

UNIVERSITY OF KALYANI

4 Years Bachelor's Degree

in

PHYSICAL EDUCATION AND SPORT (MAJOR & MINOR)

AS PER NEP 2020 GUIDELINES

COURSE STRUCTURE (FINAL)

Semester-I

Course Code	Course Title	Nature of Course	Credit of Course	Class hour/Week	Evaluation		Total Marks
					Internal	Semester End	
PED-M-T-1	Theory: Introduction and History of Physical Education & Sport Practical: Formal Activities- (Callisthenics & Dumbbell) and Marching	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-MI-T-1	Foundation and History of Physical Education and Sport	Minor	4	4	10	40	50
PED-MU-T-1		Multidisciplinary	3	3	10	35	45
PED-SEC-P-1	Gymnastics	Skill Enhancement	3	6	10	35	45
PED-VA-T-1	Environmental Education	Value Added Course	4	4	10	40	50
			20	20	55	210	265

Semester-II

Course Code	Course Title	Nature of Course	Credit of Course	Class hour/Week	Evaluation		Total Marks
					Internal	Semester End	
PED-M-T-2	Theory: Biological Basis of Physical Education and Sport Practical: Yoga	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-MI-T-2	Foundation and History of Physical Education and Sport	Minor	4	4	10	40	50
PED-MU-T-2		Multidisciplinary	3	3	10	35	45
PED-AECT-1	Communicative English	Ability Enhancement Course	4	4	10	40	50
PED-SEC-P-2	Track & Field (Running), Ball Games- Football and Handball	Skill Enhancement	3	6	10	35	45
PED-SI-T-1	Summer Internship (Additional for Certificate/Diploma)	Summer Internship	4	4	* for exit students		
			20	20	55	210	265

Semester-III

Course Code	Course Title	Nature of Course	Credit of Course	Class hour/Week	Evaluation		Total Marks
					Internal	Semester End	
PED-M-T-3	Theory: Sociological & Psychological Basis of Physical Education & Sport Practical: Formal Activities (Wand Drill & Lezium) and Kabaddi	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-MI-T-3	Management in Physical Education and Sports	Minor	4	4	10	40	50
PED-MU-T-3		Multidisciplinary Course	3	3	10	35	45
PED-SEC-P-3	Athletics (Jump and Throw) & Aerobics & Kho-Kho	Skill Enhancement Course	3	6	10	35	45
PED-VA-T-2		Value Added Course	4	4	10	40	50
			20	20	55	210	265

Semester-IV

Course Code	Course Title	Nature of Course	Credit of Course	Class hour/Week	Evaluation		Total Marks
					Internal	Semester End	
PED-M-T-4	Theory: Yoga Education Practical: Advanced Yoga & Badminton/TT	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-M-T-5	Theory: Anatomy, Physiology and Exercise Physiology Practical: Physiology of Exercise	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-MI-T-4	Management in Physical Education and Sports	Minor	4	4	10	40	50
AECC-2	MIL	Ability Enhancement Course	4	4	10	40	50
PED-SI-T-1	Summer Internship (Additional for Certificate/Diploma)	Summer Internship	4	4	* for exit students		
			20	20	50	200	250

Semester-V

Course Code	Course Title	Nature of Course	Credit of Course	Class hour/Week	Evaluation		Total Marks
					Internal	Semester End	
PED-M-T-6	Theory: Management in Sport Practical: Field work and Court Marking	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-M-T-7	Theory: Health Education, Fitness and Wellness Practical: First Aid	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-MI-T-5	Health Education, Fitness and Wellness	Minor	4	4	10	40	50
PED-MI-T-6	Formal Activities and Ball Games	Minor	4	8(Pr)	10	40	50
			20	20	50	200	250

Semester-VI

Course Code	Course Title	Nature of Course	Credit of Course	Class hour/Week	Evaluation		Total Marks
					Internal	Semester End	
PED-M-T-8	Theory: Kinesiology & Biomechanics in Physical Education & Sport Practical: Kinesiology and Biomechanics	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-M-T-9	Theory: Officiating in Physical Education and Sport Practical: Officiating	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-M-T-10	Theory: Test, Measurement and Evaluation Practical: Skill, Fitness and Posture test	Major	6	4(Th)+4(Pr)	15	40+20	75
	Adventure Sports/Camp, Internship at MultiGym, Fitness Centre, Rehab Centre, Tournament	OutReach/Internship	2				
			20	20	45	180	225

Semester-VII

Course Code	Course Title	Nature of Course	Credit of Course	Class hour/Week	Evaluation		Total Marks
					Internal	Semester End	
PED-M-T-11	Theory: Theory of Games and Sport Practical: Ball Games (Volleyball, Cricket, Basketball, Netball) (any Two)	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-M-T-12	Theory: Sports Medicine Practical: Massage, Physio-therapy and Exercise Therapy	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-M-T-13	Theory: Sports Training Practical: Weight Training and Sports Training	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-MI-T-7	Formal Activities and Ball Games	Minor	4	8 (Pr)	10	40	50
PED-MI-T-8	Health Education, Fitness and Wellness	Minor	4	4	10	40	50
			26	26	65	260	325

Semester-VIII

Course Code	Course Title	Nature of Course	Credit of Course	Class hour/Week	Evaluation		Total Marks
					Internal	Semester End	
PED-M-T-14	Theory: ICT in Physical Education and Sport	Major	4	4	10	40	50
PED-M-T-15	Theory: Instrumentation in Physical Education and Sport	Major	4	4	10	40	50
PED-M-T-16	Theory: Career Opportunities in Physical Education and Sport	Major	4	4	10	40	50
PED-M-T-17	Theory: Research Methodology Practical: Preparation and Presentation of Research Proposal	Major	6	4(Th)+4(Pr)	15	40+20	75
PED-M-T-18	Theory: Statistics in Physical Education and Sport Practical: Data Analysis	Major	6	4(Th)+4(Pr)	15	40+20	75
			24	24	60	240	300

Course Code	Course Title	Nature of Course	Credit of Course	Class hour/Week	Evaluation		Total Marks
					Internal	Semester End	
PED-SI-T-3	Research Project/ Dissertation	Summer Course	12	12	30	120	150

SI-3 for Bachelor Degree with Honors in respective Subject with Research

M-17 and M-18 for Bachelor Degree with Honors in respective Subject without Research

DETAILED SYLLABUS STRUCTURE IN PHYSICAL EDUCATION AND SPORT

SEMESTER I

MAJOR COURSE: Introduction to and History of Physical Education and Sport

Course Code: PED-M-T-1

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction

LH - 12

- 1.1 Meaning and definition of Physical Education
- 1.2 Aim and objectives of Physical Education
- 1.3 Nature of Physical Education
- 1.4 Misconception and Modern concept of Physical Education
- 1.5 Relation of Physical Education with General Education
- 1.6 Importance of Physical Education in modern society

Unit – II: History of Physical Education in Greece

LH - 20

- 2.1 Homeric Sports of the Heroic Age
- 2.2 The City States
- 2.3 Sparta – Women at Sparta, Education in Sparta, Physical Education in Sparta
- 2.4 Athens – Education, The Palaestra, Higher Education, The Ephebos, Gymnasium, The Greek Teachers
- 2.5 Greek National Games and Festivals: Pythian Games, Isthmian Games, Nemean Games, Ancient Olympic Games, Modern Olympic Games

Unit – III: History of Physical Education in Rome

LH - 12

- 3.1 Education in Rome
- 3.2 The Field of Mars, The Public Games, The Circus Maximus, The Colosseum, Gladiatorial Combats, The Thermae
- 3.3 The Roman Contribution

Unit-IV: History of Physical Education in India

LH - 16

- 4.1 Historical Development of Physical Education and Sports in India- Ancient Period, Medieval Period, Pre- Independence and Post-Independence Period
- 4.2 Brief historical background of Asian Games, Common wealth Games and SAF Games
- 4.3 National Sports Awards- Arjuna Award, Major Dhyan Chand Khel Ratna Award, Dronacharya Award and Dhyanchand Award

Unit-V: Field Practical

LH –60

5.1 Development of physical fitness through Calisthenics, Marching, and Dumbbell activities

Calisthenics: Attention, Preparation, Four and Eight count exercises involving different body parts done to command/music, Standing Exercise, Jumping Exercise, Moving Exercise and Combination of above all

5.2 Marching- Fall In, Attention, Stand at ease, Stand Easy, Eyes right, Eyes front, Right Turn, Left Turn, Half Right Turn, Half Left Turn, About Turn, Mark Time Mark, Forward March. Salute, Right and Left salute.

