

**SYLLABUS AND CURRICULUM DOCUMENT
MPES**

**MASTER OF PHYSICAL EDUCATION AND SPORTS [M.P.E.S]
*TWO YEAR MASTERS DEGREE PROGRAMME***

(UNDER MAHATMA GANDHI UNIVERSITY PG-CSS REGULATION 2019)



**REGULATION, SCHEME OF EXAMINATION AND SYLLABUS FOR THE MASTER OF
PHYSICAL EDUCATION AND SPORTS**

**BOARD OF STUDIES IN PHYSICAL EDUCATION (PG)
MAHATMAGANDHI UNIVERSITY**

2021

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M.G. UNIVERSITY REGULATION, SCHEME OF EXAMINATION AND SYLLABUS FOR THE MASTER OF PHYSICAL EDUCATION AND SPORTS (M.P.E.S) PROGRAMME:

1. PREAMBLE

- Master of Physical Education and Sports is a two year professional degree programme with an objective to prepare physical education teachers to impart physical education in educational institutions subject to fulfilling the criteria prescribed by the state and central Government .
- The course will also facilitate for employment as Sports Administrators ,Sports Science experts ,Trainers /Instructors /Coaches in fitness centers ,Health club, Sports clubs ,Sports academy e.tc
- The regulation, scheme of examination and syllabus for the Master of Physical Education and Sports (M.P.E.S) program is prepared as per the PGCSS regulations 2019.
- The objective of the program is to give specialized training and coaching in sports and games and develop teaching aptitude in sports science in students with Under Graduate Degree in Sports Science and Physical Education.

2. AIM OF THE COURSE

- To prepare highly competent and skilled teachers in Sports and Games and Physical Education.
- To develop management skills in organizing and conducting all kinds of sports events.
- To equip young talents in sports and games and Physical Education with thorough knowledge in sports science and Physical Education so as to enable them to become successful teachers and mentors in the field of Physical Education and Sports Science.

3. NAME, INTAKE AND NATURE OF THE COURSE

- The name of the program shall be MASTER OF PHYSICAL EDUCATION AND SPORTS [M.P.E.S].
- Intake 30 Seats.
- The course shall be full time residential and coeducational.

4. FACULTY UNDER WHICH THE DEGREE IS AWARDED

- The course is included in the faculty of Education

5. DURATION OF THE COURSE

- The duration of the MPES course shall be two academic years with four semesters.
- The duration of odd semesters shall be from June to October and that of even semesters from November to March.
- A student with valid reasons may be permitted to complete the Program, within a period of 4 years from the date of commencement of the first semester of the program.

6. ELIGIBILITY FOR ADMISSION

For admission to the M.P.E.S program the candidate shall fulfill the following conditions.

- He/She should have passed the B.P.E/B.P.Ed/BPES of Mahatma Gandhi University, Kottayam or from any Indian/foreign university recognized by Mahatma Gandhi University with a minimum of 45% marks in aggregate.
- Should be medically fit and free from physical deformities for undergoing heavy load of physical activities as prescribed by the syllabus.
- A medical certificate duly certified by a Government medical practitioner should be produce at time of admission.

- **M.P.E.S. (2-Year, Four Semesters) Program Structure**

SEMESTER – I

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PART – A - THEORY COURSES				
PE030101	Research Process in Physical Education and Sports Sciences	CORE	4	4
PE030102	Physiology of Exercise	CORE	4	4
PE030103	Test, Measurement and Evaluation in Physical Education	CORE	4	4
PART – B - PRACTICAL COURSES				
PE030104	Track and Field (Track Events)	CORE	5	3
PE030105	Football	CORE	5	3
PART – C – SPECIALIZATION				
PE030106	Game Specialization – Stage:1 (Any one among the following offered by the college (Basketball / Volleyball / Cricket / Handball/Football)	CORE	3	3

Total Credit : 21

SEMESTER – II

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PART – A – THEORY COURSES				
PE030201	Applied Statistics in Physical Education and Sports	CORE	5	4
PE030202	Sports Biomechanics and Kinesiology	CORE	5	4
PART – B – PRACTICAL COURSES				
PE030203	Track and Field (Throwing Events)	CORE	5	3
PART – D – PRACTICAL COURSES				
PE030204	Football/Basketball/Handball/ Volleyball/Cricket – Internship	CORE	5	3
PART – C – SPECIALIZATION				
PE030205	Game Specialization – Stage: 2 (Any one among the following offered by the college (Basketball / Volleyball / Cricket / Handball)	CORE	5	3

Total Credit : 17

SEMESTER – III

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PART – A – THEORY COURSES				
PE030301	Scientific Principles of Sports Training	CORE	4	4
PE030302	Information and Communication Technology (ICT) in Physical Education	CORE	4	4
PE800301	Sports Psychology	ELECTIVE	3	3
PE810301	Yogic Sciences			
PE800302	Health Education and Sports Nutrition	ELECTIVE	3	3
PE810302	Physical Fitness, Wellness and Lifestyle Management			
PART – B – PRACTICAL COURSES				
PE030303	Track and Field (Jumping Events & Combined Events)	CORE	4	3
PART – C – SPECIALIZATION				
PE030304	Game Specialization – Stage: 3 (Any one among the following offered by the college (Football, Volleyball / Basketball/ Cricket/ Handball))	CORE	4	3
PART – D – INTERNSHIP				
PE030305	Internship / Coaching assignment	CORE	3	2

SEMESTER – IV

Total Credit : 22

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PART – A - THEORY COURSES				
PE030401	Sports Medicine	CORE	4	4
PE030402	Sports Management and Curriculum Design in Physical Education	CORE	4	4
PE800403	Athletic Care and Rehabilitation	ELECTIVE	3	3
PE810403	Sports Journalism			
PART – C - SPECIALIZATION COURSES				
PE030403	Skills of Coaching and Officiating of Game Specialization	CORE	6	3
PART – D - INTERNSHIP COURSES				
PE030404	Skills of Coaching and Officiating of Track and Field/Internship	CORE	6	3
PART – E – DISSERTATION				
PE030405	Dissertation(Project and Viva)	CORE	2	2+1

Total Credit: 20

ELECTIVE SUBJECTS

Group A	Group B
PE800301: Sports Psychology	PE810301: Yogic Science
PE800302: Health Education and Sports Nutrition	PE810302 : Physical Fitness, Wellness and Lifestyle Management
PE800403: Athletic Care and Rehabilitation	PE810403: Sports Journalism

8. SPECIALIZATION

Each student shall take up two specializations from the list of sports and games specified (Football, Basketball, Cricket, Handball, Volleyball). Specialization in each discipline consists of learning and demonstration of skills, coaching ability (techniques and practice), officiating capacity, organization & management of tournaments and sports competitions in the concerned sports event or game.

9. ATTENDANCE

As per the Mahatma Gandhi University PG-CSS Regulation 2019 and direction from the University from time to time.

10. INTERNAL MARKS

As per the Mahatma Gandhi University PG-CSS Regulation 2019 and direction from the University from time to time.

The Internal Assessment in Practical Games/Sports ability should be based on:-

- 1) Skills
- 2) Playing ability
- 3) Assignment/Diary/Record
- 4) Attendance, Punctuality, Discipline and Interest in Class

The internal assessment in specialization

- 1) Coaching games / sports ability
- 2) Preparation of Coaching lesson plan
- 3) Coaching ability and ability to conduct sports competitions
- 4) Identification and correction of mistakes and errors
- 5) Attendance, Punctuality, Discipline interest in class

Note:

- 1) The internal marks should be published on the notice board within 15 days after the completion of assessment.
- 2) The answer sheets/assignments/seminar papers/lesson plan should be returned to the student after assessment.
- 3) If a student missed a Test/Lesson/Assignment/Seminar for valid reasons, the concerned student should give a written request to the Head of the Dept./Institution, for the re-conduct of the test/Lesson/Assignment/Seminar etc.

11. GRIEVANCE REDRESSAL MECHANISM

Internal assessment shall not be used as a tool for personal or other types of vengeance. A student has all rights to know, how the teacher arrived at the marks. In order to address the grievance of students, a three-level Grievance Redressal mechanism is envisaged. A student can approach the upper level only if grievance has not been addressed at the lower level.

Level 1: Dept. Level: The department cell chaired by the Head; and Dept. coordinator and teacher in-charge, as members.

Level 2: College level: A committee with the Principal as Chairman, Dept. Coordinator, HOD of concerned Department and a senior teacher nominated by the College council as members.

Level 3: University Level: A Committee constituted by the Vice-Chancellor as Chairman and Pro-Vice-Chancellor, Convener - Syndicate sub-committee on Students Discipline and Welfare, Chairman- Board of Examinations as members and the Controller of Examination as member-secretary.

10.1. The college council shall nominate a senior teacher as coordinator of internal evaluations. This coordinator shall make arrangements for giving awareness of the internal evaluation components to students immediately after commencement of I semester

10.2. The internal evaluation report in the prescribed format should reach the University before the 4th week of October and March every academic year.

