

## **MODULE – I**

### **BACHELOR OF PHYSICAL EDUCATION AND SPORTS (BPES)**

#### **(Four-Year Bachelor's Programme - 8 Semesters)**

#### **COURSE STRUCTURE**

**Bachelor of Physical Education and Sports (BPES)** is a four-year duration consisting of eight semesters. The curriculum of this Four-Year Bachelor's Programme comprises different course components based on the LOCF-CBCS system of the UGC with value addition courses, which are envisaged in the NEP 2020. The curriculum contains the Core Courses, Elective Courses, Ability Enhancement Courses and Value Addition Courses governed by the NEP- 2020 Ordinance for Under Graduate Courses, Manipur University. A total of 200 credits are required to complete the course. The Ordinance will govern the appropriate certifications and award of degrees for Undergraduate Programmes.

**SEMESTER- I**  
**CORE COURSE (CC)**

Course Code	Title of Course	Internal Assessment	End Semester Assessment	Total	Credits
PES501C	History and Foundation of Physical Education	25	75	100	4
PES501C(P)	Practical	-	50	50	2
PES502C	Human Anatomy and Physiology	25	75	100	4
PES502C(P)	Practical	-	50	50	2
<b>Total</b>		<b>50</b>	<b>250</b>	<b>300</b>	<b>12</b>

**ABILITY ENHANCEMENT COMPULSORY COURSE (AECC)**

Course Code	Title of Course	Internal Assessment	End Semester Assessment	Total	Credits
AECC-1	English/MIL	25	75	100	4
<b>Total</b>		<b>25</b>	<b>75</b>	<b>100</b>	<b>4</b>

**SKILL ENHANCEMENT COURSE (SEC)**

Course Code	Title of Course	Internal Assessment (Practical)	End Semester Assessment	Total	Credits
PES501S	(a) Gymnastics; (b) Badminton; (c) Tennis; (d) Table Tennis; (e) Kabaddi; and (f) Kho-Kho (any one to be opted for end semester exam.)	50	50	100	4
<b>Total</b>		<b>50</b>	<b>50</b>	<b>100</b>	<b>4</b>

**VALUE ADDITION COURSE (VAC)**  
**(Any two to be opted from the common pool)**

Course Code	Title of Course	Internal Assessment	End Semester Assessment (Internal)	Total	Credits
VAC-1		-	50	50	2
VAC-2		-	50	50	2
<b>Total</b>		<b>-</b>	<b>100</b>	<b>100</b>	<b>4</b>

**Total Marks = 600**  
**Total Credits = 24**

**SEMESTER- II**  
**CORE COURSE (CC)**

Course Code	Title of Course	Internal Assessment	End Semester Assessment	Total	Credits
PES503C	Kinesiology and Biomechanics	25	75	100	4
PES503C(P)	Practical	-	50	50	2
PES504C	Yoga Education	25	75	100	4
PES504C(P)	Practical	-	50	50	2
<b>Total</b>		<b>50</b>	<b>250</b>	<b>300</b>	<b>12</b>

**ABILITY ENHANCEMENT COMPULSORY COURSE (AECC)**

Course Code	Title of Course	Internal Assessment	End Semester Assessment	Total	Credits
AECC-2	Environmental Science (Common)	25	75	100	4
<b>Total</b>		<b>25</b>	<b>75</b>	<b>100</b>	<b>4</b>

**SKILL ENHANCEMENT COURSE (SEC)**

Course Code	Title of Course	Internal Assessment (Practical)	End Semester Assessment	Total	Credits
PES502S	(a) Judo; (b) Wrestling; (c) Boxing; (d) Weight Lifting and (e) Swimming (any one to be opted for end semester exam.)	50	50	100	4
<b>Total</b>		<b>50</b>	<b>50</b>	<b>100</b>	<b>4</b>

**VALUE ADDITION COURSE (VAC)**  
**(Any two to be opted from the common pool)**

Course Code	Title of Course	Internal Assessment	End Semester Assessment (Internal)	Total	Credits
VAC-3		-	50	50	2
VAC-4		-	50	50	2
<b>Total</b>		<b>-</b>	<b>100</b>	<b>100</b>	<b>4</b>

**Total Marks = 600**  
**Total Credits = 24**

**SEMESTER- III****CORE COURSE (CC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES605C	Sports Psychology and Sociology	25	75	100	4
PES605C(P)	Practical	-	50	50	2
PES606C	Sports Management	25	75	100	4
PES606C(P)	Practical	-	50	50	2
PES607C	Health Education	25	75	100	4
PES607C(P)	Practical	-	50	50	2
<b>Total</b>		<b>75</b>	<b>375</b>	<b>450</b>	<b>18</b>

**GENERIC ELECTIVE COURSE (GEC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES61G	Fundamentals of Computer Application	25	75	100	4
PES61G(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>125</b>	<b>150</b>	<b>6</b>

**VALUE ADDITION COURSE (VAC)**  
**(Any one to be opted from the common pool)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment (Internal)</b>	<b>Total</b>	<b>Credits</b>
VAC-5		-	50	50	2
<b>Total</b>		<b>-</b>	<b>50</b>	<b>50</b>	<b>2</b>

**Total Marks = 650**  
**Total Credits = 26**

**SEMESTER-IV****CORE COURSE (CC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES608C	Organization and Administration of Sports Events	25	75	100	4
PES608C(P)	Practical	-	50	50	2
PES609C	Sports Pedagogy	25	75	100	4
PES609C(P)	Practical	-	50	50	2
PES610C	Adapted Physical Education	25	75	100	4
PES610C(P)	Practical	-	50	50	2
<b>Total</b>		<b>75</b>	<b>375</b>	<b>450</b>	<b>18</b>

**GENERIC ELECTIVE COURSE (GEC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES62G	Fitness and Conditioning	25	75	100	4
PES62G(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>125</b>	<b>150</b>	<b>6</b>

**VALUE ADDITION COURSE (VAC)**  
**(Any one to be opted from the common pool)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment (Internal)</b>	<b>Total</b>	<b>Credits</b>
VAC-6		-	50	50	2
<b>Total</b>		<b>-</b>	<b>50</b>	<b>50</b>	<b>2</b>

**Total Marks = 650**  
**Total Credits = 26**

**SEMESTER-V**  
**CORE COURSE (CC)**

Course Code	Title of Course	Internal Assessment	End Semester Assessment	Total	Credits
PES711C	Educational Technology	25	75	100	4
PES711C(P)	Practical	-	50	50	2
PES712C	Movement Education	25	75	100	4
PES712C(P)	Practical	-	50	50	2
<b>Total</b>		<b>50</b>	<b>250</b>	<b>300</b>	<b>12</b>

**DISCIPLINE SPECIFIC ELECTIVE (DSE)**

Course Code	Title of Course	Internal Assessment	End Semester Assessment	Total	Credits
PES71D	a) Track & Field (Running Events); b) Basketball; c) Football; d) Handball and e) Volleyball (any one to be opted for end semester exam.)	25	75	100	4
PES71D(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>75</b>	<b>150</b>	<b>6</b>

**GENERIC ELECTIVE COURSE (GEC)**

Course Code	Title of Course	Internal Assessment	End Semester Assessment	Total	Credits
PES73G	Basic Sports Medicine and Physiotherapy	25	75	100	4
PES73G(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>75</b>	<b>150</b>	<b>6</b>

**VALUE ADDITION COURSE (VAC)**  
(Any one to be opted from the common pool)

Course Code	Title of Course	Internal Assessment	End Semester Assessment (Internal)	Total	Credits
VAC-7		-	50	50	2
<b>Total</b>		<b>-</b>	<b>50</b>	<b>50</b>	<b>2</b>

**Total Marks = 650**  
**Total Credits = 26**

**SEMESTER-VI****CORE COURSE (CC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES713C	Basics of Sports Training	25	75	100	4
PES713C(P)	Practical	-	50	50	2
PES714C	Sports Nutrition	25	75	100	4
PES714C(P)	Practical	-	50	50	2
<b>Total</b>		<b>50</b>	<b>250</b>	<b>300</b>	<b>12</b>

**DISCIPLINE SPECIFIC ELECTIVE (DSE)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES72D	a) Track & Field (Jumping & Throwing Events); b) Hockey; c) Cricket; d) Softball and e) Yoga (any one to be opted for end semester exam.)	25	75	100	4
PES72D(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>125</b>	<b>150</b>	<b>6</b>

**GENERIC ELECTIVE COURSE (GEC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES74G	Sports Journalism	25	75	100	4
PES74G(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>125</b>	<b>150</b>	<b>6</b>

**VALUE ADDITION COURSE (VAC)**  
(Any one to be opted from the common pool)

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment (Internal)</b>	<b>Total</b>	<b>Credits</b>
VAC-8		-	50	50	2
<b>Total</b>		<b>-</b>	<b>50</b>	<b>50</b>	<b>2</b>

**Total Marks =650**  
**Total Credits = 26**

**SEMESTER-VII****CORE COURSE (CC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES815C	Measurement and Evaluation	25	75	100	4
PES815C(P)	Practical	-	50	50	2
PES816C	Recreation and Adventure Sports	25	75	100	4
PES816C(P)	Practical	-	50	50	2
<b>Total</b>		<b>50</b>	<b>250</b>	<b>300</b>	<b>12</b>

**DISCIPLINE SPECIFIC ELECTIVE (DSE)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES83D	Traditional Sports of Manipur	25	75	100	4
PES83D(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>125</b>	<b>150</b>	<b>6</b>

**GENERIC ELECTIVE COURSE (GEC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES85G	Methods in Physical Education	25	75	100	4
PES85G(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>125</b>	<b>150</b>	<b>6</b>

**Total Marks = 600****Total Credits = 24**



**SEMESTER-VIII****CORE COURSE (CC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES817C	Research Methodology	25	75	100	4
PES817C(P)	Practical	-	50	50	2
PES818C	Sports Statistics	25	75	100	4
PES818C(P)	Practical	-	50	50	2
<b>Total</b>		<b>50</b>	<b>250</b>	<b>300</b>	<b>12</b>

**DISCIPLINE SPECIFIC ELECTIVE (DSE)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES84D	Dissertation/Project/Internship	25	75	100	4
PES84D(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>125</b>	<b>150</b>	<b>6</b>

**GENERIC ELECTIVE COURSE (GEC)**

<b>Course Code</b>	<b>Title of Course</b>	<b>Internal Assessment</b>	<b>End Semester Assessment</b>	<b>Total</b>	<b>Credits</b>
PES86G	Sports Entrepreneurship	25	75	100	4
PES86G(P)	Practical	-	50	50	2
<b>Total</b>		<b>25</b>	<b>125</b>	<b>150</b>	<b>6</b>

**Total Marks = 600****Total Credits = 24**

**MODULE – I**

**SYLLABUS**

*For*

**BACHELOR OF PHYSICAL EDUCATION AND SPORTS**

**(BPES)**

**(Four-Year Bachelor's Programme - 8 Semesters)**

## SEMESTER- I

### CORE COURSE (CC)

**PES501C: History and Foundation of Physical Education**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

#### **Learning Outcomes**

1. The pass out students would be able to compare the relationship between general education and physical education.
2. Students would be able to identify and relate with the History of Physical Education.
3. Students would be able to comprehend the relationship between Philosophy, Education and Physical Education.
4. Students would able to identify the works of Philosophers of Education and Physical Education.
5. Students would know recent developments and academic foundation of Physical Education.

#### **Course Contents**

##### **Unit-I: Introduction to Physical Education**

- 1.1. Meaning, Definition and Scope of Physical Education
- 1.2. Aims and Objective of Physical Education
- 1.3. Importance of Physical Education in present era.
- 1.4. Misconceptions about Physical Education.
- 1.5. Relationship of Physical Education with General Education.
- 1.6. Physical Education as an Art and Science.

##### **Unit-II: Historical Development of Physical Education in India**

- 2.1 Vedic Period (2500 BC – 600 BC), Early Hindu Period (600 BC – 320 AD) and Later Hindu Period (320 AD – 1000 AD), Medieval period
- 2.2 Post Mughal British Period (Before 1947) Y.M.C.A. and its contributions.
- 2.3 Physical Education in India (After 1947)
- 2.4 The early history and significant stages in the revival and development of the modern Olympic movement.
- 2.5 Educational and cultural values of Olympic movement.

##### **Unit-III: Philosophical Foundation of Physical Education**

- 3.1 Philosophical foundation: Idealism, Pragmatism, Naturalism, Realism.
- 3.2 Philosophy and Culture.
- 3.3 Introduction to sport, game, play and recreation
- 3.4 Fitness and wellness movement in the contemporary perspectives
- 3.5 Sports for all and its role in the maintenance and promotion of fitness.

##### **Unit-IV: Foundation of Physical Education**

- 4.1 Biological Foundation
  - 4.1.1 Growth and development
  - 4.1.2 Age and gender characteristics
  - 4.1.3 Body Types

#### 4.2 Psychological Foundation

- 4.2.1 Attitude, interest.
- 4.2.2 Cognition, emotions and sentiments.
- 4.2.3 Practical suggestion from psychology.

#### 4.3 Sociological Foundation

- 4.3.1 Society and culture
- 4.3.2 Social acceptance and recognition
- 4.3.3 Leadership in physical education

### **PES501C (P): Practical**

**50 Marks/2 Credits**

1. Words of Command- General Drill
2. Drill and Marching
3. Conditioning exercises (general)
4. Determining the body types
5. Practices of sport, game, play and recreation

### **References**

1. Bucher, C. A. (n.d.) - Foundation of physical education. St. Louis: The C.V. Mosby Co.
2. Deshpande, S. H. (2014) - Physical Education in Ancient India. Amravati: Degree college of Physical education.
3. Dash, B.N. (2003.) –Principles of Education, Neelkamal publication, Hyderabad,
4. Kamlesh, M.L. (2002) –Sociological Foundation of Physical Education, Metropolitan Book co. Pvt. Ltd., Delhi,
5. Pandey, R.S.( 1991) Philosophical & Sociological Foundation of Education, Vinod PustakMandir, Agra,.
6. Bhatia, K.K. & Narang, C.L. (1984.)– Philosophical & Sociological Bases of Education, Prakash Bros., Ludhiana,
7. Adams, William.C (1991.) – Foundation of Physical Education Exercises and Sports Sciences, Lea and Febigor, Philadelphia,
8. Kamlesh, M.L. (2004). Principles and History of Physical Education and Sports, Friends Publication (India) New Delhi.
9. Dr. B.C.Kapri, Fundamentals of Physical Education, Friends Publication, Dariya Ganj, Delhi (India).

### **PES502C: Human Anatomy and Physiology**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

### **Learning Outcomes**

1. The student will learn the basic structures and functions of human body by identifying, comparing and relating different systems, organs and their functional and structural units.
2. He would be able to relate and interpret the role of exercise on body systems and its relation to well being, through literature reviews and physical conditioning exercises.
3. Adapt the art to apply the knowledge of anatomy and physiology in physical activity classes at school level.

4. Construct anatomy and physiology related pedagogical materials exploring their creative imaginations while working in group and using technology.

## **Course Contents**

### **Unit-I: Introduction and Level of Organization**

- 1.1 Meaning and Concept of Anatomy and Physiology
- 1.2 Need and Importance of Anatomy in the field of physical Education.
- 1.3 Levels of Organization of Human Body- Cell, Tissue, Organ, System and classifications.
- 1.4 Microscopic Structure, Composition and function of Cell, Tissue, Organ and System
- 1.5 Essential Properties of living Organism.