5.3 Dumbbell: Grip and Attention with Light apparatus, Stand-at-ease with the dumbbell, and exercise with verbal command, drum, whistle, and music – Two counts, Four counts, Eight counts and Sixteen counts. Standing Exercise, Jumping Exercise, Moving Exercise and a Combination of above all

Reference Book

1. Bhattacharyya, A.K. & Bhowmick. S. Sarir Siksha. Paschimbanga Rajya Pustak Parsad
2. Graham, G. Teaching Children Physical Education: Becoming a Master Teacher. Human Kinetics, Champaign, Illinois
3. Kamlesh, M.L. & Singh, M.K. Physical Education. Naveen Publication
4. Kar, S. & Santra, D.C. (2018): Snatak Sarirsiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
5. Kar, S. (2018). Mahavidyalayer Sarirsiksha : Health Education and First Aid: Classique Books, Kalkata
6. Kar, S. (2017). Sarirsiksha Samagra (Part-3) Health Education and First Aid: Classique Books, Kalkata
7. Lumpkin, A. (2007) Introduction to Physical Education, Exercise Science and Sports Studies, McGraw Hill, New York
8. Siedentop, D. (2004) Introduction to Physical Education, Fitness and Sport, McGraw Hill Companies Inc., New York
9. Singh, A. et al. Essentials of Physical Education, Kalyani Publishers, Ludhiana, Punjab
10. Wuest, D.A. & Bucher, C.A. Foundation of Physical Education, Exercise Science and Sports, McGraw Hill Co. Inc., New York

MINOR COURSE: Foundation and History of Physical Education

Course Code: PED-MI-T-1

Total number of classes – 60

Unit – I: Introduction

LH - 12

- 1.1 Meaning and definition of Physical Education
- 1.2 Aim and objectives of Physical Education
- 1.3 Misconcept and Modern concept of Physical Education
- 1.4 Importance of Physical Education in modern society

Unit – II: Biological and Sociological Foundations of Physical Education

LH - 18

- 2.1 Biological Foundation- meaning and definition of growth and development, Factors affecting growth and development, Differences of growth and development, Principles of growth and development
- 2.2 Age- Chronological age, anatomical age, physiological age and mental age
- 2.3 Sociological Foundation - meaning and definition of Sociology, Society, Socialization and Physical Education
- 2.4 Role of games and sports in National and International Harmony

Unit-III: History of Physical Education

LH - 18

- 3.1 Historical development of Physical Education and Sports in India- Pre-Independence period and Post-Independence period
- 3.2 Olympic Movement-Ancient and Modern Olympic Games
- 3.3 Brief historical background of Asian Games, Common wealth Games and SAF Games
- 3.4 National Sports Awards- Arjuna Award, Major Dhyan Chand Khel Ratna Award, Dronacharya Award and Dhyanchand Award

Unit-IV: Yoga Education

LH - 12

- 4.1 Meaning and definition of the term Yoga, types, aim, objectives and importance of Yoga
- 4.2 History of Yoga
- 4.3 Astanga Yoga
- 4.4 Hatha Yoga

Reference Book

1. Graham, G. (2001) Teaching Children Physical Education: Becoming a Master Teacher. Human Kinetics, Champaign, Illinois, USA
2. Kamlesh, M.L. & Singh, M.K. (2006) Physical Education (Naveen Publication)
3. Lau, S.K. (1999) Great Indian Players, New Delhi, Sports
4. Lumpkin, A. (2007) Introduction to Physical Education, Exercise Science and Sports Studies, McGraw Hill, New York, USA

5. Siedentop, D. (2004) Introduction to Physical Education, Fitness and Sport, McGraw Hill Companies Inc., New York, USA
6. Shaffer, D.R. (2002) Development Psychology: Childhood and Adolescence. Thomson, Sydney, Australia
7. Shukla, (2000) Mother on Education, National Council of Teacher Education, New Delhi
8. Singh, A. et al. (2000) Essential of Physical Education, Kalyani Publishers, Ludhiana, Punjab
9. Wuest, D.A. & C.A. Bucher (2006) Foundation of Physical Education, Exercise Science, and Sports. McGraw Hill Companies Inc.; New York, USA
10. Fahey, T.D., M.P. Insel and W.T. Rath (2006) Fit & Well: Core Concepts and Labs in Physical Fitness, McGraw Hill, New York
11. Kansal, D.K. (2012) A Practical Approach to Test Measurement and Evaluation Sports and Spiritual Science Publication, New Delhi
12. Kar, S. & Santra, D.C. (2018): Snatak Sarirsiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
13. Kar, S. (2018). Mahavidyalayer Sarirsiksha : Health Education and First Aid: Classique Books, Kalkata
14. Kar, S. (2017). Sarirsiksha Samagra (Part-3) Health Education and First Aid: Classique Books, Kalkata

SKILL ENHANCEMENT COURSE: Gymnastics

Course Code: PED-SEC-P-1

Total number of classes – 90

Unit – I: Compulsory

LH - 40

- 1.1 Forward Roll
- 1.2 T-Balance
- 1.3 Backward Roll
- 1.4 Forward Roll with Split leg
- 1.5 Cart-Wheel

[Note: Perform the above Gymnastic skills continuously in the same sequence]

Unit – II: Optional (any two)

LH - 50

- 2.1 Hand Spring
- 2.2 Head Spring
- 2.3 Neck Spring
- 2.4 Hand Stand and Forward Roll
- 2.5 Summersault

DETAILED SYLLABUS STRUCTURE IN PHYSICAL EDUCATION AND SPORT

SEMESTER II

MAJOR COURSE: Biological Basis of Physical Education and Sport

Course Code: PED-M-T-2

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction

LH - 12

- 1.1 Evolution of Locomotion from Quadruped to Biped
- 1.2 Advantages and Disadvantages
- 1.3 Biological Basis of Life
- 1.4 Biological Basis of Physical Education
- 1.5 Exercise and its Types

Unit – II: Growth and Development

LH - 14

- 2.1 Meaning and definition of Growth and Development
- 2.2 Differences between Growth and Development
- 2.3 Stages of Growth and Development
- 2.4 Characteristics of Growth and Development at Different Stages
- 2.5 Principles of Growth and Development
- 2.6 Factors Affecting Growth and Development

Unit – III: Age and Sex Differences in Physical Education

LH - 12

- 3.1 Age- Chronological age, Anatomical age, Physiological age and Mental age
- 2.2 Anatomical Differences and Physiological Differences
- 2.3 Age and Sex differences in relation to Physical activities and Sports
- 2.4 Hereditary Traits
- 2.5 Major Neurotransmitters and Their Effects
- 2.4 Principles of Activity and its implications

Unit-IV: Somatotype

LH - 22

- 4.1 Somatotype – Meaning and Definition
- 4.2 Classification of Somatotype
- 4.3 Methods in the Assessment of Physique: Viola's Method; Kretschmer's Method; Sheldon's Method; Parnell's Method; Heath-Carter Method
- 4.4 Factors affecting Somatotype
- 4.5 Posture – Meaning and Definition, Importance of Good Posture, Causes of Poor Posture, Postural Deformities and Remedial Measures

Unit-V:Field Practical

LH –60

- 5.1 Standing Posture : Ardhashandrasana, Brikshasana, Padahasthasana
- 5.2 Sitting Posture : Ardhakurmasana, Paschimottanasana, Gomukhasana
- 5.3 Supine Posture : Setubandhasana, Halasana, Matsyasana
- 5.4 Prone Posture : Bhujangasana, Salvasana, Dhanurasana
- 5.5 Inverted Posture : Sarbhangasana, Shirsasana, Bhagrasana
(One Asana is compulsory from each posture)

Reference Book

1. Amrit Kumar, R. Moses. (1995). Introduction to Exercise Physiology. Madras: Poompugar Pathipagam
2. Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs
3. David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics
4. Fox, E.L., and Mathews, D.K. (1981). The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing
5. Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co. Richard, W. Bowers. (1989). Sports Physiology WMC: Brown Publishers
6. Sandhya Tiwaji. (1999). Exercise Physiology. Sports Publishers
7. Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications
8. Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication
9. William, D. Mc Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company

MINOR COURSE: Foundation and History of Physical Education

Course Code: PED-MI-T-2

Total number of classes – 60

Unit – I: Introduction

LH - 12

- 1.5 Meaning and definition of Physical Education
- 1.6 Aim and objectives of Physical Education
- 1.7 Misconcept and Modern concept of Physical Education
- 1.8 Importance of Physical Education in modern society

Unit – II: Biological and Sociological Foundations of Physical Education

LH - 18

- 2.1 Biological Foundation- meaning and definition of growth and development, Factors affecting growth and development, Differences of growth and development, Principles of growth and development
- 2.2 Age- Chronological age, anatomical age, physiological age and mental age
- 2.3 Sociological Foundation - meaning and definition of Sociology, Society, Socialization and Physical Education
- 2.4 Role of games and sports in National and International Harmony

Unit-III: History of Physical Education

LH - 18

- 3.5 Historical development of Physical Education and Sports in India- Pre-Independence period and Post-Independence period
- 3.6 Olympic Movement-Ancient and Modern Olympic Games
- 3.7 Brief historical background of Asian Games, Common wealth Games and SAF Games
- 3.8 National Sports Awards- Arjuna Award, Major Dhyan Chand Khel Ratna Award, Dronacharya Award and Dhyanchand Award

Unit-IV: Yoga Education

LH - 12

- 4.1 Meaning and definition of the term Yoga, types, aim, objectives and importance of Yoga
- 4.2 History of Yoga
- 4.3 Astanga Yoga
- 4.4 Hatha Yoga

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1. Graham, G. (2001) Teaching Children Physical Education: Becoming a Master Teacher. Human Kinetics, Champaign, Illinois, USA
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8. Singh, A. et al. (2000) Essential of Physical Education, Kalyani Publishers, Ludhiana, Punjab

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10. Fahey, T.D., M.P. Insel and W.T. Rath (2006) Fit & Well: Core Concepts and Labs in Physical Fitness, McGraw Hill, New York
11. Kansal, D.K. (2012) A Practical Approach to Test Measurement and Evaluation Sports and Spiritual Science Publication, New Delhi
12. Kar, S. & Santra, D.C. (2018): Snatak Saririksiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
13. Kar, S. (2018). Mahavidyalayer Saririksiksha : Health Education and First Aid: Classique Books, Kalkata
14. Kar, S. (2017). Saririksiksha Samagra (Part-3) Health Education and First Aid: Classique Books, Kalkata

SKILL ENHANCEMENT COURSE: Track Event and Ball Games

Course Code: PED-SEC-P-2

Total number of classes – 90

Unit – I: Track Events

LH - 20

- 1.1 Starting Techniques: Standing Start and Crouch Start (its variations), use of Starting Block
- 1.2 Acceleration with proper running techniques
- 1.3 Finishing technique: Run Through, Forward Lunging and Shoulder Shrug
- 1.4 Relay Race: Starting, Baton Holding/Carrying, Baton Exchange in between zone, and Finishing