12. EXTERNAL MARKS FOR PRACTICAL EXAMINATIONS

For external examination of specialization, practical, dissertation, and internship, the Institution shall constitute an expert committee in order to evaluate skills, proficiency, tactics and coaching ability of each game and event and quality of the dissertation. The committee will assess the students and submit external marks to the Principal. Then the Principal will forward the final marks to the University at the end of each semester.

13. MEDIUM OF INSTRUCTION & EXAMINATION

The medium of instruction and examination shall be in English.

14. PROGRAMME AND SCHEME OF EXAMINATION OF M.P.E.S

There shall be five parts for M.P.E.S program and Examinations

- 1) Part A – Theory
- 2) Part B – Practical
- 3) Part C – Specialization
- 4) Part D – Internship
- 5) Part E – Dissertation

Total credits of program is 80

SEMESTER-I
RESEARCH PROCESS IN PHYSICAL EDUCATION & SPORTS SCIENCES

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030101	RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES	CORE	4	4

COURSE OBJECTIVES:

- To develop understanding of the basic framework of research process.
- To identify appropriate research topics.
- To identify various sources of information for literature review and data collection.
- To select and define appropriate research problem, parameters and research questions.
- To develop an understanding of various research designs and techniques.
- To write a research proposal and report.
- To organize and conduct scientific research in a more appropriate manner
- To develop an understanding of the ethical dimensions of conducting applied research.

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Define research and describe the research process and research methods.
- Understand the research context within the area of physical Education and sports.
- Understand the processes and requirements for conducting successful research in physical education and sports.
- Understand and apply basic research methods.
- Use print and electronic library resources effectively and appropriately.
- Understand the process of sampling, the uses of questionnaires as data-gathering instruments, study the way a survey is carried out in terms of process and method, the uses of surveys and to be able to capture their own data.
- Understand and apply basic research methods including research design, data analysis, and interpretation.
- Develop testable hypotheses, differentiate research design, evaluate aptness of research conclusions, and generalize them appropriately.
- Design and conduct quantitative or qualitative research studies in laboratory or field settings.
- Learn how to apply the basic aspects of the research process in order to plan and execute a research proposal and research report.
- Be able to present, review and publish scientific articles.

COURSE CONTENTS

1. MODULE –I

- 1.1. Meaning and Definition of Research.
- 1.2. Need, Nature and Scope of Research in Physical Education
- 1.3. Classification of Research, Location of Research Problem
- 1.4. Criteria for Selection of a Problem
- 1.5. Qualities of a Good Researcher

2. MODULE –II

- 2.1. Descriptive Methods of Research
- 2.2. Survey Study, Case Study
- 2.3. Introduction of Historical Research, Steps in Historical Research
- 2.4. Sources of Historical Research: Primary Data and Secondary Data
- 2.5. Historical Criticism: Internal Criticism and External Criticism

3. MODULE –III

- 3.1. Experimental Research – Meaning, Nature and Importance.
- 3.2. Meaning of Variable, Types of Variables.
- 3.3. Experimental Design - Single Group Design, Reverse Group Design
- 3.4. Repeated Measure Design, Static Group Comparison Design
- 3.5. Equated Group Design, Factorial Design

4. MODULE –IV

- 4.1. Meaning and Definition of Sample and Population.
- 4.2. Types of Sampling; Probability Methods; Systematic Sampling, Cluster Sampling
- 4.3. Stratified Sampling
- 4.4. Area Sampling – Multi-stage Sampling.
- 4.5. Non- Probability Methods; Convenience Sample, Judgment Sampling, Quota Sampling

5. MODULE –V

- 5.1. Chapterisation of Thesis / Dissertation, Front Materials
- 5.2. Body of Thesis – Back materials.
- 5.3. Method of Writing Research Proposal
- 5.4. Thesis/Dissertation; Method of writing abstract and full paper for presenting in a conference and to publish in journals
- 5.5. Mechanics of writing Research Report, Footnote and Bibliography writing

RECOMMENDED REFERENCE

Best & Kahn (2003) *Research in Education*, 10th Ed. New Jersey; Prentice Hall, Inc.

Borse M.N. (2004). *Handbook of Research Methodologies*. Jaipur: Shree Niwas Publishers.

Chin, Beverly Ann. (2004). *How to Write a Great Research Paper*. New Jersey: John Wiley Sons.

Clarke David. H & Clarke H, Harrison (1984) *Research processes in Physical Education*.

Craig Williams and Chris Wragg (2006) *Data Analysis and Research for Sport and Exercise*. Gibaldi, Joseph. (2000). *M.L.A Handbook for Writers of Research Papers*. New Delhi: EWP Ltd. Jerry R Thomas & Jack K Nelson (2000) *Research Methods in Physical Activities*; Illinois.

Kamlesh, M. L. (1999) *Research Methodology in Physical Education and Sports*, New Delhi. Moses, A. K. (1995) *Thesis Writing Format*, Chennai; Poompugar Pathippagam.

Rothstain, A (1985) *Research Design and Statistics for Physical Education*, Engle wood.

Shaw, Dhananjay and Ashu. (2001). *Research Methodologies in Physical Education Sports and Exercise Science*. New Delhi: Khel Sahitya Kendra.

Thomas, Terry and Nelson, Jack. K. (2001). *Research methods in Physical activity*. New York: Human Kinetics.

SEMESTER-I
PHYSIOLOGY OF EXERCISE

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030102	PHYSIOLOGY OF EXERCISE	CORE	4	4

COURSE OBJECTIVES:

- To assess basic concepts of exercise physiology.
- To employ students to apply the knowledge of energy systems during exercise.
- To explain the effect of environment and ergogenic aids on exercise and training.
- To develop a thorough understanding of the relationship between physical activity and health.
- To develop the understanding of the physiological processes.

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Describe and apply the fundamental and advanced concepts of exercise physiology.
- Define and describe the term exercise physiology
- Recognize the energy system for aerobic and anaerobic components of exercise.
- Summarize the underlying physiological basis of physical fitness, physical training, health and wellness.
- Discover the nutritional aspect of fitness and performance.
- Comprehend the physiological changes and adaptations during exercise in different environmental conditions

COURSE CONTENTS

MODULE I: INTRODUCTION TO EXERCISE PHYSIOLOGY AND SKELETAL MUSCLES

- 1.1 Introduction to Exercise Physiology, Definition, Need and Importance of Exercise Physiology
- 1.2 Skeletal Muscle Structure (Macro and Micro), Physiology of Muscle Contraction, Sliding filament theory
- 1.3 Energy System and Muscle contraction, Types of muscle contraction – concentric, dynamic, isometric, eccentric contraction.
- 1.4 Effects of Exercise and Training on Muscular System

MODULE II: CARDIOVASCULAR SYSTEM AND EXERCISE

- 2.1 Structure and Function of Heart, Function of Heart Valves and Direction of Blood Flow,
- 2.2 Conduction System of the Heart, SA node and AV node, Coronary Circulation. Heart problems and exercise
- 2.3 Cardiac Cycle, Stroke Volume, Cardiac Output Heart Rate, Factors Affecting Heart Rate, Cardiac Hypertrophy
- 2.4 Effect of Exercise on Cardiovascular System

MODULE III: RESPIRATORY SYSTEM AND EXERCISE

- 3.1 Mechanics of Breathing, Pulmonary ventilation -External – Internal, Respiratory Muscles and its functions
- 3.2 Pulmonary volumes- tidal volume, vital capacity, residual volume, total lung capacity
- 3.3 Diffusion of Gases (Pulmonary diffusion) - Exchange of Gases in the Lungs, Exchange of Gases in the Tissues,– blood flow to the lungs at rest, respiratory membrane, partial pressures of gases, gases exchange in alveoli.
- 3.4 Effect of Exercise on Respiratory System

MODULE IV: METABOLISM AND ENERGY TRANSFER

- 4.1 Metabolism of Energy substrates (carbohydrate, Fat, Protein) and energy production, Anaerobic Metabolism, Aerobic Metabolism, Aerobic and Anaerobic Systems during Rest and Exercise
- 4.2 The basic energy systems – ATP-PC system, Glycolytic system, Oxidative system. The oxidative capacity of muscle- Enzyme activity,
- 4.3 Exercise and Energy expenditure- Basal and resting metabolic rates, metabolic rate during sub maximal exercise, metabolic rate during maximal capacity for aerobic exercise, metabolic rate during anaerobic effort and exercise capacity.
- 4.4 Fatigue and its causes- energy system and fatigue, metabolic by products and fatigue, neuromuscular fatigue.

MODULE V: EXERCISE ADAPTATIONS, CLIMATIC CONDITIONS, ERGOGENIC AIDS AND SPORTS PERFORMANCE

- 5.1 Physiological response and adaptations to exercise and training.
- 5.2 Physiological sex differences and exercise adaptations, Gynecological Problems, Menstrual Cycle and exercise, Pregnancy and exercise.

5.3 Climatic acclimatization - Thermoregulation- Hot, Cold, High Altitude training and Sports Performance

5.4 Amphetamines, Anabolic Steroids, Growth Hormone, Stimulants and Sports Performance .

Practicum: (Physiological Assessment)

- Measurement of heart rate, before and after activity and during activity.
- Measurement of resting heart rate
- Measurement of Blood Pressure by Sphygmomanometer
- Measurement of Vital Capacity and Peak Flow Rate.
- Assessment of Respiratory Rate.

