



ANNEXURE C

ITM UNIVERSITY SCHOOL OF SPORTS EDUCATION

Scheme of B.P.E.S. (Bachelor of Physical Education and Sports)

Ordinance:= 65 A

Degree Title : Bachelor of Physical Education and Sports (B.P.E.S.)

Name of the School : School of Sports Education

Duration : 4 years

1 Year (Two Semesters) Undergraduate Certificate in Physical Education and Sports

2 Years (Four Semesters) Undergraduate Diploma in Physical Education and Sports

3 Years (Six Semesters) Bachelor's Degree in Physical Education and Sports

4 Years (Eight Semesters) Bachelor's Degree (Honors/Research) in Physical Education and Sports

Eligibility:

The candidate must have completed his/her Higher Secondary (10+2 scheme examination or Intermediate examination or the pre-university (10+2) or any other equivalent examination recognized by the M.P. Board of Secondary Education or any other Board recognized for this purpose by ITM University Gwalior as equivalent. Reservation and age rules as per State Govt.

After completing the requirements of a three-year Bachelor's degree, candidate who meet a minimum CGPA of 7.5 shall be allowed to continue studies in fourth year of the undergraduate programme to pursue and complete the Bachelor's (Honors/Research) degree.

Admission Procedure: As decided by ITM University Gwalior from time to time

Total Seats: 100.

Fee Structure: As decided by ITM University Gwalior from time to time.

Examination, Curriculum and Related Regulation:

As per ordinance 65A of ITM University Gwalior

Eligibility: A candidate shall be eligible for the degree of Bachelor of Physical Education & Sports when he/she has completed the requirement of examination successfully as per ordinance No-.65A

Attendance: Attendance in theory and practical subjects shall be compulsory. A minimum of 75% attendance is required separately for each theory and practical's subjects.

General Instruction:

For matters not covered in this ordinance, general rules of ITM University Gwalior, as applicable in semester examination shall apply

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

General Rules and Scheme of Examination

The Examination for the degree of Bachelor of Physical Education and Sports will be of 8 semester (four years) duration:

B.P.E.S. 1 year (semester I and Semester II)

B.P.E.S. 2 year (Semester III and Semester IV)

B.P.E.S. 3 year (Semester V and Semester VI)

B.P.E.S. 4 year (Semester VII and Semester VIII)

A candidate, who –

Completed his/her Higher Secondary (10 + 2scheme) examination or Intermediate examination or the pre-university (10+2) or any other equivalent examination recognized by the M.P. Board of Secondary Education or any other Board recognized for this purpose by as equivalent thereof

Admission subject to being selected on the basis of admission tests prevailing in the year when admission is sought in the department.

After obtaining Indian or foreign qualifications recognized as equivalent to those mentioned in 2 (a) above by the ITM University Gwalior and on the basis of admission tests, shall be admitted to Semester – I for the degree of Bachelor of Physical Education & Sports

After completing the requirements of a three-year Bachelor's degree, candidate who meet a minimum CGPA of 7.5 shall be allowed to continue studies in fourth year of the undergraduate programme to pursue and complete the Bachelor's (Honors/Research) degree.

The provisions of ordinance 65A will be applicable for this course.

Examination: The examination will be conducted according to ordinance 65A

The medium of instruction shall be English .

BPES SCHEME OF EXAMINATION
(As per Ordinance 65 A)



SCHOOL OF SPORTS EDUCATION

NAME OF COURSE: BPES

SEMESTER: I

SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

S. No.	Subject Code	Subject Name & Title	Maximum Marks Allotted							Credits Allotted Subject wise			Total Credits	Remark
			Theory Slot			Practical Slot				Period per week				
			End Sem.	Mid Sem. MST (Two tests average)	Quiz/ surprise test/ Class participation/ assignment	End Sem.	Progressive Evaluation	Internal Viva	Total marks	L	T	P		
1.	PEL-101	Basic and Systemic Anatomy	60	20	20				100	3	2	-	5	
2.	PEL-102	Foundations of physical education	60	20	20				100	3	2	-	5	
3.	PEL 103	English	60	20	20				100	3	2		5	
4.	PEP - 104	Athletics-I				60	20	20	100	-	-	3	3	
5.	PEP-105	Gymnastics-				60	20	20	100	-	-	3	3	
6.	PEP-106	Yoga				60	20	20	100	-	-	3	3	
Total Marks			180	60	60	180	60	60	600				24	

Maximum Marks: (Theory) - 100
(Practical) - 100

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SCHOOL OF SPORTS EDUCATION

NAME OF COURSE: BPES

SEMESTER: II

SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

S. No.	Subject Code	Subject Name & Title	Maximum Marks Allotted							Credits Allotted Subject wise			Total Credits	Remark
			Theory Slot			Practical Slot				Period per week				
			End Sem.	Mid Sem. MST (Two tests average)	Quiz/ surprise test/ Class participation/ assignment	End Sem.	Progressive Evaluation	Internal Viva	Total marks	L	T	P		
1.	PEL-201	Educational psychology	60	20	20				100	3	2	-	5	
2.	PEL -202	Methods in physical education/	60	20	20				100	3	2	-	5	
3.	PEL -203	Basic computer application	60	20	20				100	4	1	-	5	
4.	PEP -204	Athletics II				60	20	20	100	-	-	3	3	
5.	PEP-205	Basketball				60	20	20	100	-	-	3	3	
6.	PEP-206	Mass demonstration				60	20	20	100	-	-	3	3	
Total Marks			180	60	60	180	60	60	600				24	

Maximum Marks: (Theory) - 100
 7 (Practical) - 100

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SCHOOL OF SPORTS EDUCATION

NAME OF COURSE: BPES

SEMESTER: III

SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

S. No.	Subject Code	Subject Name & Title	Maximum Marks Allotted							Credits Allotted Subject wise			Total Credits	Remark
			Theory Slot			Practical Slot				Period per week				
			End Sem.	Mid Sem. MST (Two tests average)	Quiz/ surprise test/ Class participation/ assignment	End Sem.	Progressive Evaluation	Internal Viva	Total marks	L	T	P		
1.	PEL – 301	Physiology & Physiology of exercise	60	20	20				100	3	2	-	5	
2.	PEL – 302	Fitness nutrition & training	60	20	20				100	3	2	-	5	
3.	PEL – 303	Environmental science	60	20	20				100	3	2	-	5	
4.	PEP – 304	Badminton				60	20	20	100	-		3	3	
5.	PEP – 305	Volleyball				60	20	20	100	-	-	3	3	
6.	PEP – 306	Football				60	20	20	100	-	-	3	3	
Total Marks			180	60	60	180	60	60	600				24	

Maximum Marks: (Theory) - 100
(Practical) - 100

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SCHOOL OF SPORTS EDUCATION

NAME OF COURSE: BPES

SEMESTER: IV

SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

S. No.	Subject Code	Subject Name & Title	Maximum Marks Allotted							Credits Allotted Subject wise			Total Credits	Remark
			Theory Slot			Practical Slot				Period per week				
			End Sem.	Mid Sem. MST (Two tests average)	Quiz/ surprise test/ Class participation/ assignment	End Sem.	Progressive Evaluation	Internal Viva	Total marks	L	T	P		
1.	PEL – 401	Kinesiology	60	20	20				100	3	2	-	5	
2.	PEL – 402	Basics of Sports training	60	20	20				100	3	2	-	5	
3.	PEL – 403	Correctives in physical education	60	20	20				100	3	2	-	5	
4.	PEP – 404	Hockey				60	20	20	100	-	-	3	3	
5.	PEP – 405	Cricket				60	20	20	100	-	-	3	3	
6.	PEP – 406	Taekwondo/Judo				60	20	20	100	-	-	3	3	
Total Marks			180	60	60	180	60	60	600				24	

Maximum Marks: (Theory) - 100
(Practical) - 100

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SCHOOL OF SPORTS EDUCATION

NAME OF COURSE: BPES

SEMESTER: V

SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

S.	Subject	Subject Name &	Maximum Marks Allotted							Credits Allotted Subject wise			Total Credits	Remark
			Theory Slot			Practical Slot				Period per week				
			End Sem.	Mid Sem. MST (Two tests average)	Quiz/ surprise test/ Class participation/ assignment	End Sem.	Progressive Evaluation	Internal Viva	Total marks	L	T	P		

No.	Code	Title	End Sem.	Mid Sem. MST (Two tests average)	Quiz/ surprise test/ Class participation/ assignment	End Sem.	Progressive Evaluation	Internal Viva	Total marks	L	T	P		
1.	PEL – 501	Management of Physical Education	60	20	20				100	3	2	-	5	
2.	PEL – 502	Tests& Measurement in Physical Education	60	20	20				100	3	2	-	5	
3.	PEL- 503	Sports Specialization –I	60	20	20				100	3	2	-	5	
4.	PEP – 504	Weight training				60	20	20	100	-	-	3	3	
5.	PEP – 505	Handball				60	20	20	100	-	-	3	3	
6.	PEP – 506	Teaching practice (activity)				60	20	20	100	-	-	3	3	
Total Marks			180	60	60	180	60	60	600				24	

Maximum Marks: (Theory) - 100
(Practical) - 100

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SCHOOL OF SPORTS EDUCATION

NAME OF COURSE: BPES

SEMESTER: VI

SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

S. No.	Subject Code	Subject Name & Title	Maximum Marks Allotted							Credits Allotted Subject wise			Total Credits	Remark
			Theory Slot			Practical Slot				Period per week				
			End Sem.	Mid Sem. MST (Two tests average)	Quiz/ surprise test/ Class participation/ assignment	End Sem.	Progressive Evaluation	Internal Viva	Total marks	L	T	P		
1.	PEL - 601	Research processes in Physical education	60	20	20				100	3	2	-	5	
2.	PEL – 602	Applied statistics in Physical education & Sports Sciences	60	20	20				100	3	2	-	5	
3.	PEL – 603	Sports Specialization –II	60	20	20				100	3	2	-	5	
4.	PEL – 604	Kho/Kho/ & Kabaddi				60	20	20	100	-	-	3	3	
5.	PEP – 605	Tennis				60	20	20	100	-	-	3	3	
6.	PEP – 606	Teaching practice (theory)				60	20	20	100	-	-	3	3	
Total Marks			180	60	60	180	60	60	600				24	

Maximum Marks: (Theory) - 100
(Practical) - 100

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SCHOOL OF SPORTS EDUCATION

NAME OF COURSE: BPES

SEMESTER: VII

SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

S. No.	Subject Code	Subject Name & Title	Maximum Marks Allotted							Credits Allotted Subject wise			Total Credits	Remark
			Theory Slot			Practical Slot				Period per week				
			End Sem.	Mid Sem. MST (Two tests average)	Quiz/ surprise test/ Class participation/ assignment	End Sem.	Progressive Evaluation	Internal Viva	Total marks	L	T	P		
1.	PEL - 701	Sports biomechanics	60	20	20				100	3	1	-	4	
2.	PEL - 702	Adapted physical education	60	20	20				100	3	1	-	4	
3.	PEL - 703	Talent identification	60	20	20				100	3	1	-	4	
4.	PEP - 704	Internship							100	-	-		6	
5.	PEP - 705	Weight training				60	20	20	100	-	-	3	3	
6.	PEP - 706	Table Tennis				60	20	20	100	-	-	3	3	
Total Marks			180	60	60	180	60	60	600				24	

NOTE:The Internship program will consist of 75marks and evaluation of the report will be of 25 marks

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SCHOOL OF SPORTS EDUCATION

NAME OF COURSE: BPES

SEMESTER: VIII

SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

S. No.	Subject Code	Subject Name & Title	Maximum Marks Allotted							Credits Allotted Subject wise			Total Credits	Remark
			Theory Slot			Practical Slot				Period per week				
			End Sem.	Mid Sem. MST (Two tests average)	Quiz/ surprise test/ Class participation/ assignment	End Sem.	Progressive Evaluation	Internal Viva	Total marks	L	T	P		
1.	PEL - 801	Health education	60	20	20				100	3	2	-	5	
2.	PEL - 802	Sports medicine and Physiotherapy	60	20	20				100	3	2	-	5	
3.	PEL - 803	Curriculum designs	60	20	20				100	3	2	-	5	
4.	PEL - 804	Dissertation							100	-	-		6	
5.	PEP - 805	Coaching lessons				60	20	20	100	-	-	3	3	
Total Marks			180	60	60	100	20	20	500				24	

NOTE: The distribution of marks for the dissertation will be as follows: Evaluation of thesis =50 marks , pre -submission viva voce +25 marks and external viva +25marks

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Program Outcomes (PO):

POs of General Higher Education Programs: Students BPES degree programs at the time of graduation will be able to do :

PO's UG programs

PO 1 Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives

PO2 Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

PO3 Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

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PO 5 Effective Citizenship: Demonstrate empathetic social concern and equity-centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

- PO 6 Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
- PO 7 Environment and Sustainability: Understand the issues of environmental contexts and sustainable development
- PO 8 Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Programme Specific Outcomes (PSO) of B.P.E.S.:

The programme specific outcomes are:

- PSO 1. To provide each student with the opportunity to participate in a comprehensive programme consisting of skill development, lead up games, team sports and physical fitness activities.
- PSO2. Train students achieve skills, and strategies associated with different sports, and get learning experiences of physical activities.
- PSO 3. To inculcate in students, the spirit of co-operation, leadership, fair play and sportsmanship.
- PSO 4. To provide foundation of sport studies with the knowledge of various science viz exercise physiology, sport psychology etc.
- PSO 5. To promote mass participation in physical education and sports through intramural and extramural programmes.
- PSO 6. Achieve a thorough knowledge and issues related to sports.
- PSO 7. To enable students to apply knowledge, skills and expertise gained from the programme to sport events.
- PSO 8. Students will acquire a comprehensive knowledge and sound understanding of fundamentals of Physical Education.
- PSO 9. Students will develop practical, theoretical skills in Physical Education.
- PSO 10. Students will be prepared to acquire a range of general skills, to specific skills to communicate with society effectively and learn independently.

