonus point , Angle Catch , Knee Catch.<br>Handball – Dribbling , Shooting , Chest Pass, handball Griping/ Holding skills<br>Volleyball – Forearm Serve or underarm serve, Smash ,Single man block<br>Hockey – Scoping , Dribbling , penalty shoot<br>Football- Dribbling , Inside Foot pass, |     |         |       |

**Books for References:**

<https://www.topendsports.com/health/tests/stress.htm>

Hardayal Singh(1991) Science of sports Training, New Delhi: DVS Publications. John Bunn, Scientific Principles of Coaching.

Miler, Fundamental of Track and Field Coaching.

MORGAN, R.E. AND ADAMSON, G.T. (1961). Circuit Training (2nd ed.). Bell and Sons Ltd.:

London. SCHOLICH, M. (1990). Circuit Training for All Sports: Methodology of Effective Fitness Training. Sport Books Publisher: Toronto. SELYE, H. (1956). The Stress of Life. McGraw-Hill: New

York. WILLIAMS, M. (1993). Lifetime Fitness and Wellness (3rd ed.). Brown and Benchmark: Iona.

Chmielewski TL, Myer GD, Kauffman D, Tillman SM (2006) Plyometric exercise in the rehabilitation of athletes: physiological responses and clinical application. J Orthop Sports Phys Ther 36(5):308–319

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Elective IV -Practical – VIII - Applied Scientific Sports Training | Cognitive Level |
|--------|--|-----------------|
| CO1    | Understand the characteristics of sports training.                 | K4              |
| CO2    | Learn the various components of sports training.                   | K3              |
| CO3    | Apply the principles of the training load.                         | K4              |
| CO4    | Learn to plan the training program for different sports.           | K3              |
| CO5    | Identify the talent, techniques and tactics of training.           | K4              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)



| Semester- IV    |  |     |         |       |
|-----------------|--|-----|---------|-------|
| SEC 5           | Practical– IX: COMPUTER APPLICATION IN PHYSICAL EDUCATION  | T/P | Credits | Hours |
|                 |  | P   | 1       | 2     |
|                 | <b>Learning outcomes:</b><br>4. obtain the knowledge of computer application in physical education.<br>5. understand the basic knowledge of computer<br>6. learn the MS word, MS excel & MS power point. |     |         |       |
| <b>Unit-I</b>   | Typing sports correspondence letters using MS WORD<br>Table formation using MS WORD  |     |         |       |
| <b>Unit-II</b>  | Preparing fixtures using MS WORD<br>Creating charts using EXCEL  |     |         |       |
| <b>Unit-III</b> | Statistical and mathematical functions using MS EXCEL<br>Mail Merge  |     |         |       |
| <b>Unit-IV</b>  | Internet operations<br>Preparing Sports Invitations using Word Art   |     |         |       |
| <b>Unit-V</b>   | Preparing Score Sheets for various games and Track and Field<br>Power Point presentation   |     |         |       |

**Book for References:**

1. Cassel.PandHart.MWindows98,Techmedia,NewDelhi,1998
2. Norton.P,CompleteGuidetoWindows,BPBPublishation,NewDelhi,1998TeachYourselfExcel97forWindows,BPBPublishation,NewDelhi,1998MasteringPowerPointforWindows,BPBPublishationNewDelhi,1996ComputerBasics,BPBPPublications,NewDelhi.
3. ComputerConceptsandFacts,BPBPublishation,NewDelhi.HandbookforWindows,PowerPointandExcel.
4. National Institute for Computer Education, Chennai

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Practical– IX: COMPUTER APPLICATION IN PHYSICAL EDUCATION                                       | Cognitive Level |
|--------|---|-----------------|
| CO1    | Appraise the application of MS Office in Physical Education. K5                                 | K2              |
| CO2    | Compare the computer application in Physical Education and its influence in Sports Achievements | K3              |
| CO3    | Gain knowledge about Format and Editing features.   | K2              |
| CO4    | Gain knowledge about MS Power Point   | K3              |
| CO5    | Students will be able to make ppt. file.  | K2              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate (K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |

|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | H | L | M | L | M | H | L | M | H | H | L | M |
| 4 | H | L | M | H | L | H | L | M | H | H | L | M |
| 5 | H | L | M | H | H | H | L | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Semester-IV</b> |   |            |                |              |
|--------------------|---|------------|----------------|--------------|
|                    | <b>Naan Mudhalvan Course / OLYMPIC MOVEMENT</b>   | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|                    |   | <b>T</b>   | <b>2</b>       | <b>2</b>     |
|                    | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. Understand the origin and modern Olympic movement.</li> <li>2. Study about the Olympic rings and flag.</li> <li>3. Describe the Different Olympic Games analyse the Committees of Olympic Games.</li> </ol> |            |                |              |
| <b>Unit-I</b>      | <b>Origin of Olympic movement</b><br>Origin of Olympic Movement - Philosophy of Olympic movement - The early history of the Olympic movement - The significant stages in the development of the modern Olympic movement - Educational and cultural values of Olympic movement   |            |                |              |
| <b>Unit-II</b>     | <b>Modern Olympic Games</b><br>Modern Olympic Games - Significance of Olympic Ideals, Olympic Rings, Olympic Flag   |            |                |              |
| <b>Unit-III</b>    | Olympic Protocol for member countries - Olympic Code of Ethics - Olympics in action - Sports for All  |            |                |              |

|   |   |
|---|---|
| <b>Unit-IV</b>  | <b>Different Olympic Games</b><br>Different Olympic Games - Para Olympic Games - Summer Olympics - Winter Olympics - Youth Olympic Games  |
| <b>Unit-V</b>   | <b>Committees of Olympic Games</b><br>Committees of Olympic Games - International Olympic Committee - Structure and Functions<br>National Olympic committees and their role in Olympic movement - Olympic commission and their functions - Olympic medal winners of India |
| <b>Book for References:</b>   |   |
| <ol style="list-style-type: none"> <li>Osborne, M. P. (2004). Magictree house fact tracker: ancient greece and the olympics: a nonfiction companion to magic tree house: hour of the Olympics. New York: Random House Books for Young Readers.</li> <li>Burbank, J. M., Andranovich, G. D. &amp; Heying Boulder, C. H. (2001). Olympic dreams: the impact of mega-events on local politics: Lynne Rienner</li> <li>Dr.I.Karikalan. 2017 "Olympic Movement", SShree Publications, Tuticorin</li> </ol> |   |

