

UNIVERSITY OF KALYANI



**CBCS CURRICULUM FOR THREE YEAR UNDER-GRADUATE COURSE
IN
PHYSICAL EDUCATION (GENERAL)**

**WITH EFFECT FROM THE ACADEMIC SESSION
2021-2022**

INTRODUCTION:

The University Grants Commission (UGC) has taken various measures by means of formulating regulations and guidelines and updating them, in order to improve the higher education system and maintain minimum standards and quality across the Higher Educational Institutions in India. The various steps that the UGC has initiated are all targeted towards bringing equity, efficiency and excellence in the Higher Education System of country. These steps include introduction of innovation and improvements in curriculum structure and content, the teaching-learning process, the examination and evaluation systems, along with governance and other matters. The introduction of Choice Based Credit System is one such attempt towards improvement and bringing in uniformity of system with diversity of courses across all higher education institutes in the country. The CBCS provides an opportunity for the students to choose courses from the prescribed courses comprising of core, elective, skill enhancement or ability enhancement courses. The courses shall be evaluated following the grading system, is considered to be better than conventional marks system. This will make it possible for the students to move across institutions within India to begin with and across countries for studying courses of their choice. The uniform grading system shall also prove to be helpful in assessment of the performance of the candidates in the context of employment.

Outline of the Choice Based Credit System being introduced:

1. **Core Course (CC):** A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.

2. **Elective Course:** Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the student's proficiency/skill is termed as an Elective Course.

2.1 **Discipline Specific Elective Course (DSEC):** Elective courses that are offered by the main discipline/subject of study is referred to as Discipline Specific Elective. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).

2.2 **Generic Elective Course (GEC):** An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective.

3. Ability Enhancement Courses/ Skill Enhancement Courses:

3.1 **Ability Enhancement Compulsory Course (AECC):** Ability enhancement courses are the courses based upon the content that leads to Knowledge enhancement. They (i) Environmental Science, (ii) English Communication) are mandatory for all disciplines.

3.2 **Skill Enhancement Course (SEC):** These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based instruction.

Table 1. Total Number of courses in UG-CBCS (B.A./B.Sc. Program in Physical Education)

Types of course	Core course (CC)	Elective course		Ability Enhancement Course		Total
		Discipline specific elective course (DSE)	Generic elective course (GE)	Ability Enhancement compulsory course (AECC)	Skill Enhancement course (SEC)	
No. of course	12	6(BSc)/4(BA/B.Com)	2(BA/B.Com)	2	2	24
Credit/course	6	6	6	2	2	120

Table -2. Detail of courses in UG-CBCS (B.A./B.Sc. Program in Physical Education)

Sl No	Particulars of Course	Credit Point	
		Theory + Practical	Theory + Tutorial
1	Core Course: 14 Papers		
1.A.	Core Course: Theory (12 papers)	12x4 = 48	12x5 = 60
1.B.	Core Course (Practical/Tutorial)*(12 papers)	12x2 = 24	12x1 = 12
2	Elective Courses: (6 papers)		
A.	DSE (6 papers for B.Sc./ 4 papers for B.A. & B.Com.)	6x4 = 24	4x5 = 20
B.	DSE(Pract./ Tutor.)* (6 papers for B.Sc./4 for B.A. & B.Com.)	6x2 = 12	4x1 = 4
C.	GE (Interdisciplinary) (2 papers for B.A. & B.Com.)	--	2x5 = 10
D.	GE (Pract./Tutor.)* (4 papers) (2 papers for B.A. & B.Com.)	--	2x1 = 2
3	Ability Enhancement Courses		
A.	AECC(2 papers of 2 credits each) ENVS, English Communication / MIL	2x2 = 4	2x2 = 4
B.	Skill Enhancement Course(SEC) (4 papers of 2 credits each)	4x2 = 8	4x2 = 8
	Total Credit:	120	120