BPES SEMESTER - I

BASIC AND SYSTEMIC ANATOMY- PEL 101

- CO-1 Recall about the skeletal system, muscular system, Cardiovascular system and Respiratory system. BL-1
- CO-2 Describe structure and function of cells and tissues. BL-2
- CO-3 Apply the knowledge of various systems in physical education BL-3
- CO-4 Simplify the different structures for students to understand. BL-4
- CO-5 Evaluate the current working status of different systems of body of an athlete. BL-5

Unit - I Introduction

- 1.1 Meaning and Concept of Anatomy
- 1.2 Need and Importance of anatomy for the students of Physical Education.
- 1.3 structure and functions of cells.
- i-Structure of cell
 - ii-Properties of cell
 - iii-Constituents of cell and their functions
- 1.4 structure and functions of tissues

- i-definition of tissue
- ii-Classification of tissues
- iii-Structure and functions of various types of tissues

Unit – II Skeletal system

- 2.1 composition of bone
 - i-Microscopic structure of bone
 - ii-Classification & Functions of bones

2.2 Joints

- i- Definition & classification of joints

- ii-Anatomical structure of synovial joints
- iii-Characteristics of synovial joints
- iv- movements around a joint

Unit - III

3.1 Muscles

- i-Structural classification of muscles
- ii-Functional classification of muscles
- iii-Microscopic structure of muscles (skeletal, cardiac and smooth)
- iv-Functions of muscles (skeletal, cardiac and smooth)
- v-Properties of skeletal muscles

Unit - IV

4.1 Cardio – vascular system

4.1.1-Introduction about heart and cardiovascular system

- i-Structure of heart
- ii-Structure of artery, veins and capillaries
- iii-Types of blood circulation
- v-Pumping action of heart and its regulation

Unit - V

5.1 Respiratory System

- i- Organs of Respiratory System with AI-Assisted Chest X-ray and CT Scan Analysis
- ii- Structure of Respiratory Organs using Digital Bronchoscopy and 3D Respiratory Imaging
- iii- Types of Respiration with Sleep Apnea Monitoring Systems and AI-Based Breathing Pattern Analysis
- iv- Muscles of Respiration with Respiratory Inductance Plethysmography (RIP) Belts and Wearable Respiratory Sensors
- v- Mechanism of Respiration using Digital Spirometry, Pulse Oximetry, and Smart Pulmonary Monitoring Systems

Books Recommended :

1. Singh, V. (2020). General anatomy with systemic anatomy, radiological anatomy, medical genetics (3rd updated ed.). Elsevier. (<https://www.elsevier.com/books/general-anatomy-with-systemic-anatomy-radiological-anatomy-medical-genetics/singh/9788131262436shop>)
2. Waugh, A., & Grant, A. (2022). Ross & Wilson anatomy and physiology in health and illness (14th ed.). Elsevier. (<https://www.elsevier.com/books/ross-wilson-anatomy-and-physiology-in-health-and-illness/waugh/978-0-323-83460-5>)
3. Marieb, E. N., & Hoehn, K. (2022). Human anatomy & physiology (12th global ed.). Pearson Education Limited. (<https://www.pearson.com/en-au/subject-catalog/p/human-anatomy--physiology-global-edition/P200000004924/9781292421896>)
4. Netter, F. H. (2022). Atlas of human anatomy: Classic regional approach (8th ed.). Elsevier. (<https://www.elsevier.com/books/atlas-of-human-anatomy/netter/9780323680424>)
5. Standring, S. (Ed.). (2020). Gray's anatomy: The anatomical basis of clinical practice (42nd ed.). Elsevier. (<https://www.elsevier.com/books/grays-anatomy/standring/978-0-7020-7705-0>)

BPES SEMESTER – I

FOUNDATION OF PHYSICAL EDUCATION PEL 102

Course Outcomes

- CO1 Recognize the scope of physical education BL1
- CO 2 identify the objectives of the Olympics BL 2
- CO3 Apply the benefits of Fitness movement in the society BL 3
- CO4 Analyze the physical education programs in Pre and Post Independence BL 4
- CO 5 Justify the uses of camping/outdoor education for students BL 5

Unit – I

Introduction

- 1.1 Meaning and Definition of Physical Education.
- 1.2 Aims and objective of Physical Education.
- 1.3 Scope of Physical Education.
- 1.4 Need and Importance of Physical Education
- 1.5 Physical Education as an Art as Science

Unit – II

Olympic Games

- 2.1 History of Olympics, Objectives Of Olympics
- 2.2 Olympic Motto And Olympics Flag
- 2.3Olympics Charter
- 2.4 Opening And Closing Ceremonies
- 2,5 IOC,IOA.

Unit – III

- 3.1E-learning and blended learning in Physical Education.
- 3.2Technology-based physical fitness programmes.
- 3.3Sports analytics and data-driven decision making.
- 3.4 Emerging technologies: Virtual Reality (VR), Augmented Reality (AR) and robotics in sports.

Unit – IV

- 4.1 Definition & components of physical fitness.
- 4.2 Benefits of Physical fitness.
- 4.3 Effect of Exercises on muscular, circulatory, digestive, Respiratory system.
- 4.4 Warming up and cooling down exercises and their Importance.

Unit – V

- 5.1 Physical Education in ancient India.
- 5.2 Physical Education in the city states of Greece.
- 5.3 Survey of modern physical education in India, pre and post independence period.
- 5.4 Physical education and sports institutions in India

References:

- Deborah A. Wuest and Jennifer L. Walton-Fisette (2021/2024). Foundations of Physical Education, Exercise Science, and Sport (19th Edition) –
- William H. Freeman (2013). T. Physical Education, Exercise and Sport Science in a Changing Society (8th Edition)
- Daryl Siedentop and Hans van der Mars “Introduction to Physical Education, Fitness, and Sport” (9th Edition) – (2022). .
- Harold W. Kohl and Tinker D. Murray “Foundations of Physical Activity and Public Health” –(2012).
- A.K. Uppal and Meera Sood “Introduction to Physical Education in the Contemporary Context” – (2020).

BPES SEMESTER I

Subject: English –I PEL 103

- CO 1 Recall nouns and pronouns BL1
- CO 2 Discuss interview skills BL 2
- CO3 Apply the method of report writing BL3
- CO 4 Analyze communication skills BL4
- CO5 Determine presentation skills BL 5

Unit- 1

- 1.1 Developing Grammatical Skills
- 1.2 Articles
- 1.3 Nouns, Pronouns
- 1.4 Adjectives and adverbs

Unit - 2

- 2.1 Correspondence
- 2.2 Business letters
- 2.3 Notices
- 2.4 Presentation Skills
- 2.5 Interview Skills
- 2.6 Group Discussion
- 2.7 Debate
- 2.8 Speech
- 2.9 Seminar skills

Unit - 3

- 3.1 Welcome and Vote of thanks
- 3.2 Writing of Reports
- 3.3 Précis Writing

Unit - 4

- 4.1 Problematic
- 4.2 Reflective
- 4.3 Imaginative
- 4.4 Communication Skills and Personality development

Unit -5

- 5.1 Use of Jenni AI and Paper pal to writing paragraphs and essays on topics concerning sports and general awareness.
- 5.2 Use Notebook LM, Speechify and Scispace for easy comprehension and Precise writing

BPES SEMESTER – I

5.3 use of Mindgrasp and Explain Paper AI tools to Comment on reading composition

References:

- 1-Rajesh Kumar & Karthika Sathyanathan (2025). Academic and Professional English: Skills for Effective Communication. Springer Singapore.
- 2-S. Ramasamy Naidu Memorial College (2024). English Connect IV: A Communication-Focused Textbook for Teaching General English to Undergraduate Students. Bloomsbury Academic India.
- 3-Kalyani Samantray (2025 Edition). Oxford Learner's Grammar and Composition. Oxford University Press India.
- 4-HarperCollins Publishers (2025). Enhanced Collins English Grammar and Composition (4th Edition). HarperCollins India.
- 5- Wren & Martin. High School English Grammar and Composition (Revised Edition). S. Chand Publishing.

GAMES (PRACTICAL)

PEP 104 ATHLETICS I, PEP 105 GYMNASTICS AND PEP 106 YOGA

Unit- I. History of game, Federations and Competitions.

Unit- II. Rules and their interpretation.

Unit- III. Fundamental and Advance skills.

Unit- IV. Equipments and their specification and maintenance

.Unit- V. Layout and maintenance of playfields

BPES SEMESTER – II

BPES SEMESTER – II

EDUCATIONAL PSYCHOLOGY PEL 201

Course outcomes

CO 1 Identify the sources of psychology BL 1

CO 2 .Discuss the personality of sportsmen BL 2

CO 3 Apply factors of motor learning BL3

CO 4 analyze role of motives BL 4

CO 5 Justify the relationship of extrinsic and intrinsic motivation BL5

CO 6 Design long term preparation plans keeping in mind psychological aspects BL6

Unit I :

1.1 Meaning definition & Nature of Psychology

1.2 Sources of psychology

1.3 Psychology as a Sciences

1.4 Branches of Psychology

1.5 Importance of Psychology in Education with special reference to Physical Education.

Unit II:

2.1 Growth and Development

2.2 Meaning of growth and Maturation

2.3 Development of maturation

2.4 Behavioral development with special reference to perceptual ,Language intellectual social, emotional and physical

2.6 Individual differences.

2.7 Heredity and environment as cause of individual differences

2.8 Interaction of heredity and environment.

Unit III :

3.1 Learning -Meaning and nature of learning

B PES SEMESTER – II

- 3.2 Principles of learning
- 3.3 Types of learning
- 3.4 Theories of learning (Trial and error ,conditioned reflex ,insight theory, learning by imitation).
- 3.5 Meaning of transfer of training. Conditions of transfer of training. learning curve.
- 3.6 How to overcome plateau

Unit IV:

- 4.1 Motivation
 - i. Meaning of motivation. concept of need, drive, motive, incentive and achievement
 - ii. Types of Motivation
 - iii. Role of motivation in teaching physical activities
- 4.2 Emotion
 - i. Meaning and nature of emotion. Types of emotion.
 - ii. Emotional experiences (anxiety and fear) and their effect on learning of physical activities.

Unit V;

- 5.1 Personality
 - i. Meaning and nature of personality.
 - ii. Physiological and social factors in personality.
 - ii. Development of personality
- 5.2 Memory
 - i. Definition of memory, Types of Memory.
 - ii. Mechanism of the process of remembering ,memory training. Meaning of forgetting ,Reasons of forgetting, curves of forgetting, Importance of memory in learning physical activities.

