

THE UNIVERSITY OF BURDWAN



Syllabus for 3-Year Degree / 4-Year Honours in PHYSICAL EDUCATION AND SPORTS

**Under Curriculum and Credit Framework for Under-
Graduate Programmes (CCFUP) as per NEP-2020
*w.e.f. 2023-2024***

Semester wise and Course wise Distribution of Credit & Marks under CCFUP as per NEP- 2020

Semester	Course Type	Code	Name of the Course	Credit	L-T-P	Marks	Marks Dist. Th.-Pr.-IA
I	Major/ Core Course	PEDS 1011	Foundation and History of Physical Education and Sports Science	4	3-0-1	75	40-20-15
	Minor Course	--- 1021	(Course of any allied subject for the students with Major Physical Education and Sports)	4		75	
		PEDS 1021	Introduction of Physical Education and Sports (For the students without Physical Education and Sports as Major)	4	3-1-0	75	60-0-15
	Multi/ Interdisciplinary	PEDS 1031	Fitness and Wellness (For the students other than Physical Education and Sports as Major or Minor)	3	2-1-0	50	40-0-10
	Ability Enhancement Course (AEC)	--- 1041	Arabic/ Bengali/ Hindi/ Sanskrit/ Santali/ Urdu or EquvInt. Course from SWAYAM or UGC recognized other Platform	2	2-0-0	50	40-0-10
	Skill Enhancement Course (SEC)	PEDS 1051	Exercise and Sports for Elementary Students	3	0-0-3	50	0-40-10
	Value Added Course	CAV 1061	Environmental Science/ Education	4	3-0-1	100	60-20-20
Total				20		400	
II	Major/ Core Course	PEDS 2011	Health and Wellness Education	4	3-0-1	75	40-20-15
	Minor Course	--- 2021	(Course of any allied subject for the students with Major Physical Education and Sports)	4		75	
		PEDS 2021	Health and Life Style Management (For the students without Physical Education and Sports as Major)	4	3-1-0	75	60-0-15
	Multi/ Interdisciplinary	PEDS 2031	Yoga Vyayama (For the students other than Physical Education and Sports as Major or Minor)	3	0-0-3	50	0-40-10
	Ability Enhancement Course (AEC)	ENGL 2041	Functional English or EquvInt. Course from SWAYAM or UGC recognized other Platform	2	2-0-0	50	40-0-10
	Skill Enhancement Course (SEC)	PEDS 2051	Sports Massage	3	0-0-3	50	0-40-10
	Value Added Course	CAV 2061	Understanding India	4	4-0-0	100	80-0-20
			Digital and Technological Solution			100	
			Health and Wellness, Yoga Education, Sports and Fitness		3-0-1	100	60-20-20
Total				20		400	
Grand total (Semester I - II)				40		800	
Students exiting the programme after securing 40 credits will be awarded UG Certificate in the relevant Discipline / Subject provided they secure additional 4 credits in skill based vocational courses offered during summer term of second semester.							

Semester	Course Type	Code	Name of the Course	Credit	L-T-P	Marks	Marks Dist. Th.-Pr.-IA
III	Major/ Core Course	PEDS 3011	Exercise and Sports Management	5	4-1-0	75	60-0-15
	Major/ Core Course	PEDS 3012	Fitness and Gym Exercise	5	0-0-5	75	0-60-15
	Minor Course (Vocational Education & Training)	MSR 3021	Medical Sales representative	4	3-1-0	75	60-0-15
		HRM 3021	Human Resource Management				
		RSA 3021	Retail Sales Associate				
	Multi/ Interdisciplinary	PEDS 3031	Musical Exercise	3	0-0-3	50	0-40-10
	Ability Enhancement Course (AEC)	--- 3041	Arabic/ Bengali/ Hindi/ Sanskrit/ Santali/ Urdu or EquvInt. Course from SWAYAM or UGC recognized other Platform	2	2-0-0	50	40-0-10
	Skill Enhancement Course (SEC)	PEDS 3051	Gymnastics	3	0-0-3	50	0-40-10
Total				22		375	
IV	Major/ Core Course	PEDS 4011	Yoga Education	5	4-1-0	75	60-0-15
	Major/ Core Course	PEDS 4012	Yoga and Naturopathy	5	0-0-5	75	0-60-15
	Major/ Core Course	PEDS 4013	Self Defense	5	0-0-5	75	0-60-15
	Minor Course	PEDS 4021	Trends in Yoga and Sports Science	4	3-0-1	75	40-20-15
		--- 4021	(Other than Physical Education and Sports)	4		75	
	Ability Enhancement Course (AEC)	ENGL 4041	Language & Creativity or EquvInt. Course from SWAYAM or UGC recognized other Platform	2	2-0-0	50	40-0-10
Total				25		425	
Grand total (Semester I - IV)				87		1600	
Students exiting the programme after securing 40 credits will be awarded UG Certificate in the relevant Discipline / Subject provided they secure additional 4 credits in skill based vocational courses offered during summer term of fourth semester.							

Semester	Course Type	Code	Name of the Course	Credit	L-T-P	Marks	Marks Dist. Th.-Pr.-IA
V	Major/ Core Course	PEDS 5011	Exercise and Sports Physiology	5	4-1-0	75	60-0-15
	Major/ Core Course	PEDS 5012	Ball Games- I	5	0-0-5	75	0-60-15
	Major/ Core Course	PEDS 5013	Track and Field	5	0-0-5	75	0-60-15
	Minor Course (Vocational Education & Training)	MSR 5021	Medical Sales Representative	4	3-1-0	75	60-0-15
		HRM 5021	Human Resource Management				
		RSA 5021	Retail Sales Associate				
	Internship	INT 5081		2		50	00-50 -00 (Project/ Field Diary: 30 + Viva-voce: 20)
Total				21		350	
VI	Major/ Core Course	PEDS 6011	Kinesiology and Sports Biomechanics	4	4-0-0	75	60-0-15
	Major/ Core Course	PEDS 6012	Science of Sports Training	4	4-0-0	75	60-0-15
	Major/ Core Course	PEDS 6013	Indian Games and Racket Sports	4	0-0-4	75	0-60-15
	Major/ Core Course	PEDS 6014	Ball Game- II	4	0-0-4	75	0-60-15
	Minor Course (Vocational Education & Training)	MSR 6021	Medical Sales Representative	4	3-1-0	75	60-0-15
		HRM 6021	Human Resource Management				
		RSA 6021	Retail Sales Associate				
Total				20		375	
Grand total (Semester I - VI)				128		2325	

Semester	Course Type	Code	Name of the Course	Credit	L-T-P	Marks	Marks Dist. Th.-Pr.-IA
VII	Major/ Core Course	PEDS 7011	Research Methodology	6	5-1-0	75	60-0-15
	Major/ Core Course	PEDS 7012	Test and Measurement in Exercise and Sports	6	5-0-1	75	40-20-15
	Major/ Core Course	PEDS 7013	Application of Statistics in Physical Education and Sports	6	5-1-0	75	60-0-15
	Major/ Core Course	PEDS 7014	Educational Leadership Camp / Visit Standard Sports Meet/ Study Tour/ Adventure Sports	6	0-0-6	75	0-60-15
	Minor Course	PEDS 7021	Rhythmic and Recreational Physical Education	4	0-0-4	75	0-60-15
	Initiation of Research Project / Dissertation						
Total				28		375	
VIII For UG Honours With Research Project/ Dissertation	For UG Honours With Research Project/ Dissertation						
	Major/ Core Course	PEDS 8011	Sports Sociology and Psychology	6	5-1-0	75	60-0-15
	Minor Course	PEDS 8021	Badminton & Throwball	4	0-0-4	75	0-60-15
	Research Project/ Dissertation	PEDS 8091	Research Project/ Dissertation	12	0-0-12	225	Seminar Presentation, Preparation & Submission of Research Project/ Dissertation- 135+ Viva- 90
Total				22		375	
OR							
VIII For UG Honours	For UG Honours						
	Major/ Core Course	PEDS 8011	Sports Sociology and Psychology	6	5-1-0	75	60-0-15
	Major/ Core Course	PEDS 8012	Common Sports Injury Management	4	3-1-0	75	60-0-15
	Major/ Core Course	PEDS 8013	Recreation and Inclusive Sports	4	3-1-0	75	60-0-15
	Major/ Core Course	PEDS 8014	Sports Officiating and Coaching	4	3-1-0	75	60-0-15
	Minor Course	PEDS 8021	Badminton & Throwball	4	0-0-4	75	0-60-15
Total				22		375	
Total (Semester VII-VIII)				50		750	
Grand total (Semester I-VIII)				178		3075	

SEMESTER- I**Course Title: Foundation and History of Physical Education and Sports Science****Course Type: Major** (Code: PEDS1011)**Credit: 4** (Lect.- 3 & Pract.- 1)**Full Marks- 75** (Theory: 40, Practical: 20 & Internal Assessment: 15)**Objectives:**

- i. Students may understand the historical development and the concept of Physical Education, Exercise and Sports Science
- ii. Students may learn the Philosophical, Biological, Psychological and Sociological foundation of this subject

Outcomes:

- i. Students may know the strong background of Physical Education, Exercise and Sports Science
- ii. This subject may generate vibration for further development of Physical Education, Exercise and Sports Science

UNIT- 1: Concept of Physical Education and Sports Science L- 5H

- 1.1 Meaning, Definition and Scope of Physical Education and Sports Science
- 1.2 Concept of Play, Games and Sports
- 1.3 Aim, Objectives and Importance of Physical Education and Sports Science
- 1.4 Modern concept of Physical Education and Sports Science

UNIT- 2: Historical Development of Physical Education and Sports Science L- 10H

- 2.1 Ayurveda: Concept of human, Yoga, Vyayama (exercise) and Krida (Sports)
- 2.2 Historical development of Physical Education and Sports in India of Pre-Independence period
- 2.3 Historical development of Physical Education and Sports in India of Post-Independence period
- 2.4 National Sports Awards: Major Dhyani Chand Khel Ratna Award, Arjuna Award, Dronacharya Award

UNIT- 3: Olympic Movement, Commonwealth and Asian Games L- 15H

- 3.1 Ancient Olympic Games
- 3.2 Modern Olympic Games: History, Objectives, Motto, Flag, Emblem, Torch, Oath, Olympic Village, Opening, Victory and Closing Ceremony
- 3.3 Historical background of Commonwealth and Asian Games
- 3.4 Analysis of Indian Sports performance: Olympic, Commonwealth and Asian Games

UNIT- 4: Foundation & Principles of Physical Education and Sports Science L- 15H

- 4.1 Philosophical Foundation in Physical Education and Sports: Idealism, Realism, Pragmatism and Naturalism
- 4.2 Biological Principles: Meaning and definition of growth and development. Factors affecting growth and development. Differences of growth and development. Principles of growth and development. Age: Chronological age, Anatomical age, Physiological age and Mental age
- 4.3 Psychological Foundation- Meaning and definition of Psychology and Sports Psychology. Importance of Psychology and Sports Psychology in Physical Education and Sports Science
- 4.4 Sociological Foundation: Meaning and definition of Sociology, Society and Socialization. Role of games and sports in National and International integration

FIELD PRACTICAL (Preparation of Record Book is Compulsory) P-30H

1. Physical Fitness Test through AAHPERD (10 Marks)
2. Preparation of record book of Indian Sports performance: Olympic, Commonwealth and Asian Games (10 Marks)

BOOKS FOR REFERENCE

1. Singh, A. (2000) *Essentials of Physical Education*, Kalyani Publishers, Ludhiana, Punjab
2. Kamlesh, M. L. (2015). *Physical Education: Facts and Foundations* (2nd ed.). Friends Publications, New Delhi
3. Uppal, A. K. (2016). *Physical Education and Health Education* (Revised ed.). Friends Publications, New Delhi
4. Singh, A. (2012). *Foundations of Physical Education*. Kalyani Publishers, New Delhi
5. Deshpande, S. H. (2014). *Physical Education in India*. Amol Publications, New Delhi
6. Pandey, P. (2013). *Modern Concepts of Physical Education*. Khel Sahitya Kendra. New Delhi
7. Sharma, V. K. (2010). *Health and Physical Education*. Saraswati House, New Delhi

SEMESTER- I**Course Title: Introduction of Physical Education and Sports****Course Type: Minor** (Code: PEDS1021)**Credit: 4** (Lect.- 3 & Tuto.- 1)**Full Marks- 75** (Theory: 60 & Internal Assessment: 15)**Objectives:**

- i. To educate the students about Physical Education and sports
- ii. To improve the students understanding about the benefit Physical Education and sports

Outcomes:

- i. Students may be interested for participating in Physical Education and sports
- ii. Students may convince others for exercise and sports participation

UNIT- 1: Concept of Physical Education and Sports Science**L- 15H**

- 1.1 Meaning, Definition and Scope of Physical Education and Sports Science
- 1.2 Concept of Play, Games and Sports
- 1.3 Aim, Objectives and Importance of Physical Education and Sports Science
- 1.4 Modern concept of Physical Education and Sports Science

UNIT- 2: Historical Development of Physical Education and Sports Science**L- 15H**

- 2.1 Historical development of Physical Education and Sports in India of Pre-Independence period
- 2.2 Historical development of Physical Education and Sports in India of Post-Independence period
- 2.3 National Sports Awards: Major Dhyan Chand Khel Ratna Award, Arjuna Award, Dronacharya Award
- 2.4 Sports schemes in India

UNIT- 3: Olympic Movement, Commonwealth and Asian Games**L- 15H**

- 3.1 Ancient Olympic Games
- 3.2 Modern Olympic Games: History, Objectives, Motto, Flag, Emblem, Torch, Oath, Olympic Village, Opening, Victory and Closing Ceremony
- 3.3 Historical background of Commonwealth and Asian Games
- 3.4 Indian Sports performance: Olympic, Commonwealth and Asian Games

UNIT- 4: Foundation & Principles of Physical Education and Sports Science**L- 15H**

- 4.1 Biological Principles: Meaning and definition of growth and development. Factors affecting growth and development. Differences of growth and development. Principles of growth and development.
- 4.2 Age: Chronological age, Anatomical age, Physiological age and Mental age
- 4.3 Psychological Foundation- Meaning and definition of Psychology and Sports Psychology. Importance of Psychology and Sports Psychology in Physical Education and Sports Science
- 4.4 Sociological Foundation: Meaning and definition of Sociology, Society and Socialization. Role of games and sports in National and International integration