### **Unit-II: Musculo-Skeletal System**

- 2.1 Skeleton
  - 2.1.1 Different Parts of Human Skeleton
  - 2.1.2 Types of Bones
  - 2.1.3 Gross and Microscopic Structure and function of bones.
- 2.2 Joints- Classification, structure and functions of Joints
- 2.3 Muscles- classification, structure and functions of muscles
- 2.4 Skeleton Muscles- functions of major muscles of different part of body.

### **Unit-III: Body Systems and Functions**

- 3.1 Cardio-Respiratory System:
  - 3.1.1. Anatomical position and gross structure of the Heart
  - 3.1.2. Systemic and Pulmonary Circulation
  - 3.1.3. Blood Vessels – Artery, Vein and Capillaries
- 3.2 Respiratory System:
  - 3.2.1. External and Internal Respiration
  - 3.2.2. Organs of Respiration
  - 3.2.3. Structure of Lungs
  - 3.2.4. Introduction of Mechanism of Respiration
- 3.3 Digestive System:
  - 3.3.1. Parts of Digestive Tract, Structure and Function
  - 3.3.2. Steps of Digestion
  - 3.3.3. Digestive Glands – Structure and Function
- 3.4 Excretory System:
  - 3.4.1 Routes of Excretion from Human Body
  - 3.4.2 Organs of Urinary System
  - 3.4.3 Structure and Function of Kidney.
  - 3.4.4. Structure and Functions of Skin
- 3.5 Reproductive System: Male and female reproductive system.

### **Unit-IV: Nervous and Humoral System**

- 4.1 Nervous System
  - 4.1.1. Structural Division- Central Nervous System and Peripheral Nervous System
  - 4.1.2. Functional Division- Autonomic Nervous System and Sensory Motor Nervous System.
  - 4.1.3. Brain and Spinal Cord- Structure and functions
- 4.2 Endocrine System- Names, Location and Functions of glands

4.3 Liver System- Structural division and functions of Liver

4.4 Sense organs, classification and functions.

**PES502C(P): Practical**

**50 Marks/2 Credits**

1. Identification and enumeration of body skeleton.
2. Demonstration of different body organs with charts, models and pictures.
3. Estimation of hemoglobin content.
4. Determination of blood group.
5. Determination of heart and pulse rate.
6. Measurement of Blood Pressure
7. Explanation of different body structure and functions with Audio-visual aids.

**References**

1. Bourne, Geoffery H. (1973). The Structure and Function of Muscles: London: Academic Press.
2. Chaurasia B.D. (1979). Human Anatomy Regional and Applied. CBS Publisher and Distributors.
3. Gupta, A. P. (2010). Anatomy and physiology. Agra: Sumit Prakashan.
4. Gupta, M. and Gupta, M. C. (1980). Body and anatomical science. Delhi: Swaran Printing Press.
5. Guyton, Arthur C.(1976). Text book of Medical Physiology. (Philadelphia: W.B. Saunder Company.
6. Guyton, A.C. (1996). Textbook of Medical Physiology, 9th edition. Philadelphia: W.B.
7. James C. Clouch (1971). Fundamental Human Anatomy (Lea & Febiger, Philadelphia).
8. Lamb, G. S. (1982). Essentials of exercise physiology. Delhi: Surjeet Publication.
9. Mathew, D.K. and Fox E.L. (1976). Physiological Basis of Physical Education and Athletics (Philadelphia: W.B. Saunders Company.
10. Moorthy, A. M. (2014). Anatomy physiology and health education.Karaikudi: Madalayam.
11. Morehouse, L. E. & Miller, J. (1967). Physiology of exercise. St. Louis: The C.V. Mosby Co.
12. Morehouse, E. Miller, A.T. (1976). Physiology of Exercise. St. Louis: The C.V. Mosby Company, 7th Edition.
13. Pearce, E. C. (1962). Anatomy and physiology for nurses. London: Faber & Faber Ltd. Publications, Saunders Company.
14. Sharma, R. D. (1979). Health and physical education, Gupta Prakashan.
15. Singh, S. (1979). Anatomy of physiology and health education. Ropar: Jeet Publications.

**ABILITY ENHANCEMENT COMPULSORY COURSE (AECC)**

**AECC: English/MIL (Common Syllabus)**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

## SKILL ENHANCEMENT COURSE (SEC)

**PES51S:** Gymnastics, Badminton, Tennis, Table Tennis and Kabaddi/Kho-Kho (any one to be opted for end semester exam.)

**75 Marks/3 Credits**  
**25 Marks/1 Credit**

### **Learning Outcomes**

1. Sports and Games practical will enhance the physical fitness, skills and performance to the students.
2. Students can understand the rules and interpretation in playing, officiating and coaching.
3. Students will get the opportunities to participate in various competitions at different levels.
4. Students will understand the importance and professional values of games and sports.
5. Students will understand the changes of rules and different training methods.

### **(a) Gymnastics**

1. History and foundation of Gymnastics.
2. Different events of men and women.
3. Measurement and arrangement of equipments of different events.
4. Floor Exercise (boys and girls) - Forward Roll, Backward Roll, Sideward Roll, Cart Wheel, Handstand and forward roll, Backward roll to hand stand, Diving forward roll, Side split, Head stand, Different kinds of scale, Diving roll from beat board, Round off, Jumps-leap, scissors leap.
5. Balancing Beam (girls) - Walking and running on the beam, Turning movement on the beam, Cat jump, Dancing steps and movements, Mount (1/4 turn to cross sitting), Dismount (jump from the end of the beam with legs straddle in the air), Straddle mount, Forward roll on the bench and beam.
6. Parallel Bar (boys) - Mount from one bar, Straddle walking on parallel bar, Single and double step walk, Perfect swing, Shoulder stand on one bar and roll forward, Roll side, Shoulder stand., Front on back vault to the side (dismount).
7. Vaulting Horse (boys and girls) - Approach run and jump from the board, Cat vault, Squat vault, Straddle vault, Side vault.
8. Rhythmic activities (girls) - Basic skills or five elements of three selected apparatus, Choreography with music, Basic turns, jumps, leap with music.
9. Rules and regulations, and duties of officials.

### **References**

1. Sturmt, Nik. Competitive Gymnastics, London: Stonlly Paul and Company Ltd. 1970.
2. De Carle, Tom. Hand Book of Progressive Gymnastics. Englewood Cliffs: N.J. Prentice Hall.
3. Lokon, Newton, C. and Williougby, Rodert, J. Complete Book of Gymnastics. Englewood Cliffs, N.J. Prentice Hall.

4. Cochranu, Tunvi, S. International Gymnastics for Girls and Women. London: Addition Wolly Publishing Co.
5. Cartur, Exhestine R. Gymnastics for Girls and Women. N.J. Prentice Hall.
6. Federation Rules in Gymnastics.

### **(b) Badminton**

1. History and development of Badminton
2. Court development and marking
3. Racket parts, Racket grips, Shuttle Grips.
4. The basic stances.
5. The basic strokes-Serves, Forehand-overhead and underarm, Backhand-overhead and underarm
6. Drills and lead up games.
7. Types of games-Singles, doubles, including mixed doubles.
8. Court marking.
9. Rules and their interpretations and duties of officials.

### **References**

1. Doway, J.C. Better Badminton for All: Great Britain, Pelham Books Ltd.
2. Davic part, Better Badminton Learn in yourself Book. London : Orient Paper Books.
3. Brown E, Better Badminton London Faber & Faber.
4. Rogers, Wynn. Advanced Badminton. IWOOA, WMC, Brown Co. Publishers, DUBU.

### **(c) Tennis**

1. History and development of Tennis
2. Court development and marking
3. Grips- Eastern Forehand grip and Backhand grip, Western grip, Continental grip, Chopper grip.
4. Stance and Footwork.
5. Basic Ground strokes-Forehand drive, Backhand drive.
6. Basic service
7. Basic Volley
8. Over-head Volley
9. Chop
10. Tactics – Defensive, attacking in game.
11. Court marking.
12. Rules and their interpretations and duties of officials.

### **References**

1. Rick Chavez and Lois Smith N., Teaching Tennis, Surjeet Publication, New Delhi, 1996.
2. Simon Lee, How to Play Tennis, S.K. Sachdeva for Competition Review Pvt. Ltd. New Delhi, 1991.
3. Jim Brown, Tennis- Steps to Success, Human Kinetics, 2004.



**(d) Table Tennis**

1. History and development of Table Tennis
2. Court development and marking
3. The Grip-The Tennis Grip, Pen Holder Grip.
4. Service-Forehand, Backhand, Side Spin, High Toss.
5. Strokes-Push, Chop, Drive, Half Volley, Smash, Drop-shot, Balloon, Flick Shot, Loop Drive.
6. Stance and Ready position and foot work.
7. Court marking.
8. Rules and their interpretations and duties of officials.

**References**

1. Jain, Deepak, Teaching and Coaching -Table Tennis, Delhi : Khel Sahitaya Kendra, 2001.
2. Narang, P., Play & Learn Table Tennis, Khel Sahitaya Kendra, 2005.
3. Parker, D., Take Up Table Tennis, Springfield Books Ltd., 1989.
4. Simpson, Peter, Successful Table Tennis, London: Charles Letts, 1980.
5. Taylor, R., Sports Action-Table Tennis, London, 1989.
6. Thani, Lokesh, Skills and Tactics Table Tennis, Delhi: Sports, 1998.

**(e) Kabaddi**

1. History and development of Kabaddi
2. Court development and marking
3. Skills in Raiding-Touching with hand, various kicks, crossing of baulk line, Crossing of Bonus line, luring the opponent to catch, Pursuing.
4. Skills of Holding the Raider-Variou formations, Catching from particular position, Different catches, Luring the raider to take particular position so as to facilitate catching, catching formations and techniques.
5. Additional skills in raiding-Bringing the antis in to particular position, Escaping from various holds, Techniques of escaping from chain formation, Combined formations in offence and defense.
6. Ground Marking, Rules and Officiating.

**(f) Kho-Kho**

1. History and development of Kho-Kho
2. Court development and marking
3. General skills of the game-Running, chasing, Dodging, Faking etc.
4. Skills in chasing-Correct Kho, Moving on the lanes, Pursuing the runner, Tapping the inactive runner, Tapping the runner on heels, Tapping on the pole, Diving, Judgement in giving Kho, Rectification of Foul.
5. Skills in Running-Zig-zag running, Single and double chain, Ring play, Rolling in the sides, Dodging while facing and on the back, fakes on the pole, fake legs, body arm etc, Combination of different skills.
6. Ground Marking
7. Rules and their interpretations and duties of officials.

**References**

1. Kho-Kho, The game of chase and Trill, Bombay Maharashtra Kho-Kho Association.
2. Yogesh Yadav. Kho-Kho, Maharashtra Kho-Kho Association, 1969.
3. Rao, C. V. Kabaddi, Patiala, N.I.S. Publications.
4. Reddy, B. A. Scientific Kabaddi, Madras ; Raman's Printing Press.

**VALUE ADDITION COURSE (VAC)**  
**(Any two to be opted from the common pool)**

<b>VAC-1</b>		<b>50 Marks/2 Credits</b>
<b>VAC-2</b>		<b>50 Marks/2 Credits</b>

**Teaching Learning Strategies:** The classes will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations methods.

**Virtual instructional platforms** such as online lectures, webcast etc. are to be used. Students can participate in coursework through instant messages, emails and video conferencing. Google class room, Cisco Webex Meeting, OERS, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org)), Virtual Labs ([www.vlabs.co.in](http://www.vlabs.co.in)), FOSSEE ([www.fossee.in](http://www.fossee.in)), application of spoken tutorials ([www.spoken-tutorial.org](http://www.spoken-tutorial.org)), National Digital Library ([www.ndl.iitkgp.ac.in](http://www.ndl.iitkgp.ac.in)), electronic journals ([www.ess.infibnet.ac.in](http://www.ess.infibnet.ac.in)) etc. are to be used.. Courses may also integrate DVD videos as part of the training process. Students may examine current topics in the field through the use of e- textbooks and e-physical education journals. Students can complete some portion of the education at approved testing sites for the practical components wherever necessary.

**Initiating Brain based learning:** A stress free environment will be created. Constant feedback regarding their performance will be given to initiate learning from mistakes. Creative thinking for new ideas and innovations will be encouraged. Break in learning will be filled with recreational and constructive activities for boosting cognitive functions.

**Activities:** Lecture/ Project Work/ Seminars/ Term Papers/Assignments/ Presentations/ Study etc.

**Assessment Rubric:** Classroom test, Project-work, assignments, presentations, demonstration and skill activities.

**Sports simulation laboratory:** Sports simulation laboratory is to be established to provide the students with a feasible environment where they will learn and practice sports skills using animated videos with continuous rectification of errors till exact simulation of skill is attained. Help may be taken from Youtube Streaming, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org))).

## SEMESTER- II

### CORE COURSE (CC)

**PES503C: Kinesiology and Biomechanics**

**75 Marks/3 Credits  
25 Marks/1 Credit**

#### **Learning Outcomes**

1. The student will gain the knowledge and aware of the skeletal structure of human body by identifying the origin and insertion of various muscles.
2. Students will understand the basic movements with the application of mechanical principles.
3. Students can justify and interpret the role of various mechanical principles in human movement.
4. Students can observe the importance of mechanical principles in sports.

#### **Course Contents**

##### **Unit-I: Introduction to Kinesiology and Sports Biomechanics**

- 1.1 Meaning and Definition of Kinesiology and Sports Biomechanics
- 1.2 Importance of Kinesiology and Biomechanics in sports and physical activities
- 1.3 Origin and Insertion on bones and Action of major Muscles
- 1.4 Standard reference of body position
- 1.5 Anatomical reference Planes and Axes
- 1.6 Directional terms and body movements

##### **Unit-II: Mechanical Concepts**

- 2.1 Speed, Velocity and Acceleration
  - 2.1.1 Average Speed, Average Velocity and Average Acceleration
  - 2.1.2 Average Speed versus Instantaneous Speed
- 2.2 Distance and Displacement
- 2.3 Concepts of Fluid resistance and Buoyancy
- 2.4 Motion and types of motion
- 2.5 Laws of Motion and their application to sports activities.

##### **Unit-III: Kinetic and Kinematic Analysis of Human Motion**

- 3.1 Fundamental concepts of human movement
- 3.2 Centre of Gravity, Line of Gravity and Equilibrium
- 3.3 Basic Concept related to kinetics
  - 3.3.1 Inertia
  - 3.3.2 Mass
  - 3.3.3 Force
  - 3.3.4 Centre of Gravity
  - 3.3.5 Pressure
  - 3.3.6 Density
  - 3.3.7 Torque
  - 3.3.8 Impulse
- 3.4 The Biomechanics of the Human Upper Extremity
- 3.5 The Biomechanics of the Human Lower Extremity

##### **Unit-IV: Qualitative and Quantitative Analysis**

- 4.1 Angular Kinematics of human movement
- 4.2 Linear Kinetics of human movement
- 4.3 Stability and types of stability
- 4.4 Lever, types of lever and leverage functions of human body
- 4.5 Mechanical analysis of movements: Walking, Running, Jumping and Throwing.

**PES503C(P): Practical****50 Marks/2 Credits**

1. Demonstration of different joints movements.
2. Demonstration of Agonist and Antagonist movements.
3. Teaching fundamental movements.
4. Measurement of distance and displacement.
5. Location of Centre Gravity (CG) and Line of Gravity (LG).
6. Analysis of stability and equilibrium
7. Demonstration of Linear and Angular motion.
8. Calculation of average speed, velocity and acceleration.