References :

- 1-S.K. Mangal “Advanced Educational Psychology” PHI Learning Pvt. Ltd., New Delhi, Latest Edition (2023/2024).
- 2-J.C. Aggarwal “Essentials of Educational Psychology” Vikas Publishing House, New Delhi, Revised Editi
- 3-Rajesh E., Dr. Sona Vikas, Dr. Indira Singh & Dr. G.P. Raja “Educational Psychology: Learning and Teaching” Kaav Publications, 2023.
- 4-Anita Woolfolk “Educational Psychology “(14th Edition) Pearson Education, 2024.
- 5-Sтивен R. Wininger, Antony D. Norman & Bruce W. Tuckman “Educational Psychology” SAGE Publications, 2024

METHODS IN PHYSICAL EDUCATION PEL 202

- CO1- To recall he concept of teaching method BL-1
- CO2- To describe the techniques of teaching and its importance during the class. BL-2
- CO3- To participate in inter university competition and to conduct classes in smooth manner BL-3
- CO4-To analyze the effectiveness of teaching tools BL-4
- CO5-- To create the importance of tournament and competition among students BL-5
- CO6 – To create and design lesson plan ,teaching aids .BL6

Unit I

- 1.1Meaning of the term" teaching method" its scope and importance
 - i. The factors to be considered in determining the method of teaching.
- 1.2 Types of teaching methods
 - i.Part-whole method, whole part method, command method, discussion method, project method, demonstration method.
- 1.3Principles of teaching

Unit II

- 1. Presentation Techniques
 - i. Personal preparation.
 - ii. Technical preparation.
 - iii. Steps of presentation.
 - iv. Command and their techniques.
 - v. Types of class management.
- 2. Lesson planning

B PES SEMESTER – II

2.3 Types of lessons and their values

- i. Objectives of different lesson plans a
- ii-different parts of the lesson plan .
- iii. Skill practice/group work.
- iv. Class activity/recreation part (reassembly revision and dismissal).

Unit III

3.1 Organization and conduct of competitions

- i. Track and field
- ii. Gymnastics.
- iii. Weight lifting, body building and best physique contest.
- iv. Wrestling and combatives.
- v. Swimming, diving -aquatics.
- vi. Games and sports tournaments.

3.2 Tournaments - organization, meaning and their types

- i. Knock -out types of elimination double elimination tournaments..
- ii. League-(single-double)or round robin type.
- iii. Combination type of tournament.
- iv. Challenge type (ladder-pyramaid type).

Unit IV

4.1 Audio-visual aids and teaching gadgets

- i. Values and uses of audio-visual aids.
- ii. Criteria for selecting the aids.
- iii. Steps to be followed in using teaching aids.
- iv. Special events –Demonstration, .Play days. ,Sports for all.

Unit V

5.1 Marking of track and play fields:

- i. Track and field - track 400 m standard and 200m.
- ii. Play field - football, volleyball, basketball, hockey, badminton, kabaddi, kho- kho, softball as per international regulation.

References:

Educational Technology and Methods of Teaching in Physical Education — Dr. Dalwinder Singh (2020), Friends Publications (India). Covers educational technology, teaching techniques, teaching aids, lesson planning, and innovations in physical education.

Educational Technology and Methods of Teaching in Physical Education — Dr. Mandeep Singh Nathial (2020), Friends Publications (India)

Educational Technology and Methods of Teaching in Physical Education — Prof. V. Satyanarayana (2020 Edition), Spo

Educational Technology in Physical Education and Sports — Dr. P. Gopinathan (2022).

Digital Technologies and Learning in Physical Education: Pedagogical Cases — Ashley Casey, Victoria A. Goodyear & Kathleen M. Armour (2016)

Educational Technology and Methods of Teaching in Physical Education (Course Material) — Dr. E. Amudhan (2024 compilation)

BASIC COMPUTER APPLICATIONS PEL 203

COURSE OUTCOMES

- | | | |
|------|---|------|
| CO1 | Identify the components of computer | BL1 |
| CO 2 | describe the method of word processing. | BL 2 |
| CO3 | apply the knowledge in Microsoft excel | BL 3 |
| CO 4 | Illustrate the power point presentation techniques. | BL 4 |
| CO5 | Select the appropriate software for use in physical education | BL 5 |
| CO6 | Develop physical education lessons with appropriate illustrations | BL 6 |

Unit I: Introduction to Computer

B PES SEMESTER – II

1.1 Meaning & Characteristics of Computer,
i Application of Computer with special reference to Physical Education,
ii Block Diagram of Computer, classification of Computer,
1.2 Introduction to CPU, CU, ALU Memory Unit
1.3 Auxiliary Storage Device, Input Devices, Output Devices, File, Program Software –types, Hardware, Language Processors.

Unit II: Introduction to OS Windows

2.1 Definition,
Operating System, Objectives and Function of an Operating System,
2.2 Types of an Operating System, Windows Features, Windows Desktop setting
2.3 Files and Folders, Menus and Icons Windows Accessories, Recycle Bin.

Unit III: MS-Word

3.1 Definition and Types of Word Processor,
3.2 Creating document in MS-word, Formatting features of MS-Word, Standard Toolbar, Drawing toolbar Header & Footer,
3.3 Table Handling features, Insertion of files, symbols, pictures, shapes, clip art and charts,
3.4 Equation editor, Spelling and Grammar, Font color, highlighting and shading.

Unit IV: MS-Excel

4.1 Basic of Electronic Spread Sheet, Saving & quitting worksheet,
4.2 Opening & Moving in a worksheet, toolbar and menus, working with formulas and cell referencing, working with graph, functions, and data sorting.

Unit V: Ms-Power Point and Internet

5.1 Creating presentation, working with different menus, editing and formatting text, inserting data's, pictures, organization charts and graph, drawing, slide show, animation of slides,
5.2 Internet & World Wide Web (www), Electronic Mail, Search Engines, locating information on internet, downloading.

References :

1. Fundamentals of Computers — V. Rajaraman, PHI Learning. 2015
2. Computer Fundamentals — P.K. Sinha & Priti Sinha, BPB Publications.
3. Microsoft Office 365 & Office 2019 Step by Step — Microsoft Press.
4. Introduction to Information Technology — Pearson Education. 2012
5. Computer Fundamentals and Information Technology — Khanna Book Publishing. 2025

GAMES (PRACTICAL)

PEP 204 ATHLETICS II, PEP 205 BASKETBALL, PEP 206 MASS DEMONSTRATION

Unit- I. History of game, Federations and Competitions.

Unit- II. Rules and their interpretation.

Unit- III. Fundamental and Advance skills.

Unit- IV. Equipments and their specification and maintenance.

Unit- V. Layout and maintenance of playfield

PEP 206 MASS DEMONSTRATION

BPES SEMESTER – II

Mass demonstration exercises will be taught with wand, umbrella, dumbbells, lezim, hoops, sari, tipri, Balloons etc

BPES SEMESTER – III

PHYSIOLOGY AND PHYSIOLOGY OF EXERCISE PEL 301-

- CO-1 Recall meaning and concept of exercise physiology. BL-1
- CO-2 Summarize the mechanism of various systems. BL-2
- CO-3 Apply the knowledge of Physiology in physical education. BL-3
- CO-4 Simplify the functioning of various systems to the athletes BL-4
- CO-5 Justify the importance of various Physiological aspects to the beginner athletes. BL-5
- CO-6 Design some interesting warming up exercises for athletes. BL-6

Unit I Introduction

- 1.1 Meaning and concept of exercise physiology.
- 1.2 Need for and importance of exercise physiology in physical education and sports.
- 1.3 Homeostasis and exercise, Human body adaptations to exercise

Unit II Cardiopulmonary System

- 2.1 The Cardio-vascular system and Blood.
 - i. Cardiac – cycle.
 - ii. VO_2 max
 - iii. Concept of cardiac cycle with the help of diagram.
- 2.2 Blood pressure, its maintenance and regulation
 - i. Definition of blood pressure.
 - ii. Types of blood pressure.
 - iii. Measurement of blood pressure.
 - iv. Regulation of blood pressure.
- 2.3 The cardiac output and its regulation
 - i. Concept of cardiac output.
- 2.4 The respiratory System
 - i. Mechanism of Respiration.
 - ii. Pulmonary ventilation and its regulation. Cardiorespiratory fitness
 - iii. Second – wind, . EPOC (Exercise Post Oxygen Consumption)

Unit III Digestive, nervous and sensory system

- 3.1 Digestive System
 - i. Absorption of Food.
 - ii. Energy System: ATP-Pc, Glycolytic system and Oxidative system
- 3.2 Nervous System
 - i. Motor neuron and motor unit, Neuromuscular coordination, Reaction time, Reflex action in sports, Central and peripheral fatigue.
 - ii. Functions of autonomic nervous system.
- 3.3 Sensory System
 - i. Balance and proprioception
- 3.4 Visual reaction training
- 3.5 Reaction-time training software

Unit IV Excretory, Endocrine and Reproductive Systems

- 4.1 The excretory System –
 - i. Excretion of water from the body through skin (sweating), . Electrolyte balance, Heat stress and dehydration
- 4.2 The Endocrine System -
 - i. Hormonal responses to exercise, Effect of exercise on Testosterone, cortisol, growth hormone
- 4.3 Reproductive System -

- i. . Female athlete physiology, Menstrual cycle and sports performance
- ii. . Basics of genetics and sports performance, Genetic factors influencing fitness

Unit V Physiology of Exercise

- 5.1 Effect of exercise on respiratory, circulatory, and muscular system.
- 5.2 Wearable technology in sports (AI), Wearable technology in sports (AI)
- 5.3 Warming-up, conditioning and training.. Delayed onset muscle soreness (DOMS), Exercise and mental health.

Practical / Laboratory

- Blood pressure measurement - Clinical Skill.
- Heart rate monitoring (Through carotid and Radial artery) - For exercise response
- Harvard Step Test – For Measuring cardiovascular fitness

References:

1. Draper, N., Williams, C., & Marshall, H. (2024). Exercise physiology: For health and sports performance (2nd ed.). Routledge. <https://doi.org/10.4324/9781003109280>
2. Thompson, W. R., Ozemek, C., & ACSM. (2024). ACSM’s clinical exercise physiology (2nd ed.). Lippincott Williams & Wilkins.
3. Kenney, W. L., Wilmore, J. H., & Costill, D. L. (2020). Physiology of sport and exercise (7th ed.). Human Kinetics.
4. Powers, S. K., Howley, E. T., & Quindry, J. (2023). Exercise physiology: Theory and application to fitness and performance (11th ed.). McGraw Hill.
5. McArdle, W. D., Katch, F. I., & Katch, V. L. (2022). Exercise physiology: Nutrition, energy, and human performance (9th ed.). Wolters Kluwer.
6. Lucía, A., Earnest, C. P., & Chicharro, J. L. (Eds.). (2022). Exercise physiology (IntechOpen). <https://doi.org/10.5772/intechopen.95586>

BPES III SEM

FITNESS TRAINING & NUTRITION PEL 302

CO 1	Recognize the role of diet in sports performance	BL 1
CO2	Interpret the role of hydration in physical activity.	BL 2
CO 3	Calculate daily caloric requirement and expenditure	BL3
CO4	Analyze the common myths of weight loss	BL4
CO 5	Select a balanced diet for school children	BL 5
CO6	Create and prepare weight management plans	BL6

Introduction to Sports Nutrition

- 1.1 Meaning and Definition of Sports Nutrition
- 1.2 Basic components of Nutrition
- 1.3 Factor to consider for developing nutrition plan
- 1.4 Balance diet and its components, Nutritional deficiencies.
- 1.5 Understanding of malnutrition and nutritional supplements.

Unit-II

Nutrients: Ingestion to energy metabolism

- 2.1 Carbohydrates, Protein, Fat – Meaning, classification and its function
- 2.2 Role of carbohydrates, Fat and protein during exercise
- 2.3 Vitamins, Minerals, Water – Meaning, classification and its function
- 2.4 Role of hydration during exercise
- 2.5 Establishing daily caloric requirement and expenditure

Unit-III

Nutrition and Weight Management

- 3.1 Obesity – Definition, meaning, types and causes of obesity; Health risks associated with Obesity and Solutions for Overcoming Obesity
- 3.2 Concept of BMI (Body mass index), Dieting versus exercise for weight control,
- 3.3 Common Myths about Weight Loss
- 3.4 Concept of weight management in modern era, Factor affecting weight management

Unit-IV

Steps of planning of Weight Management

- 4.1 Determination of desirable body weight
- 4.2 Daily calorie intake and expenditure in weight management
- 4.3 Role of diet and exercise in weight management
- 4.4 Designing diet plan and exercise schedule for weight gain and loss
- 4.5 Balanced diet for Indian School Children.