Table 3. SEMESTER WISE DISTRIBUTION OF COURSES & CREDITS IN B.A./ B. Sc./ B.COM. HONOURS								
Courses/ Sem	Sem-I	Sem-II	Sem- III	Sem-IV	Sem-V	Sem-VI	Total No. of Courses	Total credit
(Credits)								
CC (6)	2	2	3	3	2	2	14	84
DSE (6)					2	2	4	24
GE (6)	GE 1	GE 1	GE 2	GE 2				
AECC (2)	C-1	C-2	C-1	C-2			4	24
	1(ENV)	1(MIL)					2	4
SEC (2)			1	1			2	4
Total No. of Courses/Sem	4	4	5	5	4	4	26	--
Total Credit/ Semester	20	20	26	26	24	24	-----	140

Table 4. SEMESTER WISE DISTRIBUTION OF COURSES & CREDITS IN B.A./ B.COM. PROGRAMME/ GENERAL

Courses/ (Credit)	Sem-I	Sem-II	Sem-III	Sem-IV	Sem-V	Sem-VI	Total No. of courses	Total Credit
CC-1,2 (6)	2 (1A,2A)	2 (1B,2B)	2 (1C,2C)	2 (1D,2D)			8	48
Language CC - 1,2 (6)	1 (L ₁ -1)	1 (L ₂ -1)	1 (L ₁ -2)	1 (L ₂ -2)			4	24
DSE (6)	-	-	-	-	2(1A,2A)	2(1B,2B)	4	24
GE (6)					GE 1 C-1	GE 1 C-2	2	12
AECC (2)	1(MIL)	1(ENV)					2	4
SEC (2)			1	1	1	1	4	8
Total No. of Courses/Sem	4	4	4	4	4	4	24	--
Total Credit/ Semester	20	20	20	20	20	20	--	120

**Table 5. SEMESTER WISE DISTRIBUTION OF COURSES & CREDITS IN B.SC. PROGRAMME/
GENERAL**

Courses/ (Credit)	Sem-I	Sem-II	Sem-III	Sem-IV	Sem-V	Sem-VI	Total No. of Courses	Total Credit
CC-1,2,3 (6)	3	3	3	3			12	72
	(1A,2A, 3A)	(1B,2B,3B)	(1C,2C,3C)	(1D,2D, 3D)				
DSE -1,2,3 (6)	-	-	-	-	3(1A,2A,3A)	3(1B,2B,3B)	6	36
GE (6)	--	--	--	--	--	--	--	--
AECC (2)	1(MIL)	1(ENV)					2	4
SEC (2)			1	1	1	1	4	8
Total No. of Courses/ Sem	4	4	4	4	4	4	24	--
Total Credit/Semester	20	20	20	20	20	20	--	120

B.A./B.Sc. Program in Physical Education**1st Semester**

Course Code	Course Title	Course Type	LTP	Credit	Marks
PEDG-CC-T-1A	Foundation and History of Physical Education	Core course	4-0-2	6	75
CC-T-2A	Discipline-2 (Core-1) other than Physical Education	Core course	4-0-2	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
SEMESTER TOTAL				20	275

B.A./B.Sc. Program in Physical Education**2nd Semester**

Course Code	Course Title	Course Type	LTP	Credit	Marks
PEDG-CC-T-1B	Management of Physical Education and Sports	Core course	4-0-2	6	75
CC-T-2B	Discipline-2 (Core-2) other than Physical Education	Core course	4-0-2	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
SEMESTER TOTAL				20	275

B.A./B.Sc. Program in Physical Education**3rd Semester**

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

B.A./B.Sc. Program in Physical Education**4th Semester**

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

B.A./B.Sc. Program in Physical Education**5th Semester**

Course Code	Course Title	Course Type	LTP	Credit	Marks
PEDG-DSE-T-1/ T-2/T-3	Tests, Measurements and Evaluation in Physical Education/ Sports Training/Kinesiology and Biomechanics	DSE	4-0-2	6	75
DSE	Discipline-2 (DSE-2) other than Physical Education	DSE	4-0-2	6	75
PEDG-GE-T-1/T-2	Modern trends in Physical Education and Yoga/Management of Physical Education	GE (unrelated discipline)	4-0-2	6	75
PEDG-SEC-P-3	Indian Games: Kabaddi/Kho-kho and Racket Sports: Badminton/Table Tennis	SEC	0-0-2	2	50
		SEMESTER TOTAL		20	275

