

## B.A./B.Sc. Program in Physical Education

### 1st Semester

Course Code	Course Title	Course Type	LTP	Credit	Marks
CC-PE-1A	Foundation and History of Physical Education	Core course	4-0-2	6	75
CC-2A	Discipline-2 (Core-1) other than Physical Education	Core course		6	75
CC (Language)	Language 1A	Core course Language	5-1-0	6	75
AECC 1	Environmental Studies	AECC-1 compulsory	2-0-0	2	50
<b>SEMESTER TOTAL</b>				<b>20</b>	<b>275</b>

## B.A./B.Sc. Program in Physical Education

### 2nd Semester

Course Code	Course Title	Course Type	LTP	Credit	Marks
CC-PE-1B	Management of Physical Education and Sports	Core course	4-0-2	6	75
CC2B	Discipline-2(Core-2) other than Physical Education	Core course		6	75
CC(Language)	Language 2A	Core course Language	5-1-0	6	75
AECC-2	communicative ENG or MIL	AECC-2 Compulsory	2-0-0	2	50
<b>SEMESTER TOTAL</b>				<b>20</b>	<b>275</b>

## B.A./B.Sc. Program in Physical Education

### 3rd Semester

Course Code	Course Title	Course Type	LTP	Credit	Marks
CC-PE-1C	Anatomy, Physiology and Exercise Physiology	Core course	4-0-2	6	75
CC2C	Discipline-2 (Core-3) other than Physical Education	Core course		6	75
CC (Language)	Language 1B	Core course Language	5-1-0	6	75
SEC-PE- 1	Track and Field	SEC	0-0-2	2	50
<b>SEMESTER TOTAL</b>				<b>20</b>	<b>275</b>

## B.A./B.Sc. Program in Physical Education

### 4th Semester

Course Code	Course Title	Course Type	LTP	Credit	Marks
CC-PE-1D	Health Education, Physical Fitness and Wellness	Core course	4-0-2	6	75
CC2D	Discipline-2 (Core-4) other than Physical Education	Core course		6	75
CC (Language)	Language 2B	Core course Language	5-1-0	6	75
SEC-PE- 2	Gymnastics and Yoga	SEC	0-0-2	2	50
<b>SEMESTER TOTAL</b>				<b>20</b>	<b>275</b>

## B.A./B.Sc. Program in Physical Education

### 5th Semester

Course Code	Course Title	Course Type	LTP	Credit	Marks
	DSE				
<b>DSE-PE-1</b>	Tests, Measurements and Evaluation in Physical Education	<b>DSE</b>	5-0-1	<b>6</b>	<b>75</b>
<b>DEC-PE-2</b>	Sports Training	<b>DSE</b>	5-0-1	<b>6</b>	<b>75</b>
<b>GE 1</b>	GE 1	<b>GE</b>			
	Unrelated Discipline		4-0-2	<b>6</b>	<b>75</b>
<b>SEC-PE-3</b>	SEC 3	<b>SEC</b>		<b>2</b>	<b>50</b>
	<b>Indian Games (any one)- Kabaddi / Kho-Kho</b> <b>And</b> <b>Racket Sports (Any one)- Badminton/ Table Tennis</b>		0-0-2		
		<b>SEMESTER TOTAL</b>		<b>20</b>	<b>275</b>

## B.A./B.Sc. Program in Physical Education

### 6th Semester

Course Code	Course Title	Course Type	LTP	Credit	Marks
	DSE	<b>DSE</b>			
<b>DSE=PE-3</b>	Psychology in Physical Education and Sports		4-0-2	<b>6</b>	<b>75</b>
<b>DSE-PE-4 /Project Work</b>	Sports Medicine, Physiotherapy and Rehabilitation		4-0-2	<b>6</b>	<b>75</b>
<b>GE 2</b>	GE 2	<b>GE</b>			
	Unrelated Discipline		6-0-0	<b>6</b>	<b>75</b>
<b>SEC -PE-4</b>	SEC4	<b>SEC</b>			
	<b>Ball Games (any two)</b> Football/Handball/Basketball/ Volleyball/ Netball/ Throwball		0-0-2	<b>2</b>	<b>50</b>
		<b>SEMESTERTOTAL</b>		<b>20</b>	<b>275</b>

# SEMESTER- 1

## CORE PAPER-1: Foundation and History of Physical Education

Course Code- CC-PE-1A

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. Misconcepts 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.