UNIT V

- 3.1 Metabolism in sports
- 3.2 Food Safety –Factors Affecting Nutrition, Energy – BMR, RDA, Weight and Body Composition of Athletes
- 3.3 Carbohydrate loading, sports supplement
- 3.4 Hydration in Athlete, Fluids and electrolyte replacement

References

1. Jeukendrup, A., & Gleeson, M. (2024). Sport nutrition (4th ed.). Human Kinetics.
<https://www.mysportscience.com/post/our-new-sport-nutrition-book-is-available-from-june-2024>
[mysportscience]([https://www.mysportscience.com/post/our-new-sport-nutrition-book-is-\(https://play.google.com/store/books/details/Sport_Nutrition_Edition_4?id=nMLxEAAAQBAJ&hl=en_US](https://www.mysportscience.com/post/our-new-sport-nutrition-book-is-(https://play.google.com/store/books/details/Sport_Nutrition_Edition_4?id=nMLxEAAAQBAJ&hl=en_US))
2. Brown, M. L., & Barkoukis, H. (2025). Sports nutrition: A handbook for professionals (7th ed.). Academy of Nutrition and Dietetics. <https://www.eatrightstore.org/product-type/books/sports-nutrition-a-handbook-for-professionals-7th-ed> [eatrightstore](<https://www.eatrightstore.org/product-type/books/sports-nutrition-a-handbook-for-professionals-7th-ed>)
3. American College of Sports Medicine. (2024). ACSM's nutrition for exercise science (2nd ed.). Wolters Kluwer.
<https://shop.lww.com/ACSM-s-Nutrition-for-Exercise-Science/p/9781975197162>

[shop.lww](https://shop.lww.com/all-exercise-science/c/trees)

4. Haff, G. G., & Triplett, N. T. (Eds.). (2024). Essentials of strength training and conditioning (5th ed.). Human Kinetics. <https://us.humankinetics.com/products/essentials-of-strength-training-and-conditioning-5th-edition-with-web-resource> [us.humankinetics](https://us.humankinetics.com/blogs/buying-guides/best-fitness-professional-books)
5. Murray, R., Kenney, W. L., & Costill, D. L. (2020). Exercise physiology: The science of exercise training and performance nutrition (3rd ed.). Human Kinetics. [galaxus](https://www.galaxus.ch/en/s18/product/practical-guide-to-exercise-physiology-the-science-of-exercise-training-and-performance-nutrition-en-45790083)
6. Melvin, B. A., & Roberts, J. (2023). Nutrition for sport, exercise, and health (2nd ed.). Human Kinetics. https://books.google.com/books/about/Nutrition_for_Sport_Exercise_and_Health.html?id=rY_iEAAAQBAJ [books.google](https://books.google.com/books/about/Nutrition_for_Sport_Exercise_and_Health.html?id=rY_iEAAAQBAJ).

ENVIRONMENTAL SCIENCE PEL 303 COURSE OUTCOMES

- CO 1 . Identify the need of environmental studies and their importance BL1
- CO 2 Explain how the earth works and how we, as human beings, fit into that. BL 2
- CO 3 Use the knowledge of the ecosystem and its functions in the society. BL 3
- CO4 analyze environmental problems as well as the risks associated with these problems BL 4
- CO5 Relate the values and threats to bio-diversity BL 5
- CO6 Design programs for the conservation of natural resources BL6

UNIT – I

- 1.1 Introduction, concept & dynamics of environment. Role, necessity and scope of environmental science. Biosphere- Its segments and relationship.
- 1.2 Atmosphere: Definition, characteristics & important features. Major layers of atmosphere (brief idea)
- 1.3 Emission of temperature in atmosphere & its effects. Physical and chemical properties of atmosphere.

UNIT – II

- 2.1 Hydrosphere : Introduction and brief idea of major types (fresh and marine) Hydrological cycle.
- 2.2 Physical and chemical properties of water. Biological properties of water.

UNIT – III

- 3.1 Lithosphere : Introduction and basic idea of earth's structure.
- 3.2 Soil component ; mineral matter, organic matter, soil air, soil water, soil organisms. Physical and chemical properties of soil.
- 3.3 Types of soil based on particle size.
- 3.4 Fertility of soil, improvement of soil fertility by natural and artificial methods, use of biofertilizers.
- 3.5 Soil erosion ; introduction, causes & process of soil erosion, control measures of soil erosion.

UNIT – IV

- 4.1 Environmental degradation – meaning, definition, process, causes and types – natural and man induced (brief idea)
- 4.2 Accelerated rate of extreme events by anthropogenic activities. Exploitation of natural resources.

UNIT – V

- 5.1 Consequences of environmental degradation with reference to ; Population explosion. Industrialization and Urbanization. Agriculture Development.
- 5.2 Green House effect meaning, major sources of green house gases and causes. Climate change, Global warming and its effects.

Text & References:

- 1- Erach Bharucha Environmental Studies Latest revised editions 2023–2025
Universities Press / Orient BlackSwan
- 2-Erach Bharucha “Textbook of Environmental Studies for Undergraduate Courses”
Universities Press
- 3-G. Tyler Miller and Scott Spoolman “ Environmental Science” Cengage Learning
2024 edition
- 4- William P. Cunningham and Mary Ann Cunningham “Principles of Environmental Science”
Publisher McGraw Hill Education
- 5-J. Glynn Henry and Gary W. Heinke “Environmental Science and Engineering”
Publisher: Pearson Education

PRACTICALS

PEP 304 Badminton , PEP 305 Volleyball , PEP 306 Football

Unit- I. History of game, Federations and Competitions.

Unit- II. Rules and their interpretation.

Unit- III. Fundamental and Advance skills.

Unit- IV. Equipments and their specification and maintenance.

Unit- V. Layout and maintenance of playfield

BPES IV SEM

KINESIOLOGY PEL 401

Course Outcomes:

- CO1: recall the concepts of Kinesiology and fundamental of Mechanisms. BL 1
 CO2: describe the Laws of motion and their application to sports activities BL2
 CO3: illustrate the anatomical concepts. BL 3
 CO4: classify the body movements and body mechanics. BL4
 CO5: evaluate the motor skills of daily living. BL5
 CO6: apply the knowledge of kinesiology and mechanics of prevention of injury. BL6

Unit I: Introduction

- 1.1 Definition and Brief history.
- 1.2 Aims and objective of Kinesiology.
- 1.3 Role of Kinesiology in Physical Education
- 1.4 Fundamental concepts:
- 1.5 Definition and brief explanation of the following terms and their application to the human body
- 1.6 Axes and Planes, Centre of Gravity, Line of Gravity Base, Starting Positions.

Unit II: Anatomical Concepts

- 2.1 Review of classification of joints and muscles, Terminology of fundamental movements.
- 2.2 Types of Muscle-Contraction (Isometric and Isotonic – concentric, Eccentric), All or None Law, Reciprocal innervations and inhibition group action of muscles and Muscular Co-ordination.
- 2.3 Major characteristics location and action of major joints of shoulder, hip, knee, elbow, forearm and wrist joints. Location and actions of major muscles at these joints.

Unit III: Mechanical Concepts

- 3.1 Concept of mechanical basic of Kinesiology and its application it physical education and Sports.
- 3.2 Definition and brief explanation of following basic terms :
Mass, weight, force, motion, equilibrium, friction, speed, velocity, and momentum.

Unit IV: Kinesiological fundamental of Mechanisms

- 4.1 Simple Mechanics found in the Muscular skeletal system (Leverage and its application to human body.
- 4.2 Laws of motion and their application to sports activities.
- 4.3 Forces :
 - i. Moving one’s own body.

- ii. Giving impetus to external objectives,
- iii. Receiving impetus.
- 4.4 Equilibrium: Role of equilibrium in sports and games.

Unit V: Application

- 5.1 Application of basic mechanical principles to walking, running and jumping.
- 5.2 Motor skills of daily living.
- 5.3 Application of mechanics prevention of injury.

Reference:

1. Muscolino, J. E. (2023). *Kinesiology: The skeletal system and muscle function* (4th ed.). Elsevier. <https://www.elsevier.com/books/kinesiology-muscolino/9780323812764> [evolve.elsevier](<https://evolve.elsevier.com/cs/product/9780323812764?role=student>)
2. Trew, M., & Everett, T. (2025). *Introduction to kinesiology: Studying physical activity* (7th ed.). Human Kinetics. <https://us.humankinetics.com/products/introduction-to-kinesiology-7th-edition-with-hkpropel-access> [us.humankinetics](<https://us.humankinetics.com/products/introduction-to-kinesiology-7th-edition-with-hkpropel-access>)
3. Alderink, G. J., & Ashby, B. M. (2023). *Clinical kinesiology and biomechanics* (1st ed.). Springer. [researchguides.uic](<https://researchguides.uic.edu/kn/books>)
4. Hazari, A., Maiya, A. G., & Nagda, T. V. (2021). *Conceptual biomechanics and kinesiology*. Springer. [researchguides.uic](<https://researchguides.uic.edu/kn/books>)
5. Murray, T., Eldridge, J., & Kohl, H. W. (2019). *Foundations of kinesiology*. McGraw-Hill Education. [researchguides.uic](<https://researchguides.uic.edu/kn/books>)
6. Oatis, C. A. (2016). *Kinesiology: The mechanics and pathomechanics of human movement* (3rd ed.). Lippincott Williams & Wilkins. [researchguides.uic](<https://researchguides.uic.edu/kn/books>)

BPES SEMESTER – IV

BASICS OF SPORTS TRAINING PEL 402

- CO 1 identify the fundamental concepts of the associated terms BL 1
- CO2 Discuss important motor abilities BL2
- CO3 Apply skills to train different fitness components and related planning BL3
- CO 4 Categorize fitness components and how to train them BL4
- CO5 Select appropriate types of periodization in training BL5
- CO6 Create training programs BL 6

Unit - I Sports Training

- 1.1 Definition of terms - Conditioning, Teaching, Coaching and Sports Training.
- 1.2 Importance of sports training
- 1.3 Aim, Tasks and Characteristics of Sports Training.
- 1.4 Principles of Sports Training.

Unit - II Biomotor abilities and training means -

- 2.1 Concept of biomotor abilities & definition of important motor abilities – cardio – respiratory endurance, muscular endurance, strength, speed, power, agility, flexibility, co-ordination, balance.
- 2.2 Training means and methods for developing various fitness components.

Unit - III Warming up and cooling down

- 3.1 Meaning,significance & Types of warming up
- 3.2 General guidelines of warming up
- 3.3 Methods of warming up
- 3.4 Components of warming up
- 3.5 Physiological basis of warming up
- 3.6 Cooling down

Unit - IV Environmental factors and sports performance

- 4.1 Introduction
- 4.2 Variation in temperature
- 4.3 Humidity
- 4.4 Altitude

- 4.5 Sports programme at high altitude
- 4.6 Physiological changes during sports program at high altitude

Unit – V

5.1 Preiodisation

- i. Concept of periodisation and its importance.
- ii. Different periods of training and their duration.
- iii. Types of periodization.
- iv. Aim and content of different training periods.

5.2 Training cycles

References:

Harre, d. principles of training. Haff, G. G. (2024). Scientific foundations and practical applications of periodization. Human Kinetics.

Human Kinetics.

Bompa, T. O., & Buzzichelli, C. (2021). Periodization of strength training for sports (4th ed.).

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Singh, H. (1991). Science of sports training. DVS Publications.

Matveyev, L. P. (1981). Fundamentals of sports training. Progress Publishers.

Journal Articles

Issurin, V. B. (2016). Benefits and limitations of block periodized training approaches to athletes' preparation: A review. *Sports Medicine*, 46(3), 329–338.

<https://doi.org/10.1007/s40279-015-0425-5>

Turner, A. (2011). The science and practice of periodization: A brief review. *Strength and Conditioning Journal*, 33(1), 34–46.