**Course Out comes**

On completion of the course, the students will be able to

| CO.No. | Naan Mudhalvan Course / OLYMPIC MOVEMENT   | Cognitive Level |
|--------|--|-----------------|
| CO1    | Discuss the historical review of physical education and sports activities of Indian heritage | K2              |
| CO2    | Understand the basic principles and foundation of physical                                   | K2              |
| CO3    | Identify and relate with the History of Physical Education.                                  | K2              |
| CO4    | Describe the History of Sports.  | K2              |
| CO5    | Estimate the Recent development in India   | K3              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs | PSOs |
|-----|-----|------|
|-----|-----|------|

|          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|          | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
| <b>1</b> | H        | L        | M        | M        | L        | H        | L        | M        | H        | H        | L        | M        |
| <b>2</b> | H        | L        | M        | M        | H        | H        | L        | M        | H        | H        | L        | M        |
| <b>3</b> | H        | L        | M        | L        | M        | H        | L        | M        | H        | H        | L        | M        |
| <b>4</b> | H        | L        | M        | H        | L        | H        | L        | M        | H        | H        | L        | M        |
| <b>5</b> | H        | L        | M        | H        | H        | H        | L        | M        | H        | H        | L        | M        |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

| <b>Semester-V</b>  |  |  |            |                |              |
|--|--|--|------------|----------------|--------------|
| <b>CORE COURSE-X</b>   |  |  | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
| <b>TEST, MEASUREMENT &amp; EVALUATION IN PHYSICAL EDUCATION</b>  |  |  | <b>T</b>   | <b>4</b>       | <b>5</b>     |
| <b>Learning outcomes:</b>  |  |  |            |                |              |
| <ol style="list-style-type: none"> <li>1. The students will be able to recognize and relate the concept of test, measurement and evaluation in the context of Physical Education.</li> <li>2. Construct and conduct the physical fitness and sports skill test.</li> <li>3. The students will be able to implement the criteria of test selection.</li> <li>4. Develop the art of applications of test, measurement and evaluation in sports.</li> <li>5. Development of practical competency in conducting physical fitness and skill tests.</li> </ol> |  |  |            |                |              |

|   |   |
|---|---|
| <b>Unit-I</b>   | Meaning of Test, Measurement and Evaluation–Brief History of Test, Measurement and Evaluation–Need and Importance of measurement and Evaluation in Physical Education.  |
| <b>Unit-II</b>  | Classification of Test–Standardized and Teacher Made test-Object and subject Tests<br>–construction of Knowledge’s test and skill Test–Administration of Test–Duties during testing–<br>Duties after Testing.   |
| <b>Unit-III</b>   | Criteria of test selection–Validity, reliability, Objectivity, Norms, Administrative feasibility–<br>Strength test–Bend Knee sit ups test. Flexibility test–Sit and reach test<br>–Speed test–50mts run–Cardiorespiratory Endurance–Cooper 2minute Run/Walk test. Explosive<br>strength test–Standing Broad Jump. |
| <b>Unit-IV</b>  | AAHPERD Youth Fitness test. JCP test<br>Barrow motor ability test Harward step test<br>Magaia–Kalamen power test  |
| <b>Unit-V</b>   | Test of Specific sport skills<br>Badminton : French Short Serve Test<br>Basketball : Johnson Basketball Ability test<br>Hockey : Hendry Friedal Field Hockey test.<br>Soccer : McDonald Volleying Soccer test.<br>Tennis Boer : Miller Tennis test<br>Volleyball : Helmen Volleyball test                         |
| <b>Books for References:</b>  |   |
| <ol style="list-style-type: none"> <li>1. SafritMargaratJ Measurement in Physical Education and Exercises Science, StLouis Times Morrор Mosby college publishing.</li> <li>2. BoscoJamesMeasurementandEvaluationinPhysicalEducationandSportsNewJersyPrensticeHallin1983</li> <li>3. BarryL.Johnson,JackK.Nelson and Measurement for Evaluation in Physical education the Surjeet Publications.</li> <li>4. A.K.GuptaTests&amp;MeasurementinPhysicalEducationsportspublicationNewDelhi–52A<br/>PracticalappliedtomeasurementinPhysicalEducation–HoroldM.Borrow.</li> </ol> |   |

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | <b>Core Course-X</b><br><b>Test, Measurement &amp; Evaluation in Physical Education</b> | <b>Cognitive Level</b> |
|--------|---|------------------------|
| CO1    | Know the importance of test, measurement and evaluation in Physical education.          | K1                     |
| CO2    | Learn to conduct the tests on motor fitness components.                                 | K3                     |
| CO3    | Learn to conduct the tests on physical fitness components.                              | K3                     |
| CO4    | Learn to conduct the tests on anthropometric, aerobic and anaerobic                     | K3                     |
| CO5    | Learn to conduct the tests on various skill tests on different games.                   | K3                     |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Semester-V</b>   |  |            |                |              |
|---|--|------------|----------------|--------------|
|   | <b>Core Course–XI<br/>EXERCISE PHYSIOLOGY</b>  | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|   |  | <b>T</b>   | <b>4</b>       | <b>5</b>     |
|   | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. The student would be empowered with the applicable knowledge of physiology in physical activity and sports.</li> <li>2. The learner would be able to incorporate this knowledge in the training and coaching programme for the betterment of their trainee’s performance.</li> <li>3. Understand the meaning, nature and scope of exercise physiology analyze the effects of exercise physiology on various system of the body.</li> <li>4. Analyze the factors affecting skills, motor ability, warm-up and metabolic process and interpret the physiological principles on physical education and sports.</li> </ol> |            |                |              |
| <b>Unit-I</b>   | <b>Functional Adaptations to Exercise</b><br>Proportion and Structure of muscle – Structure of muscle – fiber – filament model of contraction – muscular theory of contraction – Muscular fatigue  |            |                |              |
| <b>Unit-II</b>  | <b>MORPHOLOGICAL FEATURE OF SKELETAL MUSCLE AND FUNCTION.</b><br>Structure of the skeletal muscle – Chemical composition – Sliding filament theory of muscular contraction–muscle fiber types–fiber distribution and performance – All or none principle – muscle tone – Types of muscular contraction –Stair case Phenomenon or treppe –Heat production in the muscle–Residual muscle soreness–Effect of Training on muscular system.   |            |                |              |
| <b>Unit-III</b>   | <b>RESPIRATORY SYSTEM AND EXERCISE:</b><br>Mechanism of breathing–Pulmonary ventilation/minute ventilation during Rest and exercise–control of ventilation–Lung volumes and capacities-Effect of exercise on Respiratory system.   |            |                |              |
| <b>Unit-IV</b>  | <b>CARDIOVASCULAR SYSTEM AND EXERCISE:</b><br>Structure properties of the heart and cardiac cycle, cardiac output during rest and exercise Stroke volume and heart rate – control of heart rate – Heart rate response to exercise on stroke volume – Blood pressure–factors affecting blood pressure and Heart rate–Regulation of blood flow– effect of exercise on circulatory system.  |            |                |              |
| <b>Unit-V</b>   | <b>EXERCISE AND ENVIRONMENT:</b><br>Exercise and temperature regulations – Hothumid climate–Exercise and temperature regulations in cold climates – Effect of High altitude on Physical performance –Physiological adaptations to altitude–Physiological changes in under Water conditions.  |            |                |              |
| <b>Books for References:</b> <ol style="list-style-type: none"> <li>1. WilliamD.Mcarole.Frank.IKatchVictor.</li> <li>2. ExercisePhysiologyEnergy,NutritionandHumanperformanceLea&amp;FebigerPhiladeRichardW.BowersandEdwardL.Fox–SportsPhysiologyThirdEditionwmcBrownPublishers</li> <li>3. LaurenceEMorehouseAugustusT.Miller,JRSeventhEditionPhysiologyofExerciseThec.v.</li> </ol> |  |            |                |              |