LH –  
18

### Unit- III: History of Physical Education

- 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, Commonwealth Games and SAF Games.
- 3.4 National Sports Awards- Arjuna Award, Rajiv Gandhi Khel Ratna Award, Dronacharya Award and Dhyanchand Award

### Unit- IV: Yoga Education

LH - 12

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

### FIELD PRACTICAL

1. Learn and demonstrate the technique of Suryanamaskar.
2. Development of physical fitness through Callisthenics and Aerobic activities (Any one).

### REFERENCES

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

## **SEMESTER- 2**

### **CORE PAPER- 2: Management of Physical Education and Sports**

**Corse Code- CC-PE-1B**

**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.

#### **FIELD PRACTICAL**

Lay out, knowledge and Officiating ability-

1. Track and Field events (any one).
2. Games: Football, Kabaddi, Kho-Kho and Volleyball (any one).

### **REFERENCES**

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. New York: Prentice hall Inc.
2. Bucher, C. A. (1983). Administration of Physical Education and Athletic programme. St. 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. Kalyayani Publishers.
10. Kar, S. & Santra, D.C. (2018): Snatak Sarirsiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
11. Kar, S. (2018). Mahavidyalayer Sarirsiksha : Health Education and First Aid: Classique Books, Kalkata
12. Kar, S. (2017). Sarirsiksha Samagra (Part-3) Health Education and First Aid: Classique Books, Kalkata

## SEMESTER- 3

### CORE PAPER- 3: Anatomy, Physiology and Exercise Physiology

Course Code- CC-PE-1C

Total number of classes - 60

#### 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. Human Cell- Structure and function.
- 1.4. Tissue- Types and functions.

#### Unit- II: Musculo-skeletal System

LH - 18

- 2.1. Skeletal System- Structure of Skeletal System. Classification and location of bones and joints. Anatomical differences between male and female.
- 2.1. Muscular System- Types of Muscles. Location, Structure and function of Skeletal muscle.
- 2.3. Types of muscular contraction.
- 2.4. 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. Mechanism of blood circulation through heart.
- 3.3 Blood Pressure, Athletic Heart and Bradycardia.
- 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.
- 4.3 Vital Capacity, O<sub>2</sub> Debt and Second Wind.
- 4.4 Effect of exercise and training on respiratory system.

#### LAB PRACTICAL

1. Assessments of BMI and WHR (Waist-to-hip ratio).
2. Assessment of Heart rate, Blood Pressure, Respiratory Rate, and Pick Flow Rate (any two).

#### REFERENCES

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.

## **SEMESTER- 3**

### **Track and Field**

**Course code: SEC-PE- 1**

#### **1. Track Events**

- 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.

#### **2. Field events (any two)**

- 2.1. Long Jump: Approach Run, Take-off, Flight in the air (Hang Style/Hitch Kick) and Landing.
- 2.2. High jump: Approach Run, Take-off, Bar Clearance (Straddle) and Landing.
- 2.3. Shot put: Holding the Shot, Placement, Initial Stance, Glide, Delivery Stance and Recovery (Perry O'Brien Technique).
- 2.4. Discus Throw: Holding the Discus, Initial Stance, Primary Swing, Turn, Release and Recovery (Rotation in the circle).
- 2.5. Javelin Throw: Grip, Carry, Release and Recovery (3/5 Impulse stride).