BOOKS FOR REFERENCE

1. Singh, A. (2000) *Essentials of Physical Education*, Kalyani Publishers, Ludhiana, Punjab
2. Kamlesh, M. L. (2015). *Physical Education: Facts and Foundations* (2nd ed.). Friends Publications, New Delhi
3. Uppal, A. K. (2016). *Physical Education and Health Education* (Revised ed.). Friends Publications, New Delhi
4. Singh, A. (2012). *Foundations of Physical Education*. Kalyani Publishers, New Delhi
5. Deshpande, S. H. (2014). *Physical Education in India*. Amol Publications, New Delhi
6. Pandey, P. (2013). *Modern Concepts of Physical Education*. Khel Sahitya Kendra. New Delhi
7. Sharma, V. K. (2010). *Health and Physical Education*. Saraswati House, New Delhi

SEMESTER- I**Course Title: Fitness and Wellness****Course Type: Multi/Interdisciplinary** (Code: PEDS1031)**Credit: 3** (Lect.- 2 & Tuto.- 1)**Full Marks- 50** (Theory: 40 & Internal Assessment: 10)**Objectives:**

- i. To educate students about physical fitness, mental fitness and wellness
- ii. To motivate students for maintaining own fitness and wellness

Outcomes:

- i. Students may accept fitness and wellness programme in daily life
- ii. They may lead healthy lifestyle and convince others

UNIT- 1: Health Related Physical Fitness**L- 15H**

- 1.1 Concept of Fitness and Physical Fitness
- 1.2 Concept of Health Related Physical Fitness
- 1.3 Components of Health related Physical Fitness
- 1.4 Assessment Techniques of Health related Physical Fitness

UNIT- 2: Performance Related Physical Fitness**L- 15H**

- 2.1 Modern concept of Physical Fitness
- 2.2 Concept of Performance Related Physical Fitness
- 2.3 Components of Performance related Physical Fitness
- 2.4 Assessment Techniques of Performance related Physical Fitness

UNIT- 3: Wellness**L- 15H**

- 3.1 Concept of Wellness
- 3.2 Aim and Objectives of Wellness
- 3.3 Components of Wellness
- 3.4 Importance of Wellness in the Modern Society

BOOKS FOR REFERENCE

1. Singh, A. (2000) *Essentials of Physical Education*, Kalyani Publishers, Ludhiana, Punjab
2. Corbin, C. B., & Lindsey, R. (2019). *Concepts of Physical Fitness: Active Lifestyles for Wellness* (18th ed.). New York: McGraw-Hill
3. Fahey, T. D., Insel, P. M., & Roth, W. T. (2020). *Fit & well: Core Concepts and Labs in Physical Fitness and Wellness* (14th ed.). New York: McGraw-Hill
4. Hoeger, W. K., & Hoeger, S. A. (2018). *Principles and Labs for Fitness and Wellness* (13th ed.). Boston: Cengage Learning
5. Kansal, D. K. (2012). *A Practical Approach to Physical Education*. S. Chand Publishing, New Delhi

SEMESTER- I**Course Title: Exercise and Sports for Elementary Students****Course Type: Skill Enhancement Course** (Code: PEDS1051)**Credit: 3** (Practical: 3)**Full Marks- 50** (Practical: 40 & Internal Assessment: 10)**Objectives:**

- i. Prepare the students to organise exercise & sports for elementary school children
- ii. Students may develop self-confidence about nurturing elementary students

Outcomes:

- i. Students may get jobs in nursery, kindergarten, play school and elementary school
- ii. Students may start their own play school in their area

Unit- 1: Exercise for Elementary Students**P- 30H**

- 1.1 Rhymes Exercise
- 1.2 Mimicking Exercise
- 1.3 Partner Exercise

Unit- 2: Recreational Games for Elementary Students**P- 30H**

- 2.1 Recreational Games- Individual
- 2.2 Recreational Games- Group
- 2.3 Recreational Games- with Teacher / Parents

Unit- 3: Sports for Elementary Students**P- 30H**

- 3.1 Fundamental Movement Sports
- 3.2 Low Level Individual Sports
- 3.3 Low Level Group Sports

BOOKS FOR REFERENCE

1. Gallahue, D. L., & Ozmun, J. C. (2012). *Understanding Motor Development: Infants, Children, Adolescents, Adults* (7th ed.). New York: McGraw-Hill
2. Graham, G., Holt/Hale, S. A., & Parker, M. (2013). *Children Moving: A Reflective Approach to Teaching Physical Education* (9th ed.). New York: McGraw-Hill
3. Pangrazi, R. P., & Beighle, A. (2019). *Dynamic Physical Education for Elementary School Children* (19th ed.). New York: Pearson
4. Sharma, O. P. (2010). *Teaching Methods in Physical Education*. Khel Sahitya Kendra, New Delhi
5. Singh, A., & Devi, R. (2015). *Physical Education for Elementary Teachers*. Friends Publications, New Delhi

SEMESTER- II**Course Title: Health and Wellness Education****Course Type: Major** (Code: PEDS2011)**Credit: 4** (Lect.- 3 & Pract.- 1)**Full Marks- 75** (Theory: 40, Practical: 20 & Internal Assessment: 15)**Objectives:**

- i. To educate students about good and bad health habits
- ii. To prepare students about wellbeing and wellness culture

Outcomes:

- i. Mental set up would be ready for maintaining good health habits
- ii. Students may follow wellness guidelines

Unit- 1: Health and Health Education**L- 9H**

- 1.1 Concept, Definition, Spectrum and Dimension of Health
- 1.2 Definition, aim, objectives, Importance and principles of Health Education
- 1.3 Health Agencies: World Health Organization (WHO), United Nations Educational Scientific and Cultural Organization (UNESCO)
- 1.4 School Health Program: Health Service, Health Instruction, Health Supervision, Health appraisal and Health Record

Unit- 2: Health Problems in India- Prevention and Control**L- 12H**

- 2.1 Communicable Diseases: Malaria, Dengue and COVID-19
- 2.2 Life style Diseases (Hypokinetic): Obesity and Diabetes
- 2.3 Life style Diseases (Hyperkinetic): Hypertension and Psychological Disorder- Stress
- 2.4 Postural Disorders- Spine: Kyphosis, Lordosis, Scoliosis; Leg: Bow leg, Knock knee, Flat foot

Unit- 3: Diet and Nutrition**L- 12H**

- 3.1 Concept of diet; Meaning, definition and role of Nutrition
- 3.2 Macro nutrients and micro nutrients
- 3.3 Role of macro and micro nutrients for exercise
- 3.4 Concept of Balance Diet: Factors and Importance

Unit- 4: Physical Fitness and Wellness**L- 12H**

- 4.1 Concept of Physical Fitness
- 4.2 Components of Health related and Performance related Physical Fitness
- 4.3 Concept of Wellness
- 4.4 Components of Wellness

FIELD PRACTICAL (Preparation of Record Book is Compulsory)**P- 30H**

1. Physical Fitness Test through AAHPERD (10 Marks)
2. Measurement of Health related physical fitness (10 Marks)

BOOKS FOR REFERENCE

1. Guyton, A. C., & Hall, J. E. (2020). *Textbook of Medical Physiology* (14th ed.). Philadelphia, PA: Elsevier
2. Tortora, G. J., & Derrickson, B. H. (2017). *Principles of Anatomy and Physiology* (15th ed.). Hoboken, NJ: John Wiley & Sons
3. McArdle, W. D., Katch, F. I., & Katch, V. L. (2015). *Exercise Physiology: Nutrition, Energy, and Human Performance* (8th ed.). Philadelphia, PA: Lippincott Williams & Wilkins
4. Fox, E. L., Bowers, R. W., & Foss, M. L. (2018). *The Physiological basis of Physical Education and Athletics* (5th ed.). Dubuque, IA: WCB/McGraw-Hill
5. Uppal, A. K., & Gautam, G. P. (2008). *Health and Physical Education*. Friends Publications, New Delhi
6. Singh, A. (2012). *Essentials of Physical Education*. Kalyani Publishers, New Delhi
7. Sharma, V. K. (2010). *Health and Physical Education*. New Delhi: Saraswati House Pvt. Ltd.
8. Wilmore, J. H., Costill, D. L., & Kenney, W. L. (2012). *Physiology of Sport and Exercise* (5th ed.). Champaign, IL: Human Kinetics

SEMESTER- II**Course Title: Health and Life Style Management****Course Type: Minor** (Code: PEDS2021)**Credit: 4** (Lect.- 3 & Tuto.- 1)**Full Marks- 75** (Theory: 60 & Internal Assessment: 15)**Objectives:**

- i. Students may understand the modern life and its positive management skill
- ii. Students will be educated about lifestyle diseases

Outcomes:

- i. Students may repair flaws in lifestyle and advice others
- ii. Students may start practicing positive lifestyle skills

Unit- 1: Health and Health Education**L- 15H**

- 1.1 Concept, Definition, Spectrum and Dimension of Health
- 1.2 Definition, aim, objectives, Importance and principles of Health Education
- 1.3 Health Agencies: World Health Organization (WHO), United Nations Educational Scientific and Cultural Organization (UNESCO)
- 1.4 School Health Program: Health Service, Health Instruction, Health Supervision, Health appraisal and Health Record

Unit- 2: Metabolic Disorders and Lifestyle Management**L- 15H**

- 2.1 Life style Diseases (Hypokinetic): Obesity and Diabetes
- 2.2 Life style Diseases (Hyperkinetic): Hypertension and Psychological Disorder- Stress
- 2.3 Postural Disorders- Spine: Kyphosis, Lordosis, Scoliosis; Leg: Bow leg, Knock knee, Flat foot
- 2.4 Hygiene: Personal and Community hygiene, Hygienic practices for all seasons and incimate weather

Unit- 3: Diet and Nutrition**L- 15H**

- 3.1 Concept, meaning, definition, Nutrition and health for all ages
- 3.2 Macro nutrients and micro nutrients
- 3.3 Role of macro and micro nutrients for exercise
- 3.4 Balance Diet: Factors and Importance

Unit- 4: Physical Fitness and Wellness**L- 15H**

- 4.1 Concept of Physical Fitness
- 4.2 Components of Health related and Performance related Physical Fitness
- 4.3 Concept of Wellness
- 4.4 Components of Wellness

BOOKS FOR REFERENCE

1. Tortora, G. J., & Derrickson, B. H. (2017). *Principles of Anatomy and Physiology* (15th ed.). Hoboken, NJ: John Wiley & Sons
2. McArdle, W. D., Katch, F. I., & Katch, V. L. (2015). *Exercise Physiology: Nutrition, Energy, and Human Performance* (8th ed.). Philadelphia, PA: Lippincott Williams & Wilkins
3. Fox, E. L., Bowers, R. W., & Foss, M. L. (2018). *The Physiological basis of Physical Education and Athletics* (5th ed.). Dubuque, IA: WCB/McGraw-Hill
4. Astrand, P.-O., Rodahl, K., Dahl, H. A., & Stromme, S. B. (2003). *Textbook of Work Physiology: Physiological Bases of Exercise* (4th Ed.). Champaign, IL: Human Kinetics
5. Pal, G. K., & Pal, P. (2017). *Textbook of Practical Physiology* (4th ed.). Universities Press, Hyderabad
6. Uppal, A. K., & Gautam, G. P. (2008). *Health and Physical Education*. Friends Publications, New Delhi
7. Singh, A. (2012). *Essentials of Physical Education*. Kalyani Publishers, New Delhi
8. Sharma, V. K. (2010). *Health and Physical Education*. New Delhi: Saraswati House Pvt. Ltd.
9. Wilmore, J. H., Costill, D. L., & Kenney, W. L. (2012). *Physiology of Sport and Exercise* (5th ed.). Champaign, IL: Human Kinetics
10. Powers, S. K., & Howley, E. T. (2018). *Exercise Physiology: Theory and Application to Fitness and Performance* (10th ed.). New York, NY: McGraw-Hill

SEMESTER- II**Course Title: Yoga Vyayama****Course Type: Multi/Interdisciplinary (Code: PEDS2031)****Credit: 3 (Practical: 3)****Full Marks- 50 (Practical: 40 & Internal Assessment: 10)****Objectives:**

- i. To know the benefit of yoga in daily life
- ii. To understand the utility of regular scheduled vyayama

Outcomes:

- i. After practicing Yoga vyayama students may feel its flavour
- ii. They may include it in their daily routine

Unit- 1: Vyayama**P- 30H**

1. Suksma Vyayama: Netra-Sakthi Vikasaka (Eye), Kapola-Sakthi Vikasaka (Cheek), Karna-Sakthi Vikasaka (Ear), Griva-Sakthi Vikasaka (Neck)
2. Sthula Vyayama: Rekha-Gati, Hrd-Gati, Utkurdana, Urdhva-Gati, Sarvanga-Pusti

Unit- 2: Asanas**P- 30H**

1. Vishramasana (Relaxative Posture): Shavasana, Makarasana
2. Dhyanasana (Meditative Posture): Sukhasana, Padmasana, Vajrasana, Sastikasana
3. Swasthyasana (Cultural Posture):
Standing Posture: Ardha Chandrasana, Brikshasana, Padahasthasana
Sitting Posture: Ardha Kurmasana, Paschimottanasana, Gomukhasana
Supine Posture: Setu Bandhasana, Halasana, Matsyasana
Prone Posture: Bhujangasana, Salvasana, Dhanurasana

Unit- 3: Pranayama and Meditation**P- 30H**

1. Pranayama
 - a. Anulom-Vilom
 - b. Bhastrika
 - c. Bhramari
2. Meditation
 - a. Sakshi-Bhava
 - b. Maitri-Bhava
 - c. OM-Meditation

BOOKS FOR REFERENCE

1. Iyengar, B. K. S. (2005). *Light on Yoga* (Revised ed.). HarperCollins Publishers. New Delhi
2. Saraswati, S. S. (2002). *Asana Pranayama Mudra Bandha* (1st ed.). Munger: Bihar School of Yoga
3. Kuvalayananda, S., & Vinekar, S. L. (1963). *Yogic Therapy: Its Basic Principles and Methods*. Lonavla: Kaivalyadhama.
4. Singh, A. (2018). *Physical Education and Yoga* (2nd ed.). Khel Sahitya Kendra. New Delhi
5. Nagarathna, R., & Nagendra, H. R. (2009). *Integrated Approach of Yoga Therapy for Positive Health* (3rd ed.). Swami Vivekananda Yoga Prakashana. Bangalore
6. Tiwari, O. P. (2016). *Yoga: A Complete Guide to Physical Education* (1st ed.). Sports Publication. New Delhi
7. Feuerstein, G. (2008). *The Yoga Tradition: Its History, Literature, Philosophy and Practice* (3rd ed.). Hohm Press. Arizona