RECOMMENDED REFERENCE

- BeotraAlka, (2000) Drug Education Handbook on Drug Abuse in Sports: Sports Authority. Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood.**
- David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics.**
- Farrell, P, Joyner, M, & Caiozzo, V. (2012). ACSM's advanced exercise physiology. Kenney, W, Wilmore. J, & Costill, D . (2015). *Physiology of sport and exercise.***
- McArdle, W, Katch, F & Katch, V. (2010). Exercise physiology. Baltimore, MD. Plowman, S, & Smith, D. (2014). Exercise physiology for health and fitness.**
- Raven, P. (2013). Exercise physiology. Australia: Wadsworth Cengage Learning. Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication. William, D. Mc Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human.**

SEMESTER-I

TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030103	TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION	CORE	4	4

COURSE OBJECTIVES:

- To develop concepts related to Test, Measurement & Evaluation;
- To construct a strong basis in the evaluation techniques through the various test and measurement method used in physical education.
- To analyze the physical ability and performance of an individual in various sports.
- To provide scientific techniques in selection and talent identification through various evaluation and grading processes applicable in physical education and sports.
- To develop the skills and techniques for construction of new tests for various needs related to specific Sports Skills.

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Explain the basics of measurement and evaluation of various test and measurement techniques.
- Develop the concepts of measurement and evaluation in physical education and sports
- Develop ability to construct new tests for various needs related to Physical Education and Sports with scientific authenticity
- To analyze various tests and performances related to physical education

COURSE CONTENTS

1. MODULE I: INTRODUCTION

1.1 Meaning and Definition of Test, Measurement and Evaluation

1.2 Need and Importance of Measurement and Evaluation

1.3 Criteria of Tests, Scientific Authenticity (Reliability, Objectivity, Validity and Availability of Norms)

1.4 Determining the purpose of test ,planning the test-test blue print ,objectives, content. Construction of test items.

1.5 Classification of test – Standard and teacher made test ,Objective and subjective tests. Advantages and disadvantages of subjective and objective evaluation.

2. MODULE II: MOTOR FITNESS TESTS

2.1 Meaning and Definition of Motor Fitness

2.2 Test for Motor Fitness: Indiana Motor Fitness Test (For Elementary and High School Boys, Girls and College Men), Oregon Motor Fitness Test, JCR Test

2.3 Barrow Motor Ability Test, Newton Motor Ability Test

2.4 McCoy's general motor ability test, Iowa Brace test

2.5 Muscular Fitness - Kraus Weber Minimum Muscular Fitness Test

3. MODULE III: PHYSICAL FITNESS TESTS

3.1 Physical Fitness Test: AAHPERD Health Related Fitness Battery (Revised in 1984)

AAHPERD Health Related Fitness Battery (Revised in 1984)

3.2 ACSM Health Related Physical Fitness Test

3.3 Roger's Physical Fitness Index

3.4 Cardiovascular Test ,Harvard Step Test

3.5 Multi-stage Fitness Test (Beep Test)

4. MODULE IV: ANTHROPOMETRIC AND AEROBIC-ANAEROBIC TESTS

4.1 Physiological Testing :Aerobic Capacity ,Cooper's 12 Minutes Run/Walk Test , Tuttle Pulse Ratio Test

4.2 The Bruce Treadmill Test Protocol and 1.5 Mile Run Test for College Age Males and Females

4.3 Anaerobic Capacity: Margaria- Kalamen Test and Wingate Anaerobic Test

4.4 Anthropometric Measurements - Method of Measuring Height, Standing Height, Sitting Height, Method of Measuring Circumference, Arm, Waist, Hip and Thigh

4.5 Method of Measuring Skin Folds: Triceps, Sub Scapular and Suprailia

5. MODULE V: SKILL TESTS

5.1 Specific Sports Skill Test: Badminton: Broer Miller test ,Tennis: Dyer Tennis Test

5.2 Basketball : Johnson Basketball Test ,Knox test

5.3 Hockey :Friendel Field Hockey Test, Harbans Singh field hockey

5.4 Volley ball :Russel Lange Volleyball Test and Brady Volleyball Test

5.5 Football: Mor-Christian General Soccer Ability Skill Test Battery, Johnson Soccer Test and Mc- Donald Soccer Test

PRACTICUM : Anthropometric Measurements Skin fold Measurements

RECOMMENDED REFERANCE.

Barrow, Harold M and McGee, Rosemary. (1979). *A Practical Approach to Measurement in Physical Education*. Philadelphia: Lea and Febiger.

Baumgartner and Jackson. (1991). *Measurement for Evaluation in Physical Education and Exercise Science*. C. Brown.

Golding, A. Lawrence. (2000). *YMCA Fitness Testing and Assessment Manual* . New York: Human Kinetics.

Heyward, Vivian H. and Wagner, Dale R. (2004). *Applied Body Composition Assessment*. New York: Human Kinetics.

Mathews, Donald. K.W. (1985). *Measurement in Physical Education*. London: Saunders Co.

Safrit, Margaret J. I. (1995). *Introduction to Measurement in physical education and exercise science*. St. Louis: Mosby.

Sodhi, H.S., & Sidhu, L.S. (1984). *Physique and selection of sports- a kinanthropometric study*. Patiala: Punjab Publishing House

James Morrow, Dale Mood, James Disch, Minsoo Kang (2016). *Measurement and Evaluation in Human Performance with Web Study Guide-4th & 5th Edition*

Bangsbo, J. (1994). *Fitness training in football: A scientific approach*. Bagsvaerd, Denmark: Ho+Storm.

Barron, H. M., & Mchee, R. (1997). *A practical approach to measurement in physical education*. Philadelphia: Lea and Febiger.

Kansal, D.K. (1996). *Test and measurement in sports and physical education*. New Delhi: D.V.S. Publications. □ 2 years B.P.Ed Curriculum | 40

SEMESTER-II

APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030201	APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS	CORE	5	4

COURSE OBJECTIVES:

- To completely describe a data set, using appropriate descriptive statistics.
- To interpret a set of descriptive statistics and understand the limitations of each measure.
- To require the ability to use and apply a wide variety of specific statistical methods.
- To develop the skills to organize, manage, and present data.
- To gain the ability to explore and organize data for analysis.
- To acquire the ability to use and apply a wide variety of specific statistical methods.
- To demonstrate understanding of the properties of probability and probability distributions.
- To demonstrate understanding of the probabilistic foundations of inference.
- To apply inferential methods relating to the means of Normal distributions.

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Know how to organize, manage, and present data.
- Explore and organize data for analysis.
- Use and apply a wide variety of specific statistical methods.

- Demonstrate understanding of the properties of probability and probability distributions.
- Demonstrate understanding of the probabilistic foundations of inference.
- Apply inferential methods relating to the means of Normal distributions.
- Understand the concept of the sampling distribution of a statistic, and in particular describe the behavior of the sample mean.
- Effectively communicate results of statistical analysis.
- Demonstrate understanding of statistical concepts embedded in their courses.
- Demonstrate proficiency in analyzing data using methods embedded in their courses.
- Demonstrate ability to select appropriate methodologies for analysis based on properties of particular data sets.

COURSE CONTENTS

1. MODULE 1: INTRODUCTION

- 1.1 Meaning, Definition and Functions of Statistics
- 1.2 Need and Importance of Statistics and Types of Statistics
- 1.3 Meaning of the Terms-Population, Sample,
- 1.4 Data, Types of Data. Variables; Discrete, Continuous. Parametric and Non-Parametric Statistics

2. MODULE II: DATA CLASSIFICATION, TABULATION AND MEASURES OF CENTRAL TENDENCY

- 2.1 Data classification
- 2.2 Meaning, Uses and Construction of Frequency Table
- 2.3 Meaning, Purpose, Calculation and Advantages of Measures of Central Tendency, Mean
- 2.4 Meaning, Purpose, Calculation and Advantages of Measures of Central Tendency Median and Mode

3. MODULE III: MEASURES OF DISPERSIONS AND SCALES

- 3.1 Meaning, Purpose, Calculation and Advances of Range,
- 3.2 Quartile Deviation, Mean Deviation, Standard Deviation and Probable Error
- 3.3 Meaning, Purpose, Calculation and Advantages of Scoring Scales,
- 3.4 Sigma Scale, Z Scale and Hull Scale

4. MODULE IV: PROBABILITY DISTRIBUTIONS AND GRAPHS

- 4.1 Probability Distributions and Graphs Normal curve
- 4.2 Meaning of Probability, Principles and properties of Normal Curve
- 4.3 Divergence Form Normality - Skewness and Kurtosis,
- 4.4 Graphical Representation in Statistics; Line Diagram, Bar Diagram, Histogram, Frequency Polygon and Ogive Curve

5. MODULE V: INFERENCE AND COMPARATIVE STATISTICS

- 5.1 Tests of Significance, Independent "t" test, Dependent "t" Test - Chi-Square Test,
- 5.2 Level of Confidence and Interpretation of Data
- 5.3 Meaning of Correlation - Co-efficient of Correlation, Calculation of Co-efficient of Correlation by the Product Moment Method and Rank Difference Method,
- 5.4 Concept of ANOVA and ANCOVA