4. Mostly Company.
5. David H. Clarke Exercise Physiology prenties Hall, Inc: Englewood Cliffs, new jersey. Larry G. Shaver Essentialsof exercise Physiology surjeet publications.
6. Dr. Amrit Kumar R. Moses introduction to exercise physiology poompugar pathipagam.
7. Donald Health. David Reid Williams.

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Core Course–XI<br>Exercise Physiology                             | Cognitive Level |
|--------|---|-----------------|
| CO1    | Find the functional changes in human body                         | K1              |
| CO2    | Develop the physiological fitness of sports persons.              | K2              |
| CO3    | Analyze the effects of exercise on various systems of human body. | K4              |
| CO4    | Compare the functions of human body before and after exercise     | K3              |
| CO5    | Design the physiological concepts of physical fitness.            | K4              |

Remember(K1); Understand(K2); Apply(K3); Analyze(K4); Evaluate(K5); Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

| <b>Semester-V</b>  |   |            |                |              |
|--|---|------------|----------------|--------------|
|  | <b>Core Course–XII</b><br><b>SPORTS NUTRITION</b>   | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|  |   | <b>T</b>   | <b>4</b>       | <b>5</b>     |
|  | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. Will develop skills to establish daily caloric requirement and to design the diet plan.</li> <li>2. Will acquaint student with principles of sports nutrition.</li> <li>3. Will orient the student to the role of food on Physical performance.</li> <li>4. Would make the student understand and prepare weight management plans.</li> </ol> |            |                |              |
| <b>Unit-I</b>  | <b>INTRODUCTION TO NUTRITION</b><br>Definition – Meaning – Need of sports Nutrition – Essential nutrition – Energy nutrients minerals and vitamins – Water –basic four food plan -balanced diet – daily recommended allowances.   |            |                |              |
| <b>Unit-II</b>   | <b>Nutrients: Ingestion to energy metabolism</b><br>Basics of Nutrition, Carbohydrates, Fats, Proteins, Vitamins, Minerals, Water, Balanced diet, Nutritive value of Food stuffs.   |            |                |              |
| <b>Unit-III</b>  | <b>Nutrition and Weight Management</b><br>Nutrition for Athletes and players, Energy requirements in Sports, Carbohydrate in loading  |            |                |              |
| <b>Unit-IV</b>   | Percentage of energy derived from foods, Glycemic Index of food, Dietary fiber of food. Nutritive value of food stuffs.   |            |                |              |
| <b>Unit-V</b>  | <b>Steps of planning of Weight Management</b><br>Principles of weight control, Exercise. The Key to successful weight loss management designing weight loss programme. Tips for control body weight   |            |                |              |
| <b>Books for References:</b> <ol style="list-style-type: none"> <li>1. William D. Mc Arodle Frank I. Katch Victor L Katch Exercise Physiology Energy, Nutrition and Human performance Lea &amp; Febiger Philadelphia</li> <li>2. Richard W. Bowers on Edward L. Fox sports Physiology Third Edition.WM. C. Brown Publishers.</li> <li>3. Laurence E. Morehouse Augustus T. Miller, Jr. Seventh edition Physiology of exercise. The C.V. Mosby Company.</li> <li>4. David H. Clarke exercise Physiology prentice – Hall, Inc. Englewood Cliffs, New Jersey.Larry G. Shaver Essentials of Exercise Physiology subject publications.</li> </ol> |   |            |                |              |

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Core Course–XII<br>Sports Nutrition                               | Cognitive Level |
|--------|---|-----------------|
| CO1    | Understand the role of nutrition and weight management on sports. | K2              |
| CO2    | Learn the importance of carbohydrates, fat and protein during     | K3              |
| CO3    | Learn the health risks and solutions for overcoming obesity.      | K3              |
| CO4    | Know to design diet plan for weight gain and weight loss.         | K4              |
| CO5    | Understand the role of physical activity in weight management.    | K4              |

