

SYLLABUS FOR 2014-15

Master of Philosophy in Physical Education

PART I: Theory Courses

- I. Research process & Research Statistics.
- II. Exercise Physiology
- III. Sports Psychology

PART II: Dissertation

Detailed Syllabus for

Master of Philosophy in Physical Education Course

Part I: Theory Courses

Paper – I

Research Process & Statistics

Unit I

1. Meaning, Nature, Need and Scope of Research in Physical Education.
2. Types of Research. Research Method vs. Research methodology,
3. Planning of statistical enquiry.
4. Collection of data – Primary and Secondary

Unit II

1. Population and Sampling, Types of sampling. Different methods of Sampling.
2. Research Design.
3. Control of Experimental Variables/Groups, Control Groups and Factors Affecting Experimental Outcome – Subjects, Age, Sex, Physiological, Psychological Variables etc.

Unit III

1. Dispersion and Skewness- Mean deviation, Standard deviation, Coefficient of variation and coefficient of variation.
2. Coefficient of correlation- Carl- Pearson method, Spearman's ranking method.
3. Regression- Simple and Multiple regressions up to three variables.

4. Standard error of estimate.

Unit IV

1. Hypothesis- Meaning of hypothesis, formulation of hypothesis, Characteristics of a good hypothesis, Type I and Type II error
2. Testing of hypothesis
3. Test of significance- Parametric 't' test, 'F' ratio, ANOVA, Post-hoc test, nonparametric Chi square test,.
3. Theoretical frequency Distribution- Normal distribution

Unit V

1. Introduction of computer Organization and architecture Types of Computers, Different parts of computers Input Output Devices. Processors. Memory, Storage Devices.
2. Use of computers in research- Statistical packages and Co state.
3. Working with Microsoft Word [Creating File, Edit, View, Insert, Format, Tools, Table]
4. Working with Microsoft Excel [Creating File, Edit, View, Insert, Format, Tools, Table]
5. Working with Microsoft Power Point Presentation [Creating File, Edit, view, Insert, Tools Slide Show]
6. Working With Internet – its basic concept, creating mail account sending & receiving mail and attachment.
7. Knowledge of SPSS.

Paper – II

Physiology of Exercise

Unit I

1. Structure and functions of Muscle:
Structure of muscle tissues, various theories of muscular contraction. Hypertrophy of muscles in relation to physical activity.
2. Bio-Energetic: Fuel for muscular work, and Energy for muscular contraction, Aerobic and Anaerobic system- Interrelationship of Aerobic and Anaerobic system with special reference to different activities. Anaerobic-Threshold training.
3. Neuromuscular Physiology: Neurons, Motor units. Neuromuscular junction bioelectric potential, kinesthesia. Tone, posture and equilibrium.

Unit II

1. Physiological Changes Due to Exercise and Training: Effect exercise and training on various systems Oxygen debt second wind. Micro-circulation. Effect of exercise on carbohydrate fat and protein metabolism.
2. Work and Environment: Work capacity under different environmental conditions such as hot humid, cold and high altitude.

Unit III

1. Sports and Nutrition: Physiological considerations of diet in relation to components quantities and significance, sport and diet and diet before during and after competition. Glycogen boosting
2. Assessment of nutritional Status.
3. Determination of energy cost of various sports activities.
4. Doping

Unit IV

1. Prediction and performance by lab and field testing.
2. Role, importance and construction of any National Physical Fitness program physiological approach.
3. Growth and Development:
 - a. Individual rate of growth and development.
 - b. Role of Heredity and environment on sports Performance.
 - c. Sex difference and sports:
4. Instrumentation: Various instruments/equipments used in the field of exercise physiology lab in Bio-chemical, Histological and other studies.

Unit V

5. Exercise-Aging and Cardio-vascular diseases. Diabetes, Obesity. Arthritis
6. Adapted Physical Education
7. Exercise Prescription

Paper – III

Sports Psychology

Unit I

1. Methods of investigation in sports psychology.
2. Psychology of Play: The Psycho analytic position on Play, The Behaviorist Position on Play, the Cognitive Position on play.
3. Psychology of Motor Learning: Meaning of the Term, Perceptual Motor Learning Retention of Motor skill. Transfer of Skill. Measurement of Learning and Learning Curve, Attention and its role in Learning Motor Skill,

Unit II

1. Personality theories and personality development through sports.
2. Children in Sport: Early Psychological Experiences, Motivation of Children in Sport. Emotions of Children in Sport, Child and Coach. Children and Competitive Sport.
3. Woman in Sport: Issues and Controversies

Unit III

1. Physical Activity and the Psychological Development of the Handicapped.
2. Moral Growth in Sport.
3. Personality of sportsman and Coach: Nature of personality, the issue of Heredity in Personality, Personality Traits and Sports person, Assessment of Personality Traits. The Coach and his Personality

Unit IV

1. Problem of Sports persons and how to solve their Problems.
2. Motivation in Sports: Nature or Motivation, Theories of Motivation, Achievement Motivation, Motivation and participation In Physical Activity. Drop outs in Sport.
3. Aggression in Sports: Theories of Aggression, Cause of Aggression, Aggression and its influence on performance.

Unit V

1. Socio-Psychological Dimensions of Sport: Sport performance in groups, Team cohesion, Goniometry in Sport, Leadership in Sport, Sport Audience and its effect on performance.
2. Psychology of Competition: Psychological Characteristic of Pre-During and Post Competition (Anxiety, Fear. Frustration), Mental Training, Psychological Preparation for Competition.

3. Psychological load in Competitive Sports: Meaning of Psychological Load. Performance and Mental Load Capacity of a Sports person.
4. Volitional Regulation In Sport: Characteristics of Volitionally Regulated Actions Factors affecting Volitionally Regulation, Development of Volitional qualities.