<https://doi.org/10.1519/SSC.0b013e3182079cdb>

Mujika, I., & Padilla, S. (2003). Scientific bases for precompetition tapering strategies. *Medicine & Science in Sports & Exercise*, 35(7), 1182–1187.

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Online Resources

World Health Organization. (2020). WHO guidelines on physical activity and sedentary behaviour. <https://www.who.int>

National Strength and Conditioning Association (NSCA). (2023). Performance training resources. <https://www.nsc.com>

Sports Authority of India. (n.d.). Coaching and training manuals.

<https://sportsauthorityofindia.nic.in>

CORRECTIVES IN PHYSICAL EDUCATION PEL 403

COURSE OUTCOMES

CO1-Recall the various postural deviations BL 1

CO2-Describe the common sports injuries BL 2

CO3 Demonstrate active and passive exercises BL 3

CO4 -Illustrate method of organizing corrective classes BL4

CO5 Evaluate the massage techniques BL 5

CO6- Design new exercises for postural defects BL6

Unit I:

1.1 Meaning and scope of “Correctives” in Physical Education.

1.2 Common postural deviations, their causes and remedial exercises :

i Kyphosis (ii) Scoliosis (iii) Lordosis

(iv) Knock Knees (v) Bowlegs (vi) Flat – feet.

1.3 Method of Organizing corrective Gymnastic Classes and its advantages.

Unit II:

2.1 Scope of Sports injuries in Physical Education

2.2 Prevention of injuries:.

2.3 Common sports injuries and their immediate treatment:

- (i) Contusion (ii) Abrasion (iii) Laceration
- (iv) Sprain (v) Strain (vi) Hematoma
- (vii) Fracture (viii) Dislocation.

Unit III: Rehabilitation

3.1 Definition, aims and objectives and scope of rehabilitation.

3.2 Goals of rehabilitation.

3.3 An introduction of effects and uses of Therapeutic Modalities in rehabilitation.

i Cold Therapy ii Infra Red Radiation

iii Contrast Bath iv Wax Bath Therapy

v Hydrotherapy (Exercises under water).

Unit IV:

4.1 Definition and scope of Therapeutic Exercises in Athletic injuries.

4.2 Classification, Physiological effects and uses of the following:

i Active Exercise (Free, Assisted and Resisted, Movements).

ii Passive Exercises (Relaxed and forced movements)

iii An introduction to progressive resistance exercises methods,

4.3 Techniques of Therapeutic Exercises:

i Muscles Strengthening Exercises.

ii General Principles of Muscle Strengthening.

iii Manual-Muscle testing.

iv Stretching and Mobilizing Exercises

v.. Testing of common soft tissue tightness or contractures and suitable exercises to stretch them.

Unit V: Therapeutic and Sports Massage

5.1 Definition and brief history of massage and remedial exercises.

5.2 General approach to a Massage Manipulation.

5.3 Common Physiological effects of Massage.

5.4 Common Massage Manipulations used in sports and Athletics and their therapeutic uses.

5.5 Contra – indications of massages in general.

5.6 Techniques of Massage for the limbs, back and neck.

Books Recommended:

1. Complete Book On Correctives, Therapeutic Exercises, Sports Injuries And Massage (Textbook And Reference Book) [Paperback] V.D. Bindal And Friends Publications (India) Paperback – 1 January 2020
2. Patel, K., & Wilkinson, N. (2005). Corrective exercise: A practical approach.
3. Sports Injuries Prevention, Treatment and Rehabilitation By Lars Peterson, Per A.F.H. Renstrom, Scott Lynch (2023)
4. Clark, M. A., Lucett, S. C., & Sutton, B. G. (2013). NASM essentials of corrective exercise training (1st ed., revised). Jones & Bartlett.
5. Bahr, R., & Engebretsen, L. (Eds.). (2009). Sports injury prevention (Handbook of sports medicine and science). Wiley-Blackwell.

GAMES (PRACTICAL)

PEP 404 Hockey, PEP 405 Cricket PEP 406 Taekwondo/Judo

Common syllabus for all games/sport

Unit- I. History of game, Federations and Competitions.

Unit- II. Rules and their interpretation.

Unit- III. Fundamental and Advance skills.

Unit- IV. Equipments/dress and their specification and maintenance.

Unit- V. Layout and maintenance of playfields/arena

BPES SEMESTER V

MANAGEMENT OF PHYSICAL EDUCATION PEL 501

COURSE OUTCOMES

CO1-Recall the importance of planning and management in educational institutions BL 1

CO2 –Discuss how equipment can be improvised BL 2

CO3 –Demonstrate the qualities of a good teacher BL 3

CO4-Illustrate the role of the teacher in developing good public relations B 4

CO 5-Evaluate the importance of Intramurals B5

CO 6-Design a budget for a school

Unit I

Introduction

1.1 Meaning , definition,nature and scope of sports management

1.2 Importance of planning and management in educational institutions.

1.3 Principles of planning and management, organization structure:

1.4 i-Scheme of organization in school, college and university.

ii-. Scheme of organization in the district and state education.

Unit II. Facilities and equipment's

2.3 Layout of physical education facilities

2.4 Need and importance of equipment for physical education and sports.

2.5 Equipment for physical education and recreational activities.

2.6 Realistic approach in purchases, procedures.

i.Development of improvised equipments

ii.Storing,store keeping,Care , maintenance, repairs and disposal of equipment.

Unit III

Staff and Leadership

3.1 Head of the Institute, his role in imbuing the spirit of discipline in sports and education.

3.2 Importance of qualified teachers of physical education and recreational leaders

3.3 Qualities of good teachers of physical education

3.4 Student leadership it's importance and limitations

3.5 Staff cooperation

Unit IV

Intramurals and extramural, Public Relations

4.1 Intramural

i importance and planning.

ii Events of Competition,

iii Time and facility factors

. iv Point system, award recognition

4.2 Extramural

i Outcomes of participation (educational)

ii Limitations in participation.

- iii Selection and training of teams.
- iv Participation ,finances and other aspects .

4.3Public Relations

- i.Definition and need.
- ii Principles of public relations in physical education
- iii . Techniques , role of media
- iv Relations with parents , public and other bodies.

Unit V

Office management and budget

- 5.1 Maintenance of records
- 5.2 Office Correspondence , filing and reports .
- 5.3 Physical education budget and it's preparation
- i Income & expenditure (sources)
- ii Maintenance of accounts.
- (f). iii Petty cash.

References:

- 1- Sanjay Sharma “Sports Administration and Management: Principles, Strategies, and Practices” Friends Publications 2023
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- 2- Harley Francis “Management of Physical Education and Sport”
Alexis Press LL 2024
- 3- K. Govindasamy, T. Arun Prasanna, M. Sundar, T.P. Yokesh “Sports Management and Curriculum Design in Physical Education” AkiNik Publications 2020
- 4- R.S. Brar & Rosy Joshi “Physical Education Sports Management Kalyani Publishers
- 5- Kruger Brentt Physical Education: Administration and Management Publisher UK Limited, 2023
BPES SEMESTER V

TESTS AND MEASUREMENT IN PHYSICAL EDUCATION PEL 502

COURSE OUTCOMES

- CO-1 List the different concepts in the subject BL-1
- CO-2 Explain the measures of central tendency BL-2
- CO-3 Use knowledge tests BL-3
- CO-4 Analyze sports skill tests BL-4
- CO-5 Select teacher made tests BL-5

Unit I :Introduction

- 1.1 Meaning of Test, Measurement and Evaluation .Need and Impotence of Test and Measurement and Evaluation in Physical Education.
- 1.2 Meaning of Statistics, Need and Importance of Statistics.
- 1.3 Meaning of Data. Kinds of Data.
- 1.4Frequency Table – Meaning construction and uses .Population and sample. Sampling techniques – importance and principles.

Unit II: Fundamentals of Statistics

- 2.1 Measures of Central Tendency –Meaning uses and calculations from frequency tables.
- 2.2 Measures of variability –meaning uses and calculations.
- 2.3 Graphical representation of Data.
- 2.4 Percentile Meaning, uses and calculations.
- 2.5 Correlations –Meaning, uses and calculations.

Unit III: Test and Evaluation and Construction

- 3.1 Knowledge Test. Importance and Types
- 3.2 Items to be included in objective and subjective knowledge tests
- 3.3 Criteria of test selection

Unit IV: Measurement of Health Status

4.1 Measurement of nutritional status (subjective and objective.)

4.2 Somatotyping- A brief account of kretchmer`s and Sheldon`s body types.

Unit V: Measurement of Social Efficiency, Physical Fitness and Skill Performance

5.1 Sports Skill Tests:

i. Lockhart and McPherson Badminton Test.

ii Johnson Basketball Ability Test.

iii McDonald Soccer Test.

iv. Brady Volleyball Test.

v Dribble and Goal Shooting Test in Hockey.

5.2 Fitness Tests –Roger`s PFI, AAHPERD Youth Fitness Test, Indiana Motor 5 Fitness Test, JCR Test and Kraus –Weber Test.

Reference:

- Dr. M. Sathish, Dr. P. Manikandan, Dr. R. Petchimuthu & Varanasi Janardhana. Test, Measurement and Evaluation in Physical Education. Dr. BGR Publications, 2025.
- Dr. Srikanta Mishra. Measurement and Evaluation in Physical Education (B.P.Ed. Latest Syllabus Based). Sports Publication, 2025.
- Ronald L. Snarr, Will Peveler & Phillip Bishop. Measurement and Evaluation in Physical Activity Applications: Exercise Science, Physical Education, Coaching, Athletic Training, and Health. Taylor & Francis, 2025.
- Dean Burt, Jacky Forsyth, Sam Jones & John Buckley. “Assessing the Reliability and Validity of the Chester Step Test 2 to Predict Aerobic Capacity.” Measurement in Physical Education and Exercise Science, 2025.
- Karin A. Pfeiffer et al. “Reliability and Validity of Physical Activity Measures for Children and Adolescents: The NCCOR Measures Registry Review.” Measurement in Physical Education and Exercise Science, 2025.
- aruppasamy Govindasamy & S. Jayasingh Albert Chandrasekar. Test and Measurement in Physical Education. AkiNik Publications, 2023.
- Dr. C. Uma Devi. Test, Measurement and Evaluation. Royal Book Publishing, 2023.
- Victoria Yaneva & Matthias von Davier (Eds.). Advancing Natural Language Processing in Educational Assessment. Routledge, 2023.
- Thomas J.R., Nelson J.K. & Silverman S.J. Research Methods in Physical Activity. 8th Edition, Human Kinetics, 2022.

SPORTS SPECIALISATION PEL 503 will be offered in a game/sport of the choice of students in 5th semester

CRICKET SPECIALIZATION PEP 503

Course outcomes

- CO-1 Recall about the Historical development and Important tournaments in Cricket. BL-1
- CO-2 Explain the fundamental skills and advanced skills of cricket BL-2
- CO-3 Demonstrate the fundamental and advanced skills of cricket BL-3
- CO-4 Simplify the cricket skills with the help of drills BL-4
- CO-5 Evaluate the performance of cricketer by their performances in the matches. BL-5

1. historical development of the game with special reference to India.
2. Important tournament held at national and International levels and distinguished personalities related to the game.
3. National and International bodies ,controlling the sports/game and their function
4. Fundamental Skills.
 - 4.1 Batting
 - i. Forward defensive stroke
 - ii. Backward defensive stroke.
 - 4.2 Bowling
 - i Simple bowling
 - 4.2 Fielding

- i. Defensive fielding –Orthodox, Unorthodox.
- 4.3 Offensive Fielding .
- 4.4 Catching High Catching.Slip Catching.
- 4.5 Stopping and throwing techniques.
- Wicket keeping technique.

- 5. Advanced Skill
- 5.1 Batting
 - (i) Forward defensive stroke
 - (ii) Backward defensive stroke
 - (iii) Forward off drive
 - (iv) Forward on drive.
- 5.2 Bowling.
 - i Simple bowling techniques.
 - ii Difference between pace.
 - iii Bowling and spin bowling : Off and leg spin bowling.
- 5.3 Fielding : Different techniques of fielding and its importance.
- 5.4 Catching : Different types of catching ,its techniques and importance.
- 5.5 Stopping and throwing : Different techniques and its importance.
- 5.6 Wicket Keeping : Different techniques and their implications.