**References**

1. Anthony J. Blazeovich (2017). Sports Biomechanics: The Basics: Optimising Human Performance: bloomsburry
2. By Peter M. (2013), Biomechanics of Sport and Exercise: Human Kinetics
3. Amrit Kumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: Poompugar Pathipagam.
4. BeotraAlka, (2000) Drug Education Handbook on Drug Abuse in Sports: Sports Authority of India Delhi.
5. Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs.
6. David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics.
7. Fox, E.L., and Mathews, D.K. (1981).The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing.
8. Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co.
9. Richard, W. Bowers.(1989). Sports Physiology. WMC: Brown Publishers.
10. Sandhya Tiwaji. (1999). Exercise Physiology.Sports Publishers.
11. Shaver, L. (1981).Essentials of Exercise Physiology. New Delhi: Subject Publications.
12. Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication.
13. William, D. McAradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company.

**PES504C: Yoga Education****75 Marks/3 Credits  
25 Marks/1 Credit****Learning Outcomes**

1. Students will gain the fundamental knowledge of Yoga.
2. The study will give the importance of different scopes of yoga in life.
3. The theoretical and practical approaches will be learned.
4. Students will gain the knowledge of the foundational structure to establish Yoga.

## Course Contents

### Unit – I: Introduction

- 1.1 Meaning and Definition of Yoga
- 1.2 Aims and Objectives of Yoga
- 1.3 Yoga in Early Upanisads
- 1.4 The Yoga Sutra: General Consideration
- 1.5 Need and Importance of Yoga in Physical Education and Sports.

### Unit - II: Foundation of Yoga

- 2.1 The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi.
- 2.2 Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga.

### Unit – III: Asanas

- 3.1 Effect of Asanas and Pranayama on various system of the body
- 3.2 Classification of asanas with special reference to physical education and sports
- 3.3 Influences of relaxtive, meditative posture on various system of the body
- 3.4 Types of Bandhas and mudras
- 3.5 Type of kriyas

### Unit –IV: Education and Yoga

- 4.1 Basic, applied and action research in Yoga
- 4.2 Difference between yogic practices and physical exercises
- 4.3 Yoga education centers in India and abroad
- 4.4 Competitions in Yogasanas.

### PES504C(P): Practical

**50 Marks/2 Credits**

1. Fundamental of Suryanamaskar and practices
2. Practices of Asanas
3. Practices of Pranayamas
4. Practices of Kriyas
5. Meditation and Dhyanna

### References

- 1 Brown, F. Y.(2000). How to use yoga. Delhi:Sports Publication.
- 2 Gharote, M. L. &Ganguly, H. (1988). Teaching methods for yogic practices. Lonawala: Kaixydahmoe.
- 3 Rajjan, S. M. (1985). Yoga strenthening of relaxation for sports man. New Delhi:Allied Publishers.
- 4 Shankar,G.(1998). Holistic approach of yoga. New Delhi:Aditya Publishers.
- 5 Shekar,K. C. (2003). Yoga for health. Delhi: Khel Sahitya Kendra.

**ABILITY ENHANCEMENT COMPULSORY COURSE (AECC)**

**AECC-2: Environmental Science (Common)**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

**SKILL ENHANCEMENT COURSE (SEC)**

**PES502S:** (a) Judo, (b) Wrestling, (c) Boxing, (d) Weight Lifting and (e) Swimming (any one to be opted for end semester exam.)

**75 Marks/3 Credits**

**25 Marks/1 Credit**

**Learning Outcomes**

1. Sports and Games practical will enhance the physical fitness, skills and performance to the students.
2. Students can understand the rules and interpretation in playing, officiating and coaching.
3. Students will get the opportunities to participate in various competitions at different levels.
4. Students will understand the importance and professional values of games and sports.
5. Students will understand the changes of rules and different training methods.

**(a) Judo**

1. History and development of Judo
2. Court management
3. Rej (salutation),
4. Ritsurei (salutation in standing position).
5. Zarai (salutation in the sitting position).
6. How to wear Judo Costume.
7. Kumi Kata (Methods of holding judo costume).
8. Shisei (Posture in Judo).
9. Kuzushi (Act of disturbing the opponent posture).
10. Tsukuri and kake (Preparatory action for attack,)
11. Ukemi (Break fall).
12. Urhiro Ukemi- (Rear break fall).
13. Yoko Ukemi (Side break fall).
14. Mae Ukemi (Front break fall).
15. Mae mawari Ukemi (Front rolling break fall).
16. Shin Tai (Advance or Retreat foot Movement).
17. Suri-ashi (Gliding foot).
18. Tsugi-ashi (Following foot steps).
19. Ayumi-ashi (Walking steps).
20. Tai Sabaki (Management of the body).
21. Nage-waze (Throwing Techniques).
22. Hiza Guruma (Knee wheel).
23. Sesae Tsurikomi-ashi (Drawing ankle throw).
24. De-ashi hari (Advance foot sweep).

25. O Goshi (Major Loin).
26. Seoi. nage (Shoulder throw) – Ippon scionage and Morote Scionage.
27. Katama-waze (Grappling Techniques).
28. Kesa-gatame (Scaff hold).
29. Kata-gatma (Shoulder hold).
30. Kami-shiho gatama (Locking of upper four quarters).
31. Method of escaping from each hold.
32. Various falling exercises.
33. Rules and regulations.

### References

1. Feldenkrais M. Higher Judo: General Work, Fredrick Warne and Co., Ltd. London and New York.
2. Smith Robart W. Judo its Story and Practice Charles E. Tuttle Company of Rutlond, Vermoni Tokoyo and Japan.
3. Ewen Harry, Your Book of Judo. Faber and Faber Ltd. 3 Queen Square London W.C.I.
4. Herrison C, J. Judo on the Ground W. Foulsham Co. Ltd. 2-5 old Bond Street London, W.L.
5. Uyenishi S. K. Judo Text Booth of Su-Jutsu. Athletic Publications Ltd. Link House, Store Street, London W.C.I.

### (b) Wrestling

1. History and development of Wrestling
2. Court measurement and management
3. Learning and demonstrating fundamental skills involving drills and lead up games, if any, therein (Catch as can style).
4. Take downs: leg tackles, arm drag.
5. Counters for take downs : Cross face, whizzer series.
6. Escapes from under : Sitout-turn in triped.
7. Counters for escapes from under : Basic control, back drop, counters for stand up.
8. Pinning combination : Nelson series, (Half Nelson, Half Nelson and bar arm) leg lift series, leg cradle series, Reverse double bar arm, chicken wing and half nelson.
9. Escapes from pinning : Wing lock series, Double arm lock roll, bridge.
10. Standing Wrestling : Head under arm series whizzer series.
11. Rules and their interpretations and duties of officials.

### References

1. Dubey. C.H. A Wrestling Guide, 201 Rampura, Sauger (M.P.)
2. Collangner E. L. & Dex Perry Wrestling A.S. Barues & Co. New York.
3. U.S. Naval Institute, Wrestling, Arnapolis Manyala USA.

### (c) Boxing

1. History and development of Boxing
2. Boxing ring measurement and management
3. Fundamental Skills
  - Player stance

- Stance - Right hand stance, left hand stance.
  - Footwork – Attack, defense.
  - Punches – Jab, cross, hook, upper cut, combinations.
  - Defense slip – bob and weave, parry/block, cover up, clinch, and counter attack.
4. Tactics – Toe to toe, counter attack, fighting in close, feinting.
  5. Categories of boxing players.
  5. Rules and their interpretations and duties of officials.

## References

1. Jacomb William J. (2018). Boxing for Beginners. Franklin Classics Trade Press.
2. Blower Gary (2020). Boxing: Training, Skills and Techniques. The Crowood Press Ltd.
3. Diaz Takanori. Boxing for Beginners. Create Space Independent Publishing Platform.
4. Jim Driscoll (2008). The Text Book of Boxing: The Deluxe Edition, Prometheus Press, USA.

## **(d) Weight Lifting**

1. History and development of Weight Lifting
2. Area and platform management
3. Two arms curls
4. Front Press
5. Pres behind the neck
6. Dead lift
7. Quarter Squat, Half squat and Full squat.
8. Rise on toes (Heel Raise).
9. Straight arm pull over.
10. Bent over, rowing.
11. Bench Press.
12. Leg Press
13. Wrist rolling.
14. 12 Pronation and supination.
15. 13 Trunk Twisting.
16. 14 Good morning exercise.
17. 15 Sit ups with weight.
18. 16 Alternate Press.
19. 17 Sport running with weight.
20. 18 Stepping on bench.
21. 19 Jack knife.
22. 20 Lateral rise.
23. 21 Iron shoe exercises.
24. Classification and competition types of Weight Lifting, Power Lifting, weight category and Best Physique.

## References

1. Katyal P.N. Manual of Weight Lifting. Ambala Cantt. Green Printin Press.
2. Krikley, George W. Modern Weight Lifting Load Faber Popular Books.
3. Murray, Jim and Karpovich Peter V. Weight Training in Athletics. Englewood Cliffs, N.J. Prentice Hall.



4. Kirkley, George and Geodhody John The Manual of Weight Training. London Stanley Paul and Company, 1971.

### (e) Swimming

1. History and development of Swimming
2. Planning and measurement of swimming pool
3. Fundamental Skills Drills:
  - Entry into the pool
  - Developing water balance and confidence
  - Water fear removing drills
  - Floating-mushroom and Jelly-fish etc
  - Gliding-with and without kickboard
4. Teaching of competitive swimming strokes (minimum two strokes)- Body position, leg, kick, arm pull, breathing and co-ordination.
5. Starts and turns of the concerned strokes.
6. Water treading and simple jumping.
7. Learning of competition strokes – Freestyle, Breaststroke, Butterfly, Backstroke and Sidestroke.
8. Rules of competition and their interpretation, and duties of officials.

### **References**

1. Helen, Elkington. Swimming- A handbook of Teacher. London: Cambridge University Press.
2. Counsilmen, James E. Science of Swimming. London: Pelham Books Ltd.
3. Torney, John A. Swimming. London: McGraw Hill Books Company Inc.
4. Spitz, Mark and Lemond, Alan. The Mark Spitz Complete Book of Swimming. London: Pelham Books Ltd.
5. Gallagher, Harry. Harry Gallagher on Swimming. London: Pelham Books Ltd.

### VALUE ADDITION COURSE (VAC) (Any two to be opted from the common pool)

**VAC-3**

**50 Marks/2**

**Credits**

**VAC-4**

**50 Marks/2 Credits**

**Teaching Learning Strategies:** The classes will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations methods.

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Courses may also integrate DVD videos as part of the training process. Students may examine current topics in the field through the use of e- textbooks and e-physical education journals. Students can complete some portion of the education at approved testing sites for the practical components wherever necessary.

**Initiating Brain based learning:** A stress free environment will be created. Constant feedback regarding their performance will be given to initiate learning from mistakes. Creative thinking for new ideas and innovations will be encouraged. Break in learning will be filled with recreational and constructive activities for boosting cognitive functions.

**Activities:** Lecture/ Project Work/ Seminars/ Term Papers/Assignments/ Presentations/ Study etc.

**Assessment Rubric:** Classroom test, Project-work, assignments, presentations, demonstration and skill activities.

**Sports simulation laboratory:** Sports simulation laboratory is to be established to provide the students with a feasible environment where they will learn and practice sports skills using animated videos with continuous rectification of errors till exact simulation of skill is attained. Help may be taken from Youtube Streaming, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org))).

## SEMESTER- III

### CORE COURSE (CC)

**PES605C: Sports Psychology and Sociology**

**75 Marks/3 Credits  
25 Marks/1 Credit**

#### **Learning Outcomes**

1. The study would orient the student in basic concepts of psychology.
2. The student would be oriented in identifying factors determining one's overall personality.
3. He would understand various laws of learning and their relevance in teaching learning process.
4. The study would orient him in getting through with the psychology of sports person.

#### **Course Contents**

##### **Unit-I: Introduction of Sports Psychology**

- 1.1 Meaning and nature of Psychology and Sports Psychology.
- 1.2 Historical Evolution of Sports Psychology
- 1.3 Importance of Sports Psychology in Physical Education and Sports.
- 1.4 Psychological factors affecting sports performances.

##### **Unit-II: Personality, Motivation and Learning**

- 2.1 Meaning, definition and types of Personality
- 2.2 Dimensions of personality and development of personality in sports
- 2.3 Meaning, definition and types of motivation
- 2.4 Need, drive, motive, incentive and motivation in sports
- 2.5 Learning- types of learning, laws of learning, transfer of learning.

##### **Unit-III: Introduction to Sports Sociology**

- 3.1 Meaning and Nature of Sociology and Sports Sociology
- 3.2 Importance of Sports Sociology in Physical Education and sports
- 3.3 Socialization and value education through Physical Education and sports
- 3.4 Impact of society on sports development.

##### **Unit-IV: Social Aspects and Physical Education.**

- 4.1 Orthodoxy, customs, Tradition, culture and Physical Education.
- 4.2 Social group, Socialization through Physical Education and sports
- 4.3 Culture and sports, Social Stratification, gender differences
- 4.4 Influence of spectators in sports.

#### **PES605C(P): Practical**

**50 Marks/2 Credits**

1. Measurement of Intelligent Quotient (IQ)- Mental Age and chronological Age.
2. Raymond. B. Cattle's Personality Factors investigation.
3. Assessment of Sports Achievement Motivation.
4. Discussion of psychological factors that enhance the sports performance.
5. Assessment of Culture and Sports.

6. Discussion of impact of social factors on sports performance.
7. Sports and gender difference.

### References

1. Alison and Robinson. (2018), *Excelling in Sport Psychology: Planning, Preparing, and Executing Applied Work*, Sean Fitzpatrick.
2. Taylor, Jim, (2018), *Assessment in Applied Sport Psychology*, Human kinetics.
3. Coumbe-Lilley , (2018), *Complex Cases in Sport Psychology*, Routledge.
4. Ball, D. W. & Loy, J. W. (1975). *Sport and social order; Contribution to the sociology of sport*. London: Addison Wesley Publishing Co., Inc.
5. Kamlesh, M.L. (1998). *Psychology in physical education and sport*. New Delhi: Metropolitan Book Co.
6. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). *Sport and social system*. London: Addison Wesley Publishing Company Inc.
7. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1981). *Sports culture and society*. Philadelphia: Lea & Febiger.
8. Skinner, C. E., (1984.). *Education psychology*. New Delhi: Prentice Hall of India.

### PES606C: Sports Management

**75 Marks/3 Credits**  
**25 Marks/1 Credit**

### Learning Outcomes

1. The student would understand the concept and importance of management of Physical Education.
2. Student shall gain knowledge regarding management of Physical Education and Sports at different level.
3. Student will be able to organize various Physical Education and sports program.
4. Student would know about various schemes and policies of State & Central Government.
5. Student would know about planning of facility and financial management.
6. Understanding of the competencies and skill of sport manager.

### Course Contents

#### Unit-I: The Management Process

- 1.1 Definition, Principles, Nature and Concept of Sports Management.
- 1.2 Progressive concept of Sports management.
- 1.3 The purpose and scope of Sports Management.
- 1.4 Essential skills of Sports Management.
- 1.5 Qualities and competencies required for the Sports Manager.
- 1.6 Event Management in physical education and sports.

#### Unit-II: Leadership in Sports Management Process

- 2.1 Meaning and Definition of leadership.
- 2.2 Leadership style and method.
- 2.3 Elements of leadership.
- 2.4 Forms of Leadership.
  - 2.4.1 Autocratic
  - 2.4.2 Laissez-faire

- 2.4.3 Democratic
- 2.4.4 Benevolent Dictator
- 2.5 Qualities of administrative leader.
- 2.6 Preparation of administrative leader.
- 2.7 Leadership and Organizational performance.