Unit – II: Football

LH - 35

- 2.1 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
- 2.2 Trapping: trapping- the Rolling ball, and the Bouncing ball with sole of the foot
- 2.3 Dribbling: Dribbling the ball with Instep of the foot, Dribbling the ball with Inner and Outer step of the foot
- 2.4 Heading: In standing, running and jumping condition
- 2.5 Throw-in: Standing throw-in and Running throw-in
- 2.6 Feinting: With the lower limb and upper part of the body
- 2.7 Tackling: Simple Tackling, Slide Tackling
- 2.8 Goal Keeping: Collection of Ball, Ball clearance- kicking, throwing and deflecting
- 2.9 Game practice with application of Rules and Regulations

Unit – III: Handball

LH - 35

- 3.1 Catching, Throwing and Ball Control
- 3.2 Goal Throws: Jump Shot, Center Shot, Dive shot, Reverse Shot
- 3.3 Dribbling: High and Low
- 3.4 Attack and counter attack, simple counter attack, counter attack from two wings and center
- 3.5 Blocking, Goal Keeping and Defensive skills
- 3.6 Game practice with application of Rules and Regulations

DETAILED SYLLABUS STRUCTURE IN PHYSICAL EDUCATION AND SPORT

SEMESTER III

MAJOR COURSE: Sociological & Psychological Basis of Physical Education & Sport

Course Code: PED-M-T-3

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Sociology of Sport

LH - 16

- 1.6 Sociology of Sport - introduction and definition
- 1.7 Importance of studying sociology of sport– A part of people’s live, Connection with important ideas and meanings in life, Connection to major spheres of social life, Sport and politics, Sport and religion, Sport and education
- 1.8 Social functions of sport: Socio-emotional function, Socialization function, Integrative function, Political function, Social mobility function
- 1.4 Social Theories of Sport: The functional theory, The conflict theory, The critical theory, The interactionist theory, The feminist theory, The figurational theory

Unit – II: Sport and Socialization

LH - 14

- 2.1 Sport and Socialization: Learning individual to participate in sport, The social learning model of sport and exercise, Role of transition within sport and exercise
- 2.2 Children in Sport: Origin of organized youth sport, Social change and the growth of organized youth sport, Major trends in youth sport, Adult controlled vs player controlled sport, Recommendations for improving youth sport
- 2.3 Gender and Sport: Participation and equity issues, Ideology and culture
- 2.4 Race and Sport: Creating race, racial ideology and sport, racial ideology and shortcomings, prospect for change
- 2.5 Sport and Deviance
- 2.6 Sport and Economy: Conditions for emergence and growth of commercial sport, changes in sport due to commercialization
- 2.7 Sport and Media: Characteristics of media, functions of media, two-way relationship of sport and media, media representations of sport

Unit – III: Introduction to Sports Psychology

LH - 14

- 3.1 Sports Psychology: Meaning and definition
- 3.2 Scope and role of Sports Psychology
- 3.3 Motivation: Meaning, definition, and types
- 3.4 Motivation in sport, achievement motivation

Unit-IV: Psychological Traits

LH - 16

- 4.1 Instinct and Emotion: Meaning, definition and types; Physical Education and Sport for emotional development
- 4.2 Stress: Meaning, Definition, Types and Causes; Relaxation procedures - autogenic training, Progressive relaxation, meditation, biofeedback, hypnosis
- 4.3 Personality: Meaning, definition, types and traits; structure of personality, developmental effects of athletic participation upon personality, personality sport type
- 4.4 Treating anxiety and depression

5.1 Development of physical fitness through Wand Drill and Lezim activities

Wand Drill: Grip and Attention with Light apparatus, Stand–at–ease with the dumbbell, and exercise with verbal command, drum, whistle, and music – Two counts, Four counts, Eight counts and Sixteen counts. Standing Exercise, Jumping Exercise, Moving Exercise and a Combination of above all

Lezim: Grip and Attention with Light apparatus, Stand–at–ease with the dumbbell, and exercise with verbal command, drum, whistle, and music – Two counts, Four counts, Eight counts and Sixteen counts. Standing Exercise, Jumping Exercise, Moving Exercise and a Combination of above all

5.2 Kabaddi

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

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

5.2.3 Additional skills in raiding: Escaping from various holds, techniques of Escaping from chain formation, offense and defence

5.2.4 Game practice with application of Rules and Regulations

Reference Book

1. Authors Guide. National Library of Educational and Psychological Test Catalogue, New Delhi: NCERT Publication
2. Jay Coakley, Sports in Society – Issues and Controversies, McGraw Hill
3. Richard, J. Crisp, Essentials of Social Psychology, Sage Publications
4. Robert N. Singer, Motor Learning and Human Performance, New York: The Macmillan Co
5. Thelma Horn, Advances in Sports Psychology. Human Kinetic
6. Whiting, H.T.A. et al. Personality and Performance in Physical Education and Sports. London: Henry Kimpton Publishers

MINOR COURSE: Management in Physical Education and Sports

Course Code: PED-MI-T-3

Total number of classes – 60

Unit – I: Introduction

LH - 12

- 1.1 Concept and definition of Sports Management
- 1.2 Importance of Sports Management
- 1.3 Principles of Sports Management
- 1.4 Sports Manager and his duties

Unit – II: Tournaments

LH - 18

- 2.1 Tournaments: Meaning and definition and types of tournaments (Knock-out, League, Combination, Challenge)
- 2.2 Procedure of drawing fixture
- 2.3 Methods of organizing Annual Athletic Meet and Play Day
- 2.4 Methods of organization of Intramural and Extramural competition

Unit-III: Facilities and Equipments

LH - 18

- 3.1 Method of Standard Athletic Track marking
- 3.2 Care and maintenance of play ground and gymnasium
- 3.3 Importance, care and maintenance of sports equipments
- 3.4 Time Table: Meaning, importance and factors affecting school's Physical Education Time Table

Unit – IV: Leadership

LH - 12

- 4.1 Meaning and definition of leadership
- 4.2 Qualities of good leader in Physical Education
- 4.3 Types of Leadership
- 4.4 Principles of leadership activities

Reference Book

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. New York: Prentice hall Inc
2. Bucher, C. A. (1983). Administration of Physical Education and Athletic programme. St. Louis: The C.V. Mosby Co
3. Kozman, H.C. Cassidy, R. & Jackson, C. (1960). Methods in Physical Education. London: W.B. Saunders Co
4. Pandey, L.K. (1977). Methods in Physical Education. Delhi: Metropolitan Book Depot
5. Sharma, V.M. & Tiwari, R.H.: (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication
6. Thomas, J. P. (1967). Organization & administration of Physical Education. Madras: Gyanodayal Press
7. Tirunarayanan, C. & Hariharan, S. (1969). Methods in Physical Education. Karaikudi: South India Press
8. Voltmer, E. F. & Esslinger, A. A. (1979). The organization and administration of Physical Education. New York: Prentice Hall Inc
9. Singh, A. et al. (2010) Essential of Physical Education. Kalyani Publishers
10. Kar, S. & Santra, D.C. (2018): Snatak Saririksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
11. Kar, S. (2018). Mahavidyalayer Saririksha : Health Education and First Aid: Classique Books, Kalkata
12. Kar, S. (2017). Saririksha Samagra (Part-3) Health Education and First Aid: Classique Books, Kalkata

SKILL ENHANCEMENT COURSE: Track Event and Ball Games

Course Code: PED-SEC-P-3

Total number of classes – 90

Unit – I: Athletics (Jump and Throw)

LH - 30

- 1.1 Long Jump: Approach Run, Take-off, Flight in the air (Hang Style/Hitch Kick) and Landing
- 1.2 High Jump: Approach Run, Take-off, Bar Clearance (Straddle) and Landing
- 1.3 Shotput: Holding the Shot, Placement, Initial Stance, Glide, Delivery Stance and Recovery (Perry O'Brien Technique)
- 1.4 Discus Throw: Holding the Discus, Initial Stance, Primary Swing, Turn, Release and Recovery (Rotation in the circle)
- 1.5 Javelin Throw: Grip, Carry, Release and Recovery (3/5 Impulse stride)

Unit – II: Aerobics

LH - 30

- 2.1 Warm-up and cool down
- 2.2 On the spot stepping
- 2.3 Forward and backward stepping
- 2.4 Sideward stepping
- 2.5 Double sideward stepping
- 2.6 Cross over stepping
- 2.7 V shape stepping
- 2.8 Slow and high intense aerobic dance
- 2.9 Individual and group aerobic dance
- 2.10 Sequence of exercises

Unit – III: Kho-Kho

LH - 30

- 3.1 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), Pole Turn, Pole Dive, Tapping, Hammering, Rectification of foul
- 3.2 Skills in running: Chain Play, Ring play and Chain & Ring mixed play
- 3.3 Game practice with application of Rules and Regulations
- 3.4 Rules and the interpretations and duties of the officials

DETAILED SYLLABUS STRUCTURE IN PHYSICAL EDUCATION AND SPORT

SEMESTER IV

MAJOR COURSE: Yoga Education

Course Code: PED-M-T-4

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction to Yoga and Yogic Practices

LH - 15

- 1.1 Concept and principles of yoga
- 1.2 Definition, aim, objectives, and classification of yoga
- 1.3 Importance of yoga
- 1.4 Classical approach to Yoga practices: Kriyas, Yama, Niyama, Asana, and Pranayama
- 1.5 Bandha, Mudra & Dhyana as per yogic texts and research-based principles of yoga
- 1.6 General guidelines for performing yoga practices

Unit – II: Ancient systems of Indian Philosophy and Yoga System

LH - 10

- 2.1 General introduction to Sad-darshana with special reference to Samkhya and Yoga
- 2.2 Jainism, Buddhism, Ajnana, Ajivika, Charvaka and Lokayata