Remember(K1);Understand (K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Semester-V</b>  |  |            |                |              |
|--|--|------------|----------------|--------------|
|  | <b>Core Course–XIII</b>  | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|  | <b>THEORIES OF TRACK AND FIELD</b>   | <b>T</b>   | <b>3</b>       | <b>5</b>     |
|  | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. Critically reflect on World Athletics Events.</li> <li>2. Identify and triggering out the best Sports persons.</li> <li>3. Define and apply specific techniques for all the Track and Field events.</li> <li>4. Learning the Running, Jumping and Throwing through Athletic practices</li> </ol> |            |                |              |
| <b>Unit-I</b>  | History of Track and Field in India, Asia, and World – Organizational set-up (Working Federations): World, Asia, India and State.  |            |                |              |
| <b>Unit-II</b>   | Warm-up, Warm down, Physical fitness Qualities, load and safety measures in track and field. Techniques in Sprints, Middle Distance and Long distance Running, types of starts, acceleration and finishing.  |            |                |              |
| <b>Unit-III</b>  | Techniques in Jumping events: Long Jump, Triple Jump, High Jump, Pole vault - Techniques in Throwing events: Shot Put, Discus Throw, Javelin Throw, Hammer Throw   |            |                |              |
| <b>Unit-IV</b>   | Combined Events Decathlon, Heptathlon, Pentathlon and Triathlon. Scoring system of combined events Techniques in Hurdles, and Relay Races  |            |                |              |
| <b>Unit-V</b>  | Competitions, Rules, Officiating, Equipments and their specifications, Standard and Non Standard track Guiding principles of standard track. Lay out of 200 m Track and Lay out and maintenance of 400mTrack   |            |                |              |
| <b>Books for References:</b>   |  |            |                |              |
| <ol style="list-style-type: none"> <li>1. Goel, R.C., 1992. Encyclopaedia of Sports and Games, Trange paper, Delhi.</li> <li>2. A.A.F.I., 1994, Competitive Rules Hand Book, Ashok Printers, Kanpur.</li> <li>3. Gambetta, V., 1981, Track and Field Coaching Manual, Leisure Press Champaign, Illidis.</li> <li>4. Thirunarayan, C., and Hariharan, S., 1970, Track and Field the South Indian Press, Karaikudi.</li> </ol> |  |            |                |              |

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Core Course–XIII<br>THEORIES OF TRACK AND FIELD   | Cognitive Level |
|--------|---|-----------------|
| CO1    | Find the rules and regulation of track and field events                                     | K1              |
| CO2    | Apply the fundamental techniques of track and field events in Physical Education and sports | K3              |
| CO3    | Distinguish the outstanding players from beginners  | K3              |
| CO4    | Judge the performance of athletes   | K3              |
| CO5    | Adapt with the new trends in track and field events   | K3              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Semester-V</b>   |   |  |  |            |                |              |
|---|---|--|--|------------|----------------|--------------|
|   | <b>Elective - V - Practical- X</b>  |  |  | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|   | <b>MEASUREMENT AND EVALUATION IN HUMAN PERFORMANCE</b>  |  |  | <b>T</b>   | <b>3</b>       | <b>4</b>     |
|   | <b>Learning outcomes:</b>   |  |  |            |                |              |
|   | 1. Apply the procedure of testing various fitness abilities in Sports   |  |  |            |                |              |
|   | 2. Apply the procedure of testing various skill abilities in Sports   |  |  |            |                |              |
|   | 3. Apply the procedure of measuring various abilities in Sports   |  |  |            |                |              |
| <b>Unit-I</b>   | Strength : Bend knee sit-ups test-<br>Flexibility : Sit and reach test-<br>Speed : 50m run<br>Cardiovascular Endurance: Cooper 12minute run/walk test<br>Explosive Strength : Standing Broad Jump |  |  |            |                |              |
| <b>Unit-II</b>  | AAPHERD Health related Physical fitness Test –YMCA Fitness Test -Motor fitness–JCR test.  |  |  |            |                |              |
| <b>Unit-III</b>   | Barrow motor ability test - Harvard step test - Kraus Weber test –Margaria Kalamen power test –<br>SDAT World Beaters Scheme Test for School Boys   |  |  |            |                |              |
| <b>Unit-IV</b>  | Johnson Basketball test–Mor Christian Soccer test–SAI Hockey test.  |  |  |            |                |              |
| <b>Unit-V</b>   | Brady Volleyball Test-French and GSC Badminton Tests-Hewitt Tennis Test.  |  |  |            |                |              |
| <b>Books for References:</b>  |   |  |  |            |                |              |
| 1. Bangsbo, J. (1994). Fitness Training in Football: A Scientific Approach. Denmark, August Krogh Inst: University of Copenhagen. |   |  |  |            |                |              |
| 2. James R. Morrow, Allen Jackson, James G. Disch & Dale Mood. (2000). Measurement and Evaluation in H                            |   |  |  |            |                |              |

umanPerformance(2<sup>nd</sup>Ed.),USA: HumanKineticsPublishers.

3. Barrow,HaroldM&McGee,Rosemary.(1979).APracticalApproachtoMeasurementinPhysicalEducation, Philadelphia:LeaandFebiger.
4. Clake,H.Harrison. Application ofMeasurementto Health andPhysicalEducation, NewJersey:PrenticeHallInc.1976.
5. Safrit,MargaretJ.(1995).IntroductiontoMeasurementinPhysicalEducationandExerciseScience,St.Louis: Mosby.
6. EdmundO.AcevedoandMichaelA.Starks.(2003).ExerciseTestingandPrescriptionlabManual,USA:HumanKineticsPublishers.
7. JamesR.Morrow.,AllenJackson,JamesG.Disch&DaleMood.(2011).MeasurementandEvaluationinHumanPerformance(4<sup>th</sup> Ed.),USA:HumanKineticsPublishers.

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Practical– X<br>MEASUREMENT AND EVALUATION IN HUMAN<br>PERFORMANCE        | Cognitive<br>Level |
|--------|---|--------------------|
| CO1    | Relate the different types of tests and measurement in physical education | K1                 |
| CO2    | Identify the sports performance using different sports skill tests        | K3                 |
| CO3    | Compare and contrast the results of different test measurements           | K3                 |
| CO4    | Determine the value of sports skill tests                                 | K3                 |
| CO5    | Improve and modify the existing skill test using computer application     |                    |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| <b>Semester-V</b> |   |            |                |              |
|-------------------|---|------------|----------------|--------------|
|                   | <b>Elective – VI - Practical– XI<br/>TRACK AND FIELD</b>  | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|                   |   | <b>T</b>   | <b>3</b>       | <b>4</b>     |
|                   | <p><b>Learning outcomes:</b></p> <ol style="list-style-type: none"> <li>1. To study the fundamental movements for Track &amp; Field events.</li> <li>2. To apply training means and methods and techniques in Track &amp; Field events</li> <li>3. To study advance level of techniques in Track &amp; Field events</li> <li>4. To understand the laying of competition area and officiating.</li> <li>5. Understand the strategy and tactics of Track events.</li> <li>6. Efficacy and hid ended talent bringing out for their high performance in the Sports arena through regular specific physical exercises.</li> </ol>  |            |                |              |
| <b>Unit-I</b>     | <p><b>Track Events</b></p> <ol style="list-style-type: none"> <li>1. Starting techniques: Standing start, Crouch start and its variations, Proper use of blocks.</li> <li>2. Finishing techniques: Run Through, Forward lunging, Shoulder Shrug.</li> <li>3. Various Middle Distance, Long distance and Road Races- Techniques and Tactics involved</li> </ol> <p><b>Hurdles:</b></p> <ol style="list-style-type: none"> <li>1. Interpretation of Rules and Officiating.</li> <li>2. Fundamental Skills-Starting, take off/ Clearance and Landing Techniques.</li> <li>3. Types of Hurdles races</li> <li>4. Ground Marking and Officiating.</li> </ol> <p><b>Relays:</b></p> <ol style="list-style-type: none"> <li>1. Fundamental Skills</li> <li>2. Various patterns of Baton Exchange.</li> </ol> |            |                |              |