SEMESTER- II**Course Title: Sports Massage****Course Type: Skill Enhancement Course** (Code: PEDS2051)**Credit: 3** (Practical: 3)**Full Marks- 50** (Practical: 40 & Internal Assessment: 10)**Objectives:**

- i. To prepare the students about basic and advance massage in Indian style (Mardana) and western style
- ii. To educate the students about the special types of sports massage

Outcomes:

- i. Students may join in the massage parlor, spa centre and health club
- ii. Students may be self employed as a masseur

Unit- 1: Historical and Scientific Background of Massage (Record Book Preparation) P- 30H

- 1.1 Massage in Ancient time in India and abroad
- 1.2 Relationship of Anatomy and Physiology to massage and body work
- 1.3 Physiological changes during massage- muscular, circulatory, lymph-vascular system
- 1.4 Roll of Therapeutic massage in stress and pain

Unit- 2: Techniques of Massage P- 30H

- 2.1 Superficial Massage- Rubbing, Scrubbing, Wringing, Stroking
- 2.2 Deep Tissue Massage- Rolling, Stretching, Gripping, Kneeding
- 2.3 Massage with different oil and aroma
- 2.4 Ayurvedic Massage

Unit- 3: Techniques Sports Massage P- 30H

- 3.1 Compression and Broadening
- 3.2 Friction
- 3.3 Effleurage
- 3.4 Petrissage

BOOKS FOR REFERENCE

1. Banerjee, P. (2018). *Massage Therapy Basics*. Book Syndicate. Kolkata
2. Archer, M. (2016). *Sports Massage* (2nd ed.). Routledge
3. Fritz, S. (2020). *Fundamentals of Therapeutic Massage* (7th ed.). Elsevier
4. Salvo, S. G. (2015). *Massage Therapy: Principles and Practice*. Elsevier
5. Holey, E. (2014). *Sports Massage* (4th ed.). Wiley
6. Goats, G. (1994). *Massage: The Scientific Basis of an Ancient Art*. Churchill Livingstone

SEMESTER- III**Course Title: Exercise and Sports Management****Course Type: Major** (Code: PEDS3011)**Credit: 5** (Lecture- 4, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60 & Internal Assessment: 15)**Objectives:**

- i. Students may understand the sports management in educational institutions.
- ii. To educate students about necessity and importance of modern technologies used in sports and fitness.

Outcomes:

- i. Students may enable to efficiently organise games and sports.
- ii. Mental setup would be ready for further higher study of Sports Management.

UNIT- 1: Exercise Management**L- 10 H**

- 1.1 Concept of exercise & types of exercise
- 1.2 Description of various exercises
- 1.3 Necessity of exercise in modern society
- 1.4 Importance of exercise in games and sports

UNIT- 2: Management of Exercise Facilities and Equipment**L- 15 H**

- 2.1 Indoor facilities (gymnasium): Importance, care and maintenance. Characteristics of standard Gymnasium.
- 2.2 Outdoor facilities (Play field): Importance, care and maintenance. Characteristics of standard Play field.
- 2.3 Exercise and sports Equipment: Importance, care and maintenance
- 2.4 Lay-out of Play-fields: Badminton, Football, Kabaddi, Kho-Kho, Track and Field.

UNIT- 3: Concept of Sports Management**L- 15 H**

- 3.1 Meaning and Definition of Management and Sports Management.
- 3.2 Important and Principles of Sports Management.
- 3.3 Management of Sports and Games in School, College and University.
- 3.4 Leadership in Sports: Meaning, Definition, Type, Qualities and Qualification of good leader

UNIT- 4: Management of Sports Competitions**L- 20 H**

- 4.1 Meaning of competition, match, game and tournament
- 4.2 Types of Tournament; Procedure of drawing fixture- Knock-out, League, Combination and Challenge tournament.
- 4.3 Method of organising Annual Athletic Meet, Play Day, Intramural and Extramural competition.
- 4.4 Method of calculation of Standard Athletic Track marking (Straight line, RDR, CDR, Total area requirement, Stagger Distance, Diagonal excess)

UNIT- 5: Technologies in Sports and Fitness**L- 15 H**

- 5.1 Technology in Sports: Concept, Different Technologies used in Sports and Fitness, Role of Technology in Sports and Fitness.
- 5.2 Technology used during Training: Wearable- Smart Watch, Glass, Goggles, Sensor-enabled Shoes, Full Body Suits, Helmets. Sensors- Heart Rate Monitors, Global Positioning System (GPS), Local Positioning System (LPS), Velocity Based Training (VBT), Sleep Trackers.
- 5.3 Technology used in Live Games: Bird's Eye View, Edge Detection, Decision Review System (DRS), Wind Gauges, Timing Equipment, Hawk Eye Technology, Goal Line Technology (GLT), Video Assistant Referee (VAR), Cognitive Training Technology.
- 5.4 AI and e-Sports: Concept, Application, Merits and Demerits. Data analytics and its applications in sports.

BOOKS FOR REFERENCE

1. Kottler, J. A., & Pappas, J. L. (2020). Sport management: Principles and applications*. Routledge.
2. Masteralexis, L. P., Barr, C. A., & Hums, M. A. (2015). Principles and practice of sport management (5th ed.). Jones & Bartlett Learning.
3. Smith, A. C. T., & Westerbeek, H. M. (2022). Strategic sport management*. Routledge.
4. Weese, W. J. (2019). Managing sport organizations: Responsibilities and practices (3rd ed.). Routledge.
5. Pedersen, P. M., & Thibault, L. (2019). Contemporary sport management (6th ed.). Human Kinetics.
6. Krebs, M., & McLean, R. (2020). Technology in sports: A comprehensive overview. Springer.
7. Hargreaves, T., & Borys, S. (2021). Wearable technology in sports: From theory to practice. Routledge.
8. Hughes, M., & Bartlett, R. (2012). Notational analysis of sport: Systems for better coaching and performance in sport (2nd ed.). Routledge.
9. Gabbett, T. J., & Domrow, N. (2018). Science and practice of sports training. Human Kinetics.
10. Crisp, J., & Heale, R. (2021). The use of analytics in sports: A guide to advanced methods and technologies. Wiley.

SEMESTER- III**Course Title: Fitness and Gym Exercise (Practical)****Course Type: Major** (Code: PEDS3012)**Credit: 5** (Lecture- 0, Tutorial- 0 & Practical- 5)**Full Marks- 75** (Practical: 60 & Internal Assessment: 15)**Objectives:**

- i. To introduce and educate students about gym exercise.
- ii. To motivate students for maintaining their personal fitness.

Outcomes:

- i. Students may start their individual gym center.
- ii. Employability as assistant to Gym Instructor, Fitness & Wellness coach in corporate sector.

UNIT- I: Warm-up and Cool down Exercise (compulsory)**L- 10 H**

- **Warm-up:** i. Jogging/ Spot jogging ii. Jumping jacks (forward & side to side) iii. Alternative toe touches iv. Leg swings (forward) v. Leg swings (side to side) vi. Hops on the spot vii. High knees/ Knee lifts viii. Heel kick to the butt ix. Neck stretch with hand resistance (forward-backwards & sidewise) x. Neck semi-circles xi. Knee to chest (stretch) xii. Heel to butt (stretch) xiii. Lunges (forward and side)
- **Cool down:** i. Slow jogging or walking ii. Chest expansion iii. Shoulder stretch iv. Triceps stretch v. Overhead stretch vi. Chest stretch vii. Standing bend (forward, backward & sidewise) viii. Hip flexor stretch ix. Thigh hug x. Quadriceps stretch xi. Lunges (forward and side) xii. Heel press xiii. Toe touch/ ankle hold/ hamstring stretch xiv. Butterfly stretch xv. Abs stretch

UNIT- II: Gym Exercise for Leg Muscle and Joints (any 4 exercises)**L- 25 H**

- **Freehand:** i. Squat ii. Lunges (front/ rear) iii. Sumo squat iv. Bridge v. Calf raises
- **With Weight:** i. Barbell squat ii. Dumbbell lunges (front/ rear) iii. Barbell sumo squat iv. Barbell hip thrust v. Dumbbell Calf raises
- **With Gym Apparatus:** i. Leg press/ hack squat ii. Leg extension iii. Leg curl iv. Cable hip extension v. Good morning/ deadlift
- **With Resistance Band:** i. Resistance band squat ii. Lateral band walk iii. Side squat iv. Alternating leg raise v. Glute kickbacks

UNIT- III: Gym Exercise for Hand Muscle and Joints (any 4 exercises)**L- 25 H**

- **Freehand:** i. Push-ups ii. Close grip push-up iii. Diamond push-up iv. Wall push-up v. Table push-up
- **With Weight:** i. Overhead barbell triceps extension ii. Overhead dumbbell triceps extension iii. Weighted bench dip iv. Biceps curl/ seated biceps curl v. Hammer curl
- **With Gym Apparatus:** i. Cable triceps extension ii. Cable/ rope up-down iii. Cable crossover iv. Seated cable rows v. Preacher curl
- **With Resistance Band:** i. Resistance band push ups ii. Resistance band biceps curl iii. Resistance band shoulder front raises iv. Resistance band triceps overhead v. Resistance band bent over rows

UNIT- IV: Gym Exercise for abdominal and Back Muscle (any 4 exercises)**L- 25 H**

- **Freehand:** i. Mountain climbers ii. Laying leg raises iii. Laying leg flutters iv. Sit up v. Plank hold
- **With Weight:** i. Weighted sit-up ii. Dumbbell Russian twist iii. Dumbbell side bend iv. Weighted plank up & down v. Barbell rollout
- **With Gym Apparatus:** i. Hanging leg raises ii. Knee raises iii. Cable crunches iv. Cable machine oblique twist v. Decline bench crunches
- **With Resistance Band:** i. Band bicycles ii. Seated band leg flutters iii. Seated band crunches iv. Band side bending v. Band twist

UNIT- 5: Fitness Test (compulsory)**L- 25 H**

Physical Fitness Test through Harvard Step Test

BOOKS FOR REFERENCE

1. Corbin, C. B. (2019). *Fitness and Wellness* (13th ed.). McGraw-Hill
2. Baechle, T. R. (2016). *Strength Training Essentials* (4th ed.). Human Kinetics
3. Heyward, V. H. (2014). *Advanced Fitness Assessment* (7th ed.). Human Kinetics
4. Sharkey, B. J. (2013). *Fitness and Health* (7th ed.). Human Kinetics
5. Powers, S. K. (2017). *Exercise Physiology: Theory and application to fitness and performance* (10th ed.). McGraw-Hill

SEMESTER- III**Course Title: Musical Exercise****Course Type: Multi/Interdisciplinary (Code: PEDS3031)****Credit: 3** (Lecture- 0, Tutorial- 0 & Practical- 3)**Full Marks- 50** (Practical: 40 & Internal Assessment: 10)**Objectives:**

- i. To introduce Indian and overseas popular music.
- ii. To feel free from regular heavy monotonous daily routine.

Outcomes:

- i. After participating several musical exercises students may texture its essence.
- ii. They may include it in their regular life style.

UNIT- 1: Exercise with Traditional / Folk Indian Music**L- 22 H**

- 1.1 Regional folk music in Bengal and exercise
- 1.2 Punjabi folk music and exercise
- 1.3 Gujarati folk music and exercise
- 1.4 Manipuri folk music and exercise

UNIT- 2: Exercise with other Global Popular Music**L- 22 H**

- 2.1 American popular music and exercise
- 2.2 African popular music and exercise
- 2.3 Asian popular music and exercise
- 2.4 Oceania popular music and exercise

UNIT- 3: Exercise with Apparatus and Group Performance with Music**L- 22 H**

- 3.1 Ribbons / Lazium drill with music
- 3.2 Wands / Hoops drill with music
- 3.3 Dumbbell / Umbrella drill with music
- 3.4 Group performance accompanied with music

BOOKS FOR REFERENCE

1. Metheny, E. (1968). *Movement and Meaning*. McGraw-Hill
2. Humphrey, D. (2010). *Dance and Movement* (Rev. ed.). Princeton Book Co.
3. Minton, S. (2003). *Choreography* (3rd ed.). Human Kinetics
4. Blom, L. A. (2000). *The Intimate Act of Choreography* (2nd ed.). University of Pittsburgh Press
5. Adshead, J. (1988). *Dance Analysis*. Dance Books

SEMESTER- III**Course Title: Gymnastics****Course Type: Skill Enhancement Course** (Code: PEDS3051)**Credit: 3** (Lecture- 0, Tutorial- 0 & Practical- 3)**Full Marks- 50** (Practical: 40 & Internal Assessment: 10)**Objectives:**

- i. To get an inclusive practical skill on floor exercise of gymnastics.
- ii. To motivate students for maintaining own fitness.

Outcomes:

- i. Students will be able to perform different floor exercises of gymnastics.
- ii. Students will be able to understand the concept of co-ordination, balance, center of gravity etc.

UNIT- 1: Floor Exercise (Compulsory)**L- 20 H**

Forward Roll, T-Balance, Forward Roll with Split Leg, Backward Roll, Cart-Wheel

(Note: Perform the above exercises continuously in the same sequence)

UNIT- 2: Floor Exercise (any three)**L- 25 H**

Hand stand and forward roll, Backward roll to hand stand, Diving forward roll, Hand stand, Hand spring, Head spring, Neck Spring, Summersault

UNIT- 3: Stunts and Pyramid**L- 20 H**

Demonstrate individual or group stunts and group pyramid

BOOKS FOR REFERENCE

1. Werner, P. (2018). *Gymnastics Fundamentals (4th ed.)*. Human Kinetics
2. Sands, W. A. (2013). *Scientific Aspects of Gymnastics*. Routledge
3. Smither, G. (2000). *Gymnastics Coaching*. Crowood Press
4. FIG. (2021). *Code of Points*. Switzerland: FIG
5. Knudson, D. (2007). *Fundamentals of Biomechanics (2nd ed.)*. Springer
6. George, G. (2010). *Biomechanics of Women Gymnastics*. Prentice Hall

SEMESTER- IV**Course Title: Yoga Education****Course Type: Major** (Code: PEDS4011)**Credit: 5** (Lecture- 4, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60 & Internal Assessment: 15)**Objectives:**

- i. To enable the students to get a thorough knowledge on Yoga.
- ii. To get an understanding of different branches of yoga and their applications and benefits in human life and health.

