

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI – 12

DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS

M.Phil - Physical Education

(2016-17 Onwards)

**ELIGIBILITY FOR ADMISSION**

The following conditions should be fulfilled for admission to the Master of Philosophy in Physical Education (M.Phil) degree course (one year):

- a) Candidates who have passed post graduate degree in Physical Education (M.P.Ed., M.P.E., and M.P.E.S.) of any University recognized by the Syndicate of this University with not less than 50% marks.
- b) Admission shall be made either on the basis of marks obtained in the qualifying examination and also in the selection test conducted by the University.
- c) There shall be reservation of seats for SC/ST/OBC as per the rules of the State/ Central Government.

**Course Structure**

S.No.	Semester	Subject	Credits	Hours /week	Maximum Marks			Passing Minimum	
					Int.	Ext.	Tot.	Ext.	Tot
1	I	<b>Core -I (Theory):</b> Research Methods and Advanced Statistics	8	8	25	75	100	38	50
2	I	<b>Core – I (Theory) :</b> Measurement and Evaluation in Human Performance	8	8	25	75	100	38	50
3	I	<b>Elective –I (Theory):</b> (a) Exercise Management (b) Sports Training (c) Exercise Physiology (d) Sports Psychology (e) Sports Management	8	8	25	75	100	38	50
4	II	<b>Project and Viva-voce</b>	16	-	25	75	100	38	50
<b>Total</b>			<b>40</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>400</b>	<b>-</b>	<b>-</b>

## Research Methods and Advanced Statistics

### UNIT - I

- 1.1 Meaning, Nature, Need and Scope of Research in Physical Education
- 1.2 Types of Research
- 1.3 Location and Criteria for Selection of Problem
- 1.4 Steps in the Research Process
- 1.5 Literature – Purpose, Sources and Search techniques.

### UNIT - II

- 2.1 Organisation of the Research report
- 2.2 Meaning and Types of Variables in Research
- 2.3 Sources of Invalidity – Threats to Internal and External Validity
- 2.4 Research Design and Types of Designs
- 2.5 Writing the Research Proposal, synopsis and abstract

### UNIT - III

- 3.1 Basic concepts of Descriptive and Inferential Statistics, Parametric Statistics
- 3.2 T-test & ANOVA for Simple and Repeated groups with follow-up test
- 3.3 Analysis of Covariance (ANCOVA) & Follow-up test
- 3.4 Pearson correlation, Partial and Multiple Correlation
- 3.5 Using correlation for prediction (Regression equation)

### UNIT – IV

- 4.1 Sampling Techniques
- 4.2 Non-Parametric tests; Man Whitney U test, Sign Test
- 4.3 Kruskal-Wallis analysis of ranks,
- 4.4 Spearman Rank order correlation and chi square.
- 4.5 Types of Error in Research

### UNIT - V

- 5.1 SPSS Package – Introduction and application
- 5.2 Creating, saving and opening a data file, Naming the Variables
- 5.3 Data entry and analysis of descriptive statistics
- 5.4 T-test, ANOVA, ANCOVA and Correlation – Data Entry and analysis with SPSS
- 5.5 Application of computer in research and statistics

### REFERENCES

- Clarke, David H. Clarke, Harrison H. *Research Process in Physical Education*, New Jersey: Prentice Hall Inc. 1984.
- Jerry R. Thomas, Jack K. Nelson and Stephen J. Silverman., *Research Methods in Physical Activity (5<sup>th</sup> Ed)*, New York: Human Kinetics. 2005.
- Chris Gratton and Ian Jones., *Research Methods for Sports Studies*, London: Routledge Taylor & Francis Group, 2004.
- Kothari C.R., *Research Methodology (2<sup>nd</sup> Ed)*, New Delhi: New Age International Pvt., 2004.
- K.D. Broota., *Experimental Design in Behavioural Research*, New Delhi: New Age International Publishers, 2006.

**Measurement and Evaluation in Human Performance**

**UNIT-I**

- 1.1 Nature of Measurement and Evaluation-Domains of Human Performance.
- 1.2 Purpose of Measurement, Testing and Evaluation.
- 1.3 Classification of Tests
- 1.4 Criteria for selection and construction of tests-Reliability, Validity and Objectivity.
- 1.5 Qualitative versus Quantitative Measurement.