# SEMESTER- 4

## CORE PAPER- 4: Health Education, Physical Fitness and Wellness

Course Code- CC-PE-1D

Total number of classes - 60

LH –  
18

### Unit- I: Introduction

- 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, 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 Diarrhoea.
- 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: Health and 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.

### LAB PRACTICAL

1. First-aid Practical- Triangular Bandage: Slings (Arm Sling, Collar & Cuff Sling), Roller Bandages: Simple Spiral, Reverse Spiral, Figure of Eight, Spica splint
2. Practical knowledge on application of Hydro-therapy and Thermo-therapy.

### REFERENCES

1. Bucher, Charles A. "Administration of Health and Physical Education Programme".
2. Delbert, Oberteuffer, et. al. "The School Health Education".
3. Ghosh, B.N. "Treatises 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 Robertson.

## SEMESTER- 4

### Gymnastics and Yoga

Course code: SEC-PE- 2

#### GYMNASTICS

##### 1. Compulsory

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

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

##### 2. Optional (any two)

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

#### YOGA

##### 3. Asanas

- 3.1. **Standing Posture**
  - 3.1.1. Ardhashandrasana
  - 3.1.2. Brikshasana
  - 3.1.3. Padahasthasana
- 3.2. **Sitting Posture**
  - 3.2.1. Ardhakurmasana
  - 3.2.2. Paschimottanasana
  - 3.2.3. Gomukhasana
- 3.3. **Supine Posture**
  - 3.3.1. Setubandhasana
  - 3.3.2. Halasana
  - 3.3.3. Matsyasana

##### 3.4 Prone Posture

- 3.4.1 Bhujangasana
- 3.4.2 Salvasana
- 3.4.3 Dhanurasana

##### 3.5 Inverted Posture

- 3.5.1 Sarvangasana
- 3.5.2 Shirsasana
- 3.5.3 Bhagrasana

**[Note: One Asana is compulsory from each Posture]**

##### 4. Pranayama (any two)

- 4.1. Kapalbhathi
- 4.2. Bhramri
- 4.3. Anulam Vilom.



# SEMESTER- 5

## Tests, Measurement and Evaluation in Physical Education

Course code: DSE-PE- 1

Total number of classes – 60

### Unit- I: Introduction

LH - 12

- 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: Measurement of Body Compositions 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 - 18

- 3.1 Kraus-Weber Muscular Strength Test
- 3.2 AAHPER Health Related Fitness Test
- 3.3 Queens College Step Test
- 3.4 J.C.R. Test

### Unit- IV: Sports Skill Test

LH - 12

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

### LAB & FIELD PRACTICAL

1. Assessment of somatotype and % body fat (any one).
2. Assessment of AAHPER Youth Fitness Test and Queens College Step Test (any one).

## REFERENCES

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 (2<sup>nd</sup> 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, 2<sup>nd</sup> Edition New York.
5. John Wiley and Sons, Inc Jenson, Clayne R and Cyntha, 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, 3<sup>rd</sup> Edition, Dallas TX: The Cooper Institute for Aerobics Research.
9. Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3<sup>rd</sup> 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- 5

## Sports Training

Course code: DSE-PE-2

Total number of classes – 60

### Unit- I: Introduction

LH - 12

- 1.1. Meaning and definition of Sports Training.
- 1.2. Aim and characteristics of Sports Training.
- 1.3. Principles of Sports Training.
- 1.4. Importance of Sports Training.

### Unit- II: Methods of Training and Conditioning in Sports

LH - 18

- 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. Periodisation- Meaning, types, aim and contents of different periods.

### Unit- III: Training Load and Adaptation

LH - 18

- 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 over load.
- 3.4 Adaptation- Meaning and conditions of adaptation, Supercompensation

### Unit- IV: Training Techniques

LH - 12

- 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.

### FIELD PRACTICAL

1. Practical Experience of Weight Training and Circuit Training (any one).
2. Measurement of Speed, Strength (Grip/Leg), Explosive Strength (Leg) and Flexibility (any two).

