

## PHYSICAL EDUCATION HONOURS SYLLABUS

Semester	Code No	Paper	Credits	Marks
I	PED-UG-E101	Foundations of Physical Education	4	100
II	PED-UG-E201	Health Education	4	100
III	PED-UG-E301	Anatomy and Physiology	4	100
IV	PED-UG-C401	Measurement and Evaluation	4	100
	PED-UG-C402	Sports Management	4	100
V	PED-UG-C501	Kinesiology and Biomechanics	4	100
	PED-UG-C502	Fitness and Sports Training	4	100
VI	PED-UG-C601	Sports and Exercise Psychology	4	100
	PED-UG-C602	Sports and Exercise Physiology	4	100

### PED-UG-E101: FOUNDATIONS OF PHYSICAL EDUCATION

#### Unit I: Meaning, Definition, Aim and Objectives of Physical Education

Terminologies of Physical Education- Old and Modern  
Scope and Place of Physical Education in total education process  
Physical Education as a science and an art

#### Unit II: Physical Education in Pre- Independence Period

Mughal Period  
British Period  
Contribution of H.V.P.M Amravati, YMCA, LNUPE,  
Role of Padmashri P.M Joseph, Central Advisory Board of Physical Education and Recreation, Kothari Commission 1964-66, New Education Policy, 1986  
Olympic movement- Ancient and Modern Olympics

#### Unit III: Biological basis of life

Growth and Development, Principles and stages of growth and development  
Body types and its implication in Physical Education and Sports  
Socializations- concept  
Socializing process through games and sports  
Philosophies of Education as applied to Physical Education

#### Unit IV: Practical

Running - Types, fundamental skills, techniques, rules and regulations, finishing techniques  
Throwing event- (Any one) Shot Put, Discus, Javelin: fundamental skills, techniques, rules and regulations  
Jumping event- (Any one) Long Jump, Triple jump, Pole vault: fundamental skills, techniques, rules and regulations

#### References:

1. Bucher Charles A., Foundations of Physical Education, St. Louis the C.V. Mosby

- Company, 1983.
2. Williams J.F – Principles of Physical Education,
  3. Barrow H.M. – Man and Movement
  4. Kamalesh M.L., Physical Education : Facts and Foundation, New Delhi, P.B. Publications,
  5. Uppal AK & Gautam GP (2008). Health and Physical Education. Friends Publication.
  6. Thirunarayanan, C. and Hariharan, S., Analytical History of Physical Education, Karaikudi, C.T. & S.H., Publications, 1990.

## **PED-UG-E201: HEALTH EDUCATION**

### **Unit I: Modern concept of Health**

Dimension of Health

Factors affecting health

Modern concept of Health Education- aims and objectives of health education

Principles of Health Education

### **Unit II: Mental health- concept of mental health**

Relation between physical and mental health

Causes of mental illness- anxiety, frustration, tension, stress etc

Psycho-somatic diseases and role of physical exercise to avert them

Posture and Postural deformities- characteristics of good posture, factors affecting posture, Postural deformities and their corrections- Kyphosis, Lordosis, Scoliosis, Flat foot, Knock-knee, Bow legs etc

### **Unit III: Concept of Nutrition and balanced diet**

Classification of food and its components

Ergogenic aids- meaning and its types

Drugs, drug abuse- Adverse effect of drugs, alcohol, tobacco on the health of individuals

Doping- concept, mechanism of doping and its adverse effects

### **Unit IV: Practical: Aerobics/Calisthenics**

Music understanding & cuing (step aerobics, floor aerobics)

Warm up & cool down exercise.

Specific conditioning exercise

Workouts – low intensity, medium intensity and high intensity.

Designing of aerobics/session.

Exercise of different parts of the body – Four count, eight count and sixteen count.