### **Unit-III: Planning and Management of sports at Institutional level**

- 3.1 Sports Management in Schools, colleges and Universities.
- 3.2 Factors affecting planning
- 3.3 Planning a school or college sports programme.
- 3.4 Directing of school or college sports programme.
- 3.5 Controlling a school, college and university sports programme.
  - 3.5.1 Developing performance standard
  - 3.5.2 Establishing a reporting system
  - 3.5.3 Evaluation
  - 3.5.4 The reward/punishment system

### **Unit-IV: Financial Management in Sports**

- 4.1 Financial management in Physical Education & sports in schools, Colleges and Universities.
- 4.2 Objectives and scope of financial planning.
- 4.3 Management of Infrastructure, finance and personal
- 4.4 Mechanics of purchase and audit.

### **PES606C(P): Practical**

**50 Marks/2 Credits**

- 1. Planning for sports facility and infrastructure.
- 2. Leadership planning- Autocratic, Laissez-faire, Democratic and Benevolent Dictator.
- 3. Organization of school, college and university competitions.
- 4. Planning and budgeting for sports equipment.

### **References**

- 1. Bucher, C.A. (2002). Management of Physical Educational and Sports.(12th Ed.). USA: McGraw Hill Co.
- 2. Chakraborti, S. (2007). Sports Management. New Delhi: Friends Publication.
- 3. Frostdick, S., & Walley, L. (2003). Sports and Safety Management. USA: A division of Reed Education and Professional Publishing Ltd.
- 4. Govindrajulu, .N. (2005). Management of Physical Education and Sports Programme. New Delhi : Friends Publication.
- 5. Kamlesh, M. L. (2000). Management Concepts in Physical Education and Sports. New Delhi : B.V. Gupta Publication.
- 6. Mastoralexis, L.P., & Barr, C.A. (1998). Principles and Practice of Sports Management. Maryland: Aspen Publication.
- 7. Roy, S. S. (2002). Sports Management. New Delhi: Friends publication.
- 8. Horine., Larry. (1985). Administration of Physical Education and Sports Programmes. New York: Saundress college publication.

**PES607C: Health Education****75 Marks/3 Credits  
25 Marks/1 Credit****Learning Outcomes**

1. The student will be able to identify and synthesize the factors that influence health
2. The student will be able to recognize the health related challenges in current time and able to apply the preventive measures.
3. The student will be able to identify the role of peers, community and media in health promotion and protection.
4. The student will be able to demonstrate the expertise in above stated domains in a school setup.
5. The student will be able to value the knowledge and skills required to preserve community health and well-being.

**Course Contents****Unit-I: Health Education and Services**

- 1.1 Concept, Dimensions, Spectrum and determinants of Health
- 1.2 Health Education and Principles of Health Education
- 1.3 Nature and Scope of Health Education in Physical Education
- 1.4 Health Services in India.

**Unit-II: Global Health Issues**

- 2.1 Communicable, Non-Communicable disease and their prevention
- 2.2 Malnutrition, Food Adulteration, Environmental Pollution and Sanitation, Population and their management.
- 2.3 Physical Activity and Nutrition, Overweight and Obesity, Mental Health
- 2.4 Prime causes of death: cardiovascular disease, chronic respiratory disease, Diabetes, Mental Disorders, Nutritional Deficiencies and their prevention through physical activity.

**Unit-III: Health Education in Schools**

- 3.1 Need and scope of health education in schools
- 3.2 Preventing alcohol, tobacco and other drugs abuses in schools
- 3.3 Personal Health and Wellness: Healthy eating, Mental and Emotional health, and Violence prevention.
- 3.4 Physical activity, Safety, First Aid and Emergency procedures.

**Unit- IV: Health Supervision and Evaluation in Schools**

- 4.1 Health Instruction and Health Supervision
- 4.2 Assessing personal and peers health risk taking
- 4.3 Analyzing the influence of family, peers, culture and media on health behavior
- 4.4 Consumer Health and Comprehensive Health Education.

**PES607C(P): Practical****50 Marks/2 Credits**

1. Demonstration of safety, first aid and emergency procedures.
2. Description of nutritional components (macro and micro).
3. Description of motivational techniques.

4. Discussion of health related factors that enhance the sports performance.
5. Description of hygiene and types of hygiene.

### References

1. Agrawal, K.C. (2001). Environmental biology. Bikaner: Nidhi publishers Ltd.
2. Bensley, R. J. and Fisher, J. B (2009). Community Health Education Methods. Massachusetts: Jones and Bartlett Publishers.
3. Edward, J. T. (2006). Health and Disease, New Delhi: Sports Publication.
4. Anspaugh, D. J. and Ezell, G. (2003). Teaching today's Health. USA: Allyn & Bacon.
5. McKenzie, J. F. and Smeltzer, J. L (2001). Planning, Implementing, and Evaluating Health Promotion Programs: A Primer, USA: Allyn & Bacon.

### GENERIC ELECTIVE COURSE (GEC)

#### **PES61G: Fundamentals of Computer Application**

**75 Marks/3 Credits  
25 Marks/1 Credit**

#### **Learning Outcomes**

1. The students can understand the basic computer application in the development of communication technology in physical education.
2. The students can explore and present their knowledge through ICT.

#### **Course Contents**

##### **Unit-I: Introduction to Computer**

- 1.1 Meaning, need and importance of information and communication technology (ICT).
- 1.2 Application of Computers in Physical Education
- 1.4 Components of computer, input and output device
- 1.5 Application of software used in Physical Education and sports.

##### **Unit-II: MS Word**

- 2.1 Introduction to MS Word
- 2.2 Creating, saving and opening a document
- 2.3 Formatting Editing features Drawing table ,
- 2.4 Page setup, paragraph alignment, spelling and grammar check printing option, inserting page number, graph, footnote and notes.

##### **Unit-III: MS Excel**

- 3.1 Introduction to MS Excel
- 3.2 Creating, saving and opening spreadsheet
- 3.3 Creating formulas
- 3.4 Format and editing features adjusting columns width and row height understanding charts.

##### **Unit-IV: MS Power Point**

- 4.1 Introduction to MS Power Point
- 4.2 Creating, saving and opening a ppt. file
- 4.3 Format and editing features slide show, design, inserting slide number
- 4.4 Picture, graph, table

## 4.5 Preparation of Power point presentations.

**PES61G(P): Practical****50 Marks/2 Credits**

1. Components of Computer
2. Application of MS Word
3. Application of MS Excel
4. Application of MS Power Point
5. Application of software
6. Data entry program.

**References**

1. Irtegov, D. (2004). Operating system fundamentals. Firewall Media.
2. Marilyn, M. & Roberta, B.(n.d.).Computers in your future. 2nd edition, India: Prentice Hall.
3. Milke, M.(2007). Absolute beginner's guide to computer basics. Pearson Education Asia.
4. Sinha, P. K. & Sinha, P. (n.d.).Computer fundamentals. 4th edition, BPB Publication.

**VALUE ADDITION COURSE (VAC)**  
**(Any one to be opted from the common pool)**

**VAC-5  
Credits****50 Marks/2**

**Teaching Learning Strategies:** The classes will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations methods.

**Virtual instructional platforms** such as online lectures, webcast etc. are to be used. Students can participate in coursework through instant messages, emails and video conferencing. Google class room, Cisco Webex Meeting, OERS, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org)), Virtual Labs ([www.vlabs.co.in](http://www.vlabs.co.in)), FOSSEE ([www.fossee.in](http://www.fossee.in)), application of spoken tutorials ([www.spoken-tutorial.org](http://www.spoken-tutorial.org)), National Digital Library ([www.ndl.iitkgp.ac.in](http://www.ndl.iitkgp.ac.in)), electronic journals ([www.ess.infibnet.ac.in](http://www.ess.infibnet.ac.in)) etc. are to be used.. Courses may also integrate DVD videos as part of the training process. Students may examine current topics in the field through the use of e- textbooks and e-physical education journals. Students can complete some portion of the education at approved testing sites for the practical components wherever necessary.

**Initiating Brain based learning:** A stress free environment will be created. Constant feedback regarding their performance will be given to initiate learning from mistakes. Creative thinking for new ideas and innovations will be encouraged. Break in learning will be filled with recreational and constructive activities for boosting cognitive functions.

**Activities:** Lecture/ Project Work/ Seminars/ Term Papers/Assignments/ Presentations/ Study etc.



**Assessment Rubric:** Classroom test, Project-work, assignments, presentations, demonstration and skill activities.

**Sports simulation laboratory:** Sports simulation laboratory is to be established to provide the students with a feasible environment where they will learn and practice sports skills using animated videos with continuous rectification of errors till exact simulation of skill is attained. Help may be taken from Youtube Streaming, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org))).

## SEMESTER- IV

### CORE COURSE (CC)

**PES608C: Organization and Administration of Sports Events**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

#### **Learning Outcomes**

1. Students will know the concept of organization and administrative functions in sports.
2. Students will know the rules to be followed for budgeting, fund utilization and maintenance.
3. Students will understand the facilities and time table management for physical education program.
4. Students will experience the competition organization and draw of competition fixture.

#### **Course Contents**

##### **Unit-I: Organization and administration**

- 1.1 Meaning and importance of Organization and Administration in physical education
- 1.2 Qualification and Responsibilities of Physical Education teacher and pupil leader
- 1.3 Planning and their basic principles,
- 1.4 Program planning: Meaning, Importance, Principles of program planning in physical education.

##### **Unit-II: Office Management, Record, Register & Budget**

- 2.1 Meaning, definition, functions and kinds of office management
- 2.2 Staffing, directing, communicating, co-ordination, controlling and evaluation
- 2.3 Maintenance of records, registers, attendance register, stock register, cash register, physical efficiency record, medical examination record.
- 2.4 Budget, importance of budget preparation, income sources.

##### **Unit-III: Facilities and Time-Table Management**

- 3.1 Facilities and equipment management- indoor and out door
- 3.2 Care of school building, gymnasium, swimming pool, play fields, play grounds
- 3.3 Equipment- needs, importance, purchase, care and maintenance
- 3.4 Time Table Management: meaning, need, importance and factor affecting time table.

##### **Unit-IV: Competition Organization**

- 4.1 Tournament and importance of Tournament
- 4.2 Types of Tournament- Knock-out Tournaments, League or Round Robin Tournaments, Combination Tournament and Challenge Tournament.
- 4.3 Organization structure of Sports Meet
- 4.4 Intramurals & Extramural Tournament planning.

**PES608C(P): Practical**

**50 Marks/2 Credits**

1. Preparation of record book, attendance register, stock register, cash register.

2. Preparation of physical efficiency record and medical examination record.
3. Maintenance of school building, gymnasium, swimming pool, and play grounds.
4. Preparation of budget for inter-college and inter-university tournaments.
5. Preparation of theory and practical time table.
6. Preparation of fixtures- Knock-out Tournaments, League Tournaments, Combination Tournament and Challenge Tournament.

### References

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. New York: Prentice hall Inc.
2. Bucher, C. A. (1983). Administration of Physical Education and Athletic programme. St. Lolis: The C.V. Hosby Co.
3. Kozman, H.C. Cassidy, R. & Jackson, C. (1960). Methods in Physical Education. London: W.B. Saunders Co.
4. Pandey, L.K. (1977). Methods in Physical Education. Delhi: Metropolitan Book Depot.
5. Sharma, V.M. & Tiwari, R.H.: (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication.
6. Thomas, J. P. (1967). Organization & administration of Physical Education. Madras: Gyanodayal Press.
7. Tirunarayanan, C. & Hariharan, S. (1969). Methods in Physical Education. Karaikudi: South India Press.
8. Voltmer, E. F. & Esslinger, A. A. (1979). The organization and administration of Physical Education. New York: Prentice Hall Inc.

### PES609C: Sports Pedagogy

**75 Marks/3 Credits**  
**25 Marks/1 Credit**

### Learning Outcomes

1. To understand the philosophy, nature and scope pedagogy in Physical Education.
2. To understand the goals of physical education and sports at different education levels.
3. To acquire the knowledge and skills of teaching and learning.
4. Implementation of teaching and learning knowledge and methods in physical education.

### Course Contents

#### Unit-I: Introduction to Physical Education

- 1.1 Philosophy of Physical Education
- 1.2 Meaning, nature and scope of Physical Education
- 1.3 Aims, objectives and goals of Physical Education
- 1.4 Importance of Physical education in primary and secondary levels.

#### Unit-II: Introduction to Sports Pedagogy

- 2.1 Meaning and definition of Pedagogy and sports Pedagogy
- 2.2 Nature and Scope of Pedagogy in Physical Education and Sports
- 2.3 Importance of Pedagogy in physical education and sports
- 2.4 Objectives of teaching and learning in physical education.

**Unit-III: Physical Education Curriculum and Learning Resources**

- 3.1 Components, parts and phases of Physical Education curriculum
- 3.2 Physical Education Curriculums of primary and secondary schools (NEP-2020)
- 3.3 Issues and challenges in designing curriculum of Physical education
- 3.4 Learning resources in Physical Education- print copies, text books, handbook, magazines, equipments and digital resources

**Unit-IV: Instruction and Theoretical Supports**

- 4.1 Preparation to achieve the goals of physical education
- 4.2 Significance of teaching physical education
- 4.3 Values of teaching-learning and teaching strategies
- 4.4 Development of teaching methods and styles

**PES609C(P): Practical****50 Marks/2 Credits**

1. Application of different teaching methods in physical education.
2. Collection of teaching and learning equipments.
3. Preparation of curriculum in physical education for primary and secondary schools.
4. List of text books, reference books, handbooks and magazines for physical education.
5. Collection of digital resources for teaching physical education.
6. Construction of lesson plan.

**References**

1. Rvogno Inez and Bathauer Dianna (2013). Elementary Physical Education: Curriculum and Instruction. Jones & Bartlett Learning.
2. National Association of Sports and Physical Education (NASPE) (2004). Moving into the Future: National Standard for Physical Education (2<sup>nd</sup> Ed.). Reston, V.A.
3. Rink, J.E. (2010). Teaching Physical Education for Learning (6<sup>th</sup> Ed.). Boston: McGraw Hill.
4. Isobel Kleniman (2001). Complete Physical Educational Plan for Grade 7-12. Human Kinetics.
5. USDHHS (1999). Promoting Physical Activity- A Guide for Community Action. Human Kinetics.
6. Daryl Siedentop et al. (2004). Complete Guide to Sports Education. Human Kinetics.
7. Kathleen Armour (2013). Sport Pedagogy: An Introduction for Teaching and Coaching (1st Edition), Kindle Edition.

**PES610C: Adapted Physical Education****75 Marks/3 Credits  
25 Marks/1 Credit****Learning Outcomes**

1. Students will develop concept and importance of adapted physical education.
2. Students will gain the knowledge of different disabilities and challenges.
3. Students will orient the various recreational activities for challenged people.
4. Students will understand the different planning for welfare of disabilities.

## Course Contents

### Unit-I: Introduction to Adapted Physical Education

- 1.1 Meaning and Definition of Adapted Physical Education.
- 1.2 Aims and objectives of Adapted Physical Education.
- 1.3 Need and Importance of Adapted Physical Education.
- 1.4 Role of Physical Education in Adapted Physical Education.
- 1.5 Brief Historical Review of Adapted Physical Education.

### Unit-II: Classification of Disability

- 2.1 Physical Disabilities- causes and characteristics
- 2.2 Mental Retardation- causes and characteristics
- 2.3 Visual Impairment- causes and characteristics
- 2.4 Hearing Impairment- causes and characteristics
- 2.5 Speech Impairment- causes and characteristics

### Unit-III: Adapted Physical Education Programme

- 3.1 Guiding Principles for Adapted Physical Education Programme (AAHPER Principle)
- 3.2 Physical Education Programme for Disabled People
- 3.3 Programs to meet Individual needs
- 3.4 Selecting activities and instructional strategies

### Unit-IV: Co-Curricular Activities and Rehabilitation

- 4.1 Outdoor and Indoor Programme for Disables
- 4.2 Rhythmic and Dance Activities
- 4.3 Aquatic Activity Programme for Disables
- 4.5 Importance of Adapted Programme in Rehabilitation
- 4.6 Governmental Welfare programme.