- 5.6 Rules and their interpretations and duties of officials.

References:

- Micharda ,Barry ,Barry Richard Cricket.London Pelhon Books, 1979.
- Mankar , Vinno, How to play Cricket. Rupa and Company, 1976.
- Greig ,Tony , Greug in Cricket .Bombay, S. Publication, 1975.
- John Snow ,Cricket Fondon : William Dusmomby Publisher Ltd. 1973.

HOCKEY SPECIALIZATION PEP 503

COURSE OUTCOMES

- CO1-Recall the history of hockey in India BL1
- CO2-Describe national awards in hockey BL2
- CO3 –Demonstrate the basic and advanced skills BL3
- CO4-Analyze the rules of hockey BL4
- CO5-Evaluate the drills in hockey BL 5

Unit I –

- 1.1Origin of Hockey
- 1.2 Ancient hockey,
- 1.3 Hockey in modern India.

Unit II - History of Major International and National Hockey Championships

- 2.1World Cup Hockey, Olympic Games, Championship trophy and Asia Cup.
- 2.2Rangaswami Cup, Benton Cup.
- 3.2 National awards in hockey

Unit III - Basic and Advance Skills of Hockey -

- 3.1Rolling, Pushing, Hitting, Stopping.
- 3.2Dribbling, Receiving, Flick, Scoop, Dodging and Tackling.

Unit IV –

- 4.1 Play field &Rules
 - i- Layout and marking of the hockey field
 - ii- Rules of the game of hockey
 - iii-Latest changes in the rules and its impact on the game

Unit V-

5.1 Drills in Hockey. 5.2 Tests in hockey
5.3 Responsibilities of coach and manager
References

1- Claire Mitchell-Taverner "Field Hockey Techniques & Tactics"

REFERENCES

1-Bertagna Joe, The Hockey Coaching Bible, Human Kinetics 2015
2- Dave Chambers, The hockey drill book, Human Kinetics; Second edition, 2016

FOOTBALL SPECIALIZATION PEP 503

CO1. Remember the origin, history and related knowledge of the game.
CO2. Interpret the laws of the game.
CO3. Demonstrate the skills of the game
CO4. Classify the tactics Field Hockey Techniques & Tactics
CO5. Evaluate their skill level
CO6. create new tactics accordingly

Unit - I History of football (National and International)

Unit - II Organization of federation and association
(District, State, National and International)

Unit -III Techniques

3.1 Advance skill and techniques
3.2 General mechanical principals applied to skill techniques

Unit -IV Rules and their interpretations

Unit -V Layout and maintenance of playfields and equipments

REFERENCES

1. Bill Beswick. (2010). Focused for Soccer. 2nd Edition, Human Kinetics.
2. Bobby Moffat. (1985), The Basic Soccer Guide. Collier Books.
3- John Hughson, Handbook of Football Studies Routledge, 2018

BASKETBALL PEP 503

•CO1: To identify Talented players in Basketball.
•CO2: To demonstrate practices for prevention from injuries.
•CO3: To apply the knowledge of the basic rules in the game to reach at the advance level.
•CO4: To analyze the organizational structure of the game
•CO5: To justify the art of coaching and officiating.
•CO6: To generate agility and speed in players.

Unit- I. History of game, Federations and Competitions.

Unit- II. Rules and their interpretation.

Unit- III. Fundamental and Advance skills.

Unit- IV. Equipments and their specification and maintenance.

Unit- V. Layout and maintenance of playfields

KHO-KHO SPECIALIZATION PEP 503

CO1: recognize the basic rules and regulations of kho-kho game.
CO2: paraphrase about ground measurement.
CO3: perform different skills in kho-kho.
CO4: Analyze the responsibilities of the federation.
CO5: judge the difference between different injuries.

Unit I-

- 1.1 Construction & maintenance of ground.
- 1.2 Introduction of Federation & their Committees

Unit II

- 2.1 Rules of the game and their interpretation.
- 2.2 Various Official & their duties for a match

Unit III- Skills of Attacker & Defender

Unit IV-

- 4.1 Qualities and philosophy of Coach
- 4.2 Organization of KHO-KHO Tournaments
- 4.3 Injuries related with a KHO-KHO player & their Immediate Treatment

Unit V-

- 5.1 Lead up activities
- 5.2 Coaching Lessons

REFERENCES

- 1-Verma Kavita, (2015)Text book on Kho Kho, International E Publication
- 2-Naval Kishore, (2016), How to play Kho Kho, Sports Publication, New Delhi 2.
- 3- Khalatkar (2016). Kho-Kho Paperback. Nachiket Prakashan; First Edition, 2016

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PRACTICALS

PEP 504 Weight training ,PEP 505 Handball ,PEP 506 Teaching practice (activity)

Common syllabus for all games/sport

Unit- I. History of game, Federations and Competitions.

Unit- II. Rules and their interpretation.

Unit- III. Fundamental and Advance skills.

Unit- IV. Equipments/dress and their specification and maintenance.

Unit- V. Layout and maintenance of playfields”

TEACHING PRACTICE PEP 506

- Each student teacher is expected to take at least five general lessons .
- Lessons will be supervised by the faculty members.
- All the parts of the lesson should be covered progressively

A. COURSE OUTCOMES

- CO 1-By the end of this lesson, the student will be aware about the research work
- CO 2-The students will be understanding the location of the research for respective.BT
- CO 3-The students will apply to find out area for search
- CO 4-the main to know and analyse the data
- CO5- Students can evaluate themselves and the perform well.
- CO6- The students will be able to create the idea for relevant topics BT.

UNIT I – Introduction

- 1.1 Meaning and Definition of Research
- 1.2 Need, Nature and Scope of research in Physical Education.
- 1.3 Classification of Research, Location of Research Problem, Criteria for selection of a problem, Qualities of a good researcher.

UNIT II – Methods of Research

- 2.1 Descriptive Methods of Research; Survey Study, Case study,
- 2.2 Introduction of Historical Research, Steps in Historical Research,
- 2.3 Sources of Historical Research:
 - i. Primary Data and Secondary Data,
- 2.4 Historical Criticism: Internal Criticism and External Criticism.

UNIT III – Experimental Research

- 3.1 Experimental Research – Meaning, Nature and Importance,
- 3.1 Meaning of Variable, Types of Variables.
- 3.3 Experimental Design - Single Group Design, Reverse Group Design, Repeated Measure Design, Static Group Comparison Design, Equated Group Design, Factorial Design.

UNIT IV – Sampling

- 4.1 Meaning and Definition of Sample and Population.
- 4.2 Types of Sampling; Probability Methods; Systematic Sampling, Cluster sampling, Stratified Sampling. Area Sampling – Multistage Sampling.
- 4.3 Non- Probability Methods; Convenience Sample, Judgement Sampling, Quota Sampling.

UNIT V – Research Proposal and Report

- 5.1 Chapters of Thesis / Dissertation, Front Materials, Body of Thesis – Back materials.
- 5.2 Method of Writing Research proposal, Thesis / Dissertation.
- 5.3 Method of writing abstract and full paper for presenting in a conference and to publish in journals ,
- 5.4 Mechanics of writing Research Report, Footnote and Bibliography writing.

REFERENCE :

1. Jones, I. (2022). Research methods for sports studies (4th ed.). Routledge. (<https://doi.org/10.4324/9781003195467>)
2. Sharma, S. K. (2020). Research process in physical education and sports sciences. Friends Publications (India).
3. Helgerud, J., Høydal, K., Wang, E., & Hoff, J. (2025). Emerging trends in sports science and physical fitness. Integrated Publications.
4. Kumar, R. (2019). Research methodology: A step-by-step guide for beginners (5th ed.). SAGE Publications.
5. Creswell, J. W., & Creswell, J. D. (2023). Research design: Qualitative, quantitative, and mixed methods approaches (6th ed.). SAGE Publications

COURSE OUTCOMES

- CO1-Recall the importance of statistics BL 1
- CO2-Interpret data classification BL 2
- CO3-Apply the different types of statistics in research studies BL 3
- CO4-Analyze the measures of dispersion and scales BL 4
- CO5-Select the suitable tests of significance BL 5

UNIT I – Introduction

- 1.1 Meaning and Definition of Statistics.
- 1.2 Function, need and importance of Statistics.
- 1.3 Types of Statistics. Meaning of the terms, Population, Sample, Data, types of data. Variables; Discrete, Continuous.
- 1.4 Parametric and non-parametric statistics.

UNIT II –

- 2.1 Data Classification, Tabulation and Measures of Central Tendency Meaning, uses and construction of frequency table.
 - 2.2 Meaning, Purpose, Calculation and advantages of Measures of central tendency – Mean, median and mode.
- ## UNIT III – Measures of Dispersions and Scales

3.1 UNIT III

- Meaning, Purpose, Calculation and advances of Range, Quartile, Deviation, Mean Deviation, Standard Deviation, Probable Error.
- 3.2 Meaning, Purpose, Calculation and advantages of scoring scales; Sigma scale, Z Scale, Hull scale

UNIT IV – Probability Distributions and Graphs

- 4.1 Normal Curve. Meaning of probability- Principles of normal curve – Properties of normal curve.
- 4.2 Divergence from normality – Skewness and Kurtosis.
- 4.3 Graphical Representation in Statistics; Line diagram, Bar diagram, Histogram, Frequency Polygon, Ogive Curve.

UNIT V – Inferential and Comparative Statistics

- 5.1 Tests of significance; Independent “t” test, Dependent “t” test – chi – square test, level of confidence and interpretation of data.
 - 5.2 Meaning of correlation – co-efficient of correlation – calculation of co-efficient of correlation by the product moment method and rank difference method.
 - 5.3 Concept of ANOVA and ANCOVA.
- Note : It is recommended that the theory topics be accompanied with practical, based on computer software of statistics.

REFERENCE

1. Dhinu, M. R. (2021). Applied statistics in physical education and sports. Friends Publications (India).
2. Scott, K. (2025). Applied statistics in physical education and sports. Edtech Press. (<https://www.edtechpress.co.uk/applied-statistics-in-physical-education-and-sports/>)
3. Collier, S. (2022). Applied statistics in physical education. Kaufmanpress.
4. Newell, J., Aitchison, T., & Grant, S. (2010). Statistics for sports and exercise science: A practical approach (1st ed.). Routledge. (<https://doi.org/10.4324/9781315847542>)
5. O’Donoghue, P. (2010). Statistics for sport and exercise studies: An introduction. Routledge. (<https://www.routledge.com/Statistics-for-Sport-and-Exercise-Studies-An-Introduction/ODonoghue/p/book/9780415595575>)

BPES VI

BPES VI SEMESTER SPORTS SPECIALIZATION

BADMINTON SPECIALIZATION PEP 603

COURSE OUTCOMES

- CO1-Recall the history of badminton BL1
- CO2-Explain the laws of badminton BL2
- CO3-Apply the terminologies in Badminton BL3
- CO4- Categorize the fundamental skills BL 4
- CO5-Evaluate the systems of play BL5

Unit I - History of Badminton

- 1.1 In India
- 1.2 In Asia
- 1.3 In World

Unit II – Laws of Badminton

- 2.1 Laws of Badminton with interpretations.
- 2.2 Recommendations to technical officials and their duties.
- 2.3 Terminologies in badminton

Unit III – Fixture/Draw in Badminton

- 3.1 Fixture for inter collegiate Badminton Competitions.
- 3.2 University – Zonal and All India University Tournaments

Unit IV – Fundamental Skills

- 4.1 Racket and Shuttle Grips
- 4.2 Serricsand Re hires
 - i Forehand and backhand stoke
- 4.3 smash over and clear drops under arm clear drive and net shot.
- ii Basic footwork

Singles – Systems of Play

- iv. Doubles – Systems of Play
 - a. Front and Back
 - b. Side by Side
 - c. Rotation

Unit V - Basic Tactics Strategy

- warming up
- 5.1 Specific Exercises of warm up and conditioning.
- 5.2 General and Specific warm up.
- 5.3 Fundamental Training drills in Badminton.