### REFERENCES

1. Bunn, J.N. (1998) Scientific Principles of Coaching, New Jersey Engle Wood Cliffs, Prentice Hall Inc.
2. Cart, E. Klafs & Daniel, D. Arnheim (1999) Modern Principles of Athletic Training St. Louis C. V. Mosphy Company.
3. Daniel, D. Arnheim (1991) Principles of Athletic Training, St. Luis, Mosby Year Book.
4. David R. Mottram (1996) Drugs in Sport, School of Pharmacy, Liverpool: John Moore University.
5. Gary, T. Moran (1997) – Cross Training for Sports, Canada : Human Kinetics Hardayal.
6. Singh (1991) Science of Sports Training, New Delhi, DVS Publications.
7. Jensen, C.R. & Fisher A.G. (2000) Scientific Basic of Athletic Conditioning, Philadelphia.
8. Ronald, P. Pfeiffer (1998) Concepts of Athletics Training 2<sup>nd</sup> Edition, London: Jones and Bartlett Publications.
9. Yograj Thani (2003), Sports Training, Delhi : Sports Publications
10. Kar, S. & Santra, D.C. (2018): Snatak Sarirsiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
11. Kar, S. (2018). Mahavidyalayer Sarirsiksha : Health Education and First Aid: Classique Books, Kalkata
12. Kar, S. (2017). Sarirsiksha Samagra (Part-3) Health Education and First Aid: Classique Books, Kalkata

# SEMESTER- 5

## Indian Games and Racket Sports

Course Code: SEC-PE-3

### KABADDI

#### **A. Fundamental skills**

1. Skills in Raiding: 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.
2. Skills of holding the raider: Various formations, catching from particular position, different catches, catching formation and techniques.
3. Additional skills in raiding: Escaping from various holds, techniques of escaping from chain formation, offense and defence.
4. Game practice with application of Rules and Regulations.

#### **B. Rules and their interpretations and duties of the officials.**

OR

### KHO-KHO

#### **A. Fundamental skills**

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.
2. Skills in running: Chain Play, Ring play and Chain & Ring mixed play.
3. Game practice with application of Rules and Regulations.

#### **B. Rules and their interpretations and duties of the officials.**

AND

### BADMINTON

#### **A. Fundamental skills**

1. Basic Knowledge: Various parts of the Racket and Grip.
2. Service: Short service, Long service, Long-high service.
3. Shots: Over head shot, Defensive clear shot, Attacking clear shot, Drop shot, Net shot, Smash.
4. Game practice with application of Rules and Regulations.

#### **B. Rules and their interpretations and duties of the officials.**

OR

### TABLE TENNIS

#### **A. Fundamental skills**

1. Basic Knowledge: Various parts of the Racket and Grip (Shake Hand & Pen Hold Grip).
2. Stance: Alternate & Parallel.
3. Push and Service: Backhand & Forehand.
4. Chop: Backhand & Forehand.
5. Receive: Push and Chop with both Backhand & Forehand.
6. Game practice with application of Rules and Regulations.

#### **B. Rules and their interpretations and duties of the officials.**

# SEMESTER- 6

## Psychology in Physical Education and Sports

Course Code- DSE-PE-3

Total number of classes - 60

### Unit- I: Introduction

LH –  
12

- 1.1. Meaning and definition Psychology.
- 1.2. Importance and scope of Psychology.
- 1.3. Meaning and definition of Sports Psychology.
- 1.4. Need for knowledge of Sports Psychology in the field of Physical Education.

### Unit- II: Learning

LH –  
18

- 2.1. Meaning and definition of learning.
- 2.2. Theories and Laws of learning.
- 2.3. Learning curve: Meaning and Types.
- 2.4. Transfer of learning- Meaning, definition and types. Factors affecting transfer of learning.