|  |  |
|--|--|
|  | 3. Understanding Relay Zones.<br>4. Ground Marking, Rules and Officiating  |
| <b>Unit-II</b>   | Discus throw, javelin throw, hammer throw, shot-put<br>1. Basic skills and techniques of the throwing events<br>2. Ground marking/ sector marking<br>3. Interpretation of rules and officiating<br>4. Grip<br>5. Stance<br>6. Release<br>7. Reserve/ (follow through action)<br>8. Rules and their interpretations and duties of officials |
| <b>Unit-III</b>  | Long Jump<br>1. Approach run<br>2. Take off<br>3. Flying Phase<br>4. Landing.  |
| <b>Unit-IV</b>   | High Jump<br>1. Approach run<br>2. Take off<br>3. Flying Phase<br>4. Landing.  |
| <b>Unit-V</b>  | Triple Jump<br>1. Approach run<br>2. Take off and landing for hop and jump<br>3. Flying phase<br>Landing   |
| <b>Books for References:</b>   |  |
| 1. Joseph L. Rogers, (2000). USA Track & Field Coaching Manual. Champaign, IL: Human Kinetics.<br>2. American Sport Education Program. (2008). Coaching Youth Successfully. Champaign, IL: Human Kinetics<br>3. Bob Swope. (2006). Teaching Track & Field: Guide for Kids & Parents. USA: Author House<br>4. Gerry Carr. (1991). Fundamentals of Track and Field (2nd Ed.). USA: Human Kinetics<br>5. Herald Muller and Wolfgang Ritzdon. (1995). Run! Jump! Throw!: The Official IAAF Guide to Teaching Athletics. Published by IAAF.<br>6. IAAF Competition Rules 2018-19. Published by IAAF |  |

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Practical– XI<br>TRACK AND FIELD  | Cognitive Level |
|--------|---|-----------------|
| CO1    | Develop the understanding and knowledge regarding the Running Event: Running technique and starting techniques: running ABC, Standing start, Crouch start and its variations, Proper use of blocks, Finishing techniques: Run Through, Forward lunging, Shoulder Shrug. | K1              |

|     |   |    |
|-----|---|----|
| CO2 | develop the understanding and knowledge of Track &Field Marking (400meter & 200 meter track marking, placement of hurdles for), Rules and Officiating                       | K3 |
| CO3 | Gain knowledge of Hurdles: Fundamental Skills-Starting, Clearance and Landing Techniques, Types of Hurdles, High and Low Hurdles-Technique, Ground Marking and Officiating. | K3 |
| CO4 | Gain knowledge of Relays: Fundamental Skills, Various patterns of Baton Exchange, Understanding of Relay Zones, Ground Marking, Interpretation of Rules and Officiating.    | K3 |
| CO5 | Adapt with the new trends in the field of track and field events  | K3 |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester - V   |   |     |         |       |
|----------------|---|-----|---------|-------|
|                | Naan Mudhalvan Course / Physical Literacy   | T/P | Credits | Hours |
|                |   | T   | 2       | 2     |
|                | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>Understand the basic concept of Movement Education and Physical Literacy</li> <li>Know about motor skills and movement pattern</li> <li>Learn about the movement concepts</li> <li>Understand and apply the concept of participation in Physical Activity</li> </ol> |     |         |       |
| <b>Unit-I</b>  | <b>Introduction</b><br>Definition, Meaning & Importance of Movement Education- Definition, Meaning & Importance of Physical Literacy- Concept of developmentally Appropriate Physical Activities  |     |         |       |
| <b>Unit-II</b> | <b>Motor Skill &amp; Movement Pattern</b><br>Classification of Motor Skills: Fundamental (Locomotor, Non-locomotor, Manipulative Skill),Specialized (Manipulative, Rhythmic Movement, Game & Sport Skills).   |     |         |       |

|                 |   |
|-----------------|---|
| <b>Unit-III</b> | <b>Movement Concepts</b><br>Introduction to Movement Concepts, Development of Movement Concepts: Space Awareness, Effort Concepts, Relationships- Long Term Athlete Development (LTAD)                                  |
| <b>Unit-IV</b>  | <b>Personal &amp; Social Development</b><br>Personal Development: Self-concept, Cognitive Functioning and Motivational outcomes - Social Development: Altruism, Controlling Aggression, Cooperation, Group development. |
| <b>Unit -V</b>  | <b>Sports for Development</b><br>Sport for Development: Sport for Education, Economic, Gender, Health and Peace   |

**Books for References:**

2. Abels, K. & Bridges, J. M. (2010) Teaching Movement Education: Foundations for Active Lifestyles. Champaign, IL: Human Kinetics Publishers.
3. Graham, G., Holt, Shirley & Parker, Melissa. (1993). Children Moving A Reflective Approach to Teaching Physical Education. New York: McGraw Hill Education.
4. Lund, J., Tannehill & Lund, Jacalyn. (2010). Standards-Based Physical Education Curriculum Development, 2nd Edition. Jones & Barlett Learning.
5. Frank, A. M (2003). Sports and Education: A Reference Handbook (Contemporary Education Issues), ABC-CLIO.
6. Ciccomascolo, L. E. & Sullivan, E. C. (2013). The Dimensions of Physical Education. Jones & Barlett Learning.
7. Pangrazi, R. P. (1998). Dynamic of Physical Education for Elementary School Children 12<sup>th</sup> Ed). Allyn & Bacon.
8. Griffin, L. & Butler, J. (2005). Teaching Games for Understanding: Theory, Research, and Practice. Champaign, IL: Human Kinetics Publishers.