B.A./B.Sc. Program in Physical Education**6th Semester**

Course Code	Course Title	Course Type	LTP	Credit	Marks
PEDG-DSE-T-4/ T-5/T-6	Psychology in Physical Education and Sports/Sports Medicine, Physiotherapy, and Rehabilitation/Dissertation or Project	DSE	4-0-2	6	75
DSE	Discipline-2 (DSE-2) other than Physical Education	DSE	4-0-2	6	75
PEDG-GE-T-3/T-4	Anatomy, Physiology and Exercise Physiology/Health Education, Physical Fitness and Measurements in Physical Education	GE (unrelated discipline)	4-0-2	6	75
PEDG-SEC-P-4	Ball Games (any two): Football/Handball/Basketball/ Volleyball/Netball/ Throwball	SEC	0-0-2	2	50
		SEMESTER TOTAL		20	275

Generic Elective Course (GEC)

(For Honours Students and students of unrelated discipline)

Course Code	Course Title	Course Type	LTP	Credit	Marks
PEDG-GE-T-1	Modern trends in Physical Education and Yoga	GE (at Sem1 for Honours Students, at Sem5 for unrelated discipline)	4-0-2	6	75
PEDG-GE-T-2	Management of Physical Education	GE (at Sem2 for Honours Students, at Sem5 for unrelated discipline)	4-0-2	6	75
PEDG-GE-T-3	Anatomy, Physiology and Exercise Physiology	GE (at Sem3 for Honours Students, at Sem6 for unrelated discipline)	4-0-2	6	75
PEDG-GE-T-4	Health Education, Physical Fitness and Measurements in Physical Education	GE (at Sem4 for Honours Students, at Sem6 for unrelated discipline)	4-0-2	6	75

SEMESTER – 1
CORE PAPER – 1: Foundation and History of Physical Education
Course Code: PEDG-CC-T-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. Misconcept and Modern concept of Physical Education
- 1.4. Importance of Physical Education in modern society

Unit – II: Biological and Sociological Foundation 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, Commonwealth 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

Field Practical

1. Learn and demonstrate the technique of Suryanamaskar
2. Development of physical fitness through Callisthenics, Marching, 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.
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7. Singh, A. et al. (2000) Essential of Physical Education, Kalyani Publishers, Ludhiana, Punjab.
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SEMESTER – 2

CORE PAPER – 2: Management of Physical Education and Sports

Course Code: PEDG-CC-T-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 organising Annual Athletic Meet and Play Day
- 2.4. Methods of organising Intramural and Extramural competition

Unit – III: Facilities and Equipments

LH - 18

- 3.1. Methods 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 of

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

References

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. NY: 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. (2000) Essential of Physical Education, Kalyani Publishers, Ludhiana, Punjab.
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SEMESTER – 2 (Practical)

Track and Field

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

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 (Parry 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 interpretations and duties of the 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 interpretations and duties of the 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 defence
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
CORE PAPER – 3: Anatomy, Physiology and Exercise Physiology
Course Code: PEDG-CC-T-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. Elementary concept of cellular organelles: Mitochondrion, Endoplasmic reticulum, Lysosome, Glycogen
- 1.4. Tissue: types and function

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
- 2.2. 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, O₂ Debt and Second Wind
- 4.4. Effect of exercise and training on respiratory system

Field Practical

1. Measurement of BMI and WHR (Waist-to-hip ratio)
2. Measurement of Heart rate, Blood Pressure, Respiratory Rate, and Peak Flow Expiratory Rate in resting and post exercise (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
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6. Richard, W. Bowers. (1989). Sports Physiology. WMC: Brown Publishers
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8. Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications
9. Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication
10. 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: PEDG-SEC-P-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

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 (Parry 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: PEDG-CC-T-1D
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, Personal Hygiene and Health Record

Unit – II: Common Health Problems - Prevention and Control

LH - 18

- 2.1. Communicable Diseases- Malaria, Dengue, Chicken Pox, Diarrhoea, Tuberculosis, Covid 19
- 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, Carbohydrate, fat, Vitamins and Minerals
- 2.4. Concept of personal and environmental hygiene

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

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
- 4.4. Management of sports injuries through the application of Thermo-therapy

Field 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

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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. Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons

SEMESTER – 4
Gymnastics and Yoga
Course Code: PEDG-SEC-P-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

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

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

Yoga

3. Asanas

3.1. Standing Posture

Ardhachandrasana
Brikshasana
Padahasthasana

3.4. Prone Posture

Bhujangasana
Salvasana
Dhanurasana

3.2. Sitting Posture

Ardhakurmasana
Paschimottanasana
Gomukhasana

3.5. Inverted Posture

Sarbangasana
Shirsasana
Bhagrasana

3.3. Supine Posture

Setubandhasana
Halasana
Matsyasana

[Note: One Asana is compulsory from each Posture]

4. Pranayama (any two)

Kapalbhati
Bhramri
Anulom Vilom

SEMESTER – 5

Test, Measurement and Evaluation in Physical Education

Course Code: PEDG-DSE-T-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 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 - 18

- 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

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

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 (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 Cynth ha, C. Hirst (1980) Measurement in Phy Edu and Athletics, NY, Macmillan Publishing Co. Inc.
6. Kansal D.K. (1996), "Test and Measurement in Sports and Physical Education, New Delhi: DVS Publications.
7. Krishnamurthy (2007) Evaluation in Physical Education and Sports, New Delhi; Ajay Verma Publication.
8. Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, 3rd Edition, Dallas TX: The Cooper Institute for Aerobics Research.
9. Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3rd Edition. Champaign IL: Human Kinetics.
10. Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in Physical Education and Sports. New Delhi; Friends Publications

SEMESTER – 5
Sports Training
Course Code: PEDG-DSE-T-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 Technique

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 2nd Edition, London: Jones and Bartlett Publications
9. Yograj Thani (2003), Sports Training, Delhi : Sports Publications
10. Kar, S. & Santra, D.C. (2018): Satak Saririksiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata

SEMESTER – 5
Kinesiology and Biomechanics
Course Code: PEDG-DSE-T-3
Total number of classes – 60

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 - 18

- 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

Field Practical

1. Demonstration of fundamental movements of different joints
2. Measurement of kinematic parameters of motion

References

1. Bunn, J.N. (1998) Scientific Principles of Coaching, New Jersey Engle Wood Cliffs, Prentice Hall Inc
2. Hay, J.G. (1993) The Biomechanics of Sport Techniques. Prentice-Hall, Inc, Englewood Cliff, New Jersey
3. Kar, S. & Santra, D.C. (2018): Snatak Saririksiksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
4. Murell, J. (1975) Athletics, Sports and Games. London
5. Singh, A. et al. (2000) Essential of Physical Education, Kalyani Publishers, Ludhiana, Punjab.

SEMESTER – 5
Indian Games and Racket Sports
Course Code: PEDG-SEC-P-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: PEDG-DSE-T-4
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

Field 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: NCERT Publication
2. Jain. (2002), Sports Sociology, Heal Sahety Kendre Publishers
3. Jay Coakley. (2001) Sports in Society – Issues and Controversies in International Education, Mc-Craw Seventh Ed
4. John D Lauther (2000) Psychology of Coaching. Ner Jersy: Prentice 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

SEMESTER – 6
Sports Medicine, Physiotherapy and Rehabilitation
Course Code: PEDG-DSE-T-5
Total number of classes – 60

Unit – I: 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 – II: 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 – III: 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 – IV: Athletic Care 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 Electrotherapy- infra-ray, short wave diathermy, ultrasound, interferential therapy (IFT)
- 4.4. Massage: definition and Types , physiological effects of Massage, therapeutic uses of Massage

Field Practical (any two)

1. Application of massage technique and paraffin bath
2. Practical knowledge on infra ray, ultrasound, SW diathermy and IFT
3. Exercise prescription for sports injuries, diabetes, obesity and asthma etc.