Outcomes:

- i. Provide them with comprehensive understanding of Yoga with reference to traditional texts like Patanjali Yoga sutras, Hatha Yoga Pradipika.
- ii. Employability as assistant to Yoga Instructor, Fitness & Wellness coach in corporate sector and Alternative medicine professional in AYUSH.

UNIT- 1: Introduction to Yoga Education**L- 10 H**

- 1.1 Meaning of Yoga, Traditional definition
- 1.2 Types of yoga- Bhakti Yoga, Jnana Yoga, Karma Yoga and Raja Yoga
- 1.3 Importance of yoga
- 1.4 Yoga as Indian Heritage

UNIT - 2: Concept of Astanga Yoga**L- 20 H**

- 2.1 Yama and Niyama
- 2.2 Asana and Pranayama
- 2.3 Pratyahara and Dharana
- 2.4 Dhyana and Samadhi

UNIT - 3: Concept of Hatha Yoga**L- 15H**

- 3.1 Shatkarma: Neti, Dhauti, Nauli, Basti, Kapalbhata and Trataka - its method and benefits.
- 3.2 Bandha: Jalandhara bandha, Moola bandha, Uddiyana bandha and Maha bandha – its method and benefits.
- 3.3 Mudra: Hand mudras (Jnana mudra, Chin mudra, Yoni mudra, Bhairava mudra and Hridaya mudra) method and benefits.
- 3.4 Chakra and Nadi: Chakra- Mooladhara, Swadhisthana, Manipura, Anahata, Vishuddhi, Ajna and Sahasrara. Nadi: Ida, Pingala and Sushumna.

UNIT - 4: Concept of Health and Disease according to Yoga**L- 15 H**

- 4.1 Pancha Kosa: Annamaya, Pranamaya, Manomaya, Vijnamaya and Anandamaya
- 4.2 Triguna: Sattva, Raja and Tama
- 4.3 Tridosha: Vata, Pitta and Kapha
- 4.4 Yogic concept of Illness

UNIT - 5: Effect of Yoga**L- 15 H**

- 5.1 Effect of regular yoga practice on physical fitness
- 5.2 Effect of regular yoga practice on physiological health
- 5.3 Effect of regular yoga practice on Psycho-social aspect
- 5.4 Effect of regular yoga practice on Spiritual aspect

BOOKS FOR REFERENCE

1. Lal Basant Kumar : Contemporary Indian Philosophy, Motilal Banarsidas Publishers Pvt. Ltd, Delhi, 2013
2. Dasgupta S. N : History of Indian Philosophy, Motilal Banarsidas, Delhi, 2012
3. Singh S. P : History of Yoga, PHISPC, Centre for Studies in Civilization Ist, 2010
4. Singh S. P & Yogi Mukesh : Foundation of Yoga, Standard Publication, New Delhi, 2010
5. Agarwal M M: Six systems of Indian Philosophy, Chowkhambha Vidya Bhawan, varanai, 2010
6. Swami Bhuteshananda: Nararad Bhakti Sutra, Advaita Ashrama Publication-Dept. Kolkata, II Edition, 2009
7. Hirianna M: Outlines of Indian Philosophy, Motilal Banarsidas, Delhi, 2009
8. Hirianna M: Essentials of Indian Philosophy, Motilal Banarsidas, Delhi, 2008
9. Radhakrishnan S: Indian Philosophy, Oxford University, UK (Vol. I & II) II Edition, 2008
10. Max Muller K. M: The six system of Indian Philosophy, Chukhambha, Sanskrit series, Varanasi, 6th Edition, 2008

SEMESTER- IV**Course Title: Yoga and Naturopathy****Course Type: Major** (Code: PEDS4012)**Credit: 5** (Lecture- 0, Tutorial- 0 & Practical- 5)**Full Marks- 75** (Practical: 60 & Internal Assessment: 15)**Objectives:**

- To get an inclusive practical skill on yogic practices like asanas, pranayama, relaxation and meditation.
- It offers practices that enhance physical fitness, mental clarity and emotional balance.
- To enable the students to get in-depth knowledge in practical skill on yogic practices and naturopathy therapies.

Outcomes:

- Covering physical, mental and spiritual dimensions of well-being.
- Employability as assistant to Yoga Instructor, Fitness & Wellness coach in corporate sector and Alternative medicine professional in AYUSH.

UNIT- 1: Yogasana**L- 50H**

- Surya Namaskara
- Meditative Posture: Siddhasana, Swastikasana, Padmasana, Vajrasana, Sukhasana
- Relaxative Posture: Shavasana, Makarasana
- Cultural Posture: **(One asana is compulsory from each pose)**
 - Standing Pose: Ardha Chandrasana, Tadasana, Padahasthasana
 - Sitting Pose: Ardha Kurmasana, Paschimottasana, Gomukhasana
 - Supine Pose: Setu Bandhasana, Halasana, Matsyasana
 - Prone Pose: Bhujangasana, Dhanurasana, Salvasana
 - Inverted Pose: Sarvangasana, Sirshasana, Bhagasana

UNIT- 2: Pranayama (any three)**L- 15H**

Anulom-Vilom Pranayama, Surya Bheda Pranayama, Chandra Bheda Pranayama, Ujjayi Pranayama, Sitkari Pranayama, Sheetali Pranayama

UNIT- 3: Yogic Kriya (any three)**L- 10H**

Kapalbhati, Trataka, Uddiyana, Nauli

UNIT- 4: Naturopathy (any three)**L- 10H**

Mud Therapy, Hydrotherapy, Sun bath, Moon bath, Forest / Green field walking

UNIT- 5: Fitness Test (compulsory)**L- 25H**

Physical Fitness Test through Harvard Step Test

BOOKS FOR REFERENCES

- Basavaraddi I. V. & Others : Teachers Manual for School Teachers, MDNIY, New Delhi, 2010
- Joshi, K.S. : Yogic Pranayama, Oriental Paperback, New Delhi.
- Swami Kuvalyananda : Pranayama, Kaivalyadhama, Lonavla, 2009
- Iyengar, B.K.S.: Light on Pranayama, Harper Collins, Swami Vivekanand Yoga Prakashan, 2012
- Nagendra, H.R: The Art and Science of Pranayama, Swami Vivekanand Yoga Prakashan, 2005, Bangalore.
- Nagendra, H.R: Mind sound resonance technique, Swami Vivekanand Yoga Prakashan, 2002, Bangalore.

SEMESTER- IV**Course Title: Self Defence****Course Type: Major** (Code: PEDS4013)**Credit: 5** (Lecture- 0, Tutorial- 0 & Practical- 5)**Full Marks- 75** (Practical: 60 & Internal Assessment: 15)**Objectives:**

- i. To measure oneself against other fighters, and to make progress towards competition.
- ii. To motivate students for maintaining own fitness.

Outcomes:

- i. To increase self-confidence, self-control and discipline.
- ii. Equips students with essential skills such as self-defence, physical fitness, mental resilience, leadership and crisis management abilities.

Any two**MARTIAL ARTS / KARATE**

UNIT- 1: Warming-up: General and Specific	L- 5 H
UNIT- 2: Fundamental Skills	L- 30 H
• Player Stances: Walking, hand position, front-leaning, side-fighting. • Hand Techniques: Punches (straight punch, reverse punch), Blocks (eight basic) • Leg Techniques: Snap kicks, stretching straight leg, thrust kick, sidekicks, round house. • Forms: The first cause katas. • Self Defense: Against punches, grabs and strikes, against basic weapons (knife, club sticks). • Sparring: One step for middle punch, high punch and groin punch.	
UNIT- 3: Game Practice	L- 10 H
UNIT- 4: Rules and their Interpretations	L- 5 H
UNIT- 5: Duties of Officials	L- 5 H

TAEKWONDO

UNIT- 1: Warming-up: General and Specific	L- 5 H
UNIT- 2: Fundamental Skills	L- 30 H
• Player stance: Walking, extending walking, L stance, cat stance. • Punches: Sitting stance punch, single punch, double punch, triple punch, front-fist punch, rear- fist punch. • Foot techniques (Balgisul): Standing kick (soseochagi), front kick (AP chagi), arc kick (Bandal Chagi), side kick (Yeop Chagi), Turning kick (Dollyo Chagi) Back kick (Twit Chagi), Reverse turning kick (Bandae Dollyo Chagi), Jump kick (Twimyo Chagi). • Poomsae (Forms): Jang, Yi Jang, Sam Jang, Sa Jang, o Jang, Yook Jang, Chil Jang. • Sparring (Kyorugi): One step sparring (hand techniques, foot techniques, self-defense technique, combination kicks), free sparring. • Board Breaking (Kyokpa): Eye control, balance, power control, speed, point of attack.	
UNIT- 3: Game Practice	L- 10 H
UNIT- 4: Rules and their Interpretations	L- 5 H
UNIT- 5: Duties of Officials	L- 5 H

JUDO

UNIT- 1: Warming-up: General and Specific	L- 5 H
UNIT- 2: Fundamental Skills	L- 30 H
• Rei (Salutation): Ritsure (salutation in standing position), Zarai (salutation in sitting position). • Kumi Kata: Method of holding judo costume. • Shisei: Position in judo. • Kuzushi: Act of disturbing the opponent posture. • Tuskuri and kake: preparatory action for attack. • Ukemi (Break Fall): Urhiro Ukemi (rear break fall), Yoko Ukemi (side break fall), Mae Ukemi (front break fall), Mae mawari Ukemi (front break fall). • Tai Sabaki: Management of the body. • Nage Waze (throwing techniques): Hiza Guruma (knee wheel), Sesae Twurikomi-ashi (drawing ankle throw). • Katamawaze (Grappling techniques): Kesagatame (Scaff hold), Kata gatame (Shoulder hold).	
UNIT- 3: Game Practice	L- 10 H
UNIT- 4: Rules and their Interpretations	L- 5 H
UNIT- 5: Duties of Officials	L- 5 H

BOXING

UNIT- 1: Warming-up: General and Specific	L- 5 H
UNIT- 2: Fundamental Skills	L- 30 H
• Player stance • Stance: Right hand stance, left hand stance • Footwork: Attack, defense • Punches: Jab, cross, hook, upper cut, combinations • Defense slip: Bob and weave, parry/block, cover up, clinch, and counter attack.	
UNIT- 3: Game Practice	L- 10 H
UNIT- 4: Rules and their Interpretations	L- 5 H
UNIT- 5: Duties of Officials	L- 5 H

BOOKS FOR REFERENCES

1. Kano, J. (2013). *Kodokan Judo*. Kodansha International. Tokyo
2. Funakoshi, G. (2012). *Karate-Do: My Way of Life*. Kodansha. Tokyo
3. Lee, B. (2008). *Tao of Jeet Kune Do*. Ohara Publications. California
4. Clarke, E. (2010). *Martial Arts Training*. London: A&C Black
5. Mahapatra, P. (2019). *Modern Self Defence Techniques*. Sports Publication. New Delhi

SEMESTER- IV**Course Title: Trends in Yoga and Sports Science****Course Type: Minor** (Code: PEDS4021)**Credit: 4** (Lecture- 3, Tutorial- 0 & Practical- 1)**Full Marks- 75** (Theory: 40; Practical: 20 & Internal Assessment: 15)**Objectives:**

- i. To enable the students to get a thorough knowledge on Yoga and modern technologies used in sports and fitness.
- ii. To get an inclusive practical skill on yogasana.

Outcomes:

- i. Provide them with comprehensive understanding of Yoga and modern technologies used in sports and fitness.
- ii. Students may understand the modern trends in yoga and sports science.

UNIT- 1: Introduction to Yoga**L- 10 H**

- 1.1 Meaning of Yoga, Traditional definition
- 1.2 Types of yoga- Bhakti Yoga, Jnana Yoga, Karma Yoga and Raja Yoga
- 1.3 Importance of yoga
- 1.4 Yoga as Indian Heritage

UNIT - 2: Concept of Astanga Yoga**L- 15 H**

- 2.1 Yama and Niyama
- 2.2 Asana and Pranayama
- 2.3 Pratyahara and Dharana
- 2.4 Dhyana and Samadhi

UNIT- 3: Technologies in Sports and Fitness**L- 20 H**

- 3.1 Technology in Sports: Concept, Different Technologies used in Sports and Fitness, Role of Technology in Sports and Fitness.
- 3.2 Technology used during Training: Wearable- Smart Watch, Glass, Goggles, Sensor-enabled Shoes, Full Body Suits, Helmets. Sensors- Heart Rate Monitors, Global Positioning System (GPS), Local Positioning System (LPS), Velocity Based Training (VBT), Sleep Trackers.
- 3.3 Technology used in Live Games: Bird's Eye View, Edge Detection, Decision Review System (DRS), Wind Gauges, Timing Equipment, Hawk Eye Technology, Goal Line Technology (GLT), Video Assistant Referee (VAR), Cognitive Training Technology.
- 3.4 AI and e-Sports: Concept, Application, Merits and Demerits. Data analytics and its applications in sports.

UNIT- 4: Yogasana (Practical)**L- 30 H**

- 4.1 Surya Namaskara
- 4.2 Meditative Posture: Siddhasana, Swastikasana, Padmasana, Vajrasana, Sukhasana
- 4.3 Cultural Posture:
 - Standing Pose: Tadasana
 - Sitting Pose: Paschimottanasana
 - Supine Pose: Setubandhasana
 - Prone Pose: Bhujangasana
 - Inverted Pose: Sarvangasana
- 4.4 Relaxative Posture: Shavasana, Makarasana

BOOKS FOR REFERENCE

1. Lal Basant Kumar : Contemporary Indian Philosophy, Motilal Banarsidas Publishers Pvt. Ltd, Delhi, 2013
2. Dasgupta S. N : History of Indian Philosophy, Motilal Banarsidas, Delhi, 2012
3. Singh S. P : History of Yoga, PHISPC, Centre for Studies in Civilization Ist, 2010
4. Hiriyanna M: Outlines of Indian Philosophy, Motilal Banarsidas, Delhi, 2009
5. Hiriyanna M: Essentials of Indian Philosophy, Motilal Banarsidas, Delhi, 2008
6. Radhakrishnan S: Indian Philosophy, Oxford University, UK (Vol. I & II) II Edition, 2008
7. Max Muller K. M: The six system of Indian Philosophy, Chukhambha, Sanskrit series, Varanasi, 6th Edition, 2008
8. Hargreaves, T., & Borys, S. (2021). Wearable technology in sports: From theory to practice. Routledge.
9. Hughes, M., & Bartlett, R. (2012). Notational analysis of sport: Systems for better coaching and performance in sport (2nd ed.). Routledge.
10. Crisp, J., & Heale, R. (2021). The use of analytics in sports: A guide to advanced methods and technologies. Wiley.
11. Schwarz, M., & Schwartz, L. (2017). Sports technology and the future: Innovations for enhancing performance. Springer.