RECOMMENDED REFERENCE

- Clark D.H. (1999) *Research Problem in Physical Education* 2nd edition, Eaglewood Cliffs, Prentice Hall, Inc.
- Jerry R Thomas & Jack K Nelson (2000) *Research Methods in Physical Activities*; Illonosis; Human Kinetics;
- Rothstain A (1985) *Research Design and Statistics for Physical Education*, Englewood Cliffs: Prentice Hall, Inc.
- Sivaramakrishnan. S. (2006) *Statistics for Physical Education*, Delhi; Friends Publication
- Thirumalaisamy (1998)
Statistics in Physical Education, Karaikudi, Senthil Kumar Publications.
- Anne.L. R. (1985). *Research Design and Statistics for Physical Education*. New Jersey: Prentice Hall Inc.
- Ferguson, G. A. (1985). *Statistical Analysis in Psychology and Education*, Singapore: McGrawhill International Book Co.
- Garrett, H. E. (1981). *Statistics in Psychology and Education*. Bombay: Vakil & Sons Ltd.
- Kamlesh, M. L. (1999). *Research Methodology in Physical Education and Sports*. New Delhi .
- Mendenhall, (1976). *Understanding Statistics*. California: Wadsworth Publishing Co.
- Prakash Verma, J. A. (2000). *Textbook on Sports Statistics*. Gwalior: Venus Publication.
- Sivaramakrishnan, S. ((2006). *Statistics for Physical Educatio*.,. Delhi: Friends Publication
- Walpole, R. E. (1993). *Introduction to Statistics*. New York: Macmillan Publishing.

SEMESTER-II SPORTS BIOMECHANICS AND KINESIOLOGY

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030202	SPORTS BIOMECHANICS AND KINESIOLOGY	CORE	5	4

COURSE OBJECTIVES:

- To develop the basic understanding of biomechanics and kinesiology and its application in human body movements in performing sports activities.
- To explain the concept of mechanical laws involved in human motion.
- To develop a comprehensive understanding of movement analysis.
- To develop the ability to perform mechanical analysis of various fundamental movements

and sports skills.

COURSE LEARNING OUTCOMES:

- After completing this course, the students will be able to
- Explain the basic mechanical concepts and will be able to interpret its relation to human body movements.
- Organize and specify the overall goal of the course.
- Apply and analyze the factors of mechanical laws involved in human movement.
- Explain the principles of movement analysis.

- Analyze the mechanical principles of motor skills and sports related skills along with their proper techniques and corrective measures.

COURSE CONTENTS

1. MODULE I: INTRODUCTION

- 1.1 Meaning, Nature, Role and Scope of Sports Biomechanics
- 1.2 Need and importance of Biomechanics in sports and Games
- 1.3 Aids and equipment's for Biomechanical Analysis, Force Plate, High Speed Cameras for motion Analysis, Reflective and non-reflective markers, Wind Tunnel Test, Accelerometer
- 1.4 Meaning of Axis and Planes, Dynamics, Kinematics, Kinetics, Statics Centre of Gravity, Line of Gravity, Plane of the Body and Axis of Motion, Vectors and Scalars quantities.
- 1.5 Bones and Joints: Structure of bones, types of bones, Types and structure of Joint, Kinds of joint movements.

2. MODULE II: MUSCLE ACTION

- 2.1 Definition ,Meaning , Need and Importance of Kinesiology
- 2.2 Muscle Terminologies: Structural classification of muscles, characteristics of muscle tissue, muscles fiber types, reciprocal innervation, all or none law.
- 2.3 Origin, Insertion and Action of Muscles of Upper extremities: Pectoralis Major and Minor, Deltoid, Biceps, Triceps (Anterior and Posterior)
- 2.4 Origin, Insertion and Action of Muscles of Trunk and Lower extremities: Abdominis, Obliques, Trapezius, Serratus, Sartorius, Rectus Femoris, Quadriceps, Hamstring, Gastrocnemius

3. MODULE III: MOTION AND FORCE

- 3.1 Meaning and Definition of Motion, Types of Motion, Newton Laws of motion as applicable to linear and Angular motion.
- 3.2 Force: Meaning ,Definitions and sources of force . Units of force and force components. Components and Resultant, Friction, Pressure.
- 3.3 Work, Power and Energy.
- 3.4 Movement of Force, Movement of Inertia
- 3.5 Pressure, Friction: Types of Friction and its application, Spin : Centripetal Force - Centrifugal Force

4. MODULE IV: PROJECTILE AND LEVER

- 4.1 Freely Falling Bodies, Projectiles- Equation of Projectile
- 4.2 Factors Influencing Equilibrium, Guiding Principles for Stability, Static and Dynamic Stability
- 4.3 Meaning of Work, Power, Energy, Kinetic Energy and Potential Energy
- 4.4 Leverage: Types of leverage and its applications, Fluid Mechanism : Water Resistance, Air Resistance, Aerodynamics

5. MODULE V: MOVEMENT ANALYSIS

5.1 Need, Importance and Scope of movement analysis.

5.2 Types of Analysis: Kinesiological, Biomechanical and Cinematographic

5.3 Analysis of Fundamental skills: Walking, Running, Jumping,

5.4 Analysis of Fundamental skills Throwing- Lifting, Pulling, Pushing, Catching, and Climbing.

5.5 Analysis of Sports Skills of - Athletics, Gymnastics, Swimming, Sports Skills of - Football, Hockey, Basketball, Volleyball and Cricket.

Practicum:

- Analysis of movement and Gait
- Types of analysis, Kinesiology, Biomechanical, & Cinematographic,
- Methods of analysis – Qualitative, Quantitative, Predictive

RECOMMENDED REFERENCE

- McGinnis, P. (2013). Biomechanics of sport and exercise. Champaign, IL: Human Kinetics. ISBN 9780736079662
- Biomechanics of Sport and Exercise ; Peter M McGinnis
- Blazevich, A. (2007). Sports biomechanics. London: A. & C. Black. ISBN 9780713678710
- Bartlett, R. (2007). Introduction to sports biomechanics. London: Routledge, Taylor & Francis Group. ISBN 9780415339933
- Hall, S. (2014) Basic biomechanics. Mcgraw Hill Higher Educat. ISBN 9780073522760
- Knudson, D. (2007). Fundamentals of biomechanics. New York, NY: Springer. ISBN 978-0-387-49311-4
- Deshpande S.H. (2002), Manav Kriya Vigyan – Kinesiology (Hindi Edition) Amravati: Hanuman Vyayam Prasarak Mandal.
- Hoffman S.J. Introduction to Kinesiology (Human Kinesiology Publication in 2005).
- Steven Roy, & Richard Irvin (1983). Sports Medicine, New Jersey: Prentice Hall.
- Thomas. (2001). Manual of structural Kinesiology, New York: Me Graw Hill.
- Uppal A.K. Lawrence Mamta MP Kinesiology (Friends Publication India (2004)
- Uppal, A.K. (2004), Kinesiology in Physical Education and Exercise Science, Delhi Friends Publication
- Williams M (1982) Biomechanics of Human Motion, Philadelphia, Saunders Co.

SEMESTER-III
SCIENTIFIC PRINCIPLES OF SPORTS TRAINING

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030301	SCIENTIFIC PRINCIPLES OF SPORTS TRAINING	CORE	4	4

COURSE OBJECTIVES:

- To provide knowledge and concept of sports training.
- To develop an understanding of the technical and tactical training.
- To provide the role of sport sciences to achieve the excellence

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Understand the modern concept of sports training.
- Describe the principles of sports training.
- Evaluate and develop system of sports training – basic performance, intermediate performance and high performance training.
- Develop Plan for training sessions.
- Apply the Methods of technical and tactical training.
- Compose training program for fitness components.
- Design phases of periodization.