**UNIT-II**

- 2.1 Grading– Norm-referenced and Criterion-referenced grading systems.
- 2.2 Process of Grading, Consistence in Grading, Grading Mechanics
- 2.3 Fitness test for Senior Citizen.
- 2.4 Fitness test for Adapted Children.
- 2.5 Fitness test for Children

**UNIT-III**

- 3.1 Body Composition Assessment
- 3.2 Health Related Physical fitness Assessment
- 3.3 Performance Related Physical fitness Assessment
- 3.3 Postural and Body Alignment Tests
- 3.4 Anthropometrical Measures

**UNIT-IV**

- 4.1 Sports skill test – Basketball, Badminton and Volleyball
- 4.2 Sports skill test – Tennis, Hockey and Football
- 4.3 Psychological Measures with equipments, Techniques and Questionnaire
- 4.4 Physiological Assessment
- 4.5 Overview of other measures like Hematological, Bio-chemical, Psychosomatic, Socio-economic, Psychomotor etc.,

**UNIT-V**

- 5.1 Introduction to Computers-Components of Computer-Input and Output Devices
- 5.2 MS Word –Creating, Editing, Formatting, Page-setup, Printing Options, mail merge
- 5.3 MS Excel- Creating, Editing, Formatting, Formula, Database
- 5.4 MS PowerPoint- Creating, Editing, Formatting, Slide-Design and Setup
- 5.5 Internet and Multimedia, Application of computer, internet and multimedia in Physical Education and Sports.

## REFERENCES

- Barrow, Harold M & McGee, Rosemary.A *Practical Approach to Measurement in Physical Education*, Philadelphia: Lea and Febiger. 1979.
- Clake, H. Harrison. *Application of Measurement to Health and Physical Education*, New Jersey: Prentice Hall Inc. 1976.
- Safrit, Margaret J. *Introduction to Measurement in Physical Education and Exercise Science*, St. Louis: Mosby. 1995.
- Edmund O. Acevedo and Michael A. Starks., *Exercise Testing and Prescription lab Manual*, USA: Human Kinetics Publishers, 2003.
- Sunil Chauhan, Akash Saxena, Kratika Gupta, *Funadamentals of Computer*, Firewall Media, 2006.
- Roberta E.Rikli & C.Jessie Jones. (2001). *Senior Fitness Test Manual*, USA: Human Kinetics Publishers, 2001.
- Michael Horvat, Martin E.Block & Luke E.Kelly. (2007). *Development and Adapted Physical Activity Assessment*, USA: Human Kinetics Publishers, 2007.
- Gregory J.Welk. *Physical Activity Assessments for Health Related Research*, USA: Human Kinetics Publishers, 2002.
- Vivian H.Heyward & Dale R.Wagner. *Applied Body Composition Assessment*, USA: Human Kinetics Publishers, 2004.

(a) Exercise Management

**UNIT – I Introduction**

- 1.1 Introduction to Exercise Management
- 1.2 Families of Exercise Tests Measures
- 1.3 Exercise and Medicines
- 1.4 Risk, Cost and Benefits of exercise
- 1.5 Considerations regarding Physical Activity for Children and Youth

**UNIT –II Cardio Pulmonary Diseases**

- 2.1 Myocardial Infraction
- 2.2 Angina and Silent Ischemia
- 2.3 Hypertension and Chronic Heart Failure
- 2.4 Chronic Obstructive and Restrictive Pulmonary Disease
- 2.5 Asthma

**UNIT–III–Metabolic Disease/Immunological/Hematological Disorders**

- 3.1 End stage Metabolic Disease: Renal and Liver Failure
- 3.2 Diabetes
- 3.3 Hyperlipedemia and Obesity
- 3.4 Chronic Fatigue Syndrome and Anemia
- 3.5 Bleeding and Clotting Disorders

**UNIT – IV - Orthopedic Disease/Neuromuscular disorders**

- 4.1 Arthritis
- 4.2 Low back syndrome
- 4.3 Osteoporosis
- 4.4 Stroke and Brain Injury
- 4.5 Spinal cord disabilities: Paraplegia and Tetraplegia

**UNIT – V – Cognitive, Psychological and Sensory Disorders**

- 5.1 Mental retardation
- 5.2 Alzheimer's Disease
- 5.3 Mental Illness
- 5.4 Deaf and Hard-of-Hearing
- 5.5 Visual Impairment

**REFERENCES**

- J. Larry Durstine and Geoffrey E. Moore., *Exercise Management for Persons with Chronic Diseases and Disabilities*, USA: Human Kinetics, 2003.
- Allen W. Jackson et al, *Physical Activity for Health and Fitness*, USA: Human Kinetics, 1999.
- Jerrold S. Greenberg et al., *Physical Fitness and Wellness (3<sup>rd</sup> Ed,)*, USA: Human Kinetics, 2004.
- Joseph P. Winnick and Francis X. Short, *Physical Fitness Training Guide*, USA: Human Kinetics, 1999.
- Frederick C. Hatfield, *Fitness: The Complete Guide*, Official Book of ISSA, 2004.
- Darryl E. Barnes, *Action Plan for Diabetes*, USA:Human Kinetics Publishers, 2004.

