

**DRAVIDIAN UNIVERSITY – KUPPAM**  
**DURSET -2015**  
**PHYSICAL EDUCATION SYLLABUS**

**UNIT – I: Research Methodology in Physical Education**

**Introduction to Research Methods:** Meaning, Need, Nature and Scope of Research in Physical Education. **Formation and Development of Research Problem:** Location of Research Problem – Criteria for selection of a problem – Hypothesis and formulation of Hypothesis - Research proposal - Techniques of Sampling – Selection of sample – Types of sample. **Descriptive and Experiments Methods of Research:** Survey study – Case Study – Normative Study – Nature and Meaning of Experimental Research – Planning for experiments research. Methods of Collecting Data. **Elements of Statistics:** Measures of central tendency (Mean, Median, Mode) – Measures of variability (Range, Quartile deviation, standard deviation) – Measures of relationship ('t' test 'F' test, Carl Pearson product moment, and Spearman name order correlation)

**UNIT - II: EXERCISE PHYSIOLOGY**

Meaning, Importance of Exercise Physiology in Sports performance, structure and functions of muscles – Classification of muscles: Effect of exercises on Muscular system. **Nervous Control of Muscular Movement:** Basic structure of the Nerve, Basic functions of the Nerve. **Respiratory System and Exercise:** What are the respiratory changes and circulatory changes takes place during exercises. **Cardiac System and Exercise:** Cardiac Cycle, Cardiac Output, Stroke Volume Cardiac output during rest and exercise - Physiological Effects of Physical Training - Biochemical changes, Cardio-respiratory changes. Factors influencing training effects, Intensity of training, Frequency and duration of training. **Nutritional Aspects:** Diet and exercise: Nutrients, Balanced diet, spacing and number of meals, Diet before activity, Diet during activity. Diet following activity, Diet and performance and caloric values of each intake.

**UNIT – III: SPORTS PSYCHOLOGY**

**Introduction** – Definition, meaning, nature – Scope need of Psychology, General factors effecting sports leaning and performance – Branches of Psychology. **Perceptual Mechanism** – Description and definition, personal factors in perception and motor learning, cognitive process: Relation ship of intelligence of motor abilities, Physical factors. **Practice** – Retention and forgetting, Motivation to the productivity, Extrinsic and Intrinsic motivation, reinforcement success and failure, regard and punishment. Praise and criticism, Knowledge of rules, Feedback. **Personality** – Meaning of personality, personality traits of sports personnel, Effect of sports participation on personality. **Anxiety and Aggression** – Definition – Meaning – Types Anxiety – Effect Anxiety on sports performance – Aggression – Types of Aggression – Effect of Aggression on sports performance.

#### **UNIT IV: SPORTS MEDICINE**

**Sports Medicine** Meaning and Definition of Sports Medicine – Modern Trends in Sports Medicine. **Common Sports Injuries** Common of Sports Injuries - Cause of Sports Injuries - Precaution to reduce Sports Injuries - Injuries to Ligaments, Tendons and Synovial Structures - Inflammation and Injuries to Joints and Bones – Rheumatic conditions. **First Aid** Define First Aid - General Principles of First Aid – **Physiotherapy** Meaning, Definition and Principles of Physiotherapy - Importance of Physiotherapy in Sports – Massage manipulation – Types of Massage - Principles of Massage - Classification of Massage - Physiological effects of general massage on different systems of the body. **Rehabilitation** Meaning of Rehabilitation - Exercise – therapy: Classification of movement – passive (Relaxed, forced and Stretching) – Active (assisted, free and resisted).

#### **UNIT V: SCIENCE OF SPORTS TRAINING**

**Sports Training** – Definition, meaning and concept, scope, characteristics, principles of sports training qualities, qualification and responsibility of good coach. **Physical Fitness Components** – Strength – Speed – Endurance – Flexibility – Agility – Coordination. **Training Methods** – Weight training– Interval training - Fartlek is training – Circuit training – Continues training - Plyometric method – Pressure Training – Resistance training – Highly attitude training. **Training Load and Recovery** – Meaning and definition of load and recovery – Types of load (intensive and extensive) – Factor of load – Overload and its symptoms. **Training Plan** - Meaning – principles of planning – Types of planning – formatting plans. Periodisation - Top form – preparatory period – competition period – Transitional period – Types of periodisation (Single, Double, Triple) – Micro, Meso and Macro cycle.

#### **UNIT VI: SPORT MANAGEMENT**

Meaning, scope of management in sports. Basic functions of management, planning, organizing, staffing, directing, controlling. Objectives-programme - budget -procedures policy development. Planning sport facilities out door and indoor at University, college and school level. Organizing a school/college sports programme. General factors in organizing Sports Programmes. Importance of financial management in sports programme-methods of fund raising in sport programme. Planning the sports infrastructure and maintenance,.

#### **UNIT VII: TEST MEASUREMENT & EVALUATION IN PHYSICAL EDUCATION.**

Meaning and Definitions of Test Measurement and Evaluation - Nature of Measurement & Evaluation- Need and Importance of Evaluation in Physical Education. Introduction, Meaning - Importance - General Evaluation Criteria - Establishing procedures of Validity, Reliability, Objectivity, Norms and Administrative procedures. Meaning of Physical Fitness and Motor Fitness - AAHPERD Youth fitness test - Oregon Motor fitness test - Indian Motor fitness test - JCR Motor fitness test. Cooper 12 minutes Run/Walk test - Hard ward step test - Rogers strength and Fitness test.