### PES610C(P): Practical

**50 Marks/2 Credits**

1. Evaluation of physical deformities and mental retardation.
2. Evaluation of visual, speech and hearing impairments.
3. Preparation of Rhythmic and Aerobic Dance Activities for rehabilitation.
4. Planning of aquatic activity for disables.
5. Planning of outdoor and indoor activities for disables.

### References

1. Auxter, Byler, Howtting, "Adapted Physical Education and reactions" Morbey-St. Luis Mirrauri.
2. Arthur G. Miller & James, "Teaching Physical Activities to impaired youth" John Wilag & Sons Inc. Canada.
3. Ronald W. French, & Paul J., "Special Physical Education", Charles E. Merrics Publishing Co. Edinburgh, Ohio.
4. Arthur S. Daniels & Euilya, "Adapted Physical Education", Harpet & Row Publisher- New York..
5. Anoop Jain, "Adapted Physical Education" Sports Publications, Ashok Vihar Delhi-52.
6. K. Park, "Preventive Social Medicine M/s Banaridas Bhanot Publishers Prem Nagar Jabalpur.

**GENERIC ELECTIVE COURSE (GEC)**

**PES62G: Fitness and Conditioning**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

**Learning Outcomes**

1. Students will understand the basic concepts of fitness, conditioning and warming-up.
2. Students will enhance knowledge of fitness and conditioning training programs.
3. Students will gain more basic knowledge of warming-up exercises.
4. Students will understand and prepare weight management plans with proper diet.

**Course Contents**

**Unit-I: Introduction to Fitness**

- 1.1 Meaning and Definition of Fitness
- 1.2 Basic components of Fitness
- 1.3 Types of Fitness, maintenance of Fitness
- 1.4 Factors to consider for developing Fitness

**Unit-II: Introduction to Conditioning**

- 2.1 Meaning and Definition of Conditioning
- 2.2 Types of Conditioning
- 2.3 Importance of Conditioning in fitness development
- 2.4 Periodization of Conditioning.

**Unit-III: Warming-up Exercises**

- 3.1 Meaning and concept of warming-up
- 3.2 Types of warming-up
- 3.3 Importance of warming-up in sports conditioning training
- 3.4 General principles of warming-up exercise
- 3.5 Factors affecting warming-up exercise.

**Unit-IV: Weight Management and Balance Diet**

- 4.1 Concept of weight management and its importance
- 4.2 Factor affecting weight management
- 4.3 Determination of desirable body height and weight
- 4.4 Balance diet and its components
- 4.5 Role of diet in weight management

**PES62G(P): Practical**

**50 Marks/2 Credits**

1. Preparation of general and specific warming up for athletes.
2. Specific Training- Circuit training, plyometric training, Fartlek training, Continuous training and selected weight training.
3. Specific training plan for micro, meso and macro cycles.
4. Preparation of balance diet for athletes.

## References

1. Bessesen, D. H. (2008). Update on Obesity. *J Clin Endocrinol Metab.* 93(6), 2027-2034.
2. Butryn, M.L., Phelan, S., & Hill, J. O. (2007). Consistent self-monitoring of weight: a key component of successful weight loss maintenance. *Obesity (Silver Spring)*. 15(12), 3091-3096.
3. Bates M. (2008). *Health Fitness Management (2nd Ed.)* USA: Human Kinetics.
4. Fink, H.H., Burgoon, L.A., & Mikesky, A.E. (2006). *Practical Applications in Sports Nutrition*. Canada : Jones and Bartlett Publishers.
5. Lancaster S. & Teodoroessu, R. (2008). *Athletic Fitness for Kids*. USA: Human Kinetics.
6. Michael J. Gibney (2002) – *Human Nutrition*, Atlantic publication, New Delhi.
7. Martin Estwood (2005) – *Principle of human nutrition*, Atlantic publication, New Delhi.
8. Sharma, P.D. (1998). *Officiating and Coaching*. AP Publishers, Jalandhar. *Rules of Games and Sports*. YMCA Publishing House, Jai Singh Rad (1986), New Delhi.

### VALUE ADDITION COURSE (VAC) (Any one to be opted from the common pool)

**VAC-6**  
**Credits**

**50 Marks/2**

**Teaching Learning Strategies:** The classes will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations methods.

**Virtual instructional platforms** such as online lectures, webcast etc. are to be used. Students can participate in coursework through instant messages, emails and video conferencing. Google class room, Cisco Webex Meeting, OERS, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org)), Virtual Labs ([www.vlabs.co.in](http://www.vlabs.co.in)), FOSSEE ([www.fossee.in](http://www.fossee.in)), application of spoken tutorials ([www.spoken-tutorial.org](http://www.spoken-tutorial.org)), National Digital Library ([www.ndl.iitkgp.ac.in](http://www.ndl.iitkgp.ac.in)), electronic journals ([www.ess.infibnet.ac.in](http://www.ess.infibnet.ac.in)) etc. are to be used.. Courses may also integrate DVD videos as part of the training process. Students may examine current topics in the field through the use of e- textbooks and e-physical education journals. Students can complete some portion of the education at approved testing sites for the practical components wherever necessary.

**Initiating Brain based learning:** A stress free environment will be created. Constant feedback regarding their performance will be given to initiate learning from mistakes. Creative thinking for new ideas and innovations will be encouraged. Break in learning will be filled with recreational and constructive activities for boosting cognitive functions.

**Activities:** Lecture/ Project Work/ Seminars/ Term Papers/Assignments/ Presentations/ Study etc.

**Assessment Rubric:** Classroom test, Project-work, assignments, presentations, demonstration and skill activities.

**Sports simulation laboratory:** Sports simulation laboratory is to be established to provide the students with a feasible environment where they will learn and practice sports skills using animated videos with continuous rectification of errors till exact simulation of skill is attained. Help may be taken from Youtube Streaming, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org))).



**SEMESTER- V****CORE COURSE (CC)****PES711C: Educational Technology****75 Marks/3 Credits****25 Marks/1 Credit****Learning Outcomes**

1. To understand the concept of technology in education and its implication.
2. To understand the communication and communication skills.
3. To understand the teaching aids and its importance.
4. To understand the teaching techniques and innovative programs.

**Course Contents****Unit-I: Introduction to Educational Technology**

- 1.1 Concept and Definition
- 1.2 Educative Process
- 1.3 The Teacher of Yesterday & Today
- 1.4 An outline of Teaching method used then and now
- 1.5 Use of sensory organ in the process of learning and remembering
- 1.6 Communication- types, cycle and classroom communication.

**Unit-II: Teaching Aids**

- 2.1 Definition and importance of Teaching Aids
- 2.2 Criteria for selecting Teaching Aids
- 2.3 Teaching Methods and Teaching Aids
- 2.4 Broad classification of Teaching Aids
- 2.5 Advantage and suggestions for effective use of selected teaching Aids.

**Unit-III: New Teaching Techniques and Innovations**

- 3.1 Art of questioning and answering
- 3.2 Purpose of questioning and classification of questions
- 3.3 Techniques of asking questions
- 3.4 Programmed Learning- concept, principles and preparation.
- 3.5 Team Teaching- meaning, principles and advantages
- 3.6 Teaching machines.

**Unit-IV: Micro Teaching and Simulation**

- 4.1 Meaning and Features of Micro Teaching
- 4.2 Micro Teaching and Traditional Teaching
- 4.3 Principles of Micro Teaching
- 4.4 Micro Teaching Skills and limitations
- 4.5 Meaning and types of Simulation Teaching
- 4.6 Advantages and limitations of Simulation.

**PES711C(P): Practical****50 Marks/2 Credits**

1. Traditional Teaching Aids- chalk board, charts, models, pictures, graphs, etc.
2. Advanced Teaching Aids- slide projector, over head projector, motion picture, smart board.
3. Practice of audio aids, visual aids, audio-visual aids, and computer assisted aids.
4. Preparation of micro teaching.
5. Preparation of simulation teaching.

**References**

1. K. Sampath, A. Pannirselvam and S. Santhanam. Introduction to Educational Technology (New Delhi : Sterling Publishers Pvt. Ltd.) .
2. Bhatia and Bhatia. The Principles and Methods of Teaching (New Delhi :Doaba House) .
3. Walia, J.S. Principles and Methods of Education (Paul Publishers Jullandhar).
4. Kochar, S.K. Methods and Techniques of Teaching (New Delhi, Jullandhar, Sterling Publishers Pvt. Ltd.).

**PES712C: Movement Education****75 Marks/3 Credits  
25 Marks/1 Credit****Learning Outcomes**

1. Students will be oriented in movement concept and themes.
2. Students will understand the fundamental movements and motor skill development.
3. Students will understand the importance of movement development in sports education.
4. Students will experience the motor skill development.

**Course Contents****Unit-I: Introduction**

- 1.1 Meaning and concept of Movement education
- 1.2 History of Movement education
- 1.3 Traditional approach to Movement Education
- 1.4 Process of skill acquisition

**Unit-II: Understanding Movements**

- 2.1 Movement Fundamentals
- 2.2 Fundamental movements- Locomotor, Non-locomotor and Manipulative
- 2.3 General space and self space
- 2.4 Qualities of movement

**Unit-III: Motor Skill Learning**

- 3.1 Concept of motor skill
- 3.2 Level of motor skill learning
- 3.3 Exploration and discovery

3.4 Motor learning principles.

#### **Unit-IV: Fundamentals of Skill**

- 4.1 Fundamental Locomotion Skill themes
- 4.2 Fundamental Manipulative Skill Themes
- 4.3 Fundamental Stability Skill Themes
- 4.4 Movement Education Program for Nursery school level.

#### **PES712C(P): Practical**

**50 Marks/2 Credits**

1. Practice of fundamental movements- Locomotor, Non-locomotor and Manipulative.
2. Practice of motor skill activities.
3. Planning of fundamental movements for school children.
4. Analysis of movement qualities.
5. Preparation for the test of motor skill movements.

#### **References**

1. Bucher, C.A. and Thaxton A. Nola. Physical Education for Children Movement Foundation and Experiences. McMillan Publishing Co. Inc. New York.
2. Cheffer John and Evaul Tom. Introduction to Physical Education Concept of Human Movement. Prentice Hall Inc. Philadelphia.
3. Gallahuc, L. David. Development of Movement Experience for Children. John Wiley and Sons, New York.
4. Gallahuc, L. David. Understanding Motor Development in Children. John Wiley and Sons, New York.
5. Wuest, D.A and Bucher, C.A. Foundation of Physical Education and Sports. McGraw Hill.
6. Thomas, R. Jerry, Lee M. Arnelia, Thomas T. Katherine. Physical Education for children- Concepts into practice. Human Kinetics Book, Champaign Illinois.

#### **DISCIPLINE SPECIFIC ELECTIVE (DSE)**

**PES71D: Track & Field (Running Events), Basketball, Football, Handball and Volleyball (any one to be opted for end semester exam.)**

**75 Marks/3 Credits  
25 Marks/1 Credit**

**PES71D(P): Practical (for the opted game/sport)**

**50 Marks/2 Credits**

#### **Learning Outcomes**

1. Sports and Games practical will enhance the physical fitness, skills and performance to the students.
2. Students can understand the rules and interpretation in playing, officiating and coaching.
3. Students will get the opportunities to participate in various competitions at different levels.
4. Students will understand the importance and professional values of games and sports.
5. Students will understand the changes of rules and different training methods.

**(a) Track & Field (Running Events)**

1. Concept and foundation of Track & Field.
2. Marking of Track & Field.
3. Starting techniques: Standing start, Crouch start and its variations, Proper use of blocks.
4. Finishing Techniques: Run Through, Forward Lunging, Shoulder Shrug.
5. Different Events in Running category
6. Hurdles: Fundamental Skills- Starting, Clearance and Landing Techniques, Types of Hurdles
7. Relays: Fundamental Skills, Various patterns of Baton Exchange, Understanding of Relay Zones,
8. Track Marking for different running events
9. Interpretation of Rules and Officiating.

**References**

1. Dybon, Geoffrey, G.H., The Mechanics of Athletics, London: University of London Press Ltd. 1962.
2. Doderty, J. Memmeth, Modern Track and Field, Englewood Cliffs: N.J. Prentice Hall, Inc.
3. Hooks, Gene. Application of Weight Training to Athletics, Englewood Cliffs: N.J. Prentice Hall, Inc. 1962.
4. Mohan, V.M. Athletics for Beginners, New Delhi: Metropolitan Books Ltd.
5. Robinson, Johnson James and Hirschni, Modern Techniques of Track and Field (London: Henry Kimpton Publishers) 1974.
6. Bosen, K.O., Track and Field Fundamental Technique (Patiala: N.I.S. Publication).

**(b) Basketball**

1. History and development of Basketball
2. Development of Court and Marking
3. Player stance and ball handling
4. Passing- Two Hand chest pass, Two hand Bounce Pass, One Hand Base ball pass, Side Arm Pass, Over Head pass, Hook Pass.
5. Receiving- Two Hand receiving, One hand receiving, Receiving in stationary position, Receiving while jumping, Receiving while running.
6. Dribbling- How to start dribble, How to drop dribble, High dribble, Low dribble, Reverse dribble, Rolling dribble.
7. Shooting- Layup shot and its variations, one hand set shot, One hand jump shot, Hook shot, Free throw.
8. Rebounding- Defensive rebound, Offensive rebound, Knock out, Rebound Organization.
9. Individual Defensive- Guarding the man with the ball and without the ball.
10. Pivoting.
11. Rules and their interpretations and duties of the officials.

**References**

1. Moontasir, Abbas. Principles of Basketball Bombay Skanda Publication.
2. Clair and Norton, Kon, Men to Men Defence and Attack. New York, the Ronald Press Company.
3. Boe Clair and Norton, Kon, Zone Defense and Attack. New York, The Ronald Press Company.
4. Abrahm C,C. Basket-Ball for Men and Women. Madras Y.M.C.A. Publishing House.
5. Julian, Alvin F. Brerad and Butter Basketball. London Prentice Hall, Inc.,
6. Colberk A.L. Modern Basketball-A Fundamental Analysis of Skills and Tactics. London, Nicholas Kaya.
7. Srivatsan, S. Basketball, NIS, Publication, Patiala.

### **(c) Football**

1. Origin, History and development of Football
2. Development of field and marking
3. Kicks- Inside kick, Instep kick, Outside instep kick, lofted kick
4. Receiving- receiving rolling the ball, receiving bouncing ball with sole, receiving aerial ball
5. Dribbling- With instep, inside and outer instep of the foot.
6. Heading- From standing, running and jumping.
7. Throw in
8. Feinting- With the lower limb and upper part of the body.
9. Tackling- Simple tackling, Slide tackling.
10. Goal Keeping- Collection of balls, Ball clearance kicking, throwing and deflecting.
11. Laws of the Game, interpretations and officiating.

### **References**

1. Larche, Harry E. Techniques of Football Coaching. London : A.S. Barners and Company.
2. Lonziak Conard, Understanding Soccer Tactics, London, Faber and Faber.
3. Saunders, Tom. Play Better Soccer in All Colour London : Colling Geaegow
4. Singh, Gian. Football Quiz. Delhi : Services Publishing House.
5. Batty Cris. Soccer Coaching the Modern Way. London : Faber and Faber.
6. Hedler and Strangton Play Football With Pale. London, Toronto, Sydney.