Unit – III: Historical Aspect of Yoga

LH - 10

- 3.1 Historical aspect of the Yoga philosophy - Ancient Period/Indus Valley Civilization, Vedic Period, Pre-classical Era, Classical Era, Post-classical Period, Modern Period
- 3.2 Yoga as reflected in Bhagwat Gita

Unit-IV: Introduction to Yogic Texts

LH - 15

- 4.1 Significance to yogic texts in the context of schools of Yoga
- 4.2 Patanjali Yoga Shastra: Ashtanga Yoga and Kriya Yoga in Sadhana Pada
- 4.3 Hatha Yogic Texts: Hatha Yoga Pradipika, Gheranda Samhita, Shiva Samhita
- 4.4 Complementarities between Patanjala Yoga and Hatha Yoga
- 4.5 Meditational process in Patanjala Yoga Sutras

Unit-V: Yoga and Health

LH - 10

- 5.1 Need of yoga for a positive health for the modern man
- 5.2 Concept of health and disease: medical and yogic perspectives
- 5.3 Concept of disease
- 5.4 Concept of Panch Kosh for an integrated and positive health
- 5.5 Utilitarian value of yoga in modern age

6.1 Advanced Yoga

- 6.1.1 Standing posture: Natarajasana, Uttana Kurmasana, Ruchikasana
- 6.1.2 Arm balance: Mayurasana, Sirsasana, Kukkutasana
- 6.1.3 Seated posture: Baddha Padmasana, Hanumanasana, Mulabandhasana
- 6.1.4 Supine/Back lying posture: Yoga Nidrasana, Raja Kapotasana, Sirsasana, Urdhva Dhanurasana

6.2 Badminton

- 6.2.1 Basic Knowledge: Various parts of the Racket and Grip
- 6.2.2 Service: Short service, Long service, Long-high service
- 6.2.3 Shots: Over head shot, Defensive clear shot, Attacking clear shot, Drop shot, Net shot, Smash
- 6.2.4 Game practice with application of Rules and Regulations
- 6.2.5 Rules and their interpretations and duties of the officials

6.3 Table Tennis

- 6.3.1 Basic Knowledge: Various parts of the Racket and Grip (Shake Hand & Pen Hold Grip)
- 6.3.2 Stance: Alternate & Parallel
- 6.3.3 Push and Service: Backhand & Forehand
- 6.3.4 Chop: Backhand and Forehand
- 6.3.5 Receive: Push and Chop with both Backhand & Forehand
- 6.3.6 Game practice with application of Rules and Regulations
- 6.3.7 Rules and their interpretations and duties of the officials

Reference Book

1. Bandopadhyay, K. Sarir Siksha Parichay, Classic Publishers, Kolkata
2. Tyagi Arun Kumar, Gymnastics: Skills and Rules, Khel Sahitya Kendra, New Delhi
3. Dubey, H.C. Gymnastics, Discovery Publishing House, New Delhi
4. Swami Satyananda Saraswati, Asana Pranayama Mudra Bandha, Yoga Publications Trust, Munger
5. Swami Satyananda Saraswati, Suryanamaskara, Yoga Publications Trust, Munger
6. Yoga – The Science of Holistic Living, Vivekananda Kendra Prakashan Trust, Chennai
7. Patanjala Yogasutra by P. V. Karambelkar, Kaivalyadhama, Lonavla, India.
8. Sripatanjalayogadarsanam– Original Samskrta, Padaccheda, and Transliteration by Dr. Rajani Pradhan, Kaivalyadhama, Lonavla, India.
9. Indian Philosophy by S. Radhakrishnan
10. Outlines of Indian Philosophy by M.Hiriayanna 5. Indian Philosophy by Chatterjee and Dasgupta

MAJOR COURSE: Anatomy, Physiology and Exercise Physiology
Course Code: PED-M-T-5

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction

LH - 12

- 1.1 Meaning and definition of Anatomy, Physiology and Exercise Physiology
- 1.2 Importance of Anatomy, Physiology and Exercise Physiology in Physical Education
- 1.3 Elementary concept of cell and cellular organelles: Basic concept of cell structure, Mitochondria, Endoplasmic reticulum, Lysosome
- 1.4 Tissue-types and functions
- 1.5 Energy sources for exercise – elementary concept

Unit – II: Musculo-skeletal System

LH - 18

- 2.1 Skeletal System- structure of skeletal system. Classification and location of bones and joints
- 2.2 Muscular System- types of muscles. Location, structure and function of skeletal muscle
- 2.3 Types of muscular contraction
- 2.4 Fiber types and performance
- 2.5 Effect of exercise and training on muscular system

Unit – III: Circulatory System

LH - 18

- 3.1 Blood- composition and function
- 3.2. Heart- structure and functions, Process of blood circulation through the heart, Pulmonary and Systemic Circulation- elementary concept
- 3.3. Cardiac cycle, Blood Pressure, Athletic Heart
- 3.4. Effect of exercise and training on circulatory system

Unit-IV: Respiratory System

LH - 12

- 4.1 Structure and function of respiratory organs
- 4.2. Mechanism of Respiration, - O₂ and CO₂ transport in blood
- 4.3. Vital capacity, O₂ debt, EPOC and Second wind
- 4.4. Effect of exercise and training on respiratory system

Unit-V: Lab Practical

LH - 60

- 5.1 Measurement of BMI and WHR (Waist-to-hip ratio)
- 5.2 Measurement of heart rate (through step test), Blood pressure, Respiratory rate, and Peak flow expiratory rate in resting and post exercise

Reference Book

1. Amrit Kumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: Poompugar Pathipagam
2. Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs
3. David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics
4. Fox, E.L., and Mathews, D.K. (1981). The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing
5. Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co. Richard, W. Bowers. (1989). Sports Physiology. WMC: Brown Publishers
6. Sandhya Tiwaji. (1999). Exercise Physiology. Sports Publishers
7. Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications
8. Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication
9. William, D. Mc Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company

MINOR COURSE: Management in Physical Education and Sports

Course Code: PED-MI-T-4

Total number of classes – 60

Unit – I: Introduction

LH - 12

- 1.1 Concept and definition of Sports Management
- 1.2 Importance of Sports Management
- 1.3 Principles of Sports Management
- 1.4 Sports Manager and his duties

Unit – II: Tournaments

LH - 18

- 2.1 Tournaments: Meaning and definition and types of tournaments (Knock-out, League, Combination, Challenge)
- 2.2 Procedure of drawing fixture
- 2.3 Methods of organizing Annual Athletic Meet and Play Day
- 2.4 Methods of organization of Intramural and Extramural competition

Unit-III: Facilities and Equipments

LH - 18

- 3.1 Method of Standard Athletic Track marking
- 3.2 Care and maintenance of play ground and gymnasium
- 3.3 Importance, care and maintenance of sports equipments
- 3.4 Time Table: Meaning, importance and factors affecting school's Physical Education Time Table

Unit – IV: Leadership

LH - 12

- 4.1 Meaning and definition of leadership
- 4.2 Qualities of good leader in Physical Education
- 4.3 Types of Leadership
- 4.4 Principles of leadership activities

Reference Book

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. New York: Prentice hall Inc
2. Bucher, C. A. (1983). Administration of Physical Education and Athletic programme. St. Louis: The C.V. Mosby Co
3. Kozman, H.C. Cassidy, R. & Jackson, C. (1960). Methods in Physical Education. London: W.B. Saunders Co
4. Pandey, L.K. (1977). Methods in Physical Education. Delhi: Metropolitan Book Depot
5. Sharma, V.M. & Tiwari, R.H.: (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication
6. Thomas, J. P. (1967). Organization & administration of Physical Education. Madras: Gyanodayal Press
7. Tirunaryanan, C. & Hariharan, S. (1969). Methods in Physical Education. Karaikudi: South India Press
8. Voltmer, E. F. & Esslinger, A. A. (1979). The organization and administration of Physical Education. New York: Prentice Hall Inc
9. Singh, A. et al. (2010) Essential of Physical Education. Kalyani Publishers
10. Kar, S. & Santra, D.C. (2018): Satak Sarisiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
11. Kar, S. (2018). Mahavidyalaya Sarisiksha : Health Education and First Aid: Classique Books, Kolkata
12. Kar, S. (2017). Sarisiksha Samagra (Part-3) Health Education and First Aid: Classique Books, Kolkata

DETAILED SYLLABUS STRUCTURE IN PHYSICAL EDUCATION AND SPORT

SEMESTER V

MAJOR COURSE: Management in Sport

Course Code: PED-M-T-6

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Organization of Competition

LH - 18

- 1.1 Tournaments: Meaning, definition and importance
- 1.2 Types of tournaments: Knock-out, League, Combination, Challenge
- 1.3 Procedure of drawing fixture
- 1.4 Organization of Annual Athletic Meet and Play Day
- 1.5 Organization of Intramural and Extramural competition

Unit – II: Management of Facilities and Time Table

LH - 18

- 2.1 Method of standard athletic track marking
- 2.2 Dimensions of sport infrastructure – gymnasium, pavilion, swimming pool, indoor and outdoor stadium
- 2.3 Care and maintenance of playground, swimming pool and gymnasium
- 2.4 Importance, care and maintenance of sport equipments
- 2.5 Time Table: Meaning, importance and factors affecting physical education time table

Unit-III: Financial and Marketing Management in Sport

LH - 12

- 3.1 Overview
- 3.2 Funding sources for sport
- 3.3 Understanding financial information
- 3.4 Budgeting system
- 3.5 Sport marketing – Concept and definition
- 3.6 Sport marketing framework – identify sport marketing opportunities, develop sport marketing strategy, plan sport marketing mix, implement and control sport marketing strategy

Unit – IV: Leadership

LH - 12

- 4.1 Meaning and definition of leadership
- 4.2 Qualities of good leader in physical education
- 4.3 Types of Leadership
- 4.4 Principles of leadership activities
- 4.5 Theories of leadership
- 4.6 Leadership challenges in sport organizations