### Unit- III: Psychological Factors

LH –  
18

- 3.1 Motivation- Meaning, definition, types and importance of Motivation in Physical Education and Sports.
- 3.2 Emotion- Meaning, definition, types and importance of Emotion in Physical Education and Sports.
- 3.3 Personality- Meaning, definition and types. Personality traits.
- 3.4 Role of physical activities in the development of personality.

### Unit- IV: Stress and Anxiety

LH –  
12

- 4.1 Stress- Meaning, definition and types of Stress.
- 4.2 Causes of Stress.
- 4.3 Anxiety- Meaning, definition and types of Anxiety.
- 4.4 Management of Stress and Anxiety through physical activity and sports.

### LAB PRACTICAL

1. Assessment of Personality, Stress and Anxiety (any one)
2. Measurement of Reaction Time, Depth Perception and Mirror Drawing (any one).

### REFERENCES

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 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 impton Publishers.

**SEMESTER- 6**  
**Sports Medicine, Physiotherapy and Rehabilitation**

**Course Code- DSE-PE-4**  
**Total number of classes - 60**

**Unit- 1: Introduction**

**LH-12**

- 1.1 Meaning, definition, Aim and Scope of Physiotherapy.
- 1.2 Need and Importance of Physiotherapy
- 1.3 Different types of physiotherapy
- 1.4 Principles of Physiotherapy

**Unit-2: Sports Medicine**

**LH-18**

- 2.1 Meaning and concept of Sports Medicine
- 2.2 Aim and Objectives of Sports Medicine
- 2.3 Common regional injuries and their management-shoulder, elbow, wrist, knee and ankle
- 2.4 Exercise Management of Sports injuries.

**Unit-3: Doping and Ergogenic aids**

**LH-12**

- 3.1 Concept and meaning of Doping
- 3.2 Types of Doping and Doping-agents
- 3.3 Effects of Doping and Dope tests
- 3.4 Ergogenic aids: Meaning, types and uses.

**Unit-4: Athletic Care, First Aid and Rehabilitation**

**LH-18**

- 4.1 Rehabilitation in sports- Meaning, Principles, Means and Methods
- 4.2 Diagnosis of injuries-signs and symptoms of injuries
- 4.3 Different forms of Hydrotherapy and Thermotherapy- hot and cold packs, whirlpool, contrast bath, infra-red, short wave diathermy and ultrasound
- 4.4 Massage: Definition and Types , Physiological effects of Massage, Therapeutic uses of Massage

**References**

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

## **SEMESTER- 6**

### **Dissertation/ Project**

1.1 Subjects: Physical Fitness Components, Body composition and Somatotype, Educational Tour, Leadership Camp, Non-communicable diseases, Organization of Games & Sports.

1.2 Project Report Format:

- Introduction
- Procedure
- Results
- Conclusions
- Recommendations
- References

## SEMESTER- 6

### BALL GAMES (Any two)

Course code: SEC-PE-4

#### FOOTBALL

##### **A. Fundamental Skills**

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. Trapping: Trapping- the Rolling ball, and the Bouncing ball with sole of the foot.
3. Dribbling: Dribbling the ball with Instep of the foot, Dribbling the ball with Inner and Outer Instep of the foot.
4. Heading: In standing, running and jumping condition.
5. Throw-in: Standing throw-in and Running throw-in.
6. Feinting: With the lower limb and upper part of the body.
7. Tackling: Simple Tackling, Slide Tackling.
8. Goal Keeping: Collection of Ball, Ball clearance- kicking, throwing and deflecting.
9. Game practice with application of Rules and Regulations.

##### **B. Rules and their interpretation and duties of officials.**

#### HANDBALL

##### **A. Fundamental Skills**

1. Catching, Throwing and Ball control,
2. Goal Throws: Jump shot, Center shot, Dive shot, Reverse shot.
3. Dribbling: High and low.
4. Attack and counter attack, simple counter attack, counter attack from two wings and center.
5. Blocking, GoalKeeping and Defensive skills.
6. Game practice with application of Rules and Regulations.