References

1. Christine, M. D., (1999). Physiology of sports and exercise.USA: Human Kinetics
2. Conley, M. (2000). Bioenergetics of exercise training. In T.R. Baechle, & R.W. Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics
3. David R. Mottram (1996) Drugs in Sport, School of Pharmacy, Liverpool: John Moore University
4. Kar, S. & Santra, D.C. (2018): Satak Saririksha Porichaya, (Vol.- 1), Santra Publication, Kolkata
5. Singh, A. et al. (2000) Essential of Physical Education, Kalyani Publishers, Ludhiana, Punjab.
6. Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, 3rd Edition, Dallas TX: The Cooper Institute for Aerobics Research.
7. Williams, J. G. P. (1962). Sports medicine. London: Edward Arnold Ltd

SEMESTER – 6
Dissertation/ Project
Course Code: PEDG-DSE-T-6

Subjects

1. Assessment of Physical Fitness Components
2. Assessment of Body composition and Somatotype
3. Educational Tour
4. Leadership Camp
5. Adventure Sport
6. Non-communicable diseases
7. Organization of Games & Sports

Project Report Format

1. Introduction
2. Procedure
3. Results
4. Conclusions
5. Recommendations
6. References

SEMESTER – 6
Ball Games (any two)
Course Code: PEDG-SEC-P-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 interpretations and duties of the 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 interpretations and duties of the 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 interpretations and duties of the 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 interpretations and duties of the 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 interpretations and duties of the officials

Throwball

A. Fundamental skills

1. Overhand service, Side arm service
2. Two hand catching
3. One hand overhead return, side arm return
4. Game practice with application of Rules and Regulations

B. Rules and their interpretations and duties of the officials

SEMESTER – 1/5

Generic Elective – 1: Modern Trends and Practices in Physical Education & Yoga

Course Code: PEDG-GE-T-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 Foundation 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, Marching, 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. Shukla, (2000) Mother on Education, National Council of Teacher Education, New Delhi.
7. Singh, A. et al. (2000) Essential of Physical Education, Kalyani Publishers, Ludhiana, Punjab.
8. Wuest, D.A. & C.A. Bucher (2006) Foundation of Physical Education, Exercise Science, and Sports. McGraw Hill Com Inc.; NY.
9. Kar, S. & Santra, D.C. (2018): Satak Saririksha Porichaya, (Vol.- 1), Santra Publication, Kolkata

SEMESTER – 2/5
Generic Elective – 2: Management of Physical Education and Sports
Course Code: PEDG-GE-T-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 organising Annual Athletic Meet and Play Day
- 2.4. Methods of organising Intramural and Extramural competition

Unit – III: Facilities and Equipments

LH - 18

- 3.1. Methods 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 of

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

References

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. NY: 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

SEMESTER – 2/5 (Practical)

Track and Field

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

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 (Parry 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 interpretations and duties of the 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 interpretations and duties of the 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 defence
 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 – 3/6

Generic Elective – 3: Anatomy, Physiology and Exercise Physiology

Course Code: PEDG-GE-T-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. Elementary concept of cellular organelles: Mitochondrion, Endoplasmic reticulum, Lysosome, Glycogen
- 1.4. Tissue: types and function

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
- 2.2. 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, O₂ Debt and Second Wind
- 4.4. Effect of exercise and training on respiratory system

Field Practical

1. Measurement of BMI and WHR (Waist-to-hip ratio)
2. Measurement of Heart rate, Blood Pressure, Respiratory Rate, and Peak Flow Expiratory Rate in resting and post exercise (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 Phy Edu and Athletics. Philadelphia: Sanders College Publishing
5. Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co.
6. Richard, W. Bowers. (1989). Sports Physiology. WMC: Brown Publishers
7. Sandhya Tiwaji. (1999). Exercise Physiology. Sports Publishers
8. Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications
9. Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication
10. William, D. Mc Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company

SEMESTER – 4/6

Generic Elective – 4: Health Education, Physical Fitness and Measurement in Physical Education

Course Code: PEDG-GE-T-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) and 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, Carbohydrate, Fat, Vitamins and Minerals

Unit – II: Health and First-aid

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 Composition and Somatotype

LH - 12

Assessment

- 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
- 3.4. Somatotype- Concept and method of measurement

Unit – IV: Physical Fitness

LH - 12

- 4.1. Physical Fitness- meaning, definition and Importance of Physical Fitness
- 4.2. Components of Physical Fitness
- 4.3. Health and Performance related Physical Fitness
- 4.4. Ageing- Physical activities and its importance

Field 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. Assessment of somatotype, body fat percentage (any one)

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