COURSE CONTENT

1. MODULE 1- INTRODUCTION

- 1.1 Definition of Sports Training, Aims and Objectives of Sports Training, Characteristics of Sports Training, Principles of Sports Training, Ethics in sports training, Qualities of a Coach, Talent Identification and development
- 1.2 Training Load: Definition of Training Load, Nature of Training load- Intensity, Density, Duration and Frequency, Principles of Training Load. Load adaptation, Conditions of Load adaptation
- 1.3 Over load.- symptoms of over Load, Causes of over load, Tackling of over load, Recovery in sports training, Factors affecting recovery process, Recovery tips in sports training.
- 1.4 Supercompensation- Definition, Supercompensation and Training Programs

2. MODULE 2: HEALTH RELATED PHYSICAL FITNESS COMPONENTS

- 2.1 .Strength – Definition, Types of Strength- Agile strength, Endurance strength. Explosive strength, Maximum strength. Speed strength, explosive strength, Relative strength, Strength Training- Methods of Strength Training: Weight Training, Isometric Training, Isotonic Training and Circuit Training, Plyometric Training

- 2.2 Endurance- Definition, Types of Endurance- Based on nature of Activity- Basic Endurance, General Endurance and Specific Endurance - Speed Endurance, Strength Endurance, Cardiovascular Endurance, Based on duration of Activity- Short Term Endurance, Medium Term Endurance, Long Term Endurance, Endurance Training-Training Methods to Improve Endurance; Continuous Method; Interval Method; Repetition Method; Cross Country Training; Fartlek Training;
- 2.3 Flexibility- Definition, Types of Flexibility- Static Flexibility, Dynamic Flexibility, Flexibility Training, Methods to Improve Flexibility- Dynamic stretching, Ballistic stretching, Static Active stretching, Static Passive stretching, Isometric stretching, PNF stretching, Flexibility and Performance, Flexibility and Sports Injuries.
- 2.4 Body Composition- Definition, Somatotypes - ectomorph, mesomorph, and endomorph,. BMI Definition - BMI Classification- Under Weight, Normal, Over Weight, Obese, Extremely Obese, BMI Calculation, Training to Maintain optimum BMI

3. MODULE 3: SKILL RELATED PHYSICAL FITNESS COMPONENTS

- 3.1 Speed and Explosive Power - Definition of Speed in sports, Types of speed in sports- reaction time, acceleration speed, maximum speed and speed endurance. Speed Training, Training methods to develop speed. Speed and performance in sports, Explosive Power- Definition, Training Methods to Develop Explosive Power.
- 3.2 Agility Definition, Agility Training, Training methods to develop Agility
- 3.3 Coordination- Definition, Importance of Coordination in Sports Training, Training methods to develop Coordination,
- 3.4 Balance - Definition, Types of Balance- Static Balance, Dynamic Balance, Training methods to develop Balance.

4. MODULE 4: TRAINING PLAN

- 4.1 Training Plan Definition: Importance of planning in Sports Training, Principal of planning in Sports Training, Systems of Planning, Causes and correction of faults
- 4.1 Training Cycles- Macro Cycle, Meso-Cycle. Types of Training Plans; Short Term Plan and Long Term Plans, Principles of Training Plan;
- 4.2 Periodization: Definition and Meaning, Types of Periodization; Single, Double and Multiple periodization, Planning, Aims and Content of Periods - Preparatory Period, Competition Period and Transition Period,
- 4.3 Altitude Training and Cross Training
Altitude Training Definition, Importance and benefits of Altitude Training.
Cross Training Definition, Importance and benefits of Cross Training.

5. MODULE 5: DOPING

- 5.1 Definition of Doping-Side Effects of Drugs and Dietary Supplements - IOC List of Doping Classes and Methods.
- 5.2 Blood Doping, the Use of Erythropoietin in Blood Boosting
- 5.3 Blood Doping Control - The Doping Testing Program, Problems in Drug Detection – Blood Testing in Doping Control
- 5.4 Problems with the Supply of Medicines Subject to IOC Regulations: Over the Counter Drugs – Prescription only Medicines (POMS) and Controlled Drugs (CDs)

RECOMMENDED REFERENCE

BeotraAlka, (2000). *Drug Education Handbook on Drug Abuse in Sports*. Delhi: Sports Authority of India.

Bompa, T, & Carrera, M. (2005). *Periodization Training for sports*. Champaign, Ill.: Human Kinetics.

Bompa, T., & Haff, G. (2009). *Periodization*. Champaign, IL: Human Kinetics.ISBN-13: 9780736074834 .

Bunn, J.N. (1998). *Scientific Principles of Coaching*, New Jersey Engle Wood Cliffs, Prentice Hall Inc.

Cart, E. Klafs & Daniel, D. Arnheim (1999). *Modern Principles of Athletic Training* St. Louis C. V. Mosphy Company .

Daniel, D. Arnheim (1991). *Principles of Athletic Training*, St. Luis: Mosby Year Book .

Haff, G., & Triplett, N. *Essentials of Strength Training and Conditioning*. Champaign, IL: HumanKinetics.ISBN-13: 9780736065832 .

Wuest, D., & Fisette, J. (2014)*Foundations of Physical Education, Exercise Ecience, and Sport*. McGraw-Hill Higher Education: ISBN-10: 0073522775ISBN.

Zatsiorsky, V., & Kraemer, W. (2006). *Science and Practice of Strength Training*. Champaign, IL: Human Kinetics. ISBN 10: 0736056289.

SEMESTER-III
INFORMATION AND COMMUNICATION TECHNOLOGY [ICT] IN
PHYSICAL EDUCATION

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030302	INFORMATION AND COMMUNICATION TECHNOLOGY [ICT] IN PHYSICAL EDUCATION	CORE	4	4

COURSE OBJECTIVES:

- To impart the concepts of computer application in Physical Education and Sports.
- To develop understanding about various concepts of computer fundamentals and applying technology in teaching learning situation.

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Correlate the computer application in Physical Education and Sports concepts with the

sports and athlete specific situations

- Integrate the knowledge about basic statistical tools and common computer applications.
- List down the Information Technology utilized in the field of sports.
- Analyze the issues related to Internet, Networking, E-learning and Cyber Security.

1. MODULE – I

- 1.1. Introduction to information and communication technology
- 1.2. Computer: - Hardware & Software,
- 1.3. CPU; Memory: - Primary & Secondary Input / Output units
- 1.4. Operating System –Free Software (Linux) .
- 1.5. Windows: Components of Windows, Desktop, Icon, Concepts of Folders.

2. MODULE –II

- 2.1. MS WORD - Creating, Editing, Printing a document, mail merge
- 2.2. Formatting the Text :,Font and Size selection, Alignment of Text, Paragraph Indenting, Bullets and Numbering, Changing case, Table Manipulation:- Draw Table, Changing cell width and height, Alignment of Text in cell, Delete / Insertion of row and column, Border and shading
- 2.3. Making a presentation - Presentation Package Creating, Opening and Saving Presentations,
- 2.4. Creating the Look of Your Presentation, Working in Different Views, Working with Slides,
- 2.5. Adding and Formatting Text, Formatting Paragraphs, Checking Spelling and Correcting Typing Mistakes, Making Notes Pages and Handouts,
- 2.6. Drawing and Working with Objects, Adding Clip Art and other pictures, Designing Slide Shows, Running and Controlling a Slide Show, Printing Presentations.

3. MODULE –III

- 3.1. MS EXCEL - Introduction , Objectives, Elements of Electronic Spread Sheet
- 3.2. Opening of Spread Sheet Addressing of Cells, Printing of Spread Sheet , Saving Workbooks
- 3.3. Manipulation of Cells :- Entering Text, Numbers and Dates , Creating Text, Number and Date Series , Editing
- 3.4. Worksheet Data Inserting and Deleting Rows, Column ,Changing Cell Height and Width ,
- 3.5. Formulas and Function , Using Formulas Function
- 3.6. Analysis & Charts, Introduction to SPSS

4. MODULE –IV

- 4.1. Introduction to Networking & Internet
- 4.2. LAN, WAN,
- 4.3. CAN, MAN
- 4.4. Internet, World Wide Web,
- 4.5. Website, Portals, E Mails, Search Engines

5. MODULE –V

- 5.1. Introduction to IT Act.
- 5.2. Design various types of formats in MS Excel
- 5.3. Preparation of PPT
- 5.4. Searching & Browsing internet
- 5.5. E-referencing System
- 5.6. Video conferencing

Recommended References:

- Goldin, C., & Katz, L. (2008). The race between education and technology. Cambridge, Mass.: Belknap Press of Harvard University Press. ISBN-13: 978-0674035300. ISBN-10: 0674035305
- Castelli, D., & Fiorentino, L. (2008). Physical education technology playbook. Champaign, IL: Human Kinetics. ISBN-10: 0736060553. ISBN-13: 978-0736060554
- Leight, J. Technology for physical education teacher education. ISBN-10: 1494895765 ISBN-978-1494895761
- Felker, K. (2011). Integrating technology into physical education and health. [Place of publication not identified]: American Press. ISBN-10: 0896414965. ISBN-13: 978-0896414969
- Mohnsen, B. (2012) Using technology in physical education. ISBN-10: 1893166899 ISBN-978-1893166899
- Selwyn, N. (2011). Education and technology. London: Continuum International Pub. Group. ISBN-10: 1441150366. ISBN-13: 978-1441150363
- Capel, S., Breckon, P., & O'Neill, J. (2006). A practical guide to teaching physical education in the secondary school. London: Routledge. ISBN-10: 0415361117. ISBN-13: 978-0415361118

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SEMESTER-III
SPORTS PSYCHOLOGY

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE800301	SPORTS PSYCHOLOGY	ELECTIVE	3	3

COURSE OBJECTIVES:

- To impart the concepts of psychology applied in the field of physical education and sports for optimal performance.
- To introduce the field of sports psychology as a scientific discipline.
- To develop understanding about various concepts of goal setting, motor learning and personality with respect to sports and athlete performance.
- To review the motivational strategies applicable in the field of sports.
- To analyze the influence of group and team on the behavior of athletes influencing team cohesion and social behavior.