(b) Sports Training

**UNIT-I (Introduction)**

- 1.1 Principles of training and conditioning
- 1.2 Structure of training
- 1.3 Components of load
- 1.4 Load and Adaptation
- 1.5 Circuit, Interval, Weight, Fartlek and Plyometric trainings

**UNIT-II (Strength and Speed development)**

- 2.1 Forms of strength and Characters of strength
- 2.2 Means and methods to develop strength
- 2.3 Forms of speed and Characters of speed
- 2.4 Means and methods to developing speed
- 2.5 Strength and speed training for women and children.

**UNIT-III (Endurance, Flexibility and Coordination development)**

- 3.1 Types of endurance and Means and methods to improve Endurance
- 3.2 Types of Flexibility and Means and methods to improve Flexibility
- 3.3 Types of Coordination and Means and methods to improve Coordination
- 3.4 Physiological adaptations to training
- 3.5 Characteristics of Endurance, Flexibility and Coordination

**UNIT-IV (Periodisation)**

- 4.1 Physical preparation
- 4.2 Technical preparation
- 4.3 Tactical preparation
- 4.4 Psychological Preparation
- 4.5 Overtraining, Detraining and Retraining

**UNIT -V**

- 5.1 Effect of drugs, alcohol and smoking on performance
- 5.2 Effect of climate changes and high altitude on performance
- 5.3 Effect of diet on performance
- 5.4 Effect of travel on Performance
- 5.5 Effect of sleep and rest on performance

**REFERENCES**

- Bill Foren, *High Performance Sports Conditioning*, USA: Human Kinetics Publishers, 2001.
- Tudor O. Bompa, *Periodisation Training Sports*, USA: Human Kinetics Publishers, 1999.
- Dick, Frank W., *Sports Training Principles*, London: Leipus Book. 1980
- Singh, Hardayal, *Science of Sports Training*, New Delhi: D. A.V. Publications. 1991.
- Thomas R. Baechle and Roger W. Earle, *Essentials of Strength Training and Conditioning (2<sup>nd</sup> Ed.)*, USA: Human Kinetics Publishers, 2000.
- Tudor O. Bompa, *Periodisation*, USA: Human Kinetics Publishers, 1999.

(c) Exercise Physiology

**UNIT- I**

- 1.1 Structure of muscles, function of muscles and fiber characteristics
- 1.2 Muscular theories of contraction- sliding filament models of contraction
- 1.3 Mechanical and dynamic properties of muscles contraction
- 1.4 Types of muscles
- 1.5 Effect of exercise on muscular system

**UNIT- II**

- 2.1 Nervous system and proprioceptors
- 2.2 The motor neuron and synapses
- 2.3 The action potential and transmission of the impulse
- 2.4 Muscles spindle and Golgi tendon organ, Joint receptors
- 2.5 Effect of exercise on nervous system

**UNIT- III**

- 3.1 Mechanism of breathing
- 3.2 Lung volume and pulmonary pressures
- 3.3 Regulation of respiration
- 3.4 Oxygen and carbon-di-oxide transport system.
- 3.5 Effect of exercise on respiratory system

**UNIT- IV**

- 4.1 Cardiac cycle- cardiac output- cardiac index- stroke volume
- 4.2 Sterling's law of heart
- 4.3 Nervous and chemical control of the heart
- 4.4 Effect of exercise on cardiac output
- 4.5 Effect of exercise on muscles blood flow

**UNIT- III**

- 5.1 Metabolism and energy transfer
- 5.2 Anaerobic metabolism
- 5.3 Aerobic metabolism
- 5.4 Energy release
- 5.5 Energy cost for various sports activities

**REFERENCES**

- Mathew D.K. and Fox E. L, *Physiological Basis of Physical Education and Athletics*, W. B. Saunders Co: Philadelphia, 1971.
- Jay Hoftman, *Physiological Aspects of Sports training and Performance*, USA: Human Kinetics Publishers, 2000.
- Jack H. Wilmore, David L. Costill and W. Larry Kenny, *Physiology of Sports and Exercise (4<sup>th</sup> Ed.)*, USA: Human Kinetics Publishers, 2008.
- Herbert A. Devries and Terry J. Housh, *Physiology of Exercise (5<sup>th</sup> Ed.)*, Brwon and Benchmark Publishers, 1994.
- Christine M. Drews, *Physiology of Sports and Exercise*, USA: Human Kinetics Publishers, 1999.