##### **B. Rules and their interpretation and duties of officials.**

#### 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, Hook shot, Free Throw.
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.**

## **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.**

## **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.**

## **THROWBALL**

### **Fundamental skills:**

Overhand service, Side arm service, two hand catching, one hand overhead return, side arm return.

Rules and their interpretations and duties of officials.



**Generic Elective Course (GEC)**  
(For Students other than Physical Education)

**1<sup>st</sup> Semester**

Course Code	Course Title	Course Type	LTP	Credit	Marks
GE-PE-1	GE-PE -1 (for the students other than Phy. Edn.)	GE		6	75
	<b>Modern trends in Physical Education and Yoga</b>	GE-1	6-0-0		

**2<sup>nd</sup> Semester**

Course Code	Course Title	Course Type	LTP	Credit	Marks
GE-PE-2	GE-PE -2 (for the students other than Phy. Edn.)	GE		6	75
	<b>Management of Physical Education</b>	GE-2	6-0-0		

**3<sup>rd</sup> Semester**

Course Code	Course Title	Course Type	LTP	Credit	Marks
GE-PE-3	GE -PE-3 (for the students other than Phy. Edn.)	GE		6	75
	<b>Anatomy, Physiology and Exercise Physiology</b>		6-0-0		

**4<sup>th</sup> Semester**

Course Code	Course Title	Course Type	LTP	Credit	Marks
GE-PE-4	GE -PE-4 (for the students other than Phy. Edn.)	GE		6	75
	<b>Health Education and Tests &amp; Measurements</b>		6-0-0		

**SEMESTER-1**  
**Modern Trends and Practices in Physical Education & Yoga**

(For the students other than Physical Education)

Course code: GE-PE-1

Total number of classes 60

**Unit-I: Introduction**

**LH -12**

- 1.1. Meaning, definition and importance of physical Education and Sports.
- 1.2. Aims, objectives and scope of Physical Education.
- 1.3. Types of sports and their utility in Health and Fitness.
- 1.4. Meaning, definition and importance of Physical fitness and Motor fitness. Difference between physical fitness and motor fitness. Components of Physical fitness.

**Unit-II: Biological, Psychological 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. Meaning and definition of Psychology. Importance of Psychology in Physical Education. Psychological factors effecting in Physical Activity and Sports.
- 2.3. Sociological Foundation-Meaning and definition of Sociology. Social values and their Importance. Socialization through Sports
- 2.4. Role of games and sports in National Integration and International Understanding.

**Unit-III: History of Physical Education**

**LH -12**

- 3.1. Historical development of Physical Education and Sports in India-Pre-Independence period and Post-Independence period.
- 3.2. Ancient Olympic Games
- 3.3. Modern Olympic Games.
- 3.4. Asian Games and Commonwealth Games

**Unit-IV: Yoga Education**

**LH -18**

- 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

**FIELD PRACTICAL**

1. Learn and demonstrate the technique of Suryanamaskar.
2. Development of physical fitness through Callisthenics and Aerobic activities (Any one).