SEMESTER- V**Course Title: Exercise and Sports Physiology****Course Type: Major** (Code: PEDS5011)**Credit: 5** (Lecture- 4, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60 & Internal Assessment: 15)**Objectives:**

- i. To learn the changes in human body systems due to exercise and sporting activities in an integrated manner.
- ii. Learn how to study the effects of exercise on the body's muscular, cardiovascular and neurohormonal systems.

Outcomes:

- i. Students will be ready to study effect of exercise and sports in detail and in application perspective.
- ii. Students will also be able to measure the changes and interpret them in the context of sports.

UNIT- 1: Introduction**L- 10 H**

- 1.5 Meaning, Definition and Importance of Anatomy, Physiology, Exercise Physiology & Sports Physiology
- 1.6 Structure and Functions of Human Cells and Tissues.
- 1.7 Structure and Functions of Organs and Systems.
- 1.8 Concept and Types of Exercises.

Unit- II: Musculo-skeletal System and Exercise**L- 15 H**

- 2.1. Skeletal System- Structure of Skeletal System. Classification and location of bones and joints. Structure of Synovial Joint.
- 2.2. Muscular System- Type, function, properties and structure of muscle. Name and location of major muscles.
- 2.3. Molecular mechanism of muscle contraction- Sliding filament theory.
- 2.4. Effect of exercise and Sports on muscular system.

Unit- III: Circulatory System and Exercise**L- 17 H**

- 3.1 Blood- Composition and function. Blood vessels- Artery, Vein and Capillary.
- 3.2 Heart- Structure and functions. Valves of the Heart. Sino-atrial Node and Atrio-ventricular Node. Mechanism of blood circulation through heart.
- 3.3 Cardiac output, Blood Pressure, Athletic Heart, Bradycardia and Tachycardia.
- 3.4 Effect of exercise and Sports on circulatory system.

Unit- IV: Respiratory System and Exercise**L- 15 H**

- 4.1 Structure and function of Respiratory organs.
- 4.2 Mechanism of Respiration. Hypoxia, Asphyxia, Hyperpnoea, Orthopnoea and Artificial Respiration.
- 4.3 Vital Capacity, O₂ Debt (EPEOC), O₂ Deficit, Second Wind and VO₂ max.
- 4.4 Effect of exercise and Sports on respiratory system.

Unit- V: Digestive & Nuro-endocrine System and Exercise**L- 18 H**

- 5.1 Digestive System: Structure and Functions. Effect of Exercise and Sports on the Digestive System.
- 5.2 Nervous system: Central nervous system- Brain, spinal cord, Automatic nervous system. Reflex action, Neuromuscular junction, Proprioception, Muscle Spindles, Golgi Tendon Organ
- 5.3 Endocrine system: Location, secretion and functions of different endocrine glands.
- 5.4 Effect of exercise and Sports on nervous system and endocrine system.

BOOKS FOR REFERENCE

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2. Cox, R.H. (2012). Sport Psychology: Concepts and Applications (7th ed.). McGrawHill.
3. Ekkekakis, P. (2013). The Measurement of Affect, Mood, and Emotion in Exercise Psychology. Cambridge University Press.
4. Schinke, R.J., McGannon, K.R., & Smith, B. (2016). Routledge International Handbook of Sport Psychology. Routledge.
5. APA Division 47. (2019). A Practitioner's Guide to Sport and Exercise Psychology.
6. Roberts, G.C., & Treasure, D.C. (2012). Advances in Motivation in Sport and Exercise (3rd ed.). Human Kinetics.

SEMESTER- V**Course Title: Ball Games- I****Course Type: Major** (Code: PEDS5012)**Credit: 5** (Lecture- 0, Tutorial- 0 & Practical- 5)**Full Marks- 75** (Practical: 60 & Internal Assessment: 15)**Objectives:**

- i. To master basic skills & techniques and rules and regulations of each game.
- ii. Developing motor skills, social skills and cognitive skills.

Outcomes:

- i. Demonstrate the ability to perform individual offensive and defensive skills and strategies.
- ii. Understand basic rules, terminology, and scoring procedures.

ANY TWO GAME (Preparation of Record Book is Compulsory)

BASKETBALL**Unit-I: Introduction of the Game****L- 5H**

Origin and History of the game, International Basketball Federation, Basketball Federation of India, West Bengal Basketball Association.

Unit-II: Fundamental Skills**P- 50 H**

Passing: Two-hand Chest Pass, Two-hand Bounce Pass, One-hand Baseball Pass, Side-arm Pass, Overhead Pass, Hook Pass.

Receiving: Two hand receiving, Receiving in stationary position, Receiving while Jumping and Receiving while Running.

Dribbling: How to start dribble, drop dribble, High Dribble, Reverse Dribble, Rolling Dribble.

Shooting: Lay-up shot and its variations, One-hand set shot, Two-hand jump shot, Hook shot, Free Throw.

Offensive play & Defensive play: Defensive rebound and offensive rebound, Guarding the player with the ball and without the ball, pivoting, Screening.

Unit-III: Rules, Regulations and Officiating**P- 15 H**

Rules and Regulations: Basketball court marking, game practice with applications of rules and regulations.

Officiating: Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.

Unit-IV: Records and Awards**L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

FOOTBALL**Unit-I: Introduction of the Game****L- 5 H**

Origin and History of the game, Federation International de Football Association (FIFA), All India Football Federation (AIFF), West Bengal Football Association.

Unit-II: Fundamental Skills**P- 50 H**

Kicking: Kicking the ball with inside of the foot, kicking the ball with full instep of the foot, kicking the ball with inner instep of the foot, kicking the ball with outer instep of the foot and lofted kick.

Receiving: Receiving the ball with chest, thigh foot and sole.

Dribbling: Dribbling the ball with instep of the foot, dribbling the ball with inner and outer instep of the foot.

Heading & Throw-in: Standing, running and jumping condition & standing throw-in and running throw-in.

Unit-III: Laws and Officiating**P- 15 H**

Laws: Football field marking, game practice with applications of rules and regulations.

Officiating: Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.

Unit-IV: Records and Awards

L- 5 H

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

VOLLEYBALL

Unit-I: Introduction of the Game

L- 5 H

Origin and History of the game, Federation International de Volleyball (FIVB), Volleyball Federation of India (VFI), West Bengal Volleyball Association.

Unit-II: Fundamental Skills

P- 50 H

Service: Under arm service, Side arm service, Tennis service, Floating service.

Pass: Under arm pass, Overhead pass

Spiking and Blocking

Unit-III: Rules, Regulations and Officiating

P- 15 H

Rules and Regulations: Volleyball court marking, game practice with applications of rules and regulations.

Officiating: Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.

Unit-IV: Records and Awards

L- 5 H

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

BOOKS FOR REFERENCE

1. FIFA. (2021). *Laws of the Game*. Zurich: FIFA
2. FIVB. (2021). *Official Volleyball Rules*. Lausanne: FIVB
3. FIBA. (2020). *Basketball Rules*. Switzerland: FIBA
4. Wade, A. (2015). *Coaching Soccer Successfully*. Human Kinetics
5. American Sport Education Program. (2016). *Coaching Principles*. Human Kinetics

SEMESTER- V**Course Title: Track and Field****Course Type: Major** (Code: PEDS5013)**Credit: 5** (Lecture- 0, Tutorial- 0 & Practical- 5)**Full Marks- 75** (Practical: 60 & Internal Assessment: 15)**Objectives:**

- i. Master the proper form and technique for each track and field event.
- ii. Develop efficient movement patterns to maximize speed, power, and distance.

Outcomes:

- i. The theoretical knowledge of track and field events helps the students to learn the various techniques along with the international rules of the events.
- ii. Students learn the rules, they can become qualified state, national and international officials.

Preparation of Record Book is Compulsory**Unit-I: Introduction of the Game****L- 5 H**

Origin and History of track and field, International Amateur Athletic Federation (IAAF), Athletic Federation of India (AFI), West Bengal Athletics Association.

Unit-II: Fundamental Skills**P- 50 H****Track Event**

Starting Techniques: Standing start and Crouch start (its variations) use of Starting Block. Acceleration with proper running techniques.

Finishing Technique: Run Through, Forward Lunging and Shoulder Shrug.

Relay Race: Starting, Baton Holding/Carrying. Baton Exchange in between Zone and Finishing.

Hurdles: Clearing techniques- approach run, take off, the flight and landing.

Field Event

Long Jump: Approach run, take off, flight in the air (Hang Style) and landing.

High Jump: Approach run, take off, clearance over the Bar and landing.

Putting the Shot: Grip, Stance, Glide, Release and Reverse. (O'Brien techniques).

Discus throw: Grip, Stance, Release and Reverse.

Javelin Throw: Grip, Carry, Release and Reverse.

Unit-III: Rules, Regulations and Officiating**P- 10 H**

Rules and Regulations: Marking- Track, Discus, Javelin, Shot-put sectors, Long Jump. Practice with applications of rules and regulations.

Officiating: Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.

Unit-IV: Records and Awards**L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

Unit-V: Self Fitness Assessment**P- 5 H**

Physical Fitness Test through AAHPERD

BOOKS FOR REFERENCE

1. IAAF. (2019). *Competition Rules*. Monaco: IAAF
2. Evans, D. (2010). *Teaching Athletics*. Champaign: Human Kinetics
3. Carr, G. (1999). *Fundamentals of Track and Field*. Human Kinetics
4. Jarver, J. (2005). *Athletics Throws and Jumps*. Tafnews Press. Sweden
5. Payne, H. (2015). *Athletics Coaching Manual*. UK Athletics

SEMESTER- VI**Course Title: Kinesiology and Sports Biomechanics****Course Type: Major** (Code: PEDS6011)**Credit: 4** (Lecture- 4, Tutorial- 0 & Practical- 0)**Full Marks- 75** (Theory: 60 & Internal Assessment: 15)**Objectives:**

- i. Know the concept and purpose of Biomechanics.
- ii. Able to differentiate Kinematic and Kinetic Parameters.
- iii. Knowledge about basic mechanics applied in sports.

Outcomes:

- i. Students Applying biomechanical principles to analyze and improve techniques in various sports
- ii. Applying concepts like levers, torque, and forces to analyze human movement

UNIT- 1: Introduction to Kinesiology and Sports Biomechanics**L- 10 H**

- 1.1 Meaning and Definition of Kinesiology, Biomechanics and Sports Biomechanics.
- 1.2 Importance and Scope of Kinesiology and Sports Biomechanics in Physical Education and Sports Science.
- 1.3 Terminology of Fundamental Movements: Locomotion, Non-locomotion and Manipulative
- 1.4 Fundamental Concepts of Axes and Planes, Centre of Gravity, Line of Gravity, Scalars and Vectors Quantities, Equilibrium.

UNIT- 2: Kinesiological Aspects of Human Movement**L- 18 H**

- 2.1 Bones and Joints: Classification of Bones and Joints. Movements around the joints.
- 2.2 Muscles: Types of Muscle contraction, Role of muscles on bodily movements. Major muscles involved with the movements of Shoulder joint, Hip joint and Knee joint.
- 2.3 Origin, Insertion and action of muscles: • Pectoralis major and minor, • Deltoid, Biceps, Triceps (Anterior and Posterior), • Trapezius, Serratus, Sartorius, Rectus femoris, Abdominis, Quadriceps, • Hamstring, Gastrocnemius
- 2.4 Fundamental concept of following terms: Angle of Pull, All or None Law, Reciprocal Innervations- Agonist and Antagonist muscles.

UNIT-3: Kinematics and Kinetics of Human Movement**L- 17 H**

- 3.1 Linear Kinematics- Distance and Displacement, Speed and Velocity, Acceleration.
- 3.2 Angular Kinematics- Inertia, Mass, Momentum, Impulse, Friction.
- 3.3 Linear Kinetics- Inertia, Mass, Momentum, Impulse, Friction.
- 3.4 Angular Kinetics- Moment of Inertia and Couple.

UNIT- 4: Mechanical Concepts**L- 15 H**

- 4.1 Force- Meaning, Definition, Types, Units and its application to sports activities.
- 4.2 Lever- Meaning, Definition, Types and Body Lever. Wheel, Axel and Pulley.
- 4.3 Motion- Concept, Types and its Application to Sports Activities. Newton's Law of Motion.
- 4.4 Projectile Motion- Concept, Types, Principles and Factors Influencing Projectile Motion.

BOOKS FOR REFERENCE

1. Singh, I. (2004). Kinanthropometry and Exercise Physiology. New Delhi: Friends Publications.
2. Uppal, A. K. (2004). Physical Fitness and Wellness. New Delhi: Friends Publications.
3. Koley, S. (2010). Anthropometric Measurements and Body Composition. New Delhi: Khel Sahitya Kendra.
4. Koley, S. & Kaur, S. (2011). Kinanthropometry in Physical Education and Sports. New Delhi: Friends Publications.
5. Sodhi, H. S. (1991). Sports Anthropometry: A Kinanthropometric Approach. Mohali: Punjab Publishing House.
6. Sidhu, L. S. & Singh, S. (1984). Kinanthropometry in Sports. Patiala: Netaji Subhas National Institute of Sports.

SEMESTER- VI**Course Title: Science of Sports Training****Course Type: Major** (Code: PEDS6012)**Credit: 4** (Lecture- 4, Tutorial- 0 & Practical- 0)**Full Marks- 75** (Theory: 60 & Internal Assessment: 15)**Objectives:**

- i. Know the concept and purpose of sports training.
- ii. Knowledge about basic methods and techniques applied in sport training.