Unit – V: Field Work and Court Marking

LH - 60

- 5.1 Lecture cum discussion, power point presentations, assignments
- 5.2 Field marking for Athletics, Kabaddi, Kho-Kho, Football, Volleyball, Handball, Badminton, and Cricket

Reference Book

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. New York: Prentice hall Inc
2. Bucher, C. A. (1983). Administration of Physical Education and Athletic programme. St. Louis: The C.V. Mosby Co
3. Kozman, H.C. Cassidy, R. & Jackson, C. (1960). Methods in Physical Education. London: W.B. Saunders Co
4. Pandey, L.K. (1977). Methods in Physical Education. Delhi: Metropolitan Book Depot
5. Sharma, V.M. & Tiwari, R.H.: (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication
6. Thomas, J. P. (1967). Organization & administration of Physical Education. Madras: Gyanodayal Press
7. Tirunaryanan, C. & Hariharan, S. (1969). Methods in Physical Education. Karaikudi: South India Press
8. Voltmer, E. F. & Esslinger, A. A. (1979). The organization and administration of Physical Education. New York: Prentice Hall Inc
9. Singh, A. et al. (2010) Essential of Physical Education. Kalyani Publishers
10. Kar, S. & Santra, D.C. (2018): Satak Saririksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
11. Kar, S. (2018). Mahavidyalaya Saririksha : Health Education and First Aid: Classique Books, Kolkata
12. Kar, S. (2017). Saririksha Samagra (Part-3) Health Education and First Aid: Classique Books, Kolkata

MAJOR COURSE: Health Education, Fitness and Wellness

Course Code: PED-M-T-7

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction

LH - 18

- 1.1 Concept, definition and dimension of Health
- 1.2 Definition, aim, objectives and principles of Health Education
- 1.3 Activities of Health Agencies- World Health Organization (WHO), United Nations Educational Scientific and Cultural Organization (UNESCO) and United Nations International Children's Emergency Fund (UNICEF)
- 1.4 Institutional Health Program-Health Service, Health Instruction, Health Supervision
- 1.5 Personal Hygiene and Health Record

Unit – II: Epidemiology and Nutrition

LH - 18

- 2.1 Communicable Diseases- Malaria, Dengue, Chicken Pox, Hepatitis, HIV and Diarrhea
- 2.2 Non-communicable Diseases- Diabetes, Asthma, Obesity, Hypertension, Heart disease, Cancer
- 2.3 Nutrition- functions of nutrients and their utilization in the body, Nutritional requirements for daily living, Diet – Pre-game, during and post-game, Preparation of Balanced Diet chart, High performance and diet
- 2.4 Role of vitamin and minerals (Fe, Ca, Mg) in nutrition and sports performance

Unit-III: Physical Fitness and Wellness

LH - 12

- 3.1 Physical Fitness-Meaning, definition and Importance of Physical Fitness
- 3.2 Components of Physical Fitness-Health and Performance related Physical Fitness
- 3.3 Concept of Wellness. Relationship between Physical activities and Wellness
- 3.4 Ageing-Physical activities and its importance

Unit – IV: First-aid Management

LH - 12

- 4.1 First aid-Meaning, definition, importance and golden rules of First-aid
- 4.2 Contents of an ideal first aid kit
- 4.3 Concept of sports injuries-Sprain, Strain, Wound, Fracture and Dislocation and their management
- 4.4 Cardiopulmonary resuscitation, wound/injury, shock, suffocation, asthma, chest discomfort, heat stroke, hypothermia, choke

- 5.1 First aid - General Principles Safety, Seek Help, Quick assessment, observe consciousness and breathing, Hand hygiene
- 5.2 Secure an open airway, Cardio Pulmonary Resuscitation (CPR), Recovery Position
- 5.3 Transportation of patient
- 5.4 Role play for shock, suffocation, asthma, chest discomfort, heat stroke, hypothermia, bites, choke, drowning,
- 5.5 ORS preparation, salt sugar solution
- 5.6 Triangular Bandage: Slings (Arm Sling, Collar & Cuff Sling)
- 5.7 Roller Bandages: Simple Spiral, Reverse Spiral
- 5.8 Figure of Eight, Spica splint

Reference Book

1. Bucher, Charles A. "Administration of Health and Physical Education Programme"
2. Delbert, Oberteuffer, et. al." The School Health Education"
3. Ghosh, B.N. "Treaties of Hygiene and Public Health"
4. Hanlon, John J. "Principles of Public Health Administration" 2003
5. Turner, C.E. "The School Health and Health Education"
6. Moss et. al. "Health Education" (National Education Association of U.T.A.)
7. Nemir A. "The School Health Education" (Harber and Brothers, New York)
8. Nutrition Encyclopedia, edited by Delores C.S. James, The Gale Group, Inc
9. Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and bertson
10. Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons

MINOR COURSE: Health Education, Fitness and Wellness

Course Code: PED-MI-T-5

Total number of classes – 60

Unit – I: Introduction

LH - 18

- 1.1 Concept, definition and dimension of Health
- 1.2 Definition, aim, objectives and principles of Health Education
- 1.3 Activities of Health Agencies -World Health Organization (WHO), United Nations Educational Scientific and Cultural Organization (UNESCO) and United Nations International Children's Emergency Fund (UNICEF)
- 1.4 School Health Program – Health Service, Health Instruction, Health Supervision,
- 1.5 Personal Hygiene and Health Record

Unit – II: Health Problems in India- Prevention and Control

LH - 18

- 2.1 Communicable Diseases- Malaria, Dengue, Chicken Pox and Diarrhea
- 2.2 Non-communicable Diseases-Obesity, Diabetes and Asthma
- 2.3 Nutrition- Nutritional requirements for daily living. Preparation of Balance Diet chart. Health disorders due to deficiency of Protein, Vitamins and Minerals
- 2.4 Postural deformities- Causes and corrective exercise of Kyphosis, Lordosis, Scoliosis, Bow-Legs, Knock Knees and Flat Foot

Unit-III: Physical Fitness and Wellness

LH - 12

- 3.1 Physical Fitness-Meaning, definition and Importance of Physical Fitness
- 3.2 Components of Physical Fitness – Health and Performance related Physical Fitness
- 3.3 Concept of Wellness. Relationship between Physical activities and Wellness
- 3.4 Ageing-Physical activities and its importance

Unit – IV: First-aid Management

LH - 12

- 4.1 First aid-Meaning, definition, importance and golden rules of First-aid
- 4.2 Concept of sports injuries-Sprain, Strain, Wound, Fracture and Dislocation
- 4.3 Management of sports injuries through the application of Hydro-therapy and Thermo-Therapy
- 4.4 Management of sports injuries through the application of Exercise and Massage therapy

Reference Book

1. Bucher, Charles A. "Administration of Health and Physical Education Programme"
2. Delbert, Oberteuffer, et. al." The School Health Education"
3. Ghosh, B.N. "Treaties of Hygiene and Public Health"
4. Hanlon, John J. "Principles of Public Health Administration" 2003
5. Turner, C.E. "The School Health and Health Education"
6. Moss et. al. "Health Education" (National Education Association of U.T.A.)
7. Nemir A. "The School Health Education" (Harber and Brothers, New York)
8. Nutrition Encyclopedia, edited by Delores C.S. James, The Gale Group, Inc
9. Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and bertson
10. Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons

MINOR COURSE: Formal Activities and Ball Games

Course Code: PED-MI-T-6

Total number of classes – 120

Unit – I: Calisthenics

LH - 20

Attention, Preparation, Four and Eight count exercises involving different body parts done to command/music, Standing Exercise, Jumping Exercise, Moving Exercise and Combination of above all

Unit – II: Athletics

LH - 40

Track Events

- 2.1 Starting Techniques: Standing Start and Crouch Start (its variations), use of Starting Block
- 2.2 Acceleration with proper running techniques
- 2.3 Finishing technique: Run Through, Forward Lunging and Shoulder Shrug

Jump and Throw

- 2.4 Long Jump: Approach Run, Take-off, Flight in the air (Hang Style/Hitch Kick) and Landing
- 2.5 Shotput: Holding the Shot, Placement, Initial Stance, Glide, Delivery Stance and Recovery (Perry O'Brien Technique)
- 2.6 Discus Throw: Holding the Discus, Initial Stance, Primary Swing, Turn, Release and Recovery (Rotation in the circle)

Unit III: Kho-Kho

LH - 30

- 3.1 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), Pole Turn, Pole Dive, Tapping, Hammering, Rectification of foul
- 3.2 Skills in running: Chain Play, Ring play and Chain & Ring mixed play
- 3.3 Game practice with application of Rules and Regulations

Unit-IV: Volleyball

LH – 30

- 4.1 Fundamental skills
 1. Service: Under arm service, Side arm service, Tennis service, Floating service.
 2. Pass: Under arm pass, Over head pass.
 3. Spiking and Blocking.
- 4.2 Game practice with application of Rules and Regulations.