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Correlate the psychological concepts with the sports and athlete specific situation
- Integrate the knowledge about personality, motor learning for behavior modification of athletes
- Relate different theories of motor learning with its influence on motor perception and related cognitive abilities of athletes

- List down the strategies for motivation utilized in the field of sports
- Analyze the issues related to social behavior based on physiological structure and function

COURSE CONTENTS

1. MODULE –I

- 1.1. The meaning, nature and scope of sports psychology, development of sports psychology, relationship of sports psychology with other sports sciences.
- 1.2. Arousal, Anxiety, Stress, Fear, Frustration conflict - their process and effect on sport performance,
- 1.3. Implication for practice. Arousal regulation - Self-awareness of anxiety, Anxiety reduction techniques, and On-site relaxation tips, Arousal inducing techniques
- 1.4. Goal settings - Types of goals, goals setting-effectiveness, basic principles, designing a goal setting system.
- 1.5. Meaning and Importance of attention, Dimensions of attention/concentration, choking self-talk, strategies to develop attention.

2. MODULE – II

- 2.1. Imagery: Meaning, Types, Uses, How it works, basic of imagery training,
- 2.2. Self-confidence - Definition, Benefits Optimal confidence, Influence expectation on performance,
- 2.3. Self-efficacy theory, assessing and self-confidence,
- 2.4. Aggression, Meaning, Types, Causes. Aggressiveness in the athletes, displacement of aggression, aggression and frustration.
- 2.5. Motor Learning. Development of motor learning, factors affecting motor learning, motor skill acquisition, Multiple Intelligence.

3. MODULE - III

- 3.1. Personality: Meaning of personality, theories of personality – Sigmund Freud personality theory,
- 3.2. Eysenck personality theory, Trait Theory, Sheldon's theory.
- 3.3. Structure of personality and personality traits of sportsman relationship of personality to sports performance personality differences among various sports groups.
- 3.4. Measurement of personality
- 3.5. Emotion: Meaning and types of emotions, specific emotional process in physical activities, level of aspiration and emotion (success and failure)

4. MODULE – IV

- 4.1. Motivation: Meaning and types of motivation,
- 4.2. Theories of motivation, achievement motivation and competitiveness, techniques of motivation,
- 4.3. Importance of motivation in peak performance. Measurement of sports motivation. Feedback, Reinforcement and Intrinsic Motivation.
- 4.4. Principles of Reinforcement- Positive and Negative Reinforcement, modifying behavior in sports, implementing behavioral program, Intrinsic Motivation and Extrinsic Rewards.

4.5. Psychology and athletic injuries: Role of psychological factors in athletic injuries, Antecedents of injuries, Stress injuries relationship, Role of sports psychology in injuries rehabilitation.

5. MODULE – V

5.1. Group and Team Dynamics. Group - Structure, how a group becomes a team, effective team climate,

5.2. Group cohesion - Definition, conceptual model and measurement. Cohesion and performance, co-relates of cohesion, building team cohesion.

5.3. Leadership - Definition, Approaches, multi-dimensional model of sports leadership, components of effective leadership,

5.4. Sport audience and their effect on the performance of the sportsmen

5.5. Psychological aspects of competition: Psychological aspects of long term and short-term preparation for competition.

Practicum: (Psychology Assessment)

- Assessment of State and Trait Anxiety of athletes
- Assessment of Sport and Exercise Motivation
- Assessment of Personality traits among athletes
- Assessment of Group Cohesion among team and individual sports.
- Assessment of Emotion

Recommended References:

- Matt Martin & Mcanzey. Multiple Intelligence: A path to student success
- Jain. (2002), Sports Sociology, Khel Sahitya Kendra Publishers.
- John D Lauther (2000) Psychology of Coaching. New Jersey: Prentice Hall Inc.
- John D. Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.
- MiroslawVauks& Bryant Cratty (1999). Psychology and the Superior Athlete. London: The Macmillan Co.
- Richard, J. Crisp. (2000). Essential Social Psychology. Sage Publications.

- Robert N. Singer (2001). Motor Learning and Human Performance. New York: The Macmillan Co.
- Robert N. Singer. (1989) The Psychology Domain Movement Behaviour. Philadelphia: Lea and Fibiger.
- Thelma Horn. (2002). Advances in Sports Psychology. Human Kinetic.
- Whiting, K, Karman Hendry L.B & Jones M.G. (1999) Personality and Performance in Physical Education and Sports London: Hendry Kempton Publishers.
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- Cox, R. (2012). Sport psychology. New York: McGraw-Hill.ISBN-13: 978-0078022470. ISBN- 0078022479
- Anshel, M. (2012). Sport psychology. San Francisco, CA: Pearson Benjamin Cummings. ISBN- 978-0321732491. ISBN-10: 0321732499

- LeUnes, A. (2008). Sport psychology. New York: Psychology Press.ISBN-13: 978-0805862669.ISBN-10: 0805862668

SEMESTER-III

YOGIC SCIENCES

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE810301	YOGIC SCIENCES	ELECTIVE	3	3

COURSE OBJECTIVES:

- To appraise an understanding of the principles of yogic practices
- To Acquaint with various types of asanas, pranayama, kriya.
- To integrate sports with yoga for performance enhancement
- To practice mental hygiene
- To attain higher level of consciousness

COURSE LEARNING OUTCOMES:

- Differentiate between various paths of yoga
- Apply and demonstrate various benefits of yoga to be applied in the field of sports
- Relate Yoga with health and wellness.
- Apply the moral values attained into life
- Attain an emotional stability in life .
- Through Yoga the postural correction can be attained .

COURSE CONTENTS

1. MODULE – I

1.1. Meaning and Definition of Yoga,

1.2. Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, Samadhi.

- 1.3. Concept of Yogic Practices: Principles - Breathing -Awareness-Relaxation.
- 1.4. Sequence- Counter pose –Time – Place – Blanket – Clothes – Bathing –
- 1.5. Emptying the bowels – Stomach – Diet - No straining – Age - Contra-indications -
Inverted asana – Sunbathing.
2. **MODULE –II**
 - 2.1. Loosening exercises: Techniques and benefits. Asanas: Types- Techniques and Benefits.
 - 2.2. Yogasans and its values.
 - 2.3. Surya namaskar: Methods and benefits.
 - 2.4. Pranayama: Types- Methods and benefits.
 - 2.5. Nadis: Meaning, methods and benefits.
 - 2.6. Chakras: Major Chakaras - Benefits of clearing and balancing Chakras.
3. **MODULE –III**
 - 3.1. Yoga and Sports: Yoga Supplemental Exercises –
 - 3.2. Yoga Compensation Exercises-
 - 3.3. Yoga Regeneration Exercises-
 - 3.4. Power Yoga.
 - 3.5. Role of Yoga in Psychological Preparation of athlete: Mental Wellbeing, Anxiety,
Depression, Concentration, Self-Actualization.
4. **MODULE –IV**
 - 4.1. Effect of Yoga on Skeletal System:
 - 4.2. Effect of Yoga on Circulatory,
 - 4.3. Effect of Yoga on Digestive, Nervous,
 - 4.4. Effect of Yoga on Respiratory, Excretory Systems.
 - 4.5. International Day of Yoga, Common Yoga Protocol suggested by AYUSH
5. **MODULE –V**
 - 5.1. Asana (Sitting, Standing, Bending & Twisting)
 - 5.2. Pranayama (5 types)
 - 5.3. Mudras: Meaning, Techniques & Benefits
 - 5.4. Shat Kriyas- Meaning, Techniques and Benefits
 - 5.5. Bandas: Meaning, Techniques & Benefits
 - 5.6. Meditation: Meaning, Techniques& Benefits
 - 5.7. Relaxation (Shavasana & Makrasana)

Recommended References:

- Authors Guide (2015), International Day of Yoga, Common Yoga Protocol, New Delhi: Ministry of AYUSH, Government of India.
- George Feuerstein. (1975).Text Book of Yoga. London: MotilalBansaridass Publishers (P) Ltd.,
- Gore.(1990). Anatomy and Physiology of Yogac Practices.Lonavala: KanchanPrkashan.
- Helen Purperhart (2004) The Yoga Adventure for Children. Netherlands: AHunter House Book.
- Iyengar, B. K. S. (2000). Light on Yoga. New Delhi: Harper Collins Publishers.

- Kuvalyananda Swami & S.L. Vinekar.(1963). Yogic Therapy – Basic Principles and Methods. New Delhi: Govt of India, Central Health Education and Bureau.
- Kenghe.C.T. (1976). Yoga as Depth-Psychology and para-Psychology (Vol-I): Historical Background, Varanasi: BharataManishai.
- Moorthy .A.M &Alagesan.S. (2004).Yoga Therapy. Coimbatore: Teachers Publication House.
- Swami SatyanandaSaraswathi. (1984). Kundalini and Tantra. Bihar: Yoga Publications Trust.
- Swami Kuvalayananda. (1998). Asanas.Lonavla: Kaivalyadhama.