Outcomes:

- i. Sstudents learn various sports training methodology which could be used to develop all the fitness components and sports performance.
- ii. Students also find this science to be very useful to prepare short, medium and long term training plans.

Unit- I: Introduction**L- 10 H**

- 1.1 Meaning and Definition of Sports Training
- 1.2 Aim and Characteristics of Sports Training
- 1.3 Principles of Sports Training
- 1.4 Need and Importance of Sports Training

Unit- II: Methods of Training and Conditioning in Sports**L-15 H**

- 2.1 Warming up and Cooling down-meaning, types and methods
- 2.2 Conditioning- concept of Conditioning and its principles
- 2.3 Training Methods- Circuit Training, Interval Training, Weight Training
- 2.4 Periodization- meaning, types, aim contents of different periods

Unit- III: Training Load and Adaptation**L- 17 H**

- 3.1 Training Load- meaning, definition, types and factors of training load
- 3.2 Components of training load
- 3.3 Over Load- meaning, causes, symptoms and tackling of overload
- 3.4 Adaptation- meaning and conditions of adaptation, super compensation

Unit- IV: Training Technique and Components**L- 18 H**

- 4.1 Strength- means and methods of strength development
- 4.2 Speed- means and methods of speed development
- 4.3 Endurance- means and methods of endurance development
- 4.4 Flexibility- means and methods of flexibility development

BOOKS FOR REFERENCE

1. Dick, W. F. (1980).Sports training principles. London: Lepus Books.
2. Harre, D.(1982).Principles of sports training. Berlin: Sporulated.
3. Jensen, R. C.& Fisher, A.G. (1979). Scientific basis of athletic conditioning. Philadelphia: Lea and Fibiger, 2ndEdn.
4. Matvyew, L.P. (1981).Fundamental of sports training. Moscow: Progress Publishers.
5. Singh, H. (1984).Sports training, general theory and methods. Patials: NSNIS.
6. Uppal, A.K., (1999).Sports Training. New Delhi: Friends Publication.

SEMESTER- VI**Course Title: Indian Games and Racket Sports****Course Type: Major** (Code: PEDS6013)**Credit: 4** (Lecture- 0, Tutorial- 0 & Practical- 4)**Full Marks- 75** (Practical: 60 & Internal Assessment: 15)**Objectives:**

- i. To master basic skills & techniques and rules and regulations of each game.
- ii. Developing motor skills, social skills and cognitive skills.

Outcomes:

- i. Demonstrate the ability to perform individual offensive and defensive skills and strategies.
- ii. Understand basic rules, terminology, and scoring procedures.

Preparation of Record Book is Compulsory**INDIAN GAMES (ANY ONE)****KHO-KHO****Unit-I: Introduction of the Game****L- 5 H**

Origin and History of the game, Asian Kho-Kho Federation, Kho-Kho Federation of India, West Bengal Kho-Kho Association

Unit-II: Fundamental Skills**P- 50 H**

Skills in Chasing: Sit on the box (Parallel & Bullet toe method), Get up from the box (Proximal & Distal foot method), Give Kho (Simple, Early, Late & Judgment), covering (moving on the lanes), Pole Turn, Pole Dive, Tapping, Hammering, Rectification of foul.

Skills in running: Chain Play, Ring play and Chain & Ring mixed play.

Unit-III: Rules, Regulations and Officiating**P- 15 H**

Rules and Regulations: Kho-Kho court marking, game practice with applications of rules and regulations.

Officiating: Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.

Unit-IV: Records and Awards**L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

KABADDI**Unit-I: Introduction of the Game****L- 5 H**

Origin and History of the game, International Kabaddi Federation, Amateur Kabaddi Federation of India

Unit-II: Fundamental Skills**P- 50 H**

Skills in Raiding: Cant, Touching with hands, Use of leg-toe touch, squat leg thrust, side kick, mule kick, arrow fly kick, crossing of baulk line. Crossing of Bonus line.

Skills of holding the raider: Various formations, catching from particular position, different catches, catching formation and techniques.

Additional skills in raiding: Escaping from various holds, techniques of escaping from chain formation, offense and defense.

Unit-III: Rules, Regulations and Officiating**P- 15 H****Rules and Regulations:** Kabaddi court marking, game practice with applications of rules and regulations.**Officiating:** Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.**Unit-IV: Records and Awards****L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

RACKET SPORTS (ANY ONE)**BADMINTON****Unit-I: Introduction of the Game****L- 5 H**Origin and History of the game, Badminton World Federation (BWF), *Badminton Association of India (BAI)***Unit-II: Fundamental Skills****P- 50 H**

Basic Knowledge: Various parts of the Racket and Grip.

Service: Short service, Long service, Long-high service.

Shots: Over-head shot, Defensive clear shot, Attacking clear shot, Drop shot, Net shot, Smash.

Unit-III: Rules, Regulations and Officiating**P- 15 H****Rules and Regulations:** Badminton court marking, game practice with applications of rules and regulations.**Officiating:** Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.**Unit-IV: Records and Awards****L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

TABLE TENNIS**Unit-I: Introduction of the Game****L- 5 H**Origin and History of the game, *International Table Tennis Federation (ITTF)*, Table Tennis Federation of India (TTFI), *West Bengal Table Tennis Association (WBTTA)***Unit-II: Fundamental Skills****P- 50 H**

Basic Knowledge: Various parts of the Racket and Grip (Shake Hand & Pen Hold Grip).

Stance: Square & Parallel.

Push and Service: Backhand & Forehand.

Chop: Backhand & Forehand.

Receive: Push and Chop with both Backhand & Forehand.

Unit-III: Rules, Regulations and Officiating**P- 15 H****Rules and Regulations:** Knowledge about TT Table, game practice with applications of rules and regulations.**Officiating:** Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.**Unit-IV: Records and Awards****L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

SEMESTER- VI**Course Title: Ball Game- II****Course Type: Major** (Code: PEDS6014)**Credit: 4** (Lecture- 0, Tutorial- 0 & Practical- 4)**Full Marks- 75** (Practical: 60 & Internal Assessment: 15)**Objectives:**

- i. To master basic skills & techniques and rules and regulations of each game.
- ii. Developing motor skills, social skills and cognitive skills.

Outcomes:

- i. Demonstrate the ability to perform individual offensive and defensive skills and strategies.
- ii. Understand basic rules, terminology, and scoring procedures.

ANY TWO GAME (Preparation of Record Book is Compulsory)

CRICKET**Unit-I: Introduction of the Game****L- 5 H**

Origin and History of the game, International Cricket Council (ICC), Board of Control for Cricket in India (BCCI), Cricket Association of Bengal (CAB)

Unit-II: Fundamental Skills**P- 50 H**

Batting-Grip, Stance, Defensive Stroke-Forward Stroke & Backward Stroke, Attacking Stroke, Running between the wicket

Balling-Grip, Smooth run up, Delivery, Types of balling-a) Swing- In-swing, Out-swing, b) Spin balling-Off-spin, Leg-spin, c) Googly

Fielding- Stance near to wicket, defensive fielding, offensive fielding, Catching

Wicket keeping

Unit-III: Rules, Regulations and Officiating**P- 15 H**

Rules and Regulations: Layout of cricket ground and positions of players & Types of pitches, game practice with applications of rules and regulations.

Officiating: Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.

Unit-IV: Records and Awards**L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

HANDBALL**Unit-I: Introduction of the Game****L- 5 H**

Origin and History of the game, International Handball Federation (IHF), Handball Association of India (HAI), West Bengal State Handball Association

Unit-II: Fundamental Skills**P- 50 H**

Grip & Dribbling: Including throwing the ball and ball control.

Pass & Receive: Including Stance and Running.

Offensive Play: Attack and counter-attack, simple counter-attack, counter-attack from two wings and center.

Defensive Play: Blocking, Goalkeeping and Defensive skills.

Unit-III: Rules, Regulations and Officiating**P- 15 H**

Rules and Regulations: Layout of Handball ground, game practice with applications of rules and regulations.

Officiating: Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.

Unit-IV: Records and Awards**L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

THROWBALL**Unit-I: Introduction of the Game****L- 5 H**

Origin and History of the game, *International Throwball Federation, Throwball federation of India (TFI), West Bengal Throwball Association*

Unit-II: Fundamental Skills**P- 50 H**

Service: Overhand service, Side arm service.

Catching: Two hand catching.

Return: One hand overhead return, side arm return.

Unit-III: Rules, Regulations and Officiating**P- 10 H****Rules and Regulations:** Layout of Throwball court, game practice with applications of rules and regulations.**Officiating:** Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.**Unit-IV: Records and Awards****L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

Compulsory Self Fitness Assessment**P- 5 H**

Physical Fitness Test through AAHPERD

SEMESTER- VII**Course Title: Research Methodology****Course Type: Major** (Code: PEDS7011)**Credit: 6** (Lecture- 5, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60, Practical: 0 & Internal Assessment: 15)**Objectives:**

- i. Understand the fundamental concepts of research in Physical Education and Sports Sciences.
- ii. Develop the ability to formulate research problems, hypotheses, and research designs.

Outcomes:

- i. Explain basic research terminology, processes, and methods.
- ii. Design simple research studies related to Physical Education and Sports.

UNIT- I: Introduction to Research**L- 20 H**

- 1.1 Meaning, Definition, and Characteristics of Research
- 1.2 Need and Importance of Research in Physical Education and Sports
- 1.3 Types of Research: Fundamental, Applied, and Action Research
- 1.4 Ethics in human experimentation

UNIT- II: Research Problem, Hypothesis & Review of Literature**L- 30 H**

- 2.1 Identification and Selection of Research Problem
- 2.2 Criteria for Selecting a Good Research Problem
- 2.3 Meaning, Types, and Formulation of Hypothesis
- 2.4 Review of Related Literature: Sources and Importance

UNIT- III: Research Designs & Sampling**L- 20 H**

- 3.1 Research Designs: Descriptive, Experimental, Survey, Case Study
- 3.2 Variables: Meaning, Types, and Control of Variables
- 3.3 Population and Sample: Meaning and Differences
- 3.4 Sampling Techniques: Random, Stratified, Systematic, Cluster, Purposive

UNIT- IV: Research Proposal and Research Report**L- 20 H**

- 4.1 Research Proposal: Components of Research Proposal
- 4.2 Research Report: Report Writing: Structure (introduction, literature review, methods, results and conclusion). Documentation: Citations, Footnotes, Endnotes, bibliography (APA, MLA styles).
- 4.3 Ethics: Ethical considerations in social research.
- 4.4 Finalisation of Thesis: Citation index of Journals, Impact Factor, h-index - i10-index.

BOOKS FOR REFERENCE

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

SEMESTER- VII**Course Title: Test and Measurement in Exercise and Sports****Course Type: Major** (Code: PEDS7012)**Credit: 6** (Lecture- 5, Tutorial- 0 & Practical- 1)**Full Marks- 75** (Theory: 40, Practical: 20 & Internal Assessment: 15)**Objectives:**

- i. To evaluate fitness, assess athletic talent and inform training programmes.
- ii. To evaluate an individual's current fitness, skill and potential to help in selecting athletes for terms or specific positions.

Outcomes:

- i. To set goals, track progress, motivate athletes and improve performance.
- ii. To identifying strength and weakness, classifying athletes, ensuring programme effectiveness and fostering research.

UNIT- I: Introduction**L- 10 H**

- 1.1. Concept of Test, Measurement & Evaluation.
- 1.2. Criteria of good Test.
- 1.3. Principles of Evaluation.
- 1.4. Importance of Test, Measurement and Evaluation in Physical Education and Sports.

UNIT- II: Body Composition and Somatotype**L- 20 H**

- 2.1. Body Mass Index (BMI): Concept and method of measurement.
- 2.2. Body Fat: Concept and method of measurement.
- 2.3. Lean Body Mass (LBM): Concept and method of measurement.
- 2.4. Somatotype: Concept and method of measurement.

UNIT- III: Physical & Motor Fitness and General Motor Ability Test**L- 20 H**

- 3.1 Definition, types & measurement methods of five physical fitness components and five motor performance components
- 3.2 Physical Fitness Test: Muscular Strength- Phillip's JCR Test; Cardio-vascular- Harvard Step Test and Queen's College Step Test; Flexibility- Sit and Reach Test; Power- Standing Broad Jump and Vertical Jump Test; Agility- Shuttle Run Test; Balance- Bass Stick Test; Reaction Time- Nelson Hand & Foot Reaction Time Test; AAHPER Youth Fitness Test
- 3.3 Motor Fitness Test: Oregon Motor Fitness Test
- 3.4 General Motor Ability (GMA) Test: Barrow General Motor Ability Test

UNIT- IV: Sports Skill Test**L- 20 H**

- 4.1 Badminton: Lockhart and McPherson Badminton Skill Test
- 4.2 Basketball: Johnson Basketball Test Battery
- 4.3 Soccer: McDonald Soccer Skill Test
- 4.4 Volleyball: Brady Volleyball Skill Test

LAB & FIELD PRACTICAL**P- 20 H**

1. Assessment of somatotype and % body fat (any one).
2. Physical Fitness Test through Harvard Step Test.

BOOKS FOR REFERENCE

1. Authors Guide (2013) ACSM's Health Related Physical Fitness Assessment Manual, USA: ACSM Publications.
2. Collins, R.D., & Hodges P.B. (2001) A Comprehensive Guide to Sports Skills Tests and Measurement (2nd edition) Lanham: Scarecrow Press.
3. Cureton T.K. (1947) Physical Fitness Appraisal and Guidance, St. Louis: The C. Mosby Company.
4. Getchell B (1979) Physical Fitness A Way of Life, 2nd Edition New York.
5. John Wiley and Sons, Inc Jenson, Clayne R and Cynt ha, C. Hirst (1980) Measurement in Physical Education and Athletics, New York, Macmillan Publishing Co. Inc.
6. Kansal D.K. (1996), "Test and Measurement in Sports and Physical Education, New Delhi: DVS Publications.
7. Krishnamurthy (2007) Evaluation in Physical Education and Sports, New Delhi; Ajay Verma Publication.
8. Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, 3rd Edition, Dallas TX: The Cooper Institute for Aerobics Research.
9. Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3rd Edition. Champaign IL: Human Kinetics.
10. Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in Physical Education and Sports. New Delhi; Friends Publications

SEMESTER- VII**Course Title: Application of Statistics in Physical Education and Sports****Course Type: Major** (Code: PEDS7013)**Credit: 6** (Lecture- 5, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60, Practical: 0 & Internal Assessment: 15)**Objectives:**

- i. To grasp foundational statistical concepts and their relevance in Physical Education and Sports.
- ii. To learn data collection, sampling and survey techniques for sports related studies.