### **(d) Handball**

1. History and development of Handball
2. Development of court and marking
3. Running, Catching the ball with two hands, Catching at chest height, Catching the high ball and catching the low ball.
4. Passing and Throwing : One handed shoulder pass, two handed chest pass the long throw.
5. Dribbling (Running with the ball).
6. Shooting:
  - The standing throw shot.
  - The side throw shot.
  - The jump shot.
  - The reverse shot.

- The fall shot
- 5. Goal Keeping- Basic stance, hand and feet movement.
- 6. Rules and their interpretations and duties of officials.

### References

1. Rowland B.J. Handball a Complete Guide. London : Faber and Faber Ltd. 24 Ronsel Square.
2. Mand, Charles L. Handball Fundamentals. Cinio, Charles E. Merrill Company, Columbus.
3. Philips B. E. Handball its Play and Management. New York : The Ronald Press Company.
4. Robarson, Richard and Olson Herbert Beginning Handball. Wadsworth Company, Inc. Belmont.

### (e) Volleyball

1. History and development of Volleyball
2. Development of court and marking
3. Players Stance- Receiving the ball and passing to the team mates,
4. The Volley (Over head pass),
5. The Dig (Under hand pass).
6. Service- Under Arm Service, Side Arm Service, Tennis Service, Round Arm Service.
7. Rules and their interpretations and duties of officials.

### References

1. Dhnraj. V. Hubert. Volleyball for Men and Women Calcutta : Y.M.C.A. Publishing House.
2. Nicholls, Keith. Modern Volleyball for Teachers, Coach and Player. London : Lepus Book.
3. Siyamaker, Thomas and Brown, Virgine H. Power Volleyball London, Saunders Company.
4. Sotir, Nicolas, Winning Volleyball London, Stanley Paul,.
5. Sandefur Kandy, Volleyball California : Goodyear Publishing Company, Inc.
6. Anthony, Don. Succes in Volleyball. London : John Murraray Publishers Ltd. .
7. Leveag, Robert E. How to Improve your Volleyball Chicago : The Athletic Institute .
8. Soudhu, G.S. Volleyball, Basic & Advanced. The Sports. People, Chandigarh.

## GENERIC ELECTIVE COURSE (GEC)

**PES73G: Basic Sports Medicine and Physiotherapy**

**75 Marks/3 Credits  
25 Marks/1 Credit**

### Learning Outcomes

1. Students will know the basic concept and importance of Sports Medicine and Physiotherapy.
2. Students will learn various therapeutic treatment modalities.
3. Students will understand the Prevention, Treatment and Rehabilitation of Athletic Injuries.

4. Students will experience the prescription of different therapeutic exercises.

## Course Contents

### Unit-I: Sports Medicine

- 1.1 Sports Medicine: Meaning, Definition, Aims, Objectives, Modern Concepts and Importance
- 1.2 Athletes Care and Rehabilitation: Contribution of Physical Education Teachers and Coaches
- 1.3 Need and Importance of the study of sports injuries in the field of Physical Education
- 1.4 Prevention of injuries in sports- Common sports injuries, Diagnosis.
- 1.5 First Aid Treatment- Laceration, Blisters, Contusion, Strain, Sprain, Fracture, Dislocation and Cramps.
- 1.6 Bandages – Types of Bandages – trapping and supports.

### Unit-II: Physiotherapy

- 2.1 Definition, scope and importance of physiotherapy
- 2.2 Guiding principles of physiotherapy
- 2.3 Introduction and demonstration of treatments- Electrotherapy, Infrared rays, Ultraviolet rays, Short Wave Diathermy, Ultrasonic rays.

### Unit-III: Hydrotherapy

- 3.1 Introduction and demonstration of treatments of Cryo-therapy, Thermo-therapy, Contrast-Bath, Whirlpool Bath, Steam Bath, Sauna Bath, Hot Water Fomentation.
- 3.2 Massage: Historical background of Massage
- 3.3 Classification of Massage Manipulation
- 3.4 Physiological Effect of Massage.

### Unit-IV: Therapeutic Exercise

- 4.1 Definition, Scope and Principles of Therapeutic Exercise
- 4.2 Classification of therapeutic exercise
- 4.3 Effects and uses of Therapeutic exercise– Passive Movements (Relaxed, Forced and passive -stretching), Active Movements (concentric, eccentric and static)
- 4.4 Application of the therapeutic exercise: Free Mobility Exercise- Shoulder, Elbow, Wrist and Finger Joints exercises; Hips, Knee, ankle and Foot joints exercises; Trunk, Head and Neck exercises.

### PES73G(P): Practical

**50 Marks/2 Credits**

1. Treatments Modalities- Ultrasound, Tens, IST, Muscle stimulator, Contrast Bath, Steam Bath, Thermo Therapy, Hydro-collator, Infra Red, Wax-bath.
2. Practice of different Massage Manipulations
3. Practice of different types of Bandages.
4. Prescription of therapeutic exercises for different types of injuries.
5. Preparation of First-Aid treatment for different injuries.

### References

1. Christine, M. D., (1999). *Physiology of sports and exercise*.USA: Human Kinetics.
2. Conley, M. (2000). *Bioenergetics of exercise training*. In T.R. Baechle, & R.W. Earle, (Eds.),

3. Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
4. David, R. M. (2005). *Drugs in sports*, (4th Ed). Routledge Taylor and Francis Group.
5. Hunter, M. D. (1979). *A dictionary for physical educators*. In H. M. Borrow & R. McGee, (Eds.), *A Practical approach to measurement in Physical Education* (pp. 573-74). Philadelphia: Lea & Febiger.
6. Jeyaprakash, C. S., *Sports Medicine*, J.P. Brothers Pub., New Delhi, 2003.
7. Khanna, G.L., (1990). *Exercise physiology & sports medicine*. Delhi:Lucky Enterprises.
8. Mathew, D.K. & Fox, E.L, (1971). *Physiological basis of physical education and athletics*. Philadelphia:W.B. Saunders Co.
9. Pandey, P.K., (1987). *Outline of sports medicine*, New Delhi: J.P. Brothers Pub.
10. Williams, J. G. P. (1962). *Sports medicine*. London: Edward Arnold Ltd.

**VALUE ADDITION COURSE (VAC)**  
**(Any one to be opted from the common pool)**

**VAC-7**  
**Credits**

**50 Marks/2**

**Teaching Learning Strategies:** The classes will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations methods.

**Virtual instructional platforms** such as online lectures, webcast etc. are to be used. Students can participate in coursework through instant messages, emails and video conferencing. Google class room, Cisco Webex Meeting, OERS, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org)), Virtual Labs ([www.vlabs.co.in](http://www.vlabs.co.in)), FOSSEE ([www.fossee.in](http://www.fossee.in)), application of spoken tutorials ([www.spoken-tutorial.org](http://www.spoken-tutorial.org)), National Digital Library ([www.ndl.iitkgp.ac.in](http://www.ndl.iitkgp.ac.in)), electronic journals ([www.ess.infibnet.ac.in](http://www.ess.infibnet.ac.in)) etc. are to be used.. Courses may also integrate DVD videos as part of the training process. Students may examine current topics in the field through the use of e- textbooks and e-physical education journals. Students can complete some portion of the education at approved testing sites for the practical components wherever necessary.

**Initiating Brain based learning:** A stress free environment will be created. Constant feedback regarding their performance will be given to initiate learning from mistakes. Creative thinking for new ideas and innovations will be encouraged. Break in learning will be filled with recreational and constructive activities for boosting cognitive functions.

**Activities:** Lecture/ Project Work/ Seminars/ Term Papers/Assignments/ Presentations/ Study etc.

**Assessment Rubric:** Classroom test, Project-work, assignments, presentations, demonstration and skill activities.

**Sports simulation laboratory:** Sports simulation laboratory is to be established to provide the students with a feasible environment where they will learn and practice sports skills using animated videos with continuous rectification of errors till exact simulation of skill is attained. Help may be taken from Youtube Streaming, Swayam Platform



([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org))).

## **SEMESTER- VI**

### **CORE COURSE (CC)**

**PES713C: Basics of Sports Training**

**75 Marks/3 Credits  
25 Marks/1 Credit**

#### **Learning Outcomes**

1. Students will be able to identify the fundamental concepts, theories and principles of physical training related to sports performance.
2. Students will be able to demonstrate the skills to train different fitness components and related planning.
3. Students will be able to understand the organization to achieve high performance in sports.
4. Students will understand the different training plan to achieve the high performance.

#### **Course Contents**

##### **Unit-I: Introduction to Sports Training**

- 1.1 Meaning and nature of Sports Training
- 1.2 Aim and Objective of Sports Training
- 1.3 Principles of Sports Training
- 1.4 Characteristics of Sports Training

##### **Unit-II: Training Components**

- 2.1 Strength: types, means and methods to develop strength
- 2.2 Speed: types, means and methods to develop speed
- 2.3 Endurance: types, means and methods to develop endurance
- 2.4 Flexibility: type, means and methods to develop flexibility
- 2.5 Coordinative abilities: types, means and methods to develop coordinative abilities.

##### **Unit-III: Training Load**

- 3.1 Principles of load and its components
- 3.2 Determination of Optimum load
- 3.3 Overload its causes and identification
- 3.4 Tackling Over Load.

##### **Unit-IV: Training programming and planning**

- 4.1 Periodization and types of Periodization.
- 4.2 Aim and Content of Periods– Preparatory, Competition, Transitional period.
- 4.3 Planning: Meaning and types.
- 4.4 Principles of Planning.

**PES713C(P): Practical**

**50 Marks/2 Credits**

1. Prescription of exercises for the improvement of physical fitness.
2. Measurement of different types of strength.

3. Measurement of different types of speed.
4. Measurement of different types of endurance.
5. Measurement of different types of flexibility and coordinative ability.

### References

1. Dick, W. F. (1980). Sports training principles. London: Lepus.
2. Harre, D. (1982). Principles of sports training. Berlin: Speculated.
3. Jensen, R. C.& Fisher, A.G. (1979). Scientific basis of athletic conditioning. Philadelphia: Lea and Fibiger, 2<sup>nd</sup> Edn.
4. Mathyew, L.P. (1981). Fundamental of sports training. Moscow: Progress Publishers.
5. Singh, H. (1984). Sports training, general theory and methods. Patiala: NSNIS.
6. Uppal, A.K., (1999). Science of Sports Training. New Delhi: Friends Publication.
7. Schlich Monfred (2003), Circuit Training for all sports, sports book publisher Toronto.
8. Dr. Sharad Chandra Mishra (2006), Sports Training, Sports Publication.

### PES714C: Sports Nutrition

**75 Marks/3 Credits**  
**25 Marks/1 Credit**

### Learning Outcomes

1. To understand the nutrition and sports nutrition.
2. To acknowledge the importance of different nutrients.
3. To understand the exercise and weight management.
4. Students will understand the planning of balance diet for athletes.

### Course Contents

#### Unit-I: Introduction to Sports Nutrition

- 1.1 Meaning and Definition of Nutrition and Sports Nutrition
- 1.2 Basic Nutrition guidelines
- 1.3 Role of nutrition in sports
- 1.4 Factor to consider for developing nutritional plan

#### Unit-II: Nutrients-Ingestion to energy metabolism

- 2.1 Macro and micro nutrients
- 2.2 Carbohydrates energy sources for exercise
- 2.3 Protein energy sources for exercise
- 2.4 Fat energy sources for exercise

#### Unit-III: Vitamins and minerals

- 3.1 Meaning and definition of vitamins and minerals
- 3.2 Types and functions of vitamins
- 3.3 Types and functions of minerals
- 3.4 Water, dehydration and importance of water for exercise.

#### Unit-IV: Weight Management and Nutrition

- 4.1 Meaning and concept of weight management
- 4.2 Exercise prescription and weight management
- 4.3 Concept of BMI (Body Mass Index), Obesity and its hazard

## 4.4 Daily caloric requirement and expenditure.

**PES714C(P): Practical****50 Marks/2 Credits**

1. Classification and observation of different nutrients.
2. Collection of different foods giving micro and macro nutritive values.
3. Preparation of daily caloric requirement for different athletes.
4. Calculation of BMI.
5. Preparation of exercise program for weight management.

**References**

1. Bessesen, D. H. (2008). Update on obesity. *J ClinEndocrinolMetab*.93(6), 2027-2034.
2. Butryn, M.L., Phelan, S., & Hill, J. O. (2007). Consistent self-monitoring of weight: a key component of successful weight loss maintenance. *Obesity* (Silver Spring). 15(12).
3. Chu, S.Y. & Kim, L. J. (2007). Maternal obesity and risk of stillbirth: a meta-analysis. *Am J Obstet Gynecol*, 197(3).
4. DeMaria, E. J. (2007). Bariatric surgery for morbid obesity. *N Engl J Med*, 356(21).
- Dixon, J.B., O'Brien, P.E., Playfair, J. (n.d.). Adjustable gastric banding and conventional therapy for type 2 diabetes: a randomized controlled trial. *JAMA*. 299(3).
5. Bucher, Charles A. "Administration of Health and Physical Education Programme".
6. Moss and et. At. "Health Education" (National Education Association of U.T.A.)

**DISCIPLINE SPECIFIC ELECTIVE (DSE)****PES72D: Track & Field (Jumping & Throwing Events), Hockey, Cricket, Softball and Yoga (any one to be opted for end semester exam.)****75 Marks/3 Credits****25 Marks/1 Credit****PES72D(P): Practical (for the opted game/sport)****50 Marks/2 Credits****Learning Outcomes**

1. Sports and Games practical will enhance the physical fitness, skills and performance to the students.
2. Students can understand the rules and interpretation in playing, officiating and coaching.
3. Students will get the opportunities to participate in various competitions at different levels.
4. Students will understand the importance and professional values of games and sports.
5. Students will understand the changes of rules and different training methods.

**(a) Track & Field (Jumping & Throwing Events)****- Jumping Events**

1. Concept, development and classification of Jumping events.

2. Measurement and marking of events.
3. High Jump - Approach run, take off, clearance over the Bar and landing; Types- Scissor cut, Straddle roll/Western Roll, Fosbury Flop.
4. Long Jump - Approach run, take off, flight in the air and landing; Type- Hang Style, Hitch Kick/Cycling/Walking in the air.
5. Triple Jump - Approach run, hop-step, take off, flight in the air and landing.
6. Ground Marking / Sector Marking.
7. Rules and their interpretations and duties of officials.

#### **- Throwing Events**

1. Concept, development and classification of Throwing events.
2. Measurement and marking of events.
3. Javelin - Grip, Carry, Approach Run, Release and Reverse.
4. Shot put - Grip, Stance, Glide, Release and Reverse; Types- Orthodox, Peri O' Brien, Disco-put.
5. Discus throw - Grip, Stance, Release and Reverse; Types- Orthodox, Disco style.
6. Hammer throw - Grip, Turning, Release and Reverse.
7. Ground Marking / Sector Marking.
8. Rules and their interpretations and duties of officials.

#### **Reference**

1. Dybon, Geoffrey, G.H., The Mechanics of Athletics, London: University of London Press Ltd. 1962.
2. Doderty, J. Memmeth, Modern Track and Field, Englewood Cliffs: N.J. Prentice Hall, Inc.
3. Hooks, Gene. Application of Weight Training to Athletics, Englewood Cliffs: N.J. Prentice Hall, Inc. 1962.
4. Mohan, V.M. Athletics for Beginners, New Delhi: Metropolitan Books Ltd.
5. Robinson, Johnson James and Hirschni, Modern Techniques of Track and Field (London: Henry Kimpton Publishers) 1974.
6. Bosen, K.O., Track and Field Fundamental Technique (Patiala: N.I.S. Publication).