### **References:**

1. Park and Park - Preventive and social medicine
2. Anderson - School Health Practice
3. Bedi Yashpal “Social and Preventive medicine”.
4. Lifestyle for Wellness. McGraw Hill, New York, USA.
5. Corbin, C. B., G. J. Welk, W. R Corbin, K. A. Welk (2006) Concepts of Physical Fitness: Active Lifestyle for Wellness, McGraw Hill, New York, USA

## **PED-UG-E301: ANATOMY AND PHYSIOLOGY**

### **Unit I: Anatomy**

Meaning and concept, Need and importance of the knowledge of anatomy in the field of Phy. Education  
Anatomical structure of human body- Cells, Tissues, Organs and Organ Systems  
Microscopic Structure of Cell- Composition and the functions of cell organelles  
Tissues- Classification of Tissues, Structure and Function of tissues  
Anatomical terms and terminologies

### **Unit II: Skeleton**

Names of different parts of Human Skeleton- Axial and Appendicular Skeleton.  
Bones- Types of bones, Structure and function of bones  
Muscles- Types of muscles  
Structure and function of skeletal muscles  
Names of major muscles and their locations in the human body

### **Unit III: Physiology**

Meaning and concept, Need and importance of the knowledge of Physiology in the field of Phy. Education  
Structure and function of heart,  
Structure and function of digestive system  
Structure and function of respiratory system  
Structure and function of excretory system

### **Unit IV: Practical: Yoga- Asanas and Pranayamas**

Asanas- Meaning, techniques, precautions & effects of the following:

Padmasana, vajrasana, sidhasana, paschimottanasa, halasana, sarvangasana, shalabhasana, ardh-matsyendrasana, bhujangasana, tadasana, vrikshasana, matsyasana, gomukhasana, ushtrasana, shavasana, makarasana, vrishchikasana, dhanurasana, purna matsyendrasana, chakrasana, ek pad sikandasana, bakasana, mayurasana, shirshasana.

Pranayama: Meaning, techniques, precautions & effects of the following:-

Anulom-vilom, bhastrika, suryabhedhen pranayama, sheetali, sheetkari, bhramari, ujjayi

### **References:**

1. Guyton A.C., Functions of the Human Body,
2. Dr. V. Selvam "Anatomy and Physiology" Bodinayakanur.
3. Dr. N.M. Muthayya "Physiology" J.J. Publications, Madurai.
4. William CS (2000). Essentials of Human Anatomy & Physiology, Benjamin

## **PED-UG-C401: MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION**

### **Unit I: Definition and meaning of test, measurement and evaluation in Physical Education**

Need and importance of test, measurement and evaluation in Physical Education  
Interrelationship between test, measurement and evaluation  
Different types of testing procedure in Physical Education and sports  
Factors affecting test, measurement and evaluation

**Unit II: Test classification**

Test administration

Steps of test construction

Criteria of test construction

Specific components of Physical fitness- strength, speed, flexibility, endurance

**Unit III: Anthropometric measurements**

Assessment of Physical Fitness

Assessment of Motor Fitness

Assessment of Health Related Fitness

Assessment of Sports skill test

**Unit IV: Practical: Lay-out of Sports and games field marking**

Rectangle marking

Circle marking

Curve marking

Square marking

Stagger marking

**References:**

1. Devinder K. Kansal, Textbook of Applied Measurement, Evaluation & Sports Selection, Sports & Spiritual Science Publications, New Delhi
2. Joseph. P.M. Organization of Physical Education.
3. Chakraborty S . Sports Management. Sports Publications.
4. Krotee, M. and Bucher, Management of Physical Education and Sports.

**PED-UG-C402: SPORTS MANAGEMENT****Unit I: Concept of management and Sports Management**

Need and Importance of Sports Management

Principles of Sports Management

Basic structure of management in Physical Education of school, college and university

Purpose and basic skill of Sports Management

**Unit II: Organisational structure for tournaments and competitions**

Administration of tournaments

Intramural and Extramural- basic principles and methods

Types of Tournaments- league, knockout, league cum knockout, consolation

Preparation of fixtures for tournaments/competitions

**Unit III: Types of equipment and facilities in Physical Education**

Need of equipment and facilities and its maintenance

Budget- Need and importance

Basic principles to be followed for preparing budget for equipments and facilities as per demand

Basic format of budget preparation

#### **Unit IV: Practical: Indigenous games - Any two**

**Kho-Kho:** Historical development of Kho-Kho at national level, Modern trends and developments in Kho-Kho. Rules, and their Interpretations.