Outcomes:

- i. Students will design and conduct basic research, test hypotheses and use statistical tools for evidence-based practice.
- ii. Students will identify trends, patterns and significant changes in fitness, injury rates and skill acquisition.

UNIT-I: Introduction**L- 20 H**

- 1.1 Meaning and concept of Statistics
- 1.2 Importance and scope of Statistics in Physical Education and Sports
- 1.3 Characteristics of Data: Types of data, Raw Scores, Single Scores, Attribute and Variable, Population and Sample, Parameters and Statistic
- 1.4 Graphical Representation of Data: Histogram, Frequency Polygon, Frequency Curve, Cumulative Frequency Polygon, Pie Diagram

UNIT- II: Numerical Methods for Analyzing Data**L- 30 H**

- 2.1 Frequency Distribution, Discrete and Continuous Class Intervals
- 2.2 Measures of Central Tendency
- 2.3 Measures of Variability
- 2.4 Percentiles, Deciles and Quartiles

UNIT - III: Normal Probability and its Applications**L- 20 H**

- 3.1 Meaning, characteristics and principles of Normal Probability Curve
- 3.2 Binomial Expansion
- 3.3 Divergence of Normality: Skewness and Kurtosis
- 3.4 Standard Scores: Percentile, Z, Sigma, Hull, T

UNIT - IV: Correlation**L- 20 H**

- 4.1 Linear Correlation
- 4.2 Correlation Coefficient
- 4.3 Partial and Multiple Correlation
- 4.4 Rank Correlation

BOOKS FOR REFERENCE

1. Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc
2. Clark D.H. (1999) Research Problem in Physical Education 2nd edition, Eaglewood Cliffs, Prentice Hall, Inc.
3. Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics
4. Kamlesh, M. L. (1999) Reserach Methodology in Physical Education and Sports, New Delhi
5. Rothstain A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc
6. Sivaramakrishnan. S. (2006) Statistics for Physical Education, Delhi; Friends Publication
7. Thirumalaisamy (1998), Statistics in Physical Education, Karaikudi, Senthilkumar Publications.

SEMESTER- VII**Course Title: Educational Leadership Camp / Visit Standard Sports Meet/ Study Tour / Adventure Sports****Course Type: Major** (Code: PEDS7014)**Credit: 6** (Lecture- 0, Tutorial- 0 & Practical- 6)**Full Marks- 75** (Theory: 0, Practical: 60 & Internal Assessment: 15)**Objectives:**

- i. Master skills for guiding institutions, including communication, motivation and conflict resolution.
- ii. Develop strategies to foster collaboration among teachers and students.

Outcomes:

- i. To develop greater self-awareness, emotional intelligence, adaptability and ethical judgment.
- ii. Maximize learning through enhanced instruction and assessment practices.

Educational Leadership Camp

- The camp may be conducted for 3-5 days (as suitable) during college hours or during vacation.
- To organize Educational Leadership Camp in or outside the campus (venue may be selected in nearby School or institution) on specific areas under study (Physical Education and Sports specific).
- Orientation on the areas may be given by teacher(s) concerned and guest speakers may be invited to give lecture on specific areas (First-Aid, officiating, recent issues on socio-cultural aspects).
- Regular visit of camp site by the teachers/head of the institution will be conducted and marks be given on group performance, creative skill, cultural events.
- Preparation of Diary / Record Book / Album of the camp throughout the day from opening to closing ceremony is compulsory.

Standard Sports Meet

- Duration: minimum 3 days
- To specify the level of Sports Meet: Inter College / District / State / Inter University competition.
- Planning to visit the same in or outside the campus or in closed stadium. To make the student understand visualize the entire spectrum of the event.
- Preparation of Diary / Record Book / Album of the event throughout the day from opening to closing ceremony is compulsory.

Study Tour

- Duration: minimum 3 days
- This is a very specific programme that cover specific area.
- This may be visit up a Sports Laboratory / Sports Store / Stadia (indoor or outdoor) / swimming pool / Gymnasium etc.
- Observing National Sports Day or participation in Sports Quiz.
- Preparation of Diary / Record Book / Album is compulsory for time to time record the events.

Adventure Sports

- Duration: minimum 3 days
- Performing and participating Group Activities, Group Cycling in and away the campus.
- Inspiring students to participate 1-3 km (Women) , 3-5 km (Men) rode race on special days (College foundation day / Sports Day / National Days of importance)
- If fund and time permits Basic Rock Climbing may be organized.
- Trekking is another interesting event where a suitable trek route may be selected.
- Preparation of Diary / Record Book / Album is compulsory for time to time record the events.

SEMESTER- VII**Course Title: Rhythmic and Recreational Physical Education****Course Type: Minor** (Code: PEDS7021)**Credit: 4** (Lecture- 0, Tutorial- 0 & Practical- 4)**Full Marks- 75** (Theory: 0, Practical: 60 & Internal Assessment: 15)**Objectives:**

- i. Development of physical skills like coordination, balance and strength.
- ii. To promote over all well-being through enjoyment and relaxation.

Outcomes:

- i. Improvement of physical fitness.
- ii. Enhancement of psychological well-being.

Unit-I: Introduction**P- 20 H**

- 1.1 Definition, meaning and scope of rhythmic activities
- 1.2 Scope, meaning and definition of recreational activities
- 1.3 Importance of rhythmic and recreational activity in physical education
- 1.4 Relation between rhythmic and recreational activities in physical education

Unit-II: Dumbbell / Umbrella Exercise**P- 20 H**

- 2.1 Correct holding techniques
- 2.2 Basic dumbbell / umbrella exercises for arms, shoulder and chest
- 2.3 Rhythmic dumbbell / umbrella drill in 8 or 16 counts
- 2.4 Dumbbell / umbrella drill in standing and sitting position

Unit-III: Wand / Lezim Drill**P- 20 H**

- 3.1 Description and importance of wand / lezim exercise
- 3.2 Basic position: attention, stand at easy, holding wand / lezim
- 3.3 Simple arm, shoulder and trunk exercises with wand / lezim
- 3.4 Rhythmic wand / lezim drill with music or count

Unit-IV: Recreational Activities**P- 20 H**

- 4.1 Recreational Games: Individual
- 4.2 Recreational Games: Group
- 4.3 Recreational Games: Parent or Teacher
- 4.4 Recreational Games: Working place

SEMESTER- VIII**For UG Honours with Research Project / Dissertation****Course Title: Sports Sociology and Psychology****Course Type: Major** (Code: PEDS8011)**Credit: 6** (Lecture- 5, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60, Practical: 0 & Internal Assessment: 15)**Objectives:**

- i. To analyze how Psycho-social structure and cultural norms influence participants and performance.
- ii. To evaluate Psycho-social patterns and changes in physical activity.

Outcomes:

- i. To boost self-estimate, mood, sleep quality and energy as well as reducing risks of stress.
- ii. To prepare the athlete to learn self-confident, obedient, self-reliant and to be courageous in competitive situation.

UNIT- I: Sports Sociology**L- 15 H**

- 1.1 Definition and meaning of Sociology, Society, Socialization & Sports Sociology; Scope of Sports Sociology
- 1.2 Individual differences: heredity and environment
- 1.3 Psycho social aspect of human behavior in relation to Physical Education and Sports
- 1.4 Importance of Sports Sociology in the field of Physical Education and Sports Science

UNIT- II: Sociological Aspect of Physical Education & Sports**L- 20 H**

- 2.1 Leadership: Meaning, Definition, Types and Qualities of good leader
- 2.2 Theories of play; socialization through Physical Education and Sports; Custom, cohesion, tradition, orthodoxy and Physical Education & Sports
- 2.3 Effects of culture on different sports personalities and their lifestyle
- 2.4 Development of Peace & Values through Physical Education & Sports; Social media and Sports

UNIT- III: Sports Psychology**L- 25 H**

- 3.1 Meaning and definition of Psychology and Sports Psychology; scope of Sports Psychology. Importance of Sports Psychology in the field of Physical Education and Sports.
- 3.2 Meaning and definition of learning; Theories of learning and Laws of learning.
- 3.3 Learning curve: Meaning, types and factors affecting Learning curve
- 3.4 Transfer of learning: Meaning, definition type and factors affecting transfer of learning.

UNIT- IV: Psychological Aspect of Physical Education & Sports**L- 15 H**

- 4.1 Emotion and Motivation: Meaning, definition, types, characteristics and Role in Physical Education and Sports.
- 4.2 Interest, Aggression and Anxiety: Meaning, definition and Role in Physical Education and Sports.
- 4.3 Personality: Meaning, definition and type of Personality traits; Role of physical activities in the development of personality.
- 4.4 Stress: Meaning, definition, types, causes and management of Stress through physical activity and sports.

Fitness Test (Compulsory)**P- 15 H**

Physical Fitness Test through Harvard Step Test

BOOKS FOR REFERENCE

1. Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.
2. Jain. (2002), Sports Sociology, Heal Sahety Kendre Publishers.
3. Jay Coakley. (2001) Sports in Society – Issues and Controversies in International Education, Mc-Craw Seventh Ed.
4. John D Lauther (2000) Psychology of Coaching. Ner Jersy: Prenticce Hall Inc.
5. John D. Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.
6. Miroslaw Vauks & Bryant Cratty (1999). Psychology and the Superior Athlete. London: The Macmillan Co.
7. Richard, J. Crisp. (2000). Essential Social Psychology. Sage Publications.
8. Robert N. Singer (2001). Motor Learning and Human Performance. New York: The Macmillan Co.
9. Robert N. Singer. (1989) The Psychology Domain Movement Behaviour. Philadelphia: Lea and Febiger.
10. Thelma Horn. (2002). Advances in Sports Psychology. Human Kinetic.
11. Whiting, K, Karman., Hendry L.B & Jones M.G. (1999) Personality and Performance in Physical Education and Sports. London: Hendry Kimpton Publishers.

SEMESTER- VIII**For UG Honours with Research Project / Dissertation****Course Title: Badminton & Throwball****Course Type: Minor** (Code: PEDS8021)**Credit: 4** (Lecture- 0, Tutorial- 0 & Practical- 4)**Full Marks- 75** (Theory: 0, Practical: 60 & Internal Assessment: 15)**Objectives:**

- i. To master basic skills & techniques and rules and regulations of each game.
- ii. Developing motor skills, social skills and cognitive skills.

Outcomes:

- i. Demonstrate the ability to perform individual offensive and defensive skills and strategies.
- ii. Understand basic rules, terminology, and scoring procedures.

BADMINTON**Unit-I: Introduction of the Game****L- 5 H**

Origin and History of the game, Badminton World Federation (BWF), Badminton Association of India (BAI)

Unit-II: Fundamental Skills**P- 50 H**

Basic Knowledge: Various parts of the Racket and Grip.

Service: Short service, Long service, Long-high service.

Shots: Over-head shot, Defensive clear shot, Attacking clear shot, Drop shot, Net shot, Smash.

Unit-III: Rules, Regulations and Officiating**P- 15 H****Rules and Regulations:** Badminton court marking, game practice with applications of rules and regulations.**Officiating:** Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.**Unit-IV: Records and Awards****L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

THROWBALL**Unit-I: Introduction of the Game****L- 5 H**

Origin and History of the game, International Throwball Federation, Throwball federation of India (TFI), West Bengal Throwball Association

Unit-II: Fundamental Skills**P- 50 H**

Service: Overhand service, Side arm service.

Catching: Two hand catching.

Return: One hand overhead return, side arm return.

Unit-III: Rules, Regulations and Officiating**P- 10 H****Rules and Regulations:** Layout of Throwball court, game practice with applications of rules and regulations.**Officiating:** Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.**Unit-IV: Records and Awards****L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

SEMESTER- VIII**For UG Honours with Research Project / Dissertation****Course Title: Research Project / Dissertation****Course Type: Research** (Code: PEDS8091)**Credit: 12** (Lecture- 0, Tutorial- 0 & Practical- 12)**Full Marks- 225** (Seminar Presentation, Preparation & Submission of Research Project/
Dissertation- 135+ Viva- 90)**Objectives:**

- i. To develop an understanding of the process, ethics, and rigor of Physical Education & Sports research.
- ii. To design and execute a systematic research project/dissertation.

Outcomes:

- i. Formulate a research problem with clear objectives and rationale and analyse & interpret quantitative and/or qualitative data.
- ii. Write a research report/dissertation following academic conventions and present research findings effectively in seminar and viva-voce.

Detailed Guidelines for Conducting the Research Project / Dissertation**1. Nature of the Research Project/Dissertation****The project/dissertation may be:**

- Empirical (Survey / Experimental / Case Study)
- Qualitative (Phenomenological, Narrative, Ethnographic)
- Mixed-method
- Action Research (school-based)
- Policy / Curriculum / Pedagogical analysis

(Aligned with NEP-2020 themes such as fitness, technology, Indian Games and Sports, Indian Knowledge Systems, Yoga etc.)

2. Topic Selection

- Topic must be relevant to Health, Fitness, Physical Education & Sports and contemporary issues.
- Should align with NEP-2020 thrust areas.
- Must be approved by the Supervisor and Departmental Research Committee (DRC) or College Research Committee (if any).

3. Supervision

- Each learner shall work under an approved research supervisor.
- Supervisor will guide proposal, methodology, data analysis, and report writing.