#### **(b) Hockey**

1. Origin, history and development of Hockey
2. Field development and marking
3. Player stance & Grip
4. Rolling the ball
5. Dribbling
6. Push
7. Stopping
8. Hit
9. Flick
10. Scoop
11. Passing – Forward pass, square pass, triangular pass, diagonal pass, return pass,
12. Reverse hit
13. Dodging
14. Goal keeping – Hand defence, foot defence
15. Positional play in attack and defense.

16. Rules and their interpretations and duties of officials.
17. Ground Marking.

### **References**

1. Flint, Rachael, H. Women's Hockey London: Pelham Books Ltd.
2. Milford, D.S. Hockey Practice and Tactics London: Edward Arnold and Company.
3. Singh, Gian and Wallia Kuku Learn Hockey this way. New Delhi International Hockey Institutes.
4. Wein, Horts. The Science of Hockey. London: Pelham Books.
5. Ahmed Khan, Eraj. Hockey for Boys and Girls, Scientific Book Company, Patna.
6. Thani, Yograj. Hockey.
7. Durairaj, Techniques of Hockey.
8. Kapur, Rules of Hockey with Interpretation (Boys and Girls).

### **(c) Cricket**

1. Origin, history and development of Cricket
2. Field development and marking
3. Batting-Forward and backward defensive stroke
4. Bowling-Simple bowling techniques
5. Fielding-Defensive and offensive fielding
6. Catching-High catching and Slip catching
7. Stopping and throwing techniques
8. Wicket keeping techniques.
9. Rules and their interpretations and duties of officials.
10. Ground Marking.

### **References**

1. Micharda, Barry, Barry Richard Cricket. London Pelhon Books.
2. 2-Mankar, Vinno, How to play Cricket. Rupa and Company.
3. Greig, Tony, Greig on Cricket. Bombay, S. Publication.
4. John Snow, Cricket Fondon :William Dusmomby Publisher Ltd.
5. N.I.S. Cricket : Pub. Inc.
6. Goei G.R. Cricket Sports Officer, Stadium Sigm.
7. M.S. Mushtaq. How to Play Cricket. Vikas Publishing House, New Delhi.

### **(d) Softball**

1. History and development
2. Field development and marking
3. Catching: one handed, two handed, with feet grounded, in flight.
4. Throwing (different passes and their uses): one handed passes (shoulder, high shoulder, underarm, bounce, lob); two handed passes (push, overhead, bounce).
5. Footwork: landing on one foot; landing on two feet; pivot; running pass.
6. Techniques of getting free: dodge and sprint; sudden sprint; sprint and stop; sprinting with change of speed.
7. Defending: marking the player; marking the ball; blocking; inside the circle; outside the circle (that is, defending the circle edge against the pass in).
8. Intercepting: pass; shot.

9. The toss-up.
10. Role of individual players.
11. Ground marking.
12. Rules and their interpretations and duties of officials.

### **(e) Yoga**

1. Background and history of Yoga
2. Development of yoga sport
3. Surya Namaskara
4. Asanas
  - Sitting Position
  - Standing Position
  - Laying Prone Position
  - Laying Spine Position
5. Pranayamas
6. Corrective Asanas
7. Kriyas
8. Rules and regulation of Yoga asanas sport.
9. Duties of referees and judges.

### **References**

1. Kuvalayananda, Asanas, Popular Prakashan, Bombay.
2. Kuvalayananda, Pranayama, Popular Prakashan, Bombay.
3. Gibbs, Yoga for Children.
4. Yadav YP, Art of Yoga.
5. B.K. Iyenger, Yoga.
6. A.P. Super, Yoga.
7. Yogeshwar, Text Book of Yoga, Yoga Centre, Mylopore, Madras.
8. Kuvalayananda and Vinekar, S.L. Yogic Therapyj. Central Bureau of Health Services, Ministry of Health, New Delhi.

### **GENERIC ELECTIVE COURSE (GEC)**

#### **PES74G: Sports Journalism**

**75 Marks/3 Credits**  
**25 Marks/1 Credit**

#### **Learning Outcomes**

1. The students will be oriented in basic art of mass communication and reporting of sports events through various mediums.
2. The students will acknowledge the importance of journalism in sports.
3. Students will understand the standard of reports and media publicity in sports.
4. Students will acknowledge the professionalism in sports journalism.

#### **Course Contents**

**Unit-I: Introduction**

- 1.1 Meaning and Definition of Journalism
- 1.2 Ethics of Journalism
- 1.3 Sports Ethics and Sportsmanship
- 1.4 Reporting Sports Events
- 1.5 National and International Sports News Agencies.

**Unit-II: Sports Bulletin**

- 2.1 Concept of Sports Bulletin
- 2.2 Types of bulletin
- 2.3 Journalism and sports education
- 2.4 Structure of sports bulletin – Compiling a bulletin
- 2.5 General news reporting and sports reporting.

**Unit-III: Mass Media**

- 3.1 Mass Media in Journalism: Radio and T.V.
- 3.2 Commentary – Running commentary on the radio – Sports expert's comments.
- 3.3 Role of Advertisement in Journalism.
- 3.4 Sports Photography
- 3.5 Editing and Publishing.

**Unit-IV: Report Writing on Sports Organization**

- 4.1 Brief review of Olympic Games, Asian Games, Common Wealth Games, World Cup, National Games and Indian Traditional Games.
- 4.2 Preparing report of an Annual Sports Meet for Publication in Newspaper.
- 4.3 Organization of Press Meet.
- 4.4 Practical assignments to observe the matches and prepare report and news of the same.
- 4.5 Visit to News Paper office and TV Centre to know various departments and their working.

**PES74G(P): Practical****50 Marks/2 Credits**

1. Collection of sports news from different media channels.
2. Report writing of tournaments or competitions to publish in TV news channels and news papers.
3. Preparation of advertisement to publish in TV news channels and news papers.
4. Collection of photographs and video clips of tournaments.
5. Practices of running commentary.
6. Conduct of press conference.

**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. Mohit Chakrabarti (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

**VALUE ADDITION COURSE (VAC)**  
**(Any one to be opted from the common pool)**

**VAC-8**

**50 Marks/2**

**Credits**

**Teaching Learning Strategies:** The classes will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations methods.

**Virtual instructional platforms** such as online lectures, webcast etc. are to be used. Students can participate in coursework through instant messages, emails and video conferencing. Google class room, Cisco Webex Meeting, OERS, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org)), Virtual Labs ([www.vlabs.co.in](http://www.vlabs.co.in)), FOSSEE ([www.fossee.in](http://www.fossee.in)), application of spoken tutorials ([www.spoken-tutorial.org](http://www.spoken-tutorial.org)), National Digital Library ([www.ndl.iitkgp.ac.in](http://www.ndl.iitkgp.ac.in)), electronic journals ([www.ess.infibnet.ac.in](http://www.ess.infibnet.ac.in)) etc. are to be used.. Courses may also integrate DVD videos as part of the training process. Students may examine current topics in the field through the use of e- textbooks and e-physical education journals. Students can complete some portion of the education at approved testing sites for the practical components wherever necessary.

**Initiating Brain based learning:** A stress free environment will be created. Constant feedback regarding their performance will be given to initiate learning from mistakes. Creative thinking for new ideas and innovations will be encouraged. Break in learning will be filled with recreational and constructive activities for boosting cognitive functions.

**Activities:** Lecture/ Project Work/ Seminars/ Term Papers/Assignments/ Presentations/ Study etc.

**Assessment Rubric:** Classroom test, Project-work, assignments, presentations, demonstration and skill activities.

**Sports simulation laboratory:** Sports simulation laboratory is to be established to provide the students with a feasible environment where they will learn and practice sports skills using



animated videos with continuous rectification of errors till exact simulation of skill is attained. Help may be taken from Youtube Streaming, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org))).

## **SEMESTER- VII**

### **CORE COURSE (CC)**

**PES815C: Measurement and Evaluation**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

#### **Learning Outcomes**

1. The students will be able to recognize and relate the concept of test, measurement and evaluation in the context of Physical Education.
2. The students will be able to construct and conduct the physical fitness and sports skill test.
3. The students will be able to implement the criteria of test selection.
4. This syllabus would orient the students in the art of applications of test, measurement and evaluation in physical and sports activities with simultaneous development of practical competency in conducting physical fitness and sports skill tests.

#### **Course Contents**

##### **Unit-I: Introduction to Test & Measurement & Evaluation**

- 1.1 Meaning of Test, Measurement & Evaluation in Physical Education.
- 1.2 Importance of Test, Measurement & Evaluation in Physical Education.
- 1.3 Criteria of selecting an appropriate test.
- 1.4 Type and classification of test

##### **Unit-II: Construction and Administration of Test**

- 2.1 Administration of testing programme.
- 2.2 Construction of Physical Fitness / Efficiency Test
- 2.3 General types of sports skill test items
- 2.4 Construction of sports skill test

##### **Unit-III: Physical Fitness Tests**

- 3.1 AAPERD Youth Fitness Test
- 3.2 Tuttle Pulse Ratio Test
- 3.3 Newton Motor Ability Test
- 3.4 Phillips JCR Test

##### **Unit-IV: Sports Skill Tests**

- 4.1 Lockhart and McPherson Badminton test
- 4.2 Johnson Basketball skills test
- 4.3 McDonald Soccer skills test
- 4.4 S.A.I Field Hockey test

4.5 Brady's Volleyball skills test.

**PES815C(P): Practical**

**50 Marks/2 Credits**

1. Conduct of AAPERD Youth Fitness Test
2. Conduct of Phillips JCR Test
3. Conduct of Lockhart and McPherson Badminton test
4. Conduct of Johnson Basketball skills test
5. Conduct of McDonald Soccer skills test
6. Conduct of S.A.I Field Hockey test
7. Conduct of Brady's Volleyball skills test.

**References**

1. Bangsbo, J. (1994). *Fitness training in football: A scientific approach*. Bagsvaerd, Denmark:Ho+Storm.
2. Barron, H. M., &Mchee, R. (1997). *A practical approach to measurement in physical education*.Philadelphia: Lea and Febiger.
3. Barron, H.M. &Mchee, R. (1997). *A Practical approach to measurement in physical education*.Philadelphia: Lea and Febiger.
4. Kansal, D.K. (1996). *Test and measurement in sports and physical education*. New Delhi:D.V.S. Publications.

**PES816C: Recreation and Adventure Sports**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

**Learning Outcomes**

1. Students will know the concepts and importance of Recreation and Adventure Sports.
2. Students will gain knowledge and experience to sustain the different activities of recreation and adventure sports in academic career.
3. Students will develop the leadership quality and career personality.
4. Students will experience the planning of recreation and adventure activity.

**Unit-I: Introduction to Recreation**

- 1.1 Meaning and definitions of Recreation
- 1.2 Classification of Recreation
- 1.3 Scope of Recreation
- 1.4 Importance of Recreational activities.

**Unit-II: Introduction to Adventure Sports**

- 2.1 Meaning and definition of Adventure Sports
- 2.2 Classification of Adventure Sports
- 2.3 Scope of Adventure Sports
- 2.4 Infrastructure, facilities and equipments
- 2.5 Importance of Adventure Sports in academics.

**Unit-III: Programme in Recreation and Adventure Sports**

- 4.1 Indoor and outdoor activities
- 4.2 Cultural and literary activities, hobbies

- 4.3 Land based- Trekking, Hiking, Wall climbing, Rock climbing, Rope climbing, Mountaineering, etc.
- 4.4 Air based- Parasailing, Paragliding, hang gliding, parachuting, paragliding, skydiving etc.
- 4.5 Water based- Rafting, Kayaking, Canoeing, Boating, Sky diving, Water skiing, River crossing etc.

#### **Unit-IV: Camping and Leadership**

- 4.1 Aim, objectives and importance of Camping
- 4.2 Organization and types of Camp
- 4.3 Selection and layout of camp site
- 4.4 Leadership camp.

#### **PES816C(P): Practical**

**50 Marks/2 Credits**

- 1. Trekking, Hiking, Wall climbing, Rock climbing, Rope climbing and Mountaineering.
- 2. Parasailing, Paragliding, Hang gliding and Parachuting.
- 3. Rafting, Kayaking, Canoeing and Boating.
- 4. Selection and layout of camping site.
- 5. Conduct of leadership camp.

#### **References**

- 1. Bright Charles K. and Herold C. Meyer. "Recreational test and readings". Eaglewood cliff, New Jersey Prentice Hall, Inc.
- 2. Ness wed, M.H. and New Meyer E.S. Leisure and Recreation, New York: Ronald Press.
- 3. Vannier Maryhalen, "Methods and Material in Recreation leadership: Philadelphia." W.B. Saunders company.
- 4. Planning Facilities for Health, Physical Education and Recreation, Chicago, the Athletic Institute.
- 5. Recreation areas: Their Design and equipments, New York : Ronal Press KRAN, R.G. Recreation and the schools: New York: Mac melon company.
- 6. Shivers J.S., "Principles and practices of Recreational services. London : Mac Melon Company.
- 7. Kilpatrick. All for Adventure. Irene/Hall, Susan (ILT).
- 8. King, Betty. Adventure.
- 9. Kalpana Swaminathan. Adventure Sports.

#### **DISCIPLINE SPECIFIC ELECTIVE (DSE)**

#### **PES83D: Traditional Sports of Manipur**

**75 Marks/3 Credits  
25 Marks/1 Credit**

#### **Learning Outcomes**

- 1. Students will recognize the major disciplines of Traditional or Indigenous games and sports of Manipur.
- 2. Students will understand the values of Traditional or Indigenous games and sports of Manipur in the modern sports trends as well as in academic field.

3. Students will know the specific sports culture of Manipur.
4. Students can predict the future scope of indigenous sports of Manipur.

### **Unit-1: Introduction**

- 1.1 Concept, meaning and definition of Traditional exercise.
- 1.2 Concept, meaning and definition Traditional sports (Indigenous Sports).
- 1.3 Different Traditional Sports of Manipur.
- 1.4 Importance of traditional sports in Manipur.

### **Unit-II: History of Traditional Sports**

- 2.1 Origin and historical development of Thang-Ta
- 2.2 Origin and historical development of Sagol Kangjei
- 2.3 Origin and historical development of Mukna
- 2.4 Origin and historical development of Kang.
- 2.5 Origin and historical development of Yubi Lakpi.

### **Unit-III: Establishment of Traditional Sports**

- 3.1 Growth and development of Traditional Sports.
- 3.2 Establishment of Traditional Sports in modern trends of sports
- 3.3 Different organizations and associations of Traditional Sports
- 3.4 Different competitions levels of Traditional Sports.
- 3.5 Equipments of the Traditional Sports.

### **Unit-IV: Development of Techniques and Skills**

- 4.1 **Different fundamental Skills of Thang-Ta:** Khutlon, Khongpham, Phidup, Shwor Kanglon (Ningsa Kanglon) and Tarol (Khousarol).
- 4.2 **Fundamental Skills of Sagol Kangjei:** Horse Riding- walk, trot, canter, gallop; Striking- offside hitting, nearside hitting, offside back hander, Nearside back hander, Hitting below the neck, Tapping.
- 4.3 **Fundamental Skills of Mukna:** Phirep (Position), Kishi painaba (Holding of waist belt), Ninggong Hunba (throw by hip), Kalap Kotpi (Leg lock from outside), Longkhrou (Leg lock), Chepching (Pull down by the side), Khongchep Haibi (Leg lock to the lower foot part of the opponent), Leng louba (controlling the shoulder of the opponent).
- 4.4 **Fundamental Skills of Kang:** Chekphei Kappa, Lamtha Kappa, Marak-Changba, Kang Hanba, Kang Handaba, Lanjang.

### **PES83D(P): Practical**

**50 Marks/2 Credits**

1. Practice of horse riding and various techniques of Sagol Kangjei.
2. Practice of various techniques of Mukna.
3. Practice of various techniques of Kang.
4. Practice of various techniques of Thang-Ta.
5. Study of rules and regulations of indigenous sports.