SEMESTER-III
HEALTH EDUCATION AND SPORTS NUTRITION

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE800302	HEALTH EDUCATION AND SPORTS NUTRITION	ELECTIVE	3	3

COURSE OBJECTIVES:

- To appraise the concept of holistic health through fitness and wellness
- To explain the concept of physical fitness , health related and motor fitness
- To describe the contemporary health issues
- To apply practical principles of fitness & wellness

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Understand the concept of holistic health through fitness and wellness
- Explain the concept of physical fitness, health related and motor fitness
- Evaluate primary health status
- Prepare fitness schedules & evaluate fitness

COURSE CONTENTS

1 MODULE I: HEALTH EDUCATION

- 1.1 Health – Meaning - Definition - Dimensions of Health - Physical - Mental - Social - Emotional – Spiritual
- 1.2 Concept of Health – Positive Health - Spectrum of Health - Determinants of Health
- 1.3 Health Education – Definition – Aims and Objectives – Principles of Health Education
- 1.4 Aspects of Health Education - Health Instruction - Health Service - Health Supervision
- 1.5 Need and Importance of Health Education

2. MODULE II: HYGEINE, HEALTH HAZARDS AND SCHOOL HEALTH

2.1 Meaning of Hygiene – Personal Hygiene - Care of Skin – Nails - Eyes - Dental Hygiene

2.2 Environmental Hygiene for Schools

2.3, Environmental Sanitation - Explosive Population

2.4 Health Hazards - Alcoholism – Smoking – Long Term - Short Term Effects

2.5 Role of Health Education in Schools - Health Services - Nutritional Service – Mid-Day Meals -
Health Appraisal - Health Record - First-Aid and Emergency Care

3. MODULE III: COMMUNICABLE AND HYPO-KINETIC DISEASES

3.1 Communicable Diseases – Non-Communicable Diseases - Definition

3.2 Communicable Diseases - HIV/AIDS – Hepatitis A, B & C – Dengue Fever – Leptospirosis

3.3– Typhoid - Malaria – Chicken Pox – Causes – Prevention

3.4 Non-Communicable Diseases – Cancer – Heart Attack - Causes - Prevention

3.5 Hypo-kinetic Diseases – Causes - Hypertension – Diabetes – Obesity - Stress - Prevention

4. MODULE IV: INTRODUCTION TO SPORTS NUTRITION

4.1 Meaning - Definition - Nutrition – Components of Nutrition - : Carbohydrate - Protein - Fat -
Vitamins - Minerals - Water - Sources – Functions – Deficiency Diseases

4.2 Definition of Sports Nutrition - Role of Nutrition in Sports

4.3 Basic Nutrition Guidelines - Balanced Diet

4.4 Energy Metabolism – Basel Metabolic Rate (BMR)

4.5 Role of Carbohydrates, Fat and Protein during Exercise

5. MODULE V: DIET AND WEIGHT MANAGEMENT

5.1 Concept of Body Mass Index (BMI) - Obesity Detection - Remedies

5.2 Dieting Versus Exercise for Weight Control

5.3 Maintaining a Healthy Lifestyle and Weigh Management Program for Sporty Child

5.4 Role of Diet and Exercise in Weight Management

5.5 Design a Diet Plan and Exercise Schedule for Weight Gain and Loss

RECOMMENDED REFERENCE

Benardot, D. (2012). *Advanced Sports Nutrition*. Champaign, IL: Human Kinetics. ISBN 9781450401616.

Burke, L. (2007). *Practical Sports Nutrition*. Champaign, IL: Human Kinetics ISBN. 9780736046954.

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Dr. A.K. Uppal. (1992). *Physical Fitness*. India: Friends Publications.

Emily R. Foster, Karyn Hartiger& Katherine A. Smith . (2002). *Fitness Fun*. Human Kinetics Publishers.

Koelen, M., & Ban, A. (2004). *Health Education and Health Promotion*. Wageningen, Netherlands: Wageningen Academic Publishers. ISBN 9789076998442.

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Warner W.K. Oeger & Sharon A. Hoeger. (1990). *Fitness and Wellness*. Morton Publishing Company,

SEMESTER-III

PHYSICAL FITNESS , WELLNESS AND LIFESTYLE MANAGEMENT

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE810302	PHYSICAL FITNESS , WELLNESS AND LIFESTYLE MANAGEMENT	ELECTIVE	3	3

COURSE OBJECTIVES:

- To appraise the concept of holistic health through fitness and wellness
- To explain the students about the concept of physical fitness , health related and motor fitness
- To describe the contemporary health issues.
- To apply practical principles of the fitness & wellness

COURSE LEARNING OUTCOMES:

- Understand the concept of holistic health through fitness and wellness
- Explain the concept of physical fitness , health related and motor fitness
- Evaluate primary health status
- Prepare fitness schedules& evaluate fitness

1. MODULE – I

1.1. Meaning and Definition of fitness wellness & Nutrition

1.2. Physical Fitness Concepts, Components, Techniques and Principles of physical fitness.

1.3. Leisure time physical activity, Opportunities in the community to participate leisure activities

2. **MODULE –II**
 - 2.1. Nutrition and wellness
 - 2.2. Body Composition & Weight Management.
 - 2.3. Endurance: Cardio respiratory & Muscular
 - 2.4. Flexibility, Fitness & Wellness relationship
 - 2.5. Stress Management & Behavior Modification.
3. **MODULE –III**
 - 3.1. Measurement of Height & Weight
 - 3.2. Measurement of Body Composition using Skin fold caliper, Bio electric impedance machine
 - 3.3. Measurement of Basic Strength, Endurance and Flexibility
 - 3.4. Assessment of cardio respiratory fitness, Health Related Fitness
 - 3.5. Stress Assessment & its Management Techniques
4. **MODULE –IV**
 - 4.1. Preparation & implementation of Group Exercise Plans
 - 4.2. Preparation & implementation of Personal Training Plans
 - 4.3. Resistance Training for Muscular Strength and Endurance; principles of resistance training,
 - 4.4. Safety techniques (spotting, proper body alignment, lifting techniques, spatial, awareness. and proper breathing techniques) Weight training principles and concepts; basic resistance exercises (including free hand exercise, free weight exercise, weight machines, exercise bands and tubing. medicine balls, fit balls)
 - 4.5. Group Exercises Plan, Personal Training, and Fitness & Wellness Activities for various ages & population
5. **MODULE –V**
 - 5.1. Principles of starting a fitness center-environment, location, policy, offer of program, record keeping, public relation.
 - 5.2. Fitness center membership and its types.
 - 5.3. Safety aspects in a fitness center.
 - 5.4. Qualification and qualities for a fitness trainer

Recommended References:

- David K. Miller & T. Earl Allen, Fitness, A life time commitment, Surjeet Publication Delhi 1989.
- Dificore Judy, the complete guide to the postnatal fitness, A & C Black Publishers Ltd. 35 Bedford row, London 1998
- Dr. A.K. Uppal, Physical Fitness, Friends Publications (India), 1992. Warner W.K. Oeger & Sharon A. Hoeger, Fitness and Wellness, Morton Publishing Company, 1990.
- Elizabeth & Ken day, Sports fitness for women, B.T. Batsford Ltd, London, 1986.
- Emily R. Foster, Karyn Hartiger & Katherine A. Smith, Fitness Fun, Human Kinetics Publishers 2002.
- Lawrence, Debbie, Exercise to Music. A & C Black Publishers Ltd. 37, Sohe Square, London 1999
- Robert Malt. 90 day fitness plan, D.K. publishing, Inc. 95, Madison Avenue, New York

- Hoeger, W., & Hoeger, S. Lifetime physical fitness & wellness. ISBN-13: 978-1285733142
ISBN-10: 1285733142
- Fahey, T., Roth, W., Insel, P., & Insel, C. Fit & well. ISBN-13: 978-0077770396
ISBN-10: 0077770390
- Corbin, C. (2011). Concepts of physical fitness. New York: McGraw-Hill Higher Education. ISBN-10: 9780073523828 ISBN-13: 978-0073523828
- Hoeger, W., & Hoeger, S. Fitness & wellness. (2013) Belmont, CA: Wadsworth, Cengage Learning ISBN-13: 978-1285733159 ISBN-10: 1285733150
- Greenberg, J., Dintiman, G., & Myers Oakes, B. (2004). Physical fitness and wellness. Champaign, IL: Human Kinetics. ISBN-13: 978-0736046961. ISBN-10: 0736046968

SEMESTER-IV SPORTS MEDICINE

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030401	SPORTS MEDICINE	CORE	4	4

COURSE OBJECTIVES

- To apprise the students about the introduction to sports medicine.
- To synthesize a basic concept of sports injuries and rehabilitation.
- To appraise the varied therapeutic aspects of exercise.
- To appraise the understanding of the preventive and curative aspects of sports injuries.
- To explain the understanding of the rehabilitation aspects of sports injuries

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Illustrate and apply the concepts of sports injuries and treatment.
- Interpret the concept of therapeutic aspects of exercise.
- Demonstrate and take care of the preventive and curative aspect of sports injuries.
- Apply the concept of rehabilitation of sports injuries

COURSE CONTENTS

1. MODULE 1: INTRODUCTION

- 1.1 Meaning, Definition and Importance of Sports Medicine
- 1.2 Mobilization Exercise and Importance
- 1.3 Gait Training and Gym Ball Exercise
- 1.4 Injuries: Types of Injury Acute, Sub-acute and Chronic

2. MODULE II: THERAPEUTIC EXERCISES AND THERAPIES

- 2.1 Definition and Principles of Therapeutic Exercises
- 2.2 Need and Importance of Therapeutic Exercises,