DETAILED SYLLABUS STRUCTURE IN PHYSICAL EDUCATION AND SPORT

SEMESTER VI

MAJOR COURSE: Kinesiology & Biomechanics in Physical Education & Sport Course Code: PED-M-T-8

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction

LH - 12

- 1.1 Basic nature and concept of Kinesiology, Biomechanics and Sports Biomechanics
- 1.2 Importance of Kinesiology and Sports Biomechanics in Physical Education
- 1.3 Classification of Joints and Muscles
- 1.4 Description of movements around the joints

Unit – II: Musculo-Skeletal Aspect of Human Motion

LH - 18

- 2.1 Concept and types of Axes and Planes of human body movement
- 2.2 Fundamental concepts of Angle of Pull, All or None Law, Reciprocal Innovation
- 2.3 Equilibrium- concept, types and factors affecting equilibrium
- 2.4 Posture – meaning, types and importance. Causes and correction of postural deformities

Unit-III: Mechanical Concept

LH - 12

- 3.1 Motion - meaning, definition, and classification
- 3.2 Concept of Kinematics – distance and displacement, speed and velocity, acceleration
- 3.3 Projectile motion - meaning, definition, and classification
- 3.4 Principles of Projectile motion

Unit – IV: Newton's Laws of Motion

LH - 12

- 4.1 Newton's Laws of Motion
- 4.2 Application of laws of motion to sports activities
- 4.3 Force - meaning, definition, and classification
- 4.4 Lever - meaning, definition and classification

Unit-V: Practical

LH - 60

- 5.1 Demonstration of fundamental movements of different joints
- 5.2 Measurement of kinematic parameters of motion
- 5.3 Lecture cum discussion, PowerPoint presentations, assignments

Reference Book

1. Clinical Kinesiology and Biomechanics by Gordon J. Alderink; Blake M. Ashby
2. Conceptual Biomechanics and Kinesiology by Animesh Hazari; Arun G. Maiya; Taral V. Nagda
3. Manual of Structural Kinesiology by R. T. Floyd; Clem Thompson
4. Kinesiology by Carol A. Oatis
5. Foundations of Kinesiology by Tinker Murray; James Eldridge; Harold W. Kohl
6. Clinical Kinesiology and Anatomy by Lynn S. Lippert

MAJOR COURSE: Officiating in Physical Education & Sport
Course Code: PED-M-T-9

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction to Officiating

LH - 12

- 1.1 Concept of officiating
- 1.2 Importance and principles of officiating
- 1.3 Quality and qualification of an official
- 1.4 Relation of official with management, players and spectators
- 1.5 Measures of improving the standards of officiating

Unit – II: Aspects of officiating

LH - 12

- 2.1 General duties of official – pre, during and post-game
- 2.2 Philosophy of officiating
- 2.3 Ethics in officiating

Unit-III: Officiating I

LH - 18

- 3.1 Football – Rules, signals, mechanics of officiating
- 3.2 Volleyball – Rules, signals, mechanics of officiating
- 3.3 Handball – Rules, signals, mechanics of officiating
- 3.4 Cricket – Rules, signals, mechanics of officiating

Unit – IV: Officiating II

LH - 18

- 4.1 Athletics – Rules, signals, mechanics of officiating
- 4.2 Badminton – Rules, signals, mechanics of officiating
- 4.3 Kabaddi – Rules, signals, mechanics of officiating
- 4.4 Kho-Kho - Rules, signals, mechanics of officiating

Unit-V: Practical Officiating

LH - 60

- 5.1 Lecture cum discussion, power point presentations, assignments
- 5.2 Officiating in different games in intramurals and external competitions

Reference Book

1. Bunn, J. W. (1968). The art of officiating sports. Englewood cliffs N.J. Prentice Hall.
2. Bunn, J. W. (1972). Scientific principles of coaching. Englewood cliffs N. J. Prentice
3. Hall. Dyson, G. H. (1963). The mechanics of athletics. London: University of London
4. Press Ltd. Dyson, G. H. (1963). The mechanics of Athletics. London: University of London Press Ltd.
5. Lawther, J.D. (1965). Psychology of coaching. New York: Pre. Hall.
6. Singer, R. N. (1972). Coaching, athletic & psychology. New York: M.C. Graw Hill.

MAJOR COURSE: Test, Measurement and Evaluation
Course Code: PED-M-T-10

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction

LH - 14

- 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 Sport

Unit – II: Measurement of Body Composition and Somatotype Assessment

LH - 18

- 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: Fitness Test

LH - 14

- 3.1 Measurement of strength using dynamometer
- 3.2 AAHPER health related fitness test
- 3.3 Queens college step test
- 3.4 J.C.R. test
- 3.5 Barrow motor ability test
- 3.6 Harvard step test
- 3.7 Iowa posture test

Unit – IV: Sport Skill Test

LH - 14

- 4.1 Lockhart and McPherson badminton skill test
- 4.2 Millar wall volley test
- 4.3 Johnson basketball test battery
- 4.4 McDonald Soccer test
- 4.5 Brady volleyball test
- 4.6 Russel Lange volleyball test
- 4.7 Cornish handball test

Unit-V: Practical

LH - 60

- 5.1 Lecture cum discussion, power point presentations, assignments
- 5.2 Organization and practice of skill test
- 5.3 Organization and practice of fitness test
- 5.4 Organization and practice of posture test

Reference Book

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

DETAILED SYLLABUS STRUCTURE IN PHYSICAL EDUCATION AND SPORT

SEMESTER VII

MAJOR COURSE: Theory of Games and Sport

Course Code: PED-M-T-11

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction

LH - 12

- 1.1 Introduction of the game/sport
- 1.2 Historical development with special reference to India
- 1.3 Important tournaments held at National and International levels
- 1.4 Distinguished sports awards and personalities

Unit – II: Game/sport specific exercises

LH - 18

- 2.1 Warming-up: jogging, loosening, striding, stretching, sprinting
- 2.2 Specific exercises for warming-up
- 2.3 Specific work out using equipment
- 2.4 Lead up activities
- 2.5 Terminologies related to the sport

Unit-III: Skills of game/sport

LH - 18

- Fundamental skills and their variations related to the sport
- 3.1 Athletics: Standing Start and Crouch Start (using block), Finishing technique, Jump techniques, Throwing techniques
 - 3.2 Badminton: Short service, long service, under arm shot, over head shot, drop shot, smash
 - 3.3 Basketball: Pass (chest, bounce, over head, no looking), receiving, dribbling, shooting (jump, lay up, free throw, three point)
 - 3.4 Cricket: Ball grip and bowling, keeping technique, fielding, batting- forward defence, backward defence, drive, hook, pull, sweep, flick shot
 - 3.5 Football: passing, receiving, dribbling, heading, shooting
 - 3.6 Handball: Dribbling, passing (chest, bounce, over head), shooting, goal keeping
 - 3.7 Kabaddi: Raiding and defending techniques
 - 3.8 Kho-Kho: Chasing and running skills
 - 3.9 Volleyball: service (under arm, tennis, side arm spin, flat), pass, tap, smash
 - 3.10 Table Tennis: Forehand and backhand stroke, serve, return of serve

Unit – IV: Rules and Officiating

LH - 12

- 4.1 Marking of the play area
- 4.2 General rules and their interpretations
- 4.3 Duties of officials
- 4.4 officiating the sport

Note: Students will choose only one sport as per their choice and efficiency and the sub titles of the syllabus will be varied accordingly.

5.1 Volleyball**A. Fundamental skills**

1. Service: Under arm service, Side arm service, Tennis service, Floating service
2. Pass: Under arm pass, Over head pass
3. Spiking and Blocking
4. Game practice with application of Rules and Regulations

B. Rules and their interpretation and duties of officials**5.2 Netball****A. Fundamental skills**

1. Catching: one handed, two handed, with feet grounded and in flight
2. Throwing (Different passes and their uses): One hand passes (shoulder, high shoulder, underarm, bounce, lob), two hand passes (Push, overhead and bounce)
3. Footwork: Landing on one foot, landing on two feet, Pivot, Running pass.
4. Shooting: One hand, forward step shot, and backward step shot
5. Techniques of free dodge and sprint, sudden sprint, sprint and stop, sprinting with change at speed
6. Defending: Marking the player, marking the ball, blocking, inside the circle, outside the circle. Defending the circle edge against the passing
7. Intercepting: Pass and shot
8. Game practice with application of Rules and Regulations

B. Rules and their interpretation and duties of officials**5.3 Basketball****A. Fundamental Skills**

1. Passing: Two hand Chest Pass, Two hands Bounce Pass, One hand Baseball Pass, Side arm Pass, Overhead Pass, Hook Pass
2. Receiving: Two hand receiving, One hand receiving, Receiving in stationary position, Receiving while Jumping and Receiving while Running
3. Dribbling: How to start dribble, drop dribble, High Dribble, Low Dribble, Reverse Dribble, Rolling Dribble
4. Shooting: Lay-up shot and its variations, One hand set shot, Two hands jump shot, Hookshot, Free Thro
5. Rebounding: Defensive rebound and Offensive rebound
6. Individual Defence: Guarding the player with the ball and without the ball, Pivoting
7. Game practice with application of Rules and Regulations.

B. Rules and their interpretation and duties of officials**5.4 Cricket****A. Fundamental skills**

1. Batting: Grip, Forward defence, Backward defence, Drive, Flick, Hook, Pull, Swipe
2. Bowling: Grip, Pace, Inswing, Outswing, Off spin, Leg spin
3. Wicket Keeping: Stance, Holding the ball
4. Fielding: Stance, Holding the ball, Throwing

B. Rules and their interpretation and duties of officials**Reference Book**

1. Bunn, J. W. (1968). The art of officiating sports. Englewood cliffs N.J. Prentice Hall.
2. Bunn, J. W. (1972). Scientific principles of coaching. Englewood cliffs N. J. Prentice Hall.
3. Dyson, G. H. (1963). The mechanics of athletics. London: University of London Press Ltd.
4. Lawther, J.D. (1965). Psychology of coaching. New York: Pre. Hall.
5. Singer, R. N. (1972). Coaching, athletic & psychology. New York: M.C. Graw Hill

MAJOR COURSE: Sports Medicine
Course Code: PED-M-T-12
Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction to Sports Medicine

LH - 18

- 1.1 Concept, aim, objective and importance in sports science
- 1.2 Injury – concept and classification, concept of rehabilitation
- 1.3 Common regional injuries in neck, shoulder, elbow, wrist, waist, knee, ankle – symptoms, diagnosis, therapeutic exercises,
- 1.4 Doping in Sport, List of banned drugs: their effects and side effects
- 1.5 Blood doping