Basic skills and techniques - Running – single chain, double chain, poll turn

Offensive Skills – early kho, late kho, pole dive, sitting in square, running, fake and pole dive,

Dive – air dive, sitting dive, flat dive. Game practice

**Kabaddi:** Modern trends and developments in Kabaddi

Measurement, preparation & maintenance of court, major tournaments & trophies, Latest rules

Basic offensive skills – cant, hand touch, squat leg thrust, side kick, back kick, mule kick

Defensive skills – Ankle catch, knee catch, thigh catch, waist catch, hand catch, bear hug

Tactics and strategy – Use of lobby, bulk line and bonus line cross, single and double chain

Game practice

**Archery:** Measurement, preparation & maintenance of court, major tournaments & trophies,

Latest rules and their interpretations

Types of bows, fundamental skills and method of scoring

#### **References:**

1. Kamlesh M.L. Scientific “Art of teaching physical Education”
2. Thiru. Narayanan C and & Harihara Sharma - Methods in Physical Education
3. Joseph. P.M. Organization of Physical Education.
4. Chakraborty S . Sports Management. Sports Publications.
5. Krotee, M. and Bucher, Management of Physical Education and Sports.

### **PED-UG-C501: KINESIOLOGY AND BIOMECHANICS**

#### **Unit I: Introduction to Kinesiology and Biomechanics**

Meaning and definition of Kinesiology and Biomechanics

Aims and objectives of Kinesiology and Biomechanics

Need and importance of Kinesiology and Biomechanics in Physical Education

Principles of Biomechanics

#### **Unit II: Kinesiology**

Joints-Types of joints- Synarthrodial, Amphiarthrodial and Diarthrodial (Gliding, Condylodial, Enarthrodial, Ginglymus, Sellar, Trochoidal)

Movement around joints-Flexion, Extension, Abduction, Adduction, Supination, Pronation, Inversion, Eversion, Rotation, Circumduction, Protraction, Retraction

Axis and Planes- types and their interrelationship

Muscle terminology- origin, insertion, intrinsic, extrinsic, innervations. Role of muscles- agonists, antagonists, stabilizers, Synergists and neutralizers

Structural classification of muscle fibers- fusiform, strap, longitudinal, triangular, sphincter, penniform- uni-penniform, bi-penniform, multi penniform

#### **Unit III: Biomechanics**

Motion- meaning, definition and types and their interrelationship

Newton’s Laws of motion and their application

Kinematics- Speed, velocity, Acceleration (linear and angular)

Kinetics- force, types of force, factors of force

Concepts of Equilibrium, stability, centre of gravity, line of gravity, mass, inertia, power, energy, levers and their applied principles in sports and physical activities

#### **Unit IV: Practical: Major games-Ball games (Any two - Football, Volleyball, Basketball, Handball, Netball, Cricket)**

Modern trends and development at national and international level- governing bodies/ associations/ federations

Rules and their interpretations, role of officials

Measurement, preparation and maintenance of play fields

Fundamental skills and techniques- offensive and defensive skills,

Game practice

#### **Reference:**

1. Greire Millor, Paul & Smith, Techniques for the analysis of Human movement  
Lapse Books London 1975.
2. Charles, Fundamentals of sports Bio-Mechanics Techniques.
3. Hay, James G. The Biomechanics of sports.
4. T.Mc Clurg Anderson Bio Mechanics of Human Motion
5. McGinnis, P. (2004). Biomechanics of Sports & Exercise. Human Kinetics.