**Course Outcomes**

On completion of the course, the students will be able to

| <b>CO. No.</b> | <b>Physical Literacy</b>   | <b>Cognitive Level</b> |
|----------------|--|------------------------|
| CO1            | Develop the motivation and ability to understand, communicate, apply and analyse various forms of movement       |                        |
| CO2            | Demonstrate a variety of movements confidently and competently across a wide range of physical activities        |                        |
| CO3            | Make healthy, active choices that are both beneficial to and respectful of their selves, others and environment. |                        |
| CO4            | Improved understanding of the importance of maintaining a healthy lifestyle                                      |                        |

|     |   |  |
|-----|---|--|
| CO5 | Improved understanding of movement and the human body |  |
|-----|---|--|

Remember (K1); Understand (K2); Apply (K3); Analyze (K4); Evaluate (K5); Create (K6)

### Mapping COs with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated (H); Moderately Correlated (M); Weakly Correlated (L)

| Semester-VI     |  |     |         |       |
|-----------------|--|-----|---------|-------|
|                 | Core Course–XIV<br>CARE, PREVENTION OF ATHLETIC INJURIES AND<br>REHABILITATION   | T/P | Credits | Hours |
|                 |  | T   | 4       | 6     |
|                 | <b>Learning outcomes:</b> <ol style="list-style-type: none"> <li>1. Understand the Prevention, Treatment and Rehabilitation of Athletic Injuries</li> <li>2. To learn them to deal with injuries, therapeutic modes.</li> <li>3. To educate the importance and principles of sports medicine.</li> <li>4. To understand the knowledge of basic rehabilitation.</li> <li>5. To identify the head, neck, and spine injuries and its exercise.</li> </ol> |     |         |       |
| <b>Unit-I</b>   | Types of Movements, Concentric, exocentric(Isotonic),Static(Isometric)and Isokinetic exercises. Posture and body mechanics–Standards of Standing posture, values of good posture, draw back and causes of poor posture.  |     |         |       |
| <b>Unit-II</b>  | Posture Tests–Examination of the spine. New York State posture Rating Chart Test, Organization of special classes for postural correction.<br>Some common deviation in posture–normal curvature of the spine and its utility, kyphosis, lordosis, kypholordosis, flatback, scoliosis(Cand Scurve,functional and structural round shoulders).Knock knees, bowlegs, flatfoot, causes for these deviations and treatment including exercise.              |     |         |       |
| <b>Unit-III</b> | A brief history of massage and remedial exercise <sup>5</sup><br>Muscle relaxation as Anaid to massage<br>Points to be considered in giving massage<br>Physiological effects of massage<br>Classification of the manipulations used in massage and their specific uses on the Human body a stroking manipulation.<br>Effleurage ,Stroking, Kneading, Friction, Hacking, Clapping, Beating and Pounding.  |     |         |       |
| <b>Unit-IV</b>  | Common athletic injuries and their treatment<br>Sprains<br>Strains<br>Contusions<br>Abrasions<br>Type of fractures and their management  |     |         |       |
| <b>Unit-V</b>   | Principles of applying heat/cold, ultra-violet rays, infra-red rays, contrast bath ultra sonic   |     |         |       |

**Book for References:**

1. Corrective Physical Education, Rathborne J. I. W. B. Saunders and Co., London 1995. Manual of massage and movement, Prof E. M. Naro Faber and Faber Ltd.
2. Therapeutic Exercise for body Alignment and Education, by William Mareuam and Catherine Worthingham, W.B. Saunders and Co., 1965
3. Massage and Medical Gymnastics, M. V. Lace J. & A. Churchill Ltd., 1951.
4. Preventive and Corrective Physical Education Stafford and Kelly, New York. The Ronald Press, 1968.

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Core Course–XIV<br>CARE, PREVENTION OF ATHLETIC INJURIES AND<br>REHABILITATION | Cognitive<br>Level |
|--------|--|--------------------|
| CO1    | Ascertain the knowledge to deal with common sports injuries.                   | K1                 |
| CO2    | Examine and assess the sign and symptoms of injury.                            | K3                 |
| CO3    | Apply different therapeutic modalities for rehabilitation                      | K3                 |
| CO4    | Compare various methods of progressive resistance exercise.                    | K3                 |
| CO5    | Create the knowledge of basic rehabilitation to the athletes.                  |                    |

Remember(K1); Understand(K2); Apply(K3); Analyze(K4); Evaluate(K5); Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H); Moderately Correlated(M); Weakly Correlated(L)

| <b>Semester-VI</b>  |   |            |                |              |
|---|---|------------|----------------|--------------|
| <b>Core Course–XV</b>   |   | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
| <b>THEORIES OF MAJOR GAMES - III (CRICKET, BASKETBALL, VOLLEYBALL, FOOTBALL AND HOCKEY)</b>   |   | <b>T</b>   | <b>4</b>       | <b>6</b>     |
| <b>Learning outcomes:</b>   |   |            |                |              |
| <ol style="list-style-type: none"> <li>1. To acquire practical knowledge in Basketball, Cricket, Hockey</li> <li>2. To learn skills and tactics in Basketball, Cricket, Hockey</li> <li>3. To practice in advanced skills in Basketball, Cricket, Hockey &amp;</li> <li>4. To understand the strategic in Basketball, Cricket, Hockey</li> </ol>  |   |            |                |              |
| <b>Unit-I</b>   | History of the Games: World, India - Organizational Chart (Working Federation): World, Asia, India, State – Major Competitions – Talent identification. |            |                |              |
| <b>Unit-II</b>  | Fundamental Skills: Types, Drills and Lead-up activities to develop skills – Scientific principles applied in sports and games.                         |            |                |              |
| <b>Unit-III</b>   | Meaning and definition of Tactics and Strategy - Systems of Play – Aspects of coaching, Leadup Games, evaluation – pre and post-match preparation.      |            |                |              |
| <b>Unit-IV</b>  | Warm-up, Cool-down, Factors influencing performance, Fitness components, Exercises and training methods to develop fitness.                             |            |                |              |
| <b>Unit-V</b>   | Rules and their Interpretations - Method of officiating and Scoring - Layout and Maintenance of playfields.   |            |                |              |
| <b>Books for References:</b>  |   |            |                |              |
| <ol style="list-style-type: none"> <li>1. Tyson, F. (1985). The Cricket Coaching Manual. Victorian Cricket Association.</li> <li>2. Mohinder, A., (1950). Learn to Play Good Cricket. New Delhi: Surjeet publications.</li> <li>3. Dhanraj V. Hubert. (1971). Volleyball: A modern approach. Patiala: SAINSNIS.</li> <li>4. Larche, &amp; Harry, F, (1969). Techniques to Football Coaching. London: A.S. Barnes and</li> </ol> |   |            |                |              |

company.