**REFERENCES**

1. Kamlesh, M.L. & Singh, M.K. (2006) Physical Education (Naveen Publication).
2. Lumpkin, A. (2007) Introduction to Physical Education, Exercise Science and Sports Studies, McGraw Hill, New York, USA.
3. Siedentop, D. (2004) Introduction to Physical Education, Fitness and Sport, McGraw Hill Companies Inc., New York, USA.
4. Shaffer, D.R. (2002) Development Psychology: Childhood and Adolescence. Thomson, Sydney, Australia.
5. Shukla, (2000) Mother on Education, National Council of Teacher Education, New Delhi.
6. Singh, A. et al. (2000) Essential of Physical Education, Kalyani Publishers, Ludhiana, Punjab.
7. Wuest, D.A. & C.A. Bucher (2006) Foundation of Physical Education, Exercise Science, and Sports. McGraw Hill Companies Inc.; New York, USA.
8. Fahey, T.D., M.P. Insel and W.T. Rath (2006) Fit & Well: Core Concepts and Labs in Physical Fitness, McGraw Hill, New York.
9. Kansal, D.K. (2012) A Practical Approach to Test Measurement and Evaluation Sports and Spiritual Science Publication, New Delhi.
10. Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs.
11. David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics.
12. Fox, E.L., and Mathews, D.K. (1981). The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing
13. Kar, S. (2018). Mahavidyalayer Sarirsiksha: Foundation & History of Physical Education : Classique Books, Kalkata
14. Kar, S. & Santra, D.C. (2018): Snatak Sarirsiksha Porichaya (Vol.-1), Santra Publication, Kolkata

**SEMESTER-2**  
**Management of Physical Education and Sports**

Course Code-GE-PE-2  
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.

**FIELD PRACTICAL**

Lay out ,knowledge and Officiating ability-

1. Track and Field events (any Two).
2. Games: Football, Volleyball, Badminton, Kabaddi and Kho-Kho (any Two).

**REFERENCES**

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. New York: Prentice hall Inc.
2. Bucher, C. A. (1983). Administration of Physical Education and Athletic programme. St. 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. (2018). Mahavidyalaya Saririksiksha (Part-1): Management of Physical Education and Sports: Classique Books, Kolkata
11. Kar, S. & Santra, D.C. (2018): Snatak Saririksiksha Porichaya (Vol.-1), Santra Publication, Kolkata

## **SEMESTER-2 (Syllabus of Practical)**

### **Track and Field**

#### **1. Track Events**

- 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.

#### **2. Field events (any two)**

- 2.1. Long Jump: Approach Run, Take-off, Flight in the air (Hang Style/Hitch Kick) and Landing.
- 2.2. High jump: Approach Run, Take-off, Bar Clearance (Straddle) and Landing.
- 2.3. Shot put: Holding the Shot, Placement, Initial Stance, Glide, Delivery Stance and Recovery (Perry O'Brien Technique).
- 2.4. Discus Throw: Holding the Discus, Initial Stance, Primary Swing, Turn, Release and Recovery (Rotation in the circle).
- 2.5. Javelin Throw: Grip, Carry, Release and Recovery (3/5 Impulse stride).

### **Ball Games and Indigenous Games**

#### **FOOTBALL**

##### **A. Fundamental Skills**

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. Trapping: Trapping- the Rolling ball, and the Bouncing ball with sole of the foot.
3. Dribbling: Dribbling the ball with Instep of the foot, Dribbling the ball with Inner and Outer Instep of the foot.
4. Heading: In standing, running and jumping condition.
5. Throw-in: Standing throw-in and Running throw-in.
6. Feinting: With the lower limb and upper part of the body.
7. Tackling: Simple Tackling, Slide Tackling.
8. Goal Keeping: Collection of Ball, Ball clearance- kicking, throwing and deflecting.
9. Game practice with application of Rules and Regulations.

##### **B. Rules and their interpretation and duties of officials.**

#### **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.**

#### **BADMINTON**

##### **A. Fundamental skills**

1. Basic Knowledge: Various parts of the Racket and Grip.
2. Service: Short service, Long service, Long-high service.
3. Shots: Over head shot, Defensive clear shot, Attacking clear shot, Drop shot, Net shot, Smash.
4. Game practice with application of Rules and Regulations.

##### **B. Rules and their interpretations and duties of the officials.**

#### **KABADDI**

##### **A. Fundamental skills**

1. Skills in Raiding: 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.
2. Skills of holding the raider: Various formations, catching from particular position, different catches, catching formation and techniques.
3. Additional skills in raiding: Escaping from various holds, techniques of escaping from chain formation, offense and defense.
4. Game practice with application of Rules and Regulations.