Unit – II: Massage and Thermootherapy

LH - 14

- 2.1 Massage - Historical development, Definition and classification of massage techniques
- 2.2 Physiological effects of massage
- 2.3 Description of the techniques of classical massage
- 2.4 Mechanical devices of massage
- 2.5 Contraindications of massage
- 2.6 Thermootherapy - Physiological effects, indications, and contraindications
- 2.7 Method and use of Infrared rays, Paraffin Wax Bath, Steam Bath, Sauna Bath, Moist Heat Pack

Unit-III: Hydrotherapy and Cryotherapy

LH - 14

- 3.1 Hydrotherapy - History & introduction
- 3.2 Effects of simple baths, raising temperature baths, Aromatic baths, Mineral baths, physical baths, whirl pool bath, steam shower
- 3.3 Cryotherapy - Physiological effects
- 3.4 Use of cold therapy in acute phase, rehabilitative phase, preventive phase of athletic injury
- 3.5 Methods of application, indications and contraindications

Unit – IV: Electrotherapy

LH - 14

- 4.1 Electrotherapy - Principles of application
- 4.2 Biophysical and therapeutic effects of electrotherapy, indications and contraindications
- 4.3 Application and use of Ultrasound, SWD, IFT, TENS, Pulsed Galvanic Stimulation
- 4.4 Manual therapy modalities

Unit-V: Practical

LH - 60

- 5.1 Lecture cum discussion, PowerPoint presentations, assignments
- 5.2 Massage: Demonstration and practice of basic massage technique
- 5.3 Physiotherapy: demonstration of the physiotherapy machines, visit to a hospital dept or center of physiotherapy and do assessment & management of the patients visiting the respective destinations
- 5.4 Exercise therapy: Mobilization of joints and muscles with and without apparatus

Reference Book

1. Christine, M. D., (1999). Physiology of sports and exercise. USA: Human Kinetics.
2. Conley, M. (2000). Bioenergetics of exercise training. In T.R. Baechle, & R.W. Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
3. David, R. M. (2005). Drugs in sports, (4th Ed). Routledge Taylor and Francis Group.
4. Hunter, M. D. (1979). A dictionary for physical educators. In H. M. Borrow & R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74). Philadelphia: Lea &Febiger.

MAJOR COURSE: Sports Training
Course Code: PED-M-T-13
Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction

LH - 10

- 1.1 Sports Training: Meaning, Definition and Scope
- 1.2 Aim, Objectives 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 Sport

LH - 18

- 2.1 Warming-up: Meaning, Definition and Methods
- 2.2 Cooling-down: Meaning, Definition and Methods
- 2.3 Conditioning: Meaning, Definition and Principles
- 2.4 Training Methods: Principles and Characteristics of Circuit Training, Interval Training and Weight Training
- 2.5 Periodisation: Meaning, Definition, Types, Aim and Contents of Different Periods

Unit-III: Load and Adaptation

LH - 14

- 3.1 Training Load: Meaning, Definition, Types and Factors
- 3.2 Load Components: Volume, Intensity, Repetition and Duration
- 3.3 Over Load: Meaning, Causes, Symptoms and Overcoming Over-load
- 3.4 Load Adaptation: Meaning and Conditions of Adaptation
- 3.5 Super-compensation

Unit – IV: Training Techniques

LH - 18

- 4.1 Strength: Means and Methods Development
- 4.2 Speed: Means and Methods Development
- 4.3 Endurance: Means and Methods Development
- 4.4 Flexibility: Means and Methods Development

Unit-V: Practical

LH - 60

- 5.1 Lecture cum discussion, power point presentations, assignments
- 5.2 Weight training - Practice with principles
- 5.3 Circuit Training - Practice with principles
- 5.4 Measurement of Speed, Strength, Endurance and Flexibility
- 5.5 Preparation of periodisation Chart

Reference Book

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.
7. Basics of Sports Training Methodology, Oleksandr Krasilshchikov, Sports & Spiritual Science

MINOR COURSE: Formal Activities and Ball Games

Course Code: PED-MI-T-7

Total number of classes – 120

Unit – I: Calisthenics

LH - 20

Attention, Preparation, Four and Eight count exercises involving different body parts done to command/music, Standing Exercise, Jumping Exercise, Moving Exercise and Combination of above all

Unit – II: Athletics

LH - 40

Track Events

- 2.1 Starting Techniques: Standing Start and Crouch Start (its variations), use of Starting Block
- 2.2 Acceleration with proper running techniques
- 2.3 Finishing technique: Run Through, Forward Lunging and Shoulder Shrug

Jump and Throw

- 2.4 Long Jump: Approach Run, Take-off, Flight in the air (Hang Style/Hitch Kick) and Landing
- 2.5 Shotput: Holding the Shot, Placement, Initial Stance, Glide, Delivery Stance and Recovery (Perry O'Brien Technique)
- 2.6 Discus Throw: Holding the Discus, Initial Stance, Primary Swing, Turn, Release and Recovery (Rotation in the circle)

Unit III: Kho-Kho

LH - 30

- 3.1 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), Pole Turn, Pole Dive, Tapping, Hammering, Rectification of foul
- 3.2 Skills in running: Chain Play, Ring play and Chain & Ring mixed play
- 3.3 Game practice with application of Rules and Regulations

Unit-IV: Volleyball

LH – 30

- 4.1 Fundamental skills
 1. Service: Under arm service, Side arm service, Tennis service, Floating service.
 2. Pass: Under arm pass, Over head pass.
 3. Spiking and Blocking.
- 4.2 Game practice with application of Rules and Regulations.

MINOR COURSE: Health Education, Fitness and Wellness

Course Code: PED-MI-T-7

Total number of classes – 60

Unit – I: Introduction

LH - 18

- 1.1 Concept, definition and dimension of Health
- 1.2 Definition, aim, objectives and principles of Health Education
- 1.3 Activities of Health Agencies – World Health Organization (WHO), United Nations Educational Scientific and Cultural Organization (UNESCO) and United Nations International Children's Emergency Fund (UNICEF)
- 1.4 School Health Program – Health Service, Health Instruction, Health Supervision,
- 1.5 Personal Hygiene and Health Record

Unit – II: Health Problems in India – Prevention and Control

LH - 18

- 2.1 Communicable Diseases- Malaria, Dengue, Chicken Pox and Diarrhea
- 2.2 Non-communicable Diseases- Obesity, Diabetes and Asthma
- 2.3 Nutrition- Nutritional requirements for daily living. Preparation of Balance Diet chart. Health disorders due to deficiency of Protein, Vitamins and Minerals
- 2.4 Postural deformities- Causes and corrective exercise of Kyphosis, Lordosis, Scoliosis, Bow-Legs, Knock Knees and Flat Foot

Unit-III: Physical Fitness and Wellness

LH - 12

- 3.1 Physical Fitness- Meaning, definition and Importance of Physical Fitness
- 3.2 Components of Physical Fitness -Health and Performance related Physical Fitness
- 3.3 Concept of Wellness. Relationship between Physical activities and Wellness
- 3.4 Ageing-Physical activities and its importance

Unit – IV: First-aid Management

LH - 12

- 4.1 First aid- Meaning, definition, importance and golden rules of First-aid
- 4.2 Concept of sports injuries- Sprain, Strain, Wound, Fracture and Dislocation
- 4.3 Management of sports injuries through the application of Hydro-therapy and Thermo-Therapy
- 4.4 Management of sports injuries through the application of Exercise and Massage therapy

Reference Book

1. Bucher, Charles A. "Administration of Health and Physical Education Programme"
2. Delbert, Oberteuffer, et. al." The School Health Education"
3. Ghosh, B.N. "Treaties of Hygiene and Public Health"
4. Hanlon, John J. "Principles of Public Health Administration" 2003
5. Turner, C.E. "The School Health and Health Education"
6. Moss et. al. "Health Education" (National Education Association of U.T.A.)
7. Nemir A. "The School Health Education" (Harber and Brothers, New York)
8. Nutrition Encyclopedia, edited by Delores C.S. James, The Gale Group, Inc
9. Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and bertson
10. Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons

DETAILED SYLLABUS STRUCTURE IN PHYSICAL EDUCATION AND SPORT

SEMESTER VIII

MAJOR COURSE: ICT in Physical Education and Sport

Course Code: PED-M-T-14

Total number of classes – 60

Unit – I: ICT in Physical Education

LH - 10

- 1.1 Meaning and nature of Information and Communication Technology
- 1.2 Scope of ICT in Physical Education and Sport – teaching learning process, publication, evaluation, research, administration, organization of competitions
- 1.3 Challenges in integrating ICT in Physical Education
- 1.4 Virtual classroom: meaning, audio-visual aid and equipment in classroom

Unit – II: Introduction to computer and internet

LH - 18

- 2.1 Computer – definition and structure
- 2.2 Hardware: Input devices – key board, mouse, scanner, microphone, camera
- 2.3 Output devices – monitor, printer, speaker, screen image projector
- 2.4 Storage devices – HDD, DVD, Mass storage, pen drive
- 2.5 Software: OS – concept and function
- 2.6 Application software in Physical Education – word processor, presentation, spread sheet, database management
- 2.7 Internet – communication facilities – email, chat, online conferencing, e-library, website, blog
- 2.8 Search engine – concept and engine

Unit – III: MS Office

LH - 18

- 3.1 MS Office – features and application in Physical Education
- 3.2 MS Excel – features and application in Physical Education
- 3.3 MS Access – features and application in Physical Education
- 3.4 MS Power Point – features and application in Physical Education
- 3.5 MS Publisher – features and application in Physical Education

Unit – IV: Web Based Learning & E-Facilities

LH - 14

- 4.1 E-learning & web based learning (LMS , MOOC ,SWYAM and E-Library)
- 4.2 Video-communication service- online class room (Google Meet, Zoom, WebEx, Microsoft Teams)
- 4.3 Google Applications (Google Doc, Google Sheet, Google Slides, Google Form, Jam Board, Google Drive and Google Earth). (Online)
- 4.4 Using grammar, plagiarism, spell check utilities and printing a document. (Online)
- 4.5 Viruses and their management