4. Stages of Research Project / Dissertation**Stage I: Research Proposal Development**

- Identification of research problem
- Review of related literature
- Objectives / Research questions / Hypotheses
- Methodology and tools
- Ethical considerations

Seminar Presentation – I (Proposal Seminar)**Stage II: Tool Construction & Pilot Study**

- Development/selection of research tools
- Pilot testing and refinement

Stage III: Data Collection

- Field work / survey / experimentation
- Maintaining ethical standards and consent

Stage IV: Data Analysis & Interpretation

- Statistical / thematic analysis
- Interpretation in the light of objectives/ hypotheses

Stage V: Report Writing

The dissertation shall include:

1. Title Page

2. Certificate & Declaration
 3. Acknowledgement
 4. Abstract
 5. Chapter I: Introduction
 6. Chapter II: Review of Related Literature
 7. Chapter III: Methodology
 8. Chapter IV: Data Analysis & Interpretation
 9. Chapter V: Findings, Conclusions & Implications
 10. References/ Bibliography (APA style)
 11. Appendices
- 5. Viva-Voce Examination** (Conducted by External Examiner)
- Based on:
 - Conceptual clarity
 - Methodology
 - Data analysis
 - Findings and implications
 - Presentation and defence
- 6. Evaluation Criteria (NEP-Aligned)**
- Originality and relevance
 - Methodological rigor
 - Ethical compliance
 - Analytical depth
 - Academic writing and referencing
 - Presentation and communication skills
- 7. Ethical Guidelines**
- Plagiarism below acceptable institutional limits.
 - Informed consent and confidentiality.
 - Compliance with UGC Research Ethics and NEP-2020 values.
 - Use of plagiarism detection software mandatory.
- 8. Submission Guidelines**
- Hard bound dissertation (as per university norms).
 - Soft copy submission to department/repository.
 - APA (7th edition) referencing style.

SEMESTER- VIII**For UG Honours****Course Title: Sports Sociology and Psychology****Course Type: Major** (Code: PEDS8011)**Credit: 6** (Lecture- 5, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60, Practical: 0 & Internal Assessment: 15)**Objectives:**

- i. To analyze how Psycho-social structure and cultural norms influence participants and performance.
- ii. To evaluate Psycho-social patterns and changes in physical activity.

Outcomes:

- i. To boost self-estimate, mood, sleep quality and energy as well as reducing risks of stress.
- ii. To prepare the athlete to learn self-confident, obedient, self-reliant and to be courageous in competitive situation.

UNIT- I: Sports Sociology**L- 15 H**

- 1.1 Definition and meaning of Sociology, Society, Socialization & Sports Sociology; Scope of Sports Sociology
- 1.2 Individual differences: heredity and environment
- 1.3 Psycho social aspect of human behavior in relation to Physical Education and Sports
- 1.4 Importance of Sports Sociology in the field of Physical Education and Sports Science

UNIT- II: Sociological Aspect of Physical Education & Sports**L- 20 H**

- 2.1 Leadership: Meaning, Definition, Types and Qualities of good leader
- 2.2 Theories of play; socialization through Physical Education and Sports; Custom, cohesion, tradition, orthodoxy and Physical Education & Sports
- 2.3 Effects of culture on different sports personalities and their lifestyle
- 2.4 Development of Peace & Values through Physical Education & Sports; Social media and Sports

UNIT- III: Sports Psychology**L- 25 H**

- 3.1 Meaning and definition of Psychology and Sports Psychology; scope of Sports Psychology. Importance of Sports Psychology in the field of Physical Education and Sports.
- 3.2 Meaning and definition of learning; Theories of learning and Laws of learning.
- 3.3 Learning curve: Meaning, types and factors affecting Learning curve
- 3.4 Transfer of learning: Meaning, definition type and factors affecting transfer of learning.

UNIT- IV: Psychological Aspect of Physical Education & Sports**L- 15 H**

- 4.1 Emotion and Motivation: Meaning, definition, types, characteristics and Role in Physical Education and Sports.
- 4.2 Interest, Aggression and Anxiety: Meaning, definition and Role in Physical Education and Sports.
- 4.3 Personality: Meaning, definition and type of Personality traits; Role of physical activities in the development of personality.
- 4.4 Stress: Meaning, definition, types, causes and management of Stress through physical activity and sports.

Fitness Test (Compulsory)**P- 15 H**

Physical Fitness Test through Harvard Step Test

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2. Jain. (2002), Sports Sociology, Heal Sahety Kendre Publishers.
3. Jay Coakley. (2001) Sports in Society – Issues and Controversies in International Education, Mc-Craw Seventh Ed.
4. John D Lauther (2000) Psychology of Coaching. Ner Jersey: Prenticce Hall Inc.
5. John D. Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.
6. Miroslaw Vauks & Bryant Cratty (1999). Psychology and the Superior Athlete. London: The Macmillan Co.
7. Richard, J. Crisp. (2000). Essential Social Psychology. Sage Publications.
8. Robert N. Singer (2001). Motor Learning and Human Performance. New York: The Macmillan Co.
9. Robert N. Singer. (1989) The Psychology Domain Movement Behaviour. Philadelphia: Lea and Febiger.
10. Thelma Horn. (2002). Advances in Sports Psychology. Human Kinetic.
11. Whiting, K, Karman., Hendry L.B & Jones M.G. (1999) Personality and Performance in Physical Education and Sports. London: Hendry Kimpton Publishers.

SEMESTER- VIII**For UG Honours****Course Title: Common Sports Injury Management****Course Type: Major** (Code: PEDS8012)**Credit: 4** (Lecture- 3, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60, Practical: 0 & Internal Assessment: 15)**Objectives:**

- i. To enable students to understand the nature, causes, and types of sports injuries.
- ii. To develop knowledge and practical skills for the prevention, immediate care, and management of sports injuries.

Outcomes:

- i. Students will be able to identify types and causes of sports injuries and describe the healing process.
- ii. Understand the process of rehabilitation and recovery for athletes to return safely and effectively to performance.

UNIT- I: Fundamentals of Sports Injuries**L- 10 H**

- 1.1 Definition, nature, causes and symptoms of sports injury.
- 1.2 Classification of sports injuries – acute, chronic, soft tissue and overuse injuries.
- 1.3 Concept of common sports injuries and risk factors.
- 1.4 Role of physical education teachers and coaches in injury prevention and management.

UNIT- II: Prevention and First Aid in Sports Injuries**L- 15 H**

- 2.1 Principles of prevention of sports injuries- conditioning, warm-up, cool-down, flexibility exercise.
- 2.2 Safety measures in sports facilities, equipment and playing environment.
- 2.3 First aid and injury prevention programme -RICE, PRICE, PRINCE, DRABC.
- 2.4 Psychological preparation and stress management strategies for injury prevention.

UNIT- III: Common Sports Injuries and Management**L- 20 H**

- 3.1 Muscle injuries: Cramp, soreness, fatigue, myositis, strain - Causes, symptoms and management.
- 3.2 Ligament injuries: Sprain, ACL tear, turf toe, skier's thumb- Causes, symptoms and management.
- 3.3 Tendon injuries: Tennis elbow, achilles tendon rupture, groin strain, rotator cuff tear, shin splint- Causes, symptoms and management.
- 3.4 Head injuries: Concussion, contusion, skull fracture, hematoma - Causes, symptoms and management.

UNIT- IV: Therapeutic Modalities & Rehabilitation of Sports Injuries**L- 15 H**

- 4.1 Basic principles of rehabilitation and stages of recovery.
- 4.2 Phases of rehabilitation and return-to-play guidelines.
- 4.3 Role of exercise therapy, massage therapy, hydrotherapy, cryotherapy and thermotherapy.
- 4.4 Nutritional and physiological aspects of rehabilitation.

BOOKS FOR REFERENCE

1. Doherty. J. Meno. Web, Moder D (2000) Track & Field, Englewood Cliffs, Prentice Hal Inc.
2. Lace, M. V. (1951) Massage and Medical Gymnastics, London: J & A Churchill Ltd.
3. Mc Ooyand Young (1954) Tests and Measurement, New York: Appleton Century.
4. Naro, C. L. (1967) Manual of Massage and, Movement, London: Febra and Febra Ltd.
5. Rathbome, J.I. (1965) Corrective Physical education, London: W.B. Saunders & Co.
6. Stafford and Kelly, (1968) Preventive and Corrective Physical Education, New York.

SEMESTER- VIII**For UG Honours****Course Title: Recreation and Inclusive Sports****Course Type: Major** (Code: PEDS8013)**Credit: 4** (Lecture- 3, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60, Practical: 0 & Internal Assessment: 15)**Objectives:**

- i. To promote physical and mental health.
- ii. Build social connection and sense of belongingness.

Outcomes:

- i. To provide opportunities for personal growth such as improved self-estimate and confidence.
- ii. Foster social inclusion and life skill like teamwork and leadership.

UNIT- I: Introduction**L- 10 H**

- 1.1 Definition and concept of recreation
- 1.2 Definition and concept of inclusive sports
- 1.3 Aim and objectives of recreation
- 1.4 Aim and objectives of Inclusive Sports

UNIT- II: Relation of Recreation and Inclusive Sports**L- 20 H**

- 2.1 Types of recreation
- 2.2 Types of Inclusive Sports
- 2.3 Relation between recreation and inclusive sports
- 2.4 Types of inclusive people

UNIT- III: Sports, Fitness and Recreation**L- 15 H**

- 3.1 Importance of recreational sports in Physical Education and Sports Science
- 3.2 Benefits of recreational sports, Agencies providing recreation: Government, Non-Government
- 3.3 Leisure and Sports community
- 3.4 Recreational Sports: significance and symbolism

UNIT - IV: Inclusive Sports and Fitness**L- 15 H**

- 4.1 Benefit of inclusive sports
- 4.2 Fitness program for inclusive people
- 4.3 Inclusive Sports: play at home
- 4.4 How to make sports more inclusive

BOOKS FOR REFERENCE

1. Chelladurai, P. (1999). Human Resources Management in Sports and Recreation. Human Kinetics.
2. Sherrill, C. (2004). *Adapted Physical Activity*. McGraw-Hill
3. Winnick, J. P. (2011). *Adapted Physical Education and Sport*. Human Kinetics
4. DePauw, K. P. (2013). *Disability and Sport*. Human Kinetics
5. Singh, H. (2018). *Recreation and Inclusion*. DVS Publications
6. Sharma, O. P. (2016). *Inclusive Sports*. Friends Publications
7. Torkildsen, G. (2012). *Leisure and Recreation Management*. Routledge
8. Kraus, R. (2011). *Recreation and Leisure*. Pearson
9. Darcy, S. (2016). *Inclusive Sport Management*. Routledge

SEMESTER- VIII**For UG Honours****Course Title: Sports Officiating and Coaching****Course Type: Major** (Code: PEDS8014)**Credit: 4** (Lecture- 3, Tutorial- 1 & Practical- 0)**Full Marks- 75** (Theory: 60, Practical: 0 & Internal Assessment: 15)**Objectives:**

- i. Develop a clear understanding of the role, duties, and responsibilities of officials in various games and sports.
- ii. Familiarize students with rules, regulations, scoring systems, and conduct of major sports.

Outcomes:

- i. Explain the rules, regulations, and technical aspects of major games and sports.
- ii. Identify and perform the duties of referees, umpires, scorers, and other technical officials.

UNIT- I: Introduction of Officiating and Coaching**L- 10 H**

- 1.1 Concept of Officiating and Coaching.
- 1.2 Importance and principles of Officiating.
- 1.3 Relation of official and coach with management, players and spectators.
- 1.4 Qualities and qualification of coach and official.

UNIT- II: Coach as a Mentor**L- 15 H**

- 2.1 Duties of coach in general, pre, during and post-game.
- 2.2 Philosophy of coaching.
- 2.3 Responsibilities of a coach on and off the field.
- 2.4 Psychology of competition and coaching.

UNIT- III: Duties of Official**L- 15 H**

- 3.1 Duties of official in general, pre, during and post-game.
- 3.2 Philosophy of officiating.
- 3.3 Mechanics of officiating.
- 3.4 Ethics of officiating.

UNIT- IV: Technical Aspects of Officiating**L- 15 H**

- 4.1 Signals and Mechanics of Officiating (Hand Signals, Whistle Use, Communication)
- 4.2 Scoring Systems: Tabulation, Score Sheets, Tie-Breaking Rules
- 4.3 Field/Court Marking, Layout, and Equipment Specifications
- 4.4 Common Errors in Officiating and How to Avoid Them

BOOKS FOR REFERENCE

1. Martens, R. (2012). *Successful Coaching* (4th ed.). Human Kinetics
2. Lyle, J. (2010). *Sports Coaching Concepts*. Routledge
3. American Sport Education Program. (2016). *Coaching Principles*. Human Kinetics
4. Singh, H. (2018). *Coaching in Sports*. DVS Publications
5. Sharma, O. P. (2016). *Officiating and Coaching*. Friends Publications
6. Wade, A. (2015). *Coaching Soccer Successfully*. Human Kinetics
7. Bompa, T. (2019). *Periodization Training*. Human Kinetics
8. FIFA. (2021). *Laws of the Game*. Zurich: FIFA

SEMESTER- VIII**For UG Honours****Course Title: Badminton & Throwball****Course Type: Minor** (Code: PEDS8021)**Credit: 4** (Lecture- 0, Tutorial- 0 & Practical- 4)**Full Marks- 75** (Theory: 0, Practical: 60 & Internal Assessment: 15)**Objectives:**

- To master basic skills & techniques and rules and regulations of each game.
- Developing motor skills, social skills and cognitive skills.

Outcomes:

- Demonstrate the ability to perform individual offensive and defensive skills and strategies.
- Understand basic rules, terminology, and scoring procedures.

BADMINTON**Unit-I: Introduction of the Game****L- 5 H** Origin and History

of the game, Badminton World Federation (BWF), Badminton Association of India (BAI)

Unit-II: Fundamental Skills**P- 50 H**

Basic Knowledge: Various parts of the Racket and Grip.

Service: Short service, Long service, Long-high service.

Shots: Over-head shot, Defensive clear shot, Attacking clear shot, Drop shot, Net shot, Smash.

Unit-III: Rules, Regulations and Officiating**P- 15 H****Rules and Regulations:** Badminton court marking, game practice with applications of rules and regulations.**Officiating:** Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.**Unit-IV: Records and Awards****L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments

THROWBALL**Unit-I: Introduction of the Game****L- 5 H**

Origin and History of the game, International Throwball Federation, Throwball federation of India (TFI), West Bengal Throwball Association

Unit-II: Fundamental Skills**P- 50 H**

Service: Overhand service, Side arm service.

Catching: Two hand catching.

Return: One hand overhead return, side arm return.

Unit-III: Rules, Regulations and Officiating**P- 10 H****Rules and Regulations:** Layout of Throwball court, game practice with applications of rules and regulations.**Officiating:** Officials, identification of signals and whistle, detailed account of score sheet fill up, interpretation of rules and duties of the officials, pre - during and post-match duties of the officials.**Unit-IV: Records and Awards****L- 5 H**

National and International levels players

National and International levels records

National and International levels awards, trophy and tournaments