References:

- 1-Jake Downey, Badminton for Schools.
- 2- Kumar S. (2010). Badminton skills and rules. Vishalkanishk printers.
- 3-Grice T. (2008). Badminton steps to success (2nded.).Human kinetics

YOGA SPECIALIZATION PEP 603

Course outcomes:

- CO1: To explain the importance of asana, pranayama, mudra, and bandha for Health.
- CO2: To demonstrate different kinds of Asana.
- CO3: To associate the importance of Yoga in wellbeing of own and society.
- CO4: To support the effectiveness/need of yoga as game.
- CO5: To develop systematic research to unfold the hidden benefits of pranayama and meditation as said by the sages.
- CO6: To design the right yoga protocol for different diseases

Unit- I.

History of Yoga, Federations and Competitions.

Unit- II.

Rules and their interpretation.

Unit- III.

Fundamental and Advance skills used in Yoga competitions.

Unit- IV.

Equipment and their specification and maintenance.

Unit- V.

Layout and maintenance of Yoga Hall

ATHLETICS SPECIALIZATION PEP 603

CO1-Remember the anti doping rules BL 1

CO2-Describe training methods BL 2

CO3-Apply the different techniques in teaching skills BL3

CO4-Analyze techniques of throws BL 4

CO5-Select appropriate equipments BL 5

Unit – I : History

1.1Historical review of various athletic events (after 2000)

1.2Historical review of various sports awards to athletes (after 2000)

Unit –II : Federation and Tournaments

2.1Anti – Doping Rules

2.2Prohibited Agents

2.3Procedure of Testing

Unit – III: Training Methods

3.1Training of Speed

3.2Training of Endurance

3.3Training of Strength

Unit – IV: Skills and Techniques

4.1Techniques of shotput

4.2Technique of Discus throw

4.3Technique of Javelin Throw

4.4Techniques of Baton exchange

4.5 Techniques of Hammer Throw and Pole Vault

Unit – V : Playfields and Equipments

5.1Basic rules of Relay Race, Shotput, Discus throw, Javelin Throw, Hammer throw and Pole Vault.

5.2Mechanics of Officiating All throws, Pole Vault and Relay Races.

i. Equipment of throws, pole vault and relay races .

ii. Layouts and maintenances of all Field events.

GYMNASTICS SPECIALIZATION PEP 603

COURSE OUTCOMES

CO1-Recall the history of gymnastics during the middle age BL1

CO2-Explain the organization of the FIG BL2

CO3-Demonstrate the techniques BL3

CO4-Analyze the skills BL4

CO5 Evaluate the purpose of the code of points BL5

Unit-I History of Gymnastics in world:- Earliest History & Middle age.

1.1 Brief History of Greek, Sweden, Denmark Germany, France.

Unit - II

2.1Organization of F.I.G.

2.2Value of gymnastics, how gymnastics can be popularized in India.

Unit – III Training Methods

3.1 Warming up (General and specific)

3.2 Training load.

Unit - IV Techniques:

4.1 Teaching of Advance skills and techniques (at least three on each apparatus)

i Specification of apparatus used for men and women. ii Lay out and maintenance of gymnasium.

Unit - V

5.1 Purpose and goal of code of points

5.2 Evaluation of the Exercise.

REFERENCES

1-Negi, Teach Yourself Women Gymnastics, Sports Publication, 2016.

2-Kunal Negi, Teach Yourself Men Gymnastics, Sports Publication, 2016.

TAEKWONDO PEL 603

Course Learning Outcome:

CO1: outline the rules regulations and competition procedure

CO2: know layouts of competition arenas and marking and dimensions of the court/arena.

CO3: understand organization structure of concerned sports event

CO4: simplify the art of coaching and officiating

CO5: evaluate the learning pattern of the players, to enhance their performance.

Unit- I.

1.1 History of Taekwondo,

1.2 Federations and Competitions.

Unit- II.

2.1 Rules and their interpretation.

2.2 Rules of World Taekwondo Federation (W.T.F)

2.3 Rules Of International Taekwondo Federation (I.T.F)

2.4 Officiating Rules

Unit- III.

3.1 Fundamental and Advance skills used in Taekwondo competitions.

3.2 Open stance

3.3 Close stance

3.4 Poomsae and Kyourgi

Unit- IV.

4.1 Equipment and their specification and maintenance.

4.2 Upper Body (Head Guard, Chest Guard, Arms Guard, Gloves).

4.3 Lower Body (Abdomen Guard, Shin Guard, Foot Guard)

Unit- V.

5.1 Layout and maintenance of Taekwondo Hall .

5.2 Playing Arena

5.3 Hall Specifications

5.4 Dojang etiquettes.

References

1-Hee Yeon, Park ,Tae kwon do, New York, NY: FACTS ON FILE

2-Sang Kim; Taekwondo Step sparring,

3-Scott Shaw; Taekwondo Basics, Tuttle Martial Arts

JUDO PEL 603

COURSE OUTCOMES

CO1: outline the rules regulations and competition procedure

CO2: know layouts of competition arenas and marking and dimensions of the court/arena.

CO3: understand organization structure of concerned sports event

CO4: simplify the art of coaching and officiating

CO5: evaluate the learning pattern of the players, to enhance their performance.

CO6: build self-defense quality.

Unit- I.

1.1 History of Judo

1.2 Federation and Competitions.

Unit- II.

- 2.1 Rules and their interpretation.
 - 2.2 Rules of world judo F
 - 2.3 Officiating Rules
- Unit- III.
- 3.1 Fundamental and Advance skills used in Judo competitions.
 - 3.2 Competition Judging Regulations.
 - 3.3 Information regarding the contest area,
 - 3.4 The technique (waza) judgments,

Unit- IV.

- 4.1 Equipment and their specification and maintenance.
- 4.2 Quality of judogi & Kyu

Unit- V.

- 5.1 Layout and maintenance of Judo Hall.
- 5.2 Playing Arena .
- 5.3 Hall Specification.
- 5.4 Dojang Etiquettes.

REFERENCES

- 1-K.Mifune CANON OF JUDO “Principle and Technique” Seibundo
- 2-Shinkosha. Roosa Mark the teaching of judo: an instructor’s handbook.

BPES SEMESTER VI

GAMES (PRACTICAL)

PEP 604 KHO KHO/KABADDI ,,PEP 605 TENNIS, PEP 606 TEACHING PRACTICE(THEORY)

Common syllabus for all the games/sports

Unit- I. History of game, Federations and Competitions.

Unit- II. Rules and their interpretation.

Unit- III. Fundamental and Advance skills.

Unit- IV. Equipments and their specification and maintenance.

Unit- V. Layout and maintenance of playfields

PEP 606 TEACHING PRACTICE(THEORY)

- Each student teacher is expected to take at least five lessons on topics from the theory subjects
- Lessons will be supervised by the faculty members.
- All the parts of the lesson should be covered progressively

BPES VII SEMESTER

SPORTS BIOMECHANICS PEL 701

COURSE OUTCOMES

CO 1 Recognize the skeletal structure of human body by identifying the origin and insertion of various muscles.
BL1

CO2 Explain the meaning and types of motion BL2

CO 3 .Apply newton’s laws of acceleration in sports activities BL 3

CO4 Illustrate the role of static and dynamic stability in sports skills BL 4

CO5 Justify the qualitative and quantitative analysis of human movements BL5

UNIT I - Introduction

- 1.1 Meaning, nature, role and scope of Applied kinesiology and Sports Biomechanics.
- 1.2 Meaning of Axis and Planes, Dynamics, Kinematics, Kinetics, Statics Centre of gravity.
- 1.3 Line of gravity plane of the body and axis of motion, Vectors and Scalars.

UNIT II - Muscle Action

2.1 Origin, Insertion and action of muscles: Pectoralis major and minor, Deltoid, Biceps, Triceps (Anterior and Posterior), Trapezius.

2.2 serratus, Sartorius, Rectus femoris, Abdominis, Quadriceps, Hamstring, Gastrocnemius.

UNIT III - Motion and Force

3.1 Meaning and definition of Motion. Types of Motion: Linear motion, angular motion, circular motion, uniform motion.

3.2 Principals related to the law of Inertia, Law of acceleration, and law of counter force.

3.3 Meaning and definition of force- Sources of force -Force components .Force applied at an angle - pressure - friction -Buoyancy, Spin - Centripetal force - Centrifugal force.

UNIT IV - Projectile and Lever

4.1 Freely falling bodies -Projectiles -Equation of projectiles stability Factors influencing equilibrium.

4.2 Guiding principles for stability -static and dynamic stability.

4.3 Meaning of work, power, energy, kinetic energy and potential energy. Leverage -classes of lever - practical application.

4.4 Water resistance - Air resistance -Aerodynamics. Note: Laboratory practicals should be designed and arranged for students internally.

UNIT V - Movement Analysis

5.1 Analysis of Movement: Types of analysis: Kinesiological, Biomechanical. Cinematographic.

5.2 Methods of analysis - Qualitative, Quantitative, Predictive.

Note: Laboratory Practicals be designed and arranged internally.

REFERENCE:

1. Deshpande S.H.(2002). Manav Kriya Vigyan - Kinesiology (Hindi Edition) Amravati :Hanuman Vyayam Prasarak Mandal.
2. Hoffman S.J. Introduction to Kinesiology. Human Kinesiology publication In.2005.
3. Steven Roy, & Richard Irvin. (1983). Sports Medicine. New Jersey: Prentice hall. Thomas. (2001). Manual of structural Kinesiology, New York: Me Graw Hill. Uppal A.K. Lawrence Mamta MP (2004) Kinesiology. Delhi, Friends Publication .
4. Uppal, A K. (2004), Kinesiology in Physical Education and Exercise Science, Delhi, Friends publications.
5. Williams M (1982) Biomechanics of Human Motion, Philadelphia; Saunders Co.

BPES VII SEMESTER

SPORTS JOURNALISM AND MASS MEDIA PEL 702

Course Objectives –

CO 1. To introduce the idea of Sport journalism among the student BL1

CO 2. To understand the relationship between sports journalism and Mass Media BL2

CO3. To broaden the dimension of students towards sports journalism and literature BL3

CO 4. To inculcate an interest of Sports journalism and give exposure of Public Relation Officer in media realms BL4

CO 5. To foster creative ways of thinking about Sports and Mass Media BL5

UNIT I Introduction

1.1 Meaning and Definition of Journalism, Ethics of Journalism.

1.2 Canons of journalism-Sports Ethics and Sportsmanship.

1.3 Reporting Sports Events.

1.4 National and International Sports News Agencies.

UNIT II Sports Bulletin

2.1 Concept of Sports Bulletin: Journalism and sports education.

2.2 Structure of sports bulletin - Compiling a bulletin - Types of bulletins.

2.3 Role of Journalism in the Field of Physical Education: Sports as an integral part of Physical Education.

2.4 Sports organization and sports journalism - General news reporting and sports reporting.

UNIT III Mass Media

3.1 Mass Media in Journalism: Radio and T.V. Commentary

- 3.2 Running commentary on the radio - Sports expert's comments.
- 3.3 Role of Advertisement in Journalism. Sports Photography: Equipment-Editing - Publishing.

UNIT IV Report Writing on Sports

- 4.1 Brief review of Olympic Games, Asian Games, Commonwealth Games World Cup,
- 4.2 National Games and Indian Traditional Games.
- 4.3 Preparing report of an Annual Sports Meet for Publication in Newspaper.
- 4.4 Organization of Press Meet.

UNIT -V Journalism

- 5.1 Sports organization and Sports Journalism.
- 5.2 General news reporting and sports reporting.
- 5.3 Methods of editing a Sports report. Evaluation of Reported News.
- 5.4 Interview with and elite Player and Coach.

REFERENCE:

Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi : Surjeet Publications
 Ahiya B.N. Chobra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication
 Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication
 Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press.
 Kannan K (2009) Soft Skills, Madurai: Madurai: Yadava College Publication
 Mohit Chakrabarti (2008): Value Education: Changing Perspective, New Delhi: Kanishka Publication.
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TALENT IDENTIFICATION PEL 703 Unit-I

- CO 1 Recognize the ability to identify talent. BL1
- CO2 Interpret the inherited signs and symptoms that make one adept for excellence in a particular sports. BL2
- CO 3 Demonstrate the method of performing anthropometric assessment BL3
- CO4 Analyze the body types and their relation to sports BL4
- CO5 Evaluate the skill tests for ball games BL5
- CO 6 Develop method for talent identification BL 6

Introduction, Meaning, Concept and scope of talent identification in sports

1. Need and Importance of talent identification.
2. Principles of talent identification.
3. Scope of Talent identification.
4. Role of Physical Education teacher / coach in talent identification.