##### **B. Rules and their interpretations and duties of the officials.**

#### **KHO-KHO**

##### **A. Fundamental skills**

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

3. Game practice with application of Rules and Regulations.  
**B. Rules and their interpretations and duties of the officials.**

**SEMESTER-3**  
**Anatomy, Physiology and Exercise Physiology**

Course Code-GE-PE-3

Total number of classes -60

**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. Human Cell-Structure and function.
- 1.4. Tissue-Types and functions.

**Unit-II: Musculo-skeletal System**

**LH -18**

- 2.1. Skeletal System-Structure of Skeletal System. Classification and location of bones and joints. Anatomical differences between male and female.
- 2.1. Muscular System-Types of Muscles. Location, Structure and function of Skeletal muscle.
- 2.3. Types of muscular contraction.
- 2.4. 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. Mechanism of blood circulation through heart.
- 3.3. Blood Pressure, Athletic Heart and Bradycardia.
- 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.
- 4.3. Vital Capacity, O<sub>2</sub> Debt and Second Wind.
- 4.4. Effect of exercise and training on respiratory system.

**LAB PRACTICAL**

1. Assessments of BMI and WHR (Waist-to-hip ratio).
2. Assessment of Heart rate, Blood Pressure, Respiratory Rate, and Pick Flow Rate (any two).

**REFERENCES**

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.
10. Kar, S. & Santra, D.C. (2018): Snatak Saririksiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
11. Kar, S. (2018). Mahavidyalayer Saririksiksha : Anatomy Physiology and Exercise Physiology: Classique Books, Kalkata

**SEMESTER- 4**  
**Health Education and Tests & Measurements in Physical Education**  
**(For the students other than Physical Education)**  
**Course Code: GE-PE-4**  
**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. Health Agencies- World Health Organization (WHO), United Nations Educational Scientific and Cultural Organization (UNESCO), United Nations International Children's Emergency Fund (UNICEF).
- 1.4. Nutrition- Nutritional requirements for daily living. Preparation of Balance Diet chart. Health disorders due to deficiency of Protein, Vitamins and Minerals.

**Unit- II: Health and First-aid Managements**

**LH - 18**

- 2.1. First aid- Meaning, definition, importance and golden rules of First-aid.
- 2.2. Concept of sports injuries- Sprain, Strain, Wound, Fracture and Dislocation.
- 2.3. Postural deformities- Causes and corrective exercise of Kyphosis, Lordosis, Scoliosis, Bow-legs, Knock Knees and Flat Foot.
- 2.4. Hypo-kinetic Diseases and Physical Activities- Obesity, Diabetes and Asthma.

**Unit- III: Measurement of Body Compositions and Somatotype Assessment**

**LH - 12**

- 3.1 Body Mass Index (BMI)- Concept and method of measurement.
- 3.2 Body Fat- Concept and method of measurement.
- 3.3 Lean Body Mass (LBM)- Concept and method of measurement.

**Unit- IV: Fitness Test**

**LH-12**

- 4.1. Kraus-Weber Muscular Strength Test
- 4.2. AAHPER Health related Fitness Test
- 4.3. Queens College Step Test
- 4.4. J.C.R. Test

**LAB PRACTICAL**

1. First-aid Practical- Triangular Bandage: Slings (Arm Sling, Collar & Cuff Sling), Roller Bandages: Simple Spiral, Reverse Spiral, Figure of Eight, Spica splint
2. Practical knowledge on application of Hydro-therapy and Thermo-therapy.

**REFERENCES**

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.
10. Kar, S. & Santra, D.C. (2018): Snatak Sarisiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
11. Kar, S. (2018). Mahavidyalayer Sarisiksha : Health Education and First Aid: Classique Books, Kalkata
12. Kar, S. (2017). Sarisiksha Samagra (Part-3) Health Education and First Aid: Classique Books, Kalkata