### **References**

1. International Polo Federation, Polo Rules.
2. Horse Riding Training Books.

3. Horse Riding and Polo training Books.
4. Original Style Polo Rules.
5. Y. Irabot Singh, Manipuri Games, 1987.
6. A. Raghmani Singh, Meitei Inatki Masanna.
7. Kang Federation of Manipur, Common Kanglon, All Manipur Kang Control Board, Imphal, 2002.
8. Kh. Tolhal Singh, Kang, All Manipur Kang control Board, Imphal, 1987.
9. Govt. of Manipur (YAS), Kang Federation gi Kanglon, 1996.
10. L. Kokngang, Thang- Ta, 2008.
11. R.K. Sanahal, Satjal, 1972.
12. L. Heramot, Sarei – Sara, Kanglei Inat Thang-Ta Sindam Sanglen.
13. L. Heramot, Mihat Mikan, Kanglei Inat Thang-Ta Sindam Sanglen.
14. Konjengbam Biren Singh, Meitei Huyen Lanlong, Manipur State Kala Academy, 1985.
15. Gurumayum Sana Sharma, Thengourourol (Sapha Lanpha), Dance Academy, 2008.
16. Festival of Thang-Ta, Department of Art and Culture.

### GENERIC ELECTIVE COURSE (GEC)

#### **PES85G: Methods in Physical Education**

**75 Marks/3 Credits**  
**25 Marks/1 Credit**

#### **Learning Outcomes**

1. Students can understand different teaching methods in physical education.
2. Students will know the various teaching aids could be procured in physical education.
3. Students will understand the proper use of teaching aids as per the methods applied.
4. Students will understand the different teaching lesson plans in physical education.

#### **Course Contents**

##### **Unit-I: Introduction**

- 1.1 Meaning and Definitions of Teaching Methods in Physical Education
- 1.2 Scope of Teaching Methods in Physical Education
- 1.3 Importance of Teaching Methods in Physical Education
- 1.4 Factors influence the Teaching Methods in Physical Education.

##### **Unit-II: Teaching Methods**

- 2.1 Types- Lecture method, Command method, Demonstration method, Discussion method, Imitation method, Project method etc.
- 2.2 Teaching Procedure: Whole method, whole-part-whole method, part-whole method.
- 2.3 Presentation Technique, Personal preparation and Technical preparation.
- 2.4 Command- Meaning, Types and its uses in different situations.

##### **Unit-III: Use of Teaching Aids**

- 3.1 Teaching Aids- Meaning, Importance and criteria for selecting teaching aids.
- 3.2 Teaching aids- Audio aids, Visual aids, Audio-visual aids, Verbal, Chalk board, Charts, Model, Slide projector, Motion picture etc.
- 3.3 Application and merits of team teaching.
- 3.4 Difference between Teaching Methods and Teaching Aid.

**Unit-IV: Lesson Planning and Teaching Innovations**

- 4.1 Lesson Planning- Meaning, Type and principles of lesson plan.
- 4.2 General, specific and coaching lesson plan.
- 4.3 Micro Teaching- application, advantages and steps of micro teaching.
- 4.4 Simulation Teaching- application, advantages and steps of simulation teaching.

**PES85G(P): Practical****50 Marks/2 Credits**

1. Ten (10) teaching practice lessons for internal out of which five (5) lessons in classroom teaching and 5 lessons for different sports activities within the premises of the institution on the students of the course.
2. One (1) each of final classroom and specific sport/game lesson plan for external evaluation (end semester exam.) must be practiced on the students of the course.
3. Preparation of lesson plan book.

**References**

1. Bhardwaj, A. (2003). New media of educational planning. New Delhi: Sarup of Sons.
2. Bhatia, & Bhatia, (1959). The principles and methods of teaching. New Delhi: Doaba House.
3. Kochar, S.K. (1982). Methods and techniques of teaching. New Delhi: Sterling Publishers Pvt. Ltd.
4. Sampath, K., Pannirselvam, A. & Santhanam, S. (1981). Introduction to educational technology. New Delhi: Sterling Publishers Pvt. Ltd.
5. Walia, J.S. (1999). Principles and methods of education. Jullandhar: Paul Publishers.

**Teaching Learning Strategies:** The classes will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations methods.

**Virtual instructional platforms** such as online lectures, webcast etc. are to be used. Students can participate in coursework through instant messages, emails and video conferencing. Google class room, Cisco Webex Meeting, OERS, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org)), Virtual Labs ([www.vlabs.co.in](http://www.vlabs.co.in)), FOSSEE ([www.fossee.in](http://www.fossee.in)), application of spoken tutorials ([www.spoken-tutorial.org](http://www.spoken-tutorial.org)), National Digital Library ([www.ndl.iitkgp.ac.in](http://www.ndl.iitkgp.ac.in)), electronic journals ([www.ess.infn.net](http://www.ess.infn.net)) etc. are to be used.. Courses may also integrate DVD videos as part of the training process. Students may examine current topics in the field through the use of e- textbooks and e-physical education journals. Students can complete some portion of the education at approved testing sites for the practical components wherever necessary.

**Initiating Brain based learning:** A stress free environment will be created. Constant feedback regarding their performance will be given to initiate learning from mistakes. Creative thinking for new ideas and innovations will be encouraged. Break in learning will be filled with recreational and constructive activities for boosting cognitive functions.

**Activities:** Lecture/ Project Work/ Seminars/ Term Papers/Assignments/ Presentations/ Study etc.

**Assessment Rubric:** Classroom test, Project-work, assignments, presentations, demonstration and skill activities.

**Sports simulation laboratory:** Sports simulation laboratory is to be established to provide the students with a feasible environment where they will learn and practice sports skills using animated videos with continuous rectification of errors till exact simulation of skill is attained. Help may be taken from Youtube Streaming, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org))).

**SEMESTER- VIII****CORE COURSE (CC)****PES817C: Research Methodology****75 Marks/3 Credits****25 Marks/1 Credit****Learning Outcomes**

1. Students able to understand the fundamentals of research methodology.
2. Students can understand the different areas and scopes of research in physical education and sports.
3. Students will understand the concept of research methodology.
4. Students will understand the development of research design, sampling and data collection.
5. Students will understand the research report writing (thesis/dissertation).

**Course Contents****Unit-I: Introduction to Research Methodology**

- 1.1 Meaning, definition and objectives of Research
- 1.2 Types of Research
- 1.3 Research methods and methodology
- 1.4 Need and importance of Research in Physical Education and Sports
- 1.5 Scope of Research in Physical Education & Sports.

**Unit-II: Research Problem and Design**

- 2.1 Research problem and selection
- 2.2 Necessity of defining Research problem
- 2.3 Meaning and needs of Research design
- 2.4 Different Research designs
- 2.5 Variables and types of variables

**Unit-III: Sample and Data Collection**

- 3.1 Meaning and definitions of population and sample
- 3.2 Types of Sampling designs and classification of sampling methods
- 3.3 Data and types of data
- 3.4 Types of data collection in research
- 3.5 Hypothesis and Types of Hypothesis
- 3.6 Sources of research literature.

**Unit-IV: Research Proposal and Report Writing**



- 4.1 Defining the Research Proposal and Research Report
- 4.2 Format of Research Proposal and Research Report writing
- 4.3 Mechanics of writing Research Report, Footnote, Endnote, Reference and Bibliography.
- 4.4 Problems encountered by researchers.

**PES817C(P): Practical****50 Marks/2 Credits**

1. Application of sampling method to represent a population.
2. Practical application of types of variables.
3. Preparation of model data collection sheet.
4. Preparation of writing research proposal (synopsis).
5. Preparation of writing research report.
6. Practice of footnote, endnote and bibliography writing (APA format).

**References**

1. Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc.
2. Clarke David. H & Clarke H, Harrison (1984) Research processes in Physical Education, New Jersey; Prentice Hall Inc.
3. Craig Williams and Chris Wragg (2006) Data Analysis and Research for Sport and Exercise Science, Londonl Routledge Press.
4. Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics.
5. Kamlesh, M. L. (1999) Reserach Methodology in Physical Education and Sports, New Delhi.
6. Moses, A. K. (1995) Thesis Writing Format, Chennai; Poompugar Pathippagam.
7. Rothstain, A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc.
8. Subramanian, R, Thirumalai Kumar S & Arumugam C (2010) Research Methods in Health, Physical Education and Sports, New Delhi; Friends Publication.
9. Moorthy A. M. Research Processes in Physical Education (2010); Friend Publication, New Delhi.

**PES818C: Sports Statistics****75 Marks/3 Credits****25 Marks/1 Credit****Learning Outcomes**

1. Students will know the fundamentals of statistics in Physical Education and Sports.
2. Students will understand the importance of various statistical techniques.
3. Students will understand the importance of statistics in research areas.
4. Students will experience to solve the basic statistical problems.

**Course Contents****Unit-I: Basics of Statistics**

- 1.1 Meaning and definition of Statistics.
- 1.2 Nature and characteristics of statistics.
- 1.3 Types of statistics

- 1.4 Graphical Presentation- Histogram, Frequency Polygon, Frequency Curve Cumulative Frequency Polygon, Ogive, Pie Diagram.
- 1.5 Needs and importance of statistics in Physical Education and Sports.

### **Unit-II: Frequency Distribution**

- 2.1 Meaning of variable and kinds of variables
- 2.2 Meaning and definition of frequency distribution
- 2.3 Preparation of frequency distribution table- Ungrouped data and Group data
- 2.4 Features of frequency distribution- Skewness and Kurtosis
- 2.5 Uses of frequency distribution table.

### **Unit-III: Measure of Central Tendency**

- 3.1 Concepts of Measures of Central Tendency
- 3.2 Measures of Central tendency- Mean, Median and Mode
- 3.3 Importance, Advantages, Disadvantages of Mean, Median and Mode
- 3.4 Computation of Mean, Median and Mode from Group and Ungrouped data

### **Unit-IV: Measure of Variability**

- 4.1 Concepts of Measures of Variability
- 4.2 Measures of Variability- Range, Mean Deviation, Quartile Deviation and Standard Deviation.
- 4.3 Importance, Advantages, Disadvantages of Range, Mean Deviation, Quartile Deviation and Standard Deviation.
- 4.4 Computation of Range, Mean Deviation, Quartile Deviation and Standard Deviation.

### **PES818C(P): Practical**

**50 Marks/2 Credits**

1. Graphical presentation- Histogram, Frequency Polygon, Frequency Curve Cumulative Frequency Polygon, Ogive, Pie Diagram.
2. Computation of central tendency: Mean, Median and Mode (group and un-group data).
3. Computation of variability: Range, Mean Deviation, Quartile Deviation and Standard Deviation.
4. Preparation of table for descriptive statistics.
5. Practice of Excel and SPSS software.

### **References**

1. Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc
2. Clark D.H. (1999). Research Problem in Physical Education 2nd edition, Eaglewood Cliffs, Prentice Hall, Inc.
3. Jerry R Thomas & Jack K Nelson (2000). Research Methods in Physical Activities; Illonosis; Human Kinetics;
4. Kamlesh, M. L. (1999) Reserach Methodology in Physical Education and Sports, New Delhi
5. Rothstain A (1985). Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc
6. Sivaramakrishnan. S. (2006). Statistics for Physical Education, Delhi; Friends Publication

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

### DISCIPLINE SPECIFIC ELECTIVE (DSE)

**PES84D: Dissertation/Project/Internship (any one to be opted for the end semester exam.)**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

**Dissertation:** A research based dissertation will be conducted on a selected research topic/problem under a supervisor/guide concerned.

**Project:** A project will be conducted on a selected topic/title under a supervisor/guide concerned.

**Internship:** Two months Internship course will be conducted in different adopted schools for teaching physical education and sports to enhance the students' personality and teaching quality. An original progress report in the form of teaching lesson plan duly assessed by the Head of the school must be submitted. At least a total of 30 lessons, 15 each of classroom (theory) and sports activity (practical) must be completed.

**PES84D(P): Practical**

**50 Marks/2 Credits**

1. Evaluation of Dissertation/Project/Internship reports.
2. Presentation of Dissertation/Project/Internship reports.
3. Viva voce of Dissertation/Project/Internship reports.

### GENERIC ELECTIVE COURSE (GEC)

**PES86G: Sports Entrepreneurship**

**75 Marks/3 Credits**

**25 Marks/1 Credit**

#### **Learning Outcomes**

1. To conceptualize the concept of Entrepreneurship, its type and traits.
2. To understand the prospect of potential business related to sports.
3. The knowledge would enable students to set up their own enterprise, catering to various demands of sports industry.

#### **Course Contents**

##### **Unit-I: Introduction**

- 1.1 Concept, Meaning and Definition of Entrepreneurship
- 1.2 Concept and characteristics Entrepreneurship
- 1.3 Need and Importance of entrepreneurship in sports

1.4 Understanding Sports Business industry.

### **Unit-II: Entrepreneurial Process**

- 2.1 Understanding the entrepreneurial process
- 2.2 Types of Entrepreneurs
- 2.3 Risk and Rewards in entrepreneurship
- 2.4 Leading sports companies and media channels.
- 2.5 Sports entrepreneurship as a “Career Option.”

### **Unit-III: Business and Organization**

- 3.1 Identifying the areas of business
- 3.2 Understanding financial aspects of the business
- 3.3 Government and private Organizations supporting entrepreneurship in India
- 3.4 Generating and arranging funds for the business.

### **Unit-IV Entrepreneurial Sports Sections**

- 4.1 Entrepreneurship in the sports Goods and Equipment
- 4.2 Entrepreneurship in Sports wears
- 4.3 Entrepreneurship in Sports management and Event management
- 4.4 Entrepreneurship in Sports software, fitness and Nutrition
- 4.5 Sports start-up and funding for sports industry.

### **PES86G(P): Practical**

**50 Marks/2 Credits**

1. Preparation and planning to establish sportswear industry.
2. Preparation for start-up business centre.
3. Search of funding agency to establish sports industry.
4. Planning for establishment of sports marketing centre.
5. Planning for sports facility development.

### **References**

1. Peter Drucker. Innovation and Entrepreneurship.
2. Desai, V. Dynamics of Entrepreneurial Development and Management. Himalaya Publishing House.
3. Gupta, C.B. & Srinivasan, N.P. Entrepreneurial Development.
4. D.N. Mishra. Entrepreneur and Entrepreneur Development & Planning.
5. Arora Renu & Shood S.K. (2007). Entrepreneurship and Development. Kalyani, New Delhi.

**Teaching Learning Strategies:** The classes will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations methods.

**Virtual instructional platforms** such as online lectures, webcast etc. are to be used. Students can participate in coursework through instant messages, emails and video conferencing. Google class room, Cisco Webex Meeting, OERS, Swayam Platform ([www.swayam.gov.in](http://www.swayam.gov.in)), Swayam Prabha ([www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)) (available on Doordarshan (free dish TV), E-Yantra ([www.e-yantra.org](http://www.e-yantra.org)), Virtual Labs ([www.vlabs.co.in](http://www.vlabs.co.in)), FOSSEE ([www.fossee.in](http://www.fossee.in)), application of spoken tutorials ([www.spoken-tutorial.org](http://www.spoken-tutorial.org)), National Digital Library

([www.ndl.iitkgp.ac.in](http://www.ndl.iitkgp.ac.in)), electronic journals ([www.ess.infibnet.ac.in](http://www.ess.infibnet.ac.in)) etc. are to be used.. Courses may also integrate DVD videos as part of the training process. Students may examine current topics in the field through the use of e- textbooks and e-physical education journals. Students can complete some portion of the education at approved testing sites for the practical components wherever necessary.

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