**(d) Sports Psychology**

**UNIT- I**

- 1.1 Meaning and Nature of Sports Psychology
- 1.2 The history and development of sports psychology
- 1.3 Development of Sports Psychology
- 1.4 General Factors affecting learning and performance
- 1.5 Motivation of children and youth in sports

**UNIT- II**

- 2.1 Meaning of the term perceptual motor learning
- 2.2 The retention of motor skills
- 2.3 Transfer of skill
- 2.4 Learning Curve and its role in learning motor skills
- 2.5 Theories of Learning

**UNIT- III**

- 3.1 Motivation in sports
- 3.2 Theories of motivation
- 3.3 Achievement motivation and level of aspiration
- 3.4 Methods of assessing aspiration level motivation and motivation
- 3.5 Psychological Skill training

**UNIT- IV**

- 4.1 Emotions in Sports performance
- 4.2 Aggression and theories of aggression
- 4.3 Issue and controversies in physical activity and the psychology development
- 4.4 Mental plan
- 4.5 Psychological preparation for competition

**UNIT- V**

- 5.1 Physical activity and the psychology development of the handicapped
- 5.2 Personality of sportsmen and coach
- 5.3 Nature of personality heredity and personality traits of sports men
- 5.4 Assessment of personality traits
- 5.5 Implication for the coach

**REFERENCES**

- Cratty Bryant, J. *Movement Behaviour and Motor Learning*. Philadelphia Lea & Febiger, 1975.
- Kamlesh, M. L. *Psychology of Physical Education and Sports*. Metropolitan Book Co. Pvt. Ltd. 1983.
- Singer Robert N. *Motor Learning and Human Performance*, New York: Macmillan Publishing Co. 1975.
- Diane L. Gill. *Psychological Dynamics of Sport*. New York: Human Kinetics Publishers Inc. 1986.
- Anthony Laker, *The Sociology of Sport and Physical Education*, Routledge Taylor and Francis Group, 2002.



(e) Sports Management

**UNIT - I**

- 1.1 History and Evaluation of Management
- 1.2 Principles of Sports Management
- 1.3 Policies of Sports Management
- 1.4 Standard Practices of Sports Management
- 1.5 Functions of Sports Management

**UNIT - II**

- 2.1 Legal aspects of Physical Education
- 2.2 Administration in Sports
- 2.3 Community involvement and Public relations
- 2.4 Stress, burnout and conflicts in Management
- 2.5 Management of Recreation and Leisure activities

**UNIT - III**

- 3.1 Functions in the Process of Management and Effective communication
- 3.2 Planning and organizing activity based programmes
- 3.3 Controlling the Activity Based Programmes
- 3.4 Delegation of duty in the activity based programmes
- 3.5 Staffing and Leading personal in activity based programme

**UNIT – IV**

- 4.1 Office, Class and Staff Management
- 4.2 Managing sports facilities – Designing and Planning sports facilities, sports facility specifications, standards and structures.
- 4.3 Managing of Sports equipments–Selection, purchase and maintenance security.
- 4.4 Finance Management
- 4.5 Risk Management

**UNIT - V**

- 5.1 Training for Administrators/Manager for better performance
- 5.2 Behaviour Management
- 5.3 Crisis Management
- 5.4 Event management
- 5.5 Career opportunities in Sports Management

**REFERENCES**

- Chelladurai .P. *Managing organizations for Sports and Physical Activity*, Holcomb Hathaway Publishers: Arizona, 2001.
- Davis Kathleen A., *Sports Management*, WCB Brown & Benchmark, Iowa, 1994.
- Lisa Pike Masteralexis, Carol A. Barr and Mary A. Hums, **Principles and Practice of Sports Management**, Jone and Bartlett Publishers, 2005.
- David C. Watt, *Sports Management and Administration*, Routledge Taylor & Francis Group, 2003.
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- ASEP, *Personal Management for Sport Directors*, USA: Human Kinetics, 1999.