Reference Book

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

MAJOR COURSE: Instrumentation in Physical Education and Sport

Course Code: PED-M-T-15

Total number of classes – 60

Unit – I: Introduction

LH - 12

- 1.1 Meaning and definition of sport instrumentation
- 1.2 Significance of instrumentation in Sport
- 1.3 General principles of instrumentation in sport
- 1.4 Meaning of foams, types of foam (polyurethane, polystyrene, Styrofoam, closed-cell, open-cell foam, neoprene) and their uses in sport

Unit – II: Nanotechnology in sport materials

LH - 18

- 2.1 Meaning and definition of nanotechnology
- 2.2 Meaning of nano glue and nano moulding technology
- 2.3 Uses and benefit of nanotechnology in sport uniform and safety equipment
- 2.4 Uses and benefit of nanotechnology in sport equipment and playing surfaces

Unit – III: Surfaces of playfields and measuring gadgets

LH - 18

- 3.1 Method of construction and installation of synthetic and cinder track
- 3.2 Method of construction of cricket pitches: turf and cemented
- 3.3 Meaning and types of flooring materials: synthetic (polyurethane and poly grass) and wooden
- 3.4 Modern tools and gears used in physical education and sport: clothing, shoe, protective equipment, ball, bat, stick, racket, pole, pedometer, dynamometer, various ergometers, magnetic marker, high speed camera, motion analyzer software, match analysis software, pulse oximeter, EMG, exercise equipment

Unit – IV: Machines and Illumination

LH - 12

- 4.1 Cricket – bowling machine, mechanism and advantage
- 4.2 Basketball – ball feeder, mechanism and advantage
- 4.3 Tennis – serving machine, mechanism and advantage
- 4.4 Volleyball – serving machine, mechanism and advantage
- 4.3 Lighting facilities – methos of erecting and luminous in indoor and outdoor stadium, method of measuring luminous

Reference Book

1. Instrumentation of sports equipment by Franz Konstantin Fuss.
2. Instrumentation In Physical Education and Sports Hardcover – by Priyanka and Umesh Kr. Ahlawat.
3. Routledge Handbook of Sports Technology and Engineering edited by Franz Fuss, Aleksandar Subic, Martin Strangwood, Rabindra Mehta

MAJOR COURSE: Career Opportunities in Physical Education and Sport

Course Code: PED-M-T-16

Total number of classes – 60

Unit – I: Introduction to Profession

LH - 18

- 1.1 Introduction to Professional Career Development
- 1.2 Introduction to Career Planning: Self-Assessment
- 1.3 Identifying Your Professional Talents
- 1.4 Introduction to Career Planning: Career Exploration
- 1.5 Developing Your Professional Resume
- 1.6 Enhancing Your Professional Resume
- 1.7 Preparing Your Career and Internship Cover Letters
- 1.8 Professional Communications

Unit – II: Developing Professionalism

LH - 18

- 2.1 Preparing for Your Employment and Internship Interviews
- 2.2 Conducting Your Employment and Internship Interviews
- 2.3 Introduction to the Career Fair Search Process
- 2.4 Exploring Internship Options within Your Profession
- 2.5 Networking Search Strategies
- 2.6 Developing Your Professional Career Portfolio
- 2.7 Influencing Your Networking Partners

Unit – III: Career options in Physical Education

LH - 12

- | | | |
|---|--|-----------------------------|
| 3.1 Professional sportsperson | 3.2 Teacher/Professor | 3.3 Sports administrator |
| 3.4 Sports coach | 3.5 Sports manager | 3.6 Sports official |
| 3.7 Gym instructor | 3.8 Sports events coordinator | 3.9 Sports journalist |
| 3.10 Sports commentator | 3.11 Sports software engineer/Annalist | |
| 3.12 Sports equipment manufacturing and marketing | 3.13 Career in sports tourism | |
| 3.14 Career in sport law | 3.15 Sports physiotherapist | 3.16 Dietitian nutritionist |
| 3.17 Chiropractor | 3.18 Fitness specialist | |

Unit – IV: Institutions of Physical Education and Sport

LH - 12

- 4.1 Netaji Subhash National Institute of Sports (NSNIS)
- 4.2 Sports Authority of India (SAI)
- 4.3 International Olympic Committee (IOC)
- 4.4 Indian Olympic Association (IOA)
- 4.5 Laxmibai National Institute of Physical Education (LNIPE)
- 4.6 Govt./Private Universities/Colleges
- 4.7 Institutions for sports: TFA, MRF Pace Foundation, ASI Pune, IIS bellary, Usha School of Athletics Kozhikode, ABGSF Bengaluru, SSA Jhajjar and the like
- 4.8 National/International Federation/Bodies controlling various sports

Reference Book

1. Great Jobs in Sports by Heidi Feldman
2. Careers in Popular Sports Hardcover by Jacob Wilson (Editor)
3. The Sports Career Play Book: An insider Guide to Landing Your Dream Job in Sports Kindle Edition by Sixth Man Production

MAJOR COURSE: Research Methodology

Course Code: PED-M-T-17

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Introduction

LH - 12

- 1.1 Meaning of research, Need and importance of research
- 1.2 Scope of research in Physical Education
- 1.3 Types of research
- 1.4 Inter-disciplinary approach

Unit – II: Research Protocol

LH - 18

- 2.1 Research problem: Formulation and location of the problem
- 2.2 Criteria for selection of problem
- 2.3 Defining and delimiting problem
- 2.4 Preparation of a Research proposal
- 2.5 Formulation of hypothesis
- 2.6 Library search; Library sources
- 2.7 Procedure of research report writing

Unit-III: Descriptive Research

LH - 18

- 3.1 Survey method, Tools of surveys such as questionnaires, interviews etc.
- 3.2 Case studies; definition, importance, characteristics, data collection
- 3.3 Philosophical research, brief discussion on methodology and tools
- 3.4 Historical Research method; Scope in Physical Education, Historical data, Historical criticism

Unit – IV: Experimental Research

LH - 12

- 4.1 Meaning Scope and nature
- 4.2 Experimental and control group
- 4.3 Experimental designs

Unit-V: Practical

LH - 60

- 5.1 Lecture cum discussion, PowerPoint presentations, assignments
- 5.2 Preparation and presentation of a research proposal

Reference Book

1. Best, J.W. (1963). Research in education. U.S.A.: Prentice Hall.
2. Bompa, T. O. &Haff, G. G. (2009). Periodization: theory and methodology of training, 5th ed.Champaign, IL: Human Kinetics.
3. Brown, L. E., &Ferrigno, V. A. (2005). Training for speed, agility and quickness, 2nd ed.Champaign, IL: Human Kinetics.
4. Brown, L.E. & Miller, J., (2005). How the training work. In: Training Speed, Agility, and Quickness. Brown, L.E. &Ferrigno, V.A &Ferrigno, V.A., eds. Champaign, IL: Human Kinetics.
5. Carl, E. K., & Daniel, D. A. (1969). Modern principles of athletes training. St. Louis: St. Louis's Mosby Company.
6. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc.
7. Garrett, H.E. (1981). Statistics in psychology and education. New York: VakilsFeffer and Simon Ltd.
8. Oyster, C. K., Hanten, W. P., &Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
9. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
10. Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity.U.S.A: Champaign, IL: Human Kinetics Books.
11. Uppal, A. K. (1990). Physical fitness: how to develop. New Delhi: Friends Publication.

MAJOR COURSE: Statistics in Physical Education and Sport
Course Code: PED-M-T-18

Total number of classes – 90 (60 Th + 60 Pr)

Unit – I: Statistics and Data

LH - 18

- 1.1 Statistics: Meaning, Definition, and Need
- 1.2 Importance of statistics in Physical Education and Sport
- 1.3 Raw scores and Single scores
- 1.4 Types of data
- 1.5 Frequency distribution
- 1.6 Continuous and discrete class interval
- 1.7 Measures of central tendency
- 1.8 Measures of variability
- 1.9 Absolute and relative variability

Unit – II: Graphical presentation of data

LH - 12

- 2.1 Guideline for graph construction
- 2.2 Histogram
- 2.3 Frequency polygon
- 2.4 Frequency curve
- 2.5 Cumulative frequency polygon
- 2.6 Ogive
- 2.7 Pie diagram

Unit – III: The Normal Distribution

LH - 12

- 3.1 Concept of probability
- 3.2 The normal curve
- 3.3 How to judge the normality of data
- 3.4 Uses of normal distribution

Unit – IV: Correlation Behavior of Test Items

LH - 18

- 4.1 Linear correlation
- 4.2 Correlation coefficient
- 4.3 Rank correlation
- 4.4 Partial correlation
- 4.5 Multiple correlation

Unit-V: Practical

LH - 60

- 5.1 Lecture cum discussion, PowerPoint presentations, assignments
- 5.2 Analysis and presentation of a sport related data

Reference Book

1. Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.
2. A Sports-Oriented Approach to Introductory Statistics (First Edition) by Andrew Wiesner.
3. Handbook of Statistical Methods and Analyses in Sports edited By Jim Albert, Mark E. Glickman, Tim B. Swartz, Ruud H. Koning

MAJOR COURSE: Research Project/ Dissertation

Course Code: PED-SI-T-3

Total number of classes – 90 (60 Th + 60 Pr)

1. A candidate shall have dissertation for Bachelor Degree with Honours in Physical Education with Research during Semester VIII and must submit his/her Synopsis in department and get it approved by the D.R.C. (Departmental Research Committee) duly constituted as per guideline laid down by the UGC and the Statute of the affiliated University concerned.
2. A candidate selecting dissertation must submit his/her dissertation not less than one week before the beginning of the Semester VIII Examination.
3. The candidate has to face the Viva-Voce conducted by D.R.C. (Departmental Research Committee) with external examiner.