### **PED-UG-C502: FITNESS AND SPORTS TRAINING**

#### **Unit I: Definition and meaning of Sports Training**

Aims and objectives of Sports training

Characteristics and principles of Sports training

Training load, concept of training load and adaptation

Types of load and loading principles

#### **Unit II: Principles of training methods**

Strength training methods for developing maximal, explosive and strength endurance

Training methods for Endurance development

Training methods for Speed development

Training methods for Flexibility development

#### **Unit III: Planning of training programme - meaning and its importance**

Training cycles- macro and micro cycles

Periodization- types of periodisation- short term and long term

Components of Periodisation- Preparatory, competition and transition

Structure and function of single, double periodisation and its importance

#### **Unit IV: Practical: Fitness Training and Test**

Fitness Training - Means and methods of Free hand training, Weight training, Circuit training, Interval training

Fitness Assessment Tests

Physical Fitness Tests- types- administration, scoring and interpretation

Motor Fitness Tests- types, administration, scoring and interpretation

Cardio-vascular Fitness Tests- types, administration, scoring and interpretation

**Reference:**

1. Singh Hardayal (1991). *Science of Sport Training*. Delhi: D.V.S Publication.
2. Williams, J. (1977) *II Athletic Training and Physical fitness*. Allyn and Bacon Inc.,
3. Singh H, (1984). *Science of sports Training*.
4. Mateweyew L.P. *Fundamental Sports Training*.

**PED-UG-C601: SPORTS AND EXERCISE PSYCHOLOGY**

**Unit I: Meaning, definition and nature of Sports Psychology**

Branches of Psychology

Scope of Psychology

Need and importance of Sports Psychology in Physical Education and Sports

Sports Psychology and its relation to other sports sciences

**Unit II: Concept and meaning of motor learning, motor skill and motor control**

Learning, laws of learning and stages of learning

Factors affecting learning and motor training

Learning curve, types and characteristics

Transfer of training- types and its application

**Unit III: Meaning, nature and types of personality**

Personality traits of sports persons

Role of Physical Education and sports in developing personality

Meaning and types of Motivation.

Importance of motivation in learning physical activities and sports

**Unit IV: Practical: Major games - Individual games**

Select any two: Badminton, Table Tennis, Swimming, Gymnastics

Modern trends and development at national and international level- governing bodies/ associations/ federations

Rules and their interpretations, role of officials

Measurement, preparation and maintenance of play fields/courts/mats/pools

Fundamental skills and techniques- offensive and defensive skills,

Game practice

**Reference**

1. Alderman A.B. *Psychological Behaviour in sports*
2. Cratty B.J. *Psychology and Physical activity*
3. Singer R.N. *Coaching, Athletics and psychology*.
4. Kamlesh ML. *Psychology in Physical Education & Sports*

## **PED-UG-C602: SPORTS AND EXERCISE PHYSIOLOGY**

### **Unit I: Definition, meaning and concept of Exercise Physiology**

Need, importance and scope of Exercise Physiology in Physical education and sports

Scope of Exercise Physiology in Physical Education and sports

Bio energetics- types and their role

Muscle fibres- types and characteristics of fast twitch and slow twitch fibres

### **Unit II: Mechanism of muscular system**

Muscle contraction- types and physiology of muscle contraction

Mechanism of respiratory system (lung capacities, mechanism of breathing- exhalation, inhalation, role of respiratory muscle, oxygen debt, second wind, stitch)

Mechanism of circulatory system (Cardiac Cycle, Cardiac output, stroke volume, heart rate)

Mechanism of excretory system- function of skin and kidneys

Mechanism of Nervous system- axon, dendrite, synapse, neuro-muscular junction

### **Unit III: Effect of exercise on Muscular system**

Effect of exercise on circulatory system

Effect of exercise on respiratory system

Effect of exercise on excretory system

Effect of exercise on nervous system

### **UNIT IV: Practical: Coaching lessons/ Projects**

Students will be divided into groups of two or fours and will be asked to prepare a report of coaching assignment or Projects carried out in nearby schools. The report should be submitted in the given format:

Title of the Coaching Assignment/Project

Acknowledgement

Contents

Test Administration-Procedure

Pre Test (Record of participants)

Coaching/ Training

Post Test (Record of participants)

Interpretation of Findings

Conclusions

Appendix- List of figures and tables

Bibliography/References

### **Reference**

1. Devrises H.A Physiology of exercise for physical Education and Athletics London,
2. Morehouse LE and Milner A.T. Physiology of exercise St Louis,
3. Tiwari Sandhya, 2009, Exercise physiology, Sports publication.
4. Jack H Wilmore and David L Costil, Physiology of sports and exercise, Human kinetics