

DEPARTMENT OF PHYSICAL EDUCATION
UNIVERSITY OF KALYANI
DETAILED SYLLABUS

M.P.Ed SEMESTER-1

Subject: PHYSICAL FITNESS, HEALTH AND WELLNESS
Course Code: MPCC-101
Full Marks: 70

Se Unit 1-Physical Fitness

Meaning and Definition of Physical Fitness, Physical Fitness concept and Techniques. Principles of physical fitness, physiological principles involved in human movement. Components of Physical Fitness. Leisure time physical activity and identification of opportunities in the community to participate in this activity. Current trends in fitness in conditioning, components of total health, fitness and relation between physical activity and lifelong wellness.

SM Unit II- Concept of Health and Health Problems

Concepts, Dimensions, Spectrum and determinants of Health, Definition of Health, Health Education, Health Instructions, Health Supervision, Aims and objectives, Principles of Health Education, Health Service and guidance instructions in personal hygiene.

Se Unit III- Communicable Diseases

Communicable and Non Communicable Diseases, Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive population, personal and Environmental Hygiene for schools. Objectives of school health service, Role of Health Education in schools: Health Services- Care of skin, Nails, Eye, Nutritional service, Health appraisal, Health Record, Healthful school environment, first-aid and emergency care etc.

Se Unit IV- Hygiene and Health

Meaning of Hygiene, Types of Hygiene, Dental Hygiene. Effect of Alcohol on Health. Effect of Tobacco on Health, Lifestyle Management of Hypertension, Obesity and Stress.

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M.P.Ed SEMESTER-1

Subject: TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION
Course Code: MPEC-101
Full Marks: 70

Unit 1- Introduction

Meaning and Definition of Test, Measurement and Evaluation. Need and Importance of Measurement and Evaluation. Criteria for test selection- scientific Authentic. Meaning, definition and establishing - Validity, Reliability, Objectivity. Norms- Administrative Considerations.

Unit II- Physical Fitness and Motor Fitness Tests

Physical Fitness Test: AAHPERD Health Related Fitness Battery (revised in 1984), ACSM Health Related Fitness Test, Roger's Physical Fitness Index. Cardio vascular test: Harvard Step test, 12 minutes run/ walk test, Multi-Stage Fitness test (Beep test)
Meaning and definition of Motor Fitness. Test for motor fitness: Indiana Motor Fitness test (for elementary and high school boys, girls and college men), Oregon Motor Fitness Test (Separately for boys and girls) - JCR test.
Motor Ability: Barrow Motor Ability Test, Newton Motor Ability Test, Muscular Fitness, Kraus Weber Minimum Muscular Fitness Test.

Unit III- Anthropometric and Aerobic-Anaerobic Tests

Physiological Testing: Aerobic Capacity: The Bruce Treadmill Test Protocol, 1.5 Mile Run test for college age males and females. Anaerobic Capacity: Margaria-Kalamen test, Wingate Anaerobic Test. Anthropometric Measurements- Method of Measuring Height: Standing height, Sitting Height. Method of measuring Circumference: Arm, Waist, Hip, Thigh. Method of Measuring Skin Folds: Biceps, Triceps, Sub scapular, Suprailiac.

Unit IV-Skill Tests

Specific Sports Skill Test: Badminton: Miller Wall Volley Test. Basketball: Johnson Basketball Test, Harrison Basketball ability Test. Cricket: Sutcliff Cricket test. Hockey: Friendel Field Hockey Test, Harban's Hockey Test. Volleyball: Russel Lange Volleyball Test, Brady Volleyball Test. Football: Mor-Chistran General Soccer Ability Skill Test Battery, Jhonson Soccer Test, Mc-Donald Volley Soccer Test. Tennis: Dyer Tennis Test.

DEPARTMENT OF PHYSICAL EDUCATION
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M.P.Ed SEMESTER-1

Subject: RESEARCH METHODOLOGY IN PHYSICAL EDUCATION AND SPORTS
SCIENCES

Course Code: MPCC-103

Full Marks: 70

UNIT I-Introduction

Meaning and Definition of research-Need, Nature and Scope of research in physical Education .Classification of research, Location of research Problem, Criteria for selection of a problem, Qualities of a good researcher.

UNIT II- Methods of Research

Descriptive Methods of Research; Survey study , Case study, Introduction of Historical Research, Steps in Historical Research, Sources of Historical Research. Primary data and Secondary Data, Historical Criticism: Internal criticism and External criticism.

Experimental research – Meaning, Nature and Importance, Meaning of Variable, Types of Variables. Experimental Design-Single Group Design, Reverse Group Design. Repeated Measure Design, static Group Comparison Design, Equated Group Design, Factorial Design.

UNIT III-Sampling

Meaning and Definition of Sample and Population. Types of sampling; Probability Methods; Systematic Sampling, Cluster sampling, Stratified sampling. Area Sampling –Multistage sampling. Non – Probability Methods; convenience Sampling, Judgement sampling, Quota sampling.

UNIT IV-Research Proposal and Report

Chapterization of Thesis/ Dissertation, Front Materials, Body of Thesis-Back Materials. Method of Writing proposal, Thesis/Dissertation; Method of writing abstract and full paper for presentation in a conference and publish in journal, Mechanics of writing Research Report, Footnote and Bibliography writing.

**DEPARTMENT OF PHYSICAL EDUCATION
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M.P.Ed SEMESTER-1

Subject: PHYSIOLOGY OF EXERCISE
Course Code: MPCC-102
Full Marks: 70

UNIT I – Skeletal Muscles and Exercise

Macro and micro structure of skeletal muscle, Chemical composition, Sliding filament theory of muscular contraction, Types of muscle fiber, Muscle tone, Chemistry of muscular contraction-heat production in muscle, Effects of exercise and training on muscular system.

UNIT II – Cardiovascular System and Exercise

Heart Valves and Direction of the Blood Flow – Conduction System of the Heart – Blood Supply to the Heart – Cardiac Cycle – Stroke Volume – Cardiac Output – Heart Rate – Factors Affecting Heart Rate – Cardiac Hypertrophy – Effect of exercises and training on the Cardio vascular system.

UNIT III – Respiratory System and Exercise

Mechanics of Breathing – Respiratory Muscles, Minute Ventilation, Ventilation at Rest and During Exercise. Diffusion of Gases – Exchange of Gases in the Lungs – Exchange of Gases in the Tissues – Control of Ventilation – Ventilation and the Anaerobic Threshold. Oxygen Debt – Lung Volumes and Capacities – Effect of exercises and training on the respiratory system.

UNIT IV – Metabolism and Energy Transfer & Climatic conditions and sports performance and ergogenic aids

Metabolism – ATP – PC or Phosphagen System – Anaerobic Metabolism – Aerobic Metabolism – Aerobic and Anaerobic Systems during Rest and Exercise. Short Duration High Intensity Exercises
High Intensity Exercise Lasting Several Minutes – Long Duration Exercises. Variation in Temperature and Humidity – Thermoregulation – Sports performance in hot climate, Cool Climate, high altitude. Influence of: Amphetamine, Anabolic steroids, Androstenedione, Beta-blocker, Choline, Creatine, Human growth hormone on sports performance. Narcotic, Stimulants: Amphetamines, Caffeine, Ephedrine, Sympathomimetic amines. Stimulants and sports performance.