5. Horat, W., (1970). The Science of Hockey. London: Pelham Books.
6. Milford, D. S. (1949). Hockey Practice and Tactics, London Mnolds and Company.
7. Colberk, A.L. Modern Basketball - A Fundamental Analysis of Skills and Tactics. London, NicholesKayl

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Core Course– XV<br>THEORIES OF MAJOR GAMES - III (CRICKET, BASKETBALL,<br>VOLLEYBALL, FOOTBALL AND HOCKEY) | Cognitive<br>Level |
|--------|--|--------------------|
| CO1    | Know the fundamental of all the games and sports   | K2                 |
| CO2    | Understand the rules of all the games and sports   | K3                 |
| CO3    | Preparing the students for the competition   | K3                 |
| CO4    | Classify the students accordingly for various games and sports.  | K3                 |
| CO5    | Design and practice the new methods of technique and training  | K3                 |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |
| 4   | H   | M | L | L | H | L | M    | M | H | M | H | L |
| 5   | H   | M | L | L | H | L | L    | M | H | M | H | M |



| <b>Semester-VI</b>   |  |            |                |              |
|--|--|------------|----------------|--------------|
|  | <b>Core Course– XVI</b>  | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|  | <b>RESEARCH AND ELEMENTARY STATISTICS</b>  | <b>T</b>   | <b>4</b>       | <b>6</b>     |
|  | <b>Learning outcomes</b> <ol style="list-style-type: none"> <li>1. Demonstrate knowledge of statistics and the terms like data, population and sample.</li> <li>2. Demonstrate knowledge of descriptive statistical methods and normal curve.</li> <li>3. Demonstrate knowledge of the properties of scales and graphs.</li> <li>4. Demonstrate the ability to perform data analysis.</li> </ol> |            |                |              |
| <b>Unit-I</b>  | <b>INTRODUCTION</b><br>Definition for Research–Need, importance and scope of research in Physical Education–<br>Basic research–Applied research.   |            |                |              |
| <b>Unit-II</b>   | <b>FORMULATION AND DEVELOPMENT OF RESEARCH PROBLEM</b><br>Location of research problem–Criteria ins electing the research problem–Hypothesis–<br>Research proposal.  |            |                |              |
| <b>Unit-III</b>  | <b>HISTORICAL RESEARCH</b><br>Definition of Historical research– Steps in historical research–Sources of Historical data–<br>primary and secondary sources of data–Historical criticism and internal.  |            |                |              |
| <b>Unit-IV</b>   | <b>INTRODUCTION TO STATISTICS</b><br>Meaning and Definition of Statistics, Nature, Need for and Importance of Statistics, Types<br>of Statistics - Data: Quantitative and Qualitative data   |            |                |              |
| <b>Unit-V</b>  | <b>MEASURE OF CENTRAL TENDENCY</b><br>Frequency Distribution – Measure of Central Tendency, Mean, Median and Mode<br>Definition-Computation of mean, median and mode from the ungrouped data - Specific<br>characteristics and use ofmeasure of Measure of Central Tendency  |            |                |              |
| <b>Books for References:</b> <ol style="list-style-type: none"> <li>1. David, C. H., &amp; Clarke, H. H., (1984). Research Processes in Physical Education, Eaglewood Cliffs: Prentice Hall INC.</li> <li>2. Gupta, (1982). Advanced Practical Statistics, New Delhi : S.S Chand &amp; Co.</li> <li>3. Wilks, S.S., (1984). Elementary Statical Analysis. Calcutta: Deford&amp; IBH publishing Co., Calcutta.</li> <li>4. Karikalan, I., (2017). Elementary statistics in Physical Education. Shree Publications, Tuticorin</li> </ol> |  |            |                |              |

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Core Course– XVI<br>RESEARCH AND ELEMENTARY STATISTICS         | Cognitive Level |
|--------|--|-----------------|
| CO1    | Understand the importance of statistics in physical education. | K4              |
| CO2    | Understand and apply the statistics in research.               | K4              |
| CO3    | Understand and apply the basics of statistics in research      | K2              |
| CO4    | Learn the basic and advanced statistics.                       | K3              |
| CO5    | Know the graphical representation of statistics.               | K2              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

**Mapping Cos with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester-IV   |   |     |         |       |
|---|---|-----|---------|-------|
|   | Elective – VII  | T/P | Credits | Hours |
|   | Practical - XII: Major Games-III<br>(Cricket, Basketball, Volleyball, Football and Hockey)  | P   | 3       | 5     |
|   | <b>Learning outcomes:</b><br>1. To acquire practical knowledge on games<br>2. To obtain the experience in Skills, strategy, tactics and advance skills. |     |         |       |
| <b>Unit-I</b>   | General and Specific Conditioning Exercises   |     |         |       |
| <b>Unit-II</b>  | Fundamental Skills (Offensive Skills, Defensive Skills)   |     |         |       |
| <b>Unit-III</b>   | Techniques and Tactics  |     |         |       |
| <b>Unit-IV</b>  | Lead up games and System of Play  |     |         |       |
| <b>Unit-V</b>   | Method of Officiating Play field, Equipment specifications and Scoring  |     |         |       |
| <b>Books for References:</b><br>1. Dr.Anil Sharma O.P.Sharma. Rules of games, sports publication, An sari Road New Delhi.<br>2. Dr.P.Mariayyah. Sports & Games, Sports Publication Raja Street, Coimbatore.<br>3. Rao C.V. (1971). Kabaddi. Patiala NIS Publication.<br>4. Monika, A., 2005, “Kabaddi”, Sports Publications, First edition, New Delhi<br>5. Thakur, J.K., 2013 “Measurement of Playing Field”, Sports Publications, New Delhi |   |     |         |       |

### Course Outcomes

On completion of the course, the students will be able to

| CO.No. | Practical – XII- Major Games-III<br>(Cricket, Basketball, Volleyball, Football and Hockey) | Cognitive Level |
|--------|--|-----------------|
| CO1    | Learn the fundamental skills, rules and regulation in various Games and sports.            | K3              |
| CO2    | Know to prepare and maintain of various play field and specification                       | K6              |
| CO3    | Learn to adapt team tactics and techniques of various sports.                              | K3              |
| CO4    | Develop evaluation of skills and performance of the players.                               | K5              |
| CO5    | Learn the rules and regulations and current interpretation of new changes in The games.    | K3              |