Unit-II

Understanding Human Body

- 2.1 Genetics and Environment and their role in sports performance.
- 2.2 Body types and their relation to sports.
- 2.3 Basic Anthropometry
- 2.4 Anthropometric assessment and data recording.

UNIT III

Fitness Tests

- 3.1 AAPHER youth fitness test
- 3.2 JCR test
- 3.3 Coopers 12 minute run/walk test
- 3.4 Harvard Step test.

Unit-IV

Skill Tests for talent identification

- 4.1 Skill tests for Ball games
- 4.2 Skill test for Racket games.
- 4.3 Skill test for Athletic abilities
- 4.4 Psychological tests related to sports abilities.

UNIT V Talent identification protocols

- 5.1 Test Matrix for Grassroot Talent
- 5.2 Description of talent identification tests
- 5.3 Sports science evaluation

- 1- Russell K. Athletic talent: from detection to perfection. 7th Technol Sport 1989
2. Bartmus U, Neumann E, de Marées H. The talent problem in sports 7th Sports Med 1987
- 3- Williams AM, Reilly T.. J Talent identification and development in soccer Sport Sci 2000; ,.
- 4 Kansal, D.K. Test and measurement in sports and physical education New Delhi:D.V.S. Publications 1996

PEP 704 Internship , PEP 705 Weight training, PEP 706 Table tennis

The students will go for Internship to schools/fitness centres for 3 months in which:

- 1-Every student has to work on a honorary basis in the institution/ School/fitness centers.
- 2-Evaluated on the basis of Daily Diary preparation, regularity, teaching quality, sincerity, class control and job execution.
- 3- A student is required to bring a certificate on letter head of the Institute / Organization., specifying that he/she has imparted instruction/training/teaching in that organization w.e.f to and his/her work has been excellent/very good/good/satisfactory/poor (The administrator may tick any one of the five alternatives).

PEP 705 Weight training ,PEP 706 Table tennis

Common syllabus for all the games/sports

Unit- I. History of game, Federations and Competitions.

Unit- II. Rules and their interpretation.

Unit- III. Fundamental and Advance skills.

Unit- IV. Equipments and their specification and maintenance.

Unit- V. Layout and maintenance of playfields

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BPES SEMESTER – VIII.

HEALTH EDUCATION PEL 801

COURSE OUTCOMES

CO1: The knowledge would enable the students to recognize the health related issues and the methods to resolve it.

CO2: By the end of this lesson, the student will able to paraphrase about health education related varied diseases and

health related services.

CO3: By the end of this lesson, the student will be able to perform health related services.

CO4: By the end of this lesson, the student will be able to illustrate health goals, health problems and health services.

CO5: By this education, the student will be able to judge different health related issues.

CO6: By the end of this lesson, the student will be able to compose health related services and health care plans.

Unit I

1.1 Health

- i. Dimensions of Health
- ii. Positive Health
- iii. Concept Of Health
- iv. Ecology of Health
- v. Spectrum of Health
- vi. Determinants of Health.

1.2 Health Education

- i. Concept ,objective and scope
- ii. Principles of Health Education.
- iii. Communication in Health Education.
- iv. Public Health Education in attainment of Health Goals.

Unit II

2.1 Health Problems

- i. Communicable diseases
- ii. Nutrition
- iii. Environmental sanitation
- iv. Medical Care
- v. Population

2.2 Organization and Administrative set-up of Health System in India

- i. Central level
- ii. State Level
- iii. District Level.

2.3 Planning of Health Education program

- i. Practice of Health Education Program.
- ii. Steps to be followed in Planning Health Education Programs.

2.4 Child Health programs

Unit III

3.1 Hygiene

- i. The Care of Skin, Mouth, nails, clothing, etc. Importance of rest, sleep and exercise.

3.2 Community Health

- ii. Brief account of Housing water supply ,sewage and refuse disposal .

3.3 School Health Service

- i. History and Health Problems
- ii. Objectives of School Health Service

3.4 Aspects of School Health Service

- i. Health Appraisal ,Remedial measures and follow –up
- ii. Prevention of communicable diseases
- iii. Healthful school environment
- iv. Nutritional services
- v. First –aid and Emergency care
- vi. Mental health,Dental health and Eye health service.
- vii. Health Education for handicapped children.
- viii. School Health record.

Unit IV

4.1 Food and Nutrition

- i. Classification of foods ,Proximate Principles, and Role of various nutrient.

- 4.2 definition of balanced diet ,Principles ,. Balanced diet for Indian Players /School children
i- .Malnutrition and Adulteration of food.

Unit V

- 5.1 National Family Welfare Programme
i. Concept, need, importance, and role of Health Education in family welfare programme.
- 5.2 Sex Education
Concept, need and organization of sex education at school level.
- 5.3 National Health Programs in India
i. NMEP (National Malaria Eradication Programme.)
ii. DDCP (Diarrhoeal Diseases Control Programme.)
iii. NFCP (National Filaria Control Programme.)
iv. National TB Control Programme.
v. STD Control Programme.
- 5.4 International Health Agencies
i. WHO (b) UNICEF (c) UNDP
i. (d) FAO (e) ILO

Reference:

1. Anderson ,C.L. and Chewell , William H. School Health Practice, St. Louis: The C. V. Mosby Company ,1986.
2. Bedi, Yashpal Social and Preventive Medicine ,New Delhi ,Atmaram and Sons ,1985.
3. Goah ,B.N. Hygiene and Public Health ,Calcutta :Scientific Publishing Co.1989.
4. Hanllon, John ,I. Principal of Public Health Administration Saint Louis :The C.V. Mosby Company 1969.
5. Katz, Alfred ,H ,and Felton , Jean Spencer Health and the community .London :Coltton Mc Millan Limited 1965.
6. Park ,J.E. and Park ,K. Preventive and Social medicine Jabalpur : M/s.Banarsidas Bhanot Publishers,1983.

BPES SEMESTER VIII

SPORTS MEDICINE AND PHYSIOTHERAPY PEL 802

COURSE OUTCOMES

- CO1- Recall nature, scope need and importance of sports medicine BL1
CO2 Describe the various kinds of common injuries, preventive measures and their first aid procedure. BL2
CO3-Apply practical and theoretical knowledge and application of sports physiotherapy and rehabilitative exercises. BL3
CO4-Analyze different therapeutic modalities and its safety measures. BL4
CO 5- Contrast ergogenic aids in sports and its ill effect of different drugs and doping.

Introduction to Sports Medicine

- 1.1 Definition, aims and objectives of Sports Medicine
- 1.2 Scope of Sports Medicine
- 1.3 Need and Importance of Sports Medicine
- 1.4 History of Sports Medicine in India and Abroad

UNIT – II

Injuries in Sports

- 2.1 Classification of Injuries, causes and prevention of sports injuries.
- 2.2 Skin and Muscles Injuries (blisters, corns, abrasions, bruises, burns, cuts and lacerations, muscles strain and ruptures)
- 2.3 Tendons Ligaments, Cartilage, bursa and bone Injuries
- 2.4 Common site-specific injuries in sports Common regional injuries and their management (Head & Neck, Face, Thorax, Abdomen, Pelvis, Upper Limbs and Lower Limbs (shoulder, elbow, Wrist, hip, knee and Ankle joints).

UNIT-III

Introduction to Physiotherapy and Therapeutic Exercises and Modalities

- 3.1 Importance of Physiotherapy; Types of Massage
- 3.2 Definition and meaning of therapeutic exercise, Classification, Effects and uses of therapeutic Exercises
- 3.3 Hydrotherapy (Hot and Cold Packs, Whirlpool, Contrast bath), Thermotherapy

3.4 Electrotherapy (Infrared rays – Ultraviolet rays –short wave diathermy – ultrasonic therapy, IFT)

UNIT-IV

Doping in Sports

4.1 Ergogenic aids in Sports

4.2 National and International Anti-doping organization and their role

4.3 Classification and types of drugs banned by WADA and NADA, Side effects of drugs

4.4 Blood doping, Types of Blood Doping herapeutic Exercises

UNIT-V: Massage

□ Introduction and Definition.

□ Effects of Massage: Physical, Physiological and Psychological.

□ General contraindications of Massage

□ Classification of Massage Techniques and their application, effects and uses:

▪ Superficial Stroking

▪ Effleurage

▪ Kneading

▪ Petrissage

▪ Friction

▪ Percussion

▪ Vibratory Technique

SUGGESTED READINGS:

REFERENCES

1. Armstrong and Tucker, Injuries in sports (London: Staples press, 1964).

2-. David, R. M. (2005). Drugs in sports, (4th Ed).Routledge Taylor and Francis Group.

3. Hunter, M. D. (1979). A dictionary for physical educators.

4-. Jeyaprakash, C. S., Sports Medicine, J.P. Brothers Pub., New Delhi, 2003 >

5-Bindal, V.D. (2010). Corrective Physical Education, Therapeutic Exercise and Rehabilitation. Agra: Associated Publishing House.

BPES VIII SEMESTER

CURRICULUM DESIGNS PEL 803

COURSE LEARNING OUTCOMES

- CO1Remember the concept and the need for curriculum in schools BL1
- CO2 Describe the social, cultural and the psychological bases of curriculum development BL2
- CO3 Apply the principles employed in sequencing the school curriculum and the syllabus at different levels BL3
- CO 4Classify the various learning sites and resources operating as curriculum supports in the system BL4
- CO5 Evaluate the role of teachers in operationalizing the curriculum bl5
- CO 6 Modify the approaches adopted to evaluate and revise the curriculum at different levels BL6

COURSE CONTENT

Unit I: Introduction

- Meaning of curriculum, different perspectives of curriculum
- Need for curriculum in schools, meaning and significance of core curriculum;
- Relationship between curriculum frame work, curriculum, syllabus and textbooks
- Types of curriculum: subject-centered, activity-centered, environmental centered, community-centered and their relevance.

Unit II: Foundations of Curriculum Development

- Forms of knowledge and structure of a discipline, and their characterization in Different school subjects
- Different perspectives on learning (behaviorists, cognitivists and social constructivists) and their implications to curriculum development
- Socio-cultural bases: Importance of society-school relationships; cultural, social ethos, social

changes, knowledge explosion , value transitions, multiculturalism, multilingual aspects, societal aspirations

Unit III: Curriculum Planning and Implementation

- Change in emphasis and approach to curriculum: learner and activity centered and constructivist based-Curriculum embedded in real life contexts leading to knowledge construction; applicability and relevance to school curriculum planning.
- Brief Review of National curriculum frameworks–2005.
- Principles of planning: Determining objectives, understanding the learner, Selecting material for instruction, Curriculum implementation, selecting methods of teaching, evaluation and Follow-up.
- Curriculum implementation: Operationalizing curriculum into learning situations; Planning and converting curriculum into syllabus and curriculum engagement activities.

Unit IV: Curriculum Evaluation

- Meaning and importance of curriculum evaluation
- Process of curriculum evaluation and renewal: collecting opinions and views from teachers, students and parents about textbooks and other materials.
- Data collection from achievement tests and periodical assessments, teachers' experiences in transacting every unit;
- Identification of non-attainability of curricular goals/objectives and learning outcomes; constraints faced in implementing the curriculum by school, teachers and other stakeholders

SUGGESTED READINGS:

- Dewey, John(1959):The Child and the Curriculum, Chicago ,the University of Chicago Press.
- Giroux, Henry et.al (1981): Curriculum and Instruction: Alternatives in Education by MC Cutchan Public Corp, Printed in USA.
- Kumar, Krishna and Malla Reddy (1977). Curriculum Development and Educational Technology.

Dissertation PEP 804 :Students will write a thesis after selecting a appropriate problem under the guidance of the faculty .

Coaching lessons PEP 804

The students of BPES – VIII Semester need to develop proficiency in taking coaching lesson in selected game specialization. In view of this, the students shall be provided with advance mechanism of coaching in selected game specialization. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class time they are going to handle at school and college level. Each student teacher is expected to take at least five lessons during the course of the sixth semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these coaching lessons, all the parts of the lesson covered progressively.