Remember(K1);Understand(K2);Apply(K3);Analyze(K4);Evaluate(K5);Create(K6)

### Mapping Cos with Pos and PSOs

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | M | M | M | L | H | L    | M | H | M | H | L |
| 2   | H   | M | M | M | H | H | M    | H | H | M | H | L |
| 3   | H   | M | L | L | M | L | M    | H | H | M | H | L |

|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | H | M | L | L | H | L | M | M | H | M | H | L |
| 5 | H | M | L | L | H | L | L | M | H | M | H | M |

Highly Correlated(H);Moderately Correlated(M);Weakly Correlated(L)

| Semester-IV   |  |  |     |         |       |
|---|--|--|-----|---------|-------|
| Elective – VII  |  |  | T/P | Credits | Hours |
| Project   |  |  | P   | 3       | 5     |
| Students will visit the districts of the state to do survey on availability of sports infra-structure in concerned schools (or) Observe the tournaments conducted at District, State, National and University level and submit an individual project report and will be assessed by a viva voce for 2credits. |  |  |     |         |       |

| Semester-VI  |  |  |     |         |       |
|--|--|--|-----|---------|-------|
| Naan Mudhalvan Course / SPORTS TECHNOLOGY  |  |  | T/P | Credits | Hours |
|  |  |  | T   | 2       | 2     |
| <b>Learning outcomes:</b><br>Understand the fundamental concepts of technology using in Sports<br>2 Understand the science of sports materials used in sports and games<br>3 To attain the knowledge of playfield surface<br>4 To discuss about various modern equipment<br>5 To elaborate on the steps and stages of training gadgets |  |  |     |         |       |
| <b>Unit-I</b>  | <b>Importance of technology in Sports: 9</b><br>Meaning, Definition - General Principles and purpose of instrumentation in sports - Technological impacts on sports.   |  |     |         |       |
| <b>Unit-II</b>   | <b>Science of Sports Materials: 9</b><br>Adhesives - Nano glue - Nano Moulding Technology - Nano turf - Foot wear production - Factors and applications in sports - Constraints - Foams - Polyurethane - Polystyrene - Styrofoam - closed cell and open-cell foams - Neoprene - Foam - Smart Materials: Shape Memory Alloy (SMA) - Thermo chromic film - High - density modeling foam.     |  |     |         |       |
| <b>Unit-III</b>  | <b>Surfaces of Playfields: 9</b><br>Modern surfaces for playfields - Construction and installation of sports surfaces - Types of materials: synthetic, wood, polyurethane - Artificial turf - Modern technology in the construction of indoor and outdoor facilities - Use of computer and software in Match Analysis and Coaching.  |  |     |         |       |
| <b>Unit-IV</b>   | <b>Modern Equipment's: 9</b><br>Playing Equipment's - Balls: Types, Materials and Advantages – Bat / Stick / Racquets: Types, Materials and Advantages - Clothing and shoes: Types, Materials and Advantages - Measuring equipment's: Running, Throwing and Jumping Events - Protective Equipment: Types, Materials and Advantages - Sports equipment with Nano technology and Advantages. |  |     |         |       |

|  |   |
|--|---|
| <b>Unit-V</b>  | <b>Training Gadgets: 9</b><br>Basketball: Ball Feeder - Mechanism and Advantages; Cricket: Bowling Machine - Mechanism and Advantages; Tennis: Serving Machine - Mechanism and Advantages; Volleyball: Serving Machine - Mechanism and Advantages; Lighting Facilities: Method of erecting Flood Light and measuring luminous; Video Coverage: Types, Size, Capacity; Place and Position of Camera in Live coverage of sporting events; Use of computer and software in mater analysis and coaching |
| <b>Book for References:</b><br>Brar, R.S. et al. Teaching Methodology and Educational Technology in Physical Education, Kalyani Publisher: New Delhi, 2008.<br>2. Bosco, James S. "Sports Technology", New Jersey, Prentice Hall Inc., 1983.<br>3. Hoover, Kenneth H. The Professional Teacher's Handbook, Boston, Allyn and Bacon, 1972.<br>4. Krik, David. Physical Education and Curriculum Study, Kent, Croom Helm, 1988.<br>5. Mohanty, J. Educational Technology, New Delhi, 1992. |   |

**Course Outcomes**

On completion of the course, the students will be able to

| CO.No. | Naan Mudhalvan Course / SPORTS TECHNOLOGY  | Cognitive Level |
|--------|--|-----------------|
| CO1    | The Program content is designed to educate the students about technological advancements in the field of Sports and Physical Education.                          | K1              |
| CO2    | The students will learn about latest technologies like: Nanotechnology applied for better performance output   | K3              |
| CO3    | The students will be provided an opportunity to get acquainted with scientific terms and technologies being the part of Sports equipments, apparel and playfield | K3              |
| CO4    | it is improving the qualities of products of modern world and human performance  | K3              |
| CO5    | Understand the different type of foot wear production factor application in sports, constraints.   | K3              |

Remember (K1); Understand (K2); Apply (K3); Analyze (K4); Evaluate (K5); Create (K6)

**Mapping COs with Pos and PSOs**

| COs | POs |   |   |   |   |   | PSOs |   |   |   |   |   |
|-----|-----|---|---|---|---|---|------|---|---|---|---|---|
|     | 1   | 2 | 3 | 4 | 5 | 6 | 1    | 2 | 3 | 4 | 5 | 6 |
| 1   | H   | L | M | M | L | H | L    | M | H | H | L | M |
| 2   | H   | L | M | M | H | H | L    | M | H | H | L | M |
| 3   | H   | L | M | L | M | H | L    | M | H | H | L | M |
| 4   | H   | L | M | H | L | H | L    | M | H | H | L | M |
| 5   | H   | L | M | H | H | H | L    | M | H | H | L | M |

Highly Correlated (H); Moderately Correlated (M); Weakly Correlated (L)

| <b>Semester-IV</b>                          |                           |            |                |              |
|---|---------------------------|------------|----------------|--------------|
|   |                           | <b>T/P</b> | <b>Credits</b> | <b>Hours</b> |
|   | <b>EXTENSION ACTIVITY</b> |            |                |              |
|   |                           |            | <b>1</b>       |              |
| <b>NCC, NSS, YRC, RRC, Sports and Games</b> |                           |            |                |              |