- 2.3 Types of Therapeutic Exercises-Resistance training, Muscle stretching exercises (flexibility training) Balance training. Coordination training.
- 2.4 Therapies in Sports Medicine, P.R.I.C.E., Aquatic Therapy and Heat Therapies (Dry heat Therapies and Moist heat Therapies)
- 3. MODULE III: SPINE INJURIES AND EXERCISE**
- 3.1 Head and Neck injuries: General concept Mechanism and approach.
- 3.2 Spine Injuries: General introduction to ligaments and muscular injuries, Complication of injuries to nervous tissue
- 3.3 Principles of Handling a Spine Injured Person.
- 3.4 Free Hand Exercises, Stretching and Strengthening Exercises for Head, Neck and Spine Injuries
- 4. MODULE IV: UPPER EXTREMITY INJURIES AND EXERCISE**
- 4.1 Shoulder Injuries in Sports: Dislocation and rotator cuff injuries.
- 4.2 Elbow, Wrist and Fingers: Sprain, Strain, Dislocations and Strapping
- 4.3 Low back pain: Common causes
- 4.4 General care and prevention of Low back pain
- 5. MODULE V: LOWER EXTREMITY INJURIES AND EXERCISE**
- 5.1 Hip Injury: Identification of signs and symptoms, Causes of Hip injury.
- 5.2 Knee Injuries: Introduction to injuries of Ligaments of knee and meniscus tear, Causes of Knee injuries
- 5.3 Ankle Injuries: Introduction to ankle sprain, Grades of ankle sprain.
- 5.4 Shin bone injuries, Causes and Precautions.

RECOMMENDED REFERENCE

- Mlelion, Morris B. (1996). *Sports Injuries and Athletic Problems*. New Delhi: Surjeet Publications.
- Booher James M. and Thibodeau Gary-A.(1985). *Athletic Injury Assessment*. Toronto: Mosby College Publishing.
- Hutson M. A. (1996). *Sports Injuries*. United Kingdom: Oxford University Press.
- Kulund Daniel. N.(1998). *The Injured Athlete*. Philadelphia: British Jurnel of Lippincott Co.
- Kupria, Werner. (1995). *Physical Therapy for Sports*. Philadelphia: W.B. Saunders Com.
- Mottram, David R. (2004). *Drugs in Sports*. London: Routledge.
- Norris, Chritopher M.(1997). *Sports Injuries*. Oxford: Butterworth Heinmann.
- Porter, Stuart. (2003). *Tidy's Physiotherapy*. Oxford: Buterwort-Heinemann.
- Roy Steven and Richer Irvin. (1983). *Sports Medicine*. Prentice Hall.
- Satpathy,G.C. (2005). *Sports Medicine and Exercise Science*. New Delhi: Isha Books.
- Sherry, Eugele and Bokor. (1997). *Sports Medicine*. London: GMM

SEMESTER-IV
SPORTS MANAGEMENT AND CURRICULUM DESIGN IN
PHYSICAL EDUCATION

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030402	SPORTS MANAGEMENT AND CURRICULUM DESIGN IN PHYSICAL EDUCATION	CORE	4	4

COURSE OBJECTIVES:

- To describe organization and administration of sports program.
- To analyze and interpret sports philosophy, sports sociology, business systems, sports management, public administration and marketing techniques.
- To develop opportunities to construct & design the curriculum of PE in broader aspects realizing the age group, gender consideration and physiological basis

COURSE LEARNING OUTCOMES:

- Identify issues relevant to modern physical education and sport management.
- Explore the area as a career perspective

COURSE CONTENT

MODULE I: INTRODUCTION TO SPORTS MANAGEMENT

- 1.1 Nature and concept of Management – Definition, Scope of management
- 1.2 History and Evolution of Management- Scientific Management to Contemporary Management
- 1.3 Qualities of a good manager
- 1.4 Nature and concept of Sports Management – Definition, Scope,
- 1.5 Role of a sports manager.

MODULE II: FUNCTIONS OF MANAGEMENT – PLANNING

- 2.1 Planning – Definition, Scope of Planning, Purpose of Planning.
- 2.2 Advantages and disadvantages of planning, Types of Plans, MBO concept
- 2.3 Planning process, Environment Analysis
- 2.4 Introduction to Sports Industry – Analysis of Sports Industry
- 2.5 Planning in Sports, Competitive Sports Programs and Community Based Physical education and Sports Program

MODULE III: EQUIPMENTS AND PUBLIC RELATION

- 3.1 Purchase, Care and Supplies of Equipment, Guidelines for Selection and Supplies of Equipment
- 3.2 Equipment Room, Equipment and Supply Manager
- 3.3 Guidelines for Checking, Storing, Issuing, Care and Maintenance of Supplies and Equipment
- 3.4 Public Relations in Sports: Planning the Public Relation Program and Principles of Public Relation
- 3.5 Public Relations in Schools and Communities- Public Relation and the Media

MODULE IV: CURRICULUM

- 4.1 Meaning and Definition of Curriculum
- 4.2 Principles of Curriculum Construction-Students Centered, Activity Centered, Community Centered, Forward-Looking Principle and Principles of Integration
- 4.3 Theories of Curriculum Development- Conservative (Preservation of Culture), Relevance, Flexibility, Quality, Contextually and Plurality
- 4.4. Approaches to Curriculum-Subject Centered, Learner Centered and Community Centered and Curriculum Framework

MODULE V: CURRICULUM SOURCES

- 5.1 Factors Affecting Curriculum
- 5.2 Sources of Curriculum Materials and Curriculum Research
- 5.3 Integration of Physical Education with Other Sports Sciences
- 5.4 Evaluation of Curriculum

RECOMMENDED REFERENCE

- Bill, K. (2009). *Sport Management*. England: Learning Matters. ISBN-13: 978- 1844452637. ISBN-10: 1844452638.
- Bowers, M. (2015). *Sport Management*. Champaign: Sagamore Publishing. ISBN-10: 1571677267. ISBN-13: 978- 1571677266 . (n.d.).
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- Smith, A., & Stewart, B. (1999). *Sports Management*. St Leonards, N.S.W.: Allen &Unwin. ISBN-13: 978-1864487510. ISBN-10: 1864487518 .
- Williams, J.F. (2003). *Principles of Physical Education*. Meerut: College Book House. Yadvnider, Singh.(2004). *Sports Management*, New Delhi: Lakshay Publication .

SEMESTER-IV
ATHLETIC CARE & REHABILITATION

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE800403	ATHLETIC CARE & REHABILITATION	ELECTIVE	3	3

COURSE OBJECTIVES:

- To apprise the students about the introduction to Athletic Care & Rehabilitation
- To synthesize a basic concept of sports injuries and rehabilitation.
- To appraise the varied therapeutic aspects of exercise.
- To appraise the understanding of the preventive and curative aspects of sports injuries.
- To explain the understanding of the rehabilitation aspects of sports injuries
- To describe the knowledge in the field of positive life style.

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Illustrate and apply the concepts of sports injuries and rehabilitation.
- Interpret the concept of therapeutic aspects of exercise.
- Demonstrate and take care of the preventive and curative aspect of sports injuries.
- Apply the concept of rehabilitation of sports injuries.
- Interpret the concept toward positive lifestyle.

COURSE CONTENTS

MODULE I: CORRECTIVE PHYSICAL EDUCATION

- 1.1 Corrective Physical Education, Definition and Objective
- 1.2 Need and Importance of corrective Physical Education
- 1.3 Body Mechanics, Definition, Need and Importance
- 1.4 Examination of Spin and Gait Analysis

MODULE II: POSTURE

- 2.1 Define Posture, Need and Importance of Good posture
- 2.2 Postural deformities and Causes
- 2.3 Upper extremity deviation in Posture: Kyphosis, Lordosis, Scoliosis, Round shoulders, Text neck, Treatments Including Exercises.
- 2.4 Lower extremity deformities in posture: Knock Knee, Bow Leg, Flat Foot. Treatments Including Exercises.

MODULE III: REHABILITATION EXERCISES

- 3.1 Definition, Need and Importance of rehabilitation
- 3.2 Principles of rehabilitation exercise
- 3.3 Types of rehabilitation exercise: Passive, Active, Assisted and Resisted Exercises
- 3.4 Need and Importance of stretching in rehabilitation. Principles Stretching during rehabilitation, PNF Techniques and Principles.

MODULE IV: MASSAGE

- 4.1 Brief History of Massage, Need, Importance and Principles of Massage
- 4.2 Effects of Massage: Physiological, Chemical and Psychological
- 4.3 Indication /Contra Indication of Massage
- 4.4 Types of Massage :Stroking Manipulation, Pressure Manipulation, Percussion Manipulation/Tapotement, Shaking (Vibration)Manipulation

MODULE V: SPORTS INJURIES CARE, TREATMENT AND SUPPORT

- 5.1 Principles Pertaining to the Prevention of Sports Injuries
- 5.2 Care and Treatment of Exposed and Unexposed Injuries in Sports
- 5.3 Principles of Applying Cold and Heat, Infrared Rays- Ultrasonic Therapy, Short Wave Diathermy Therapy
- 5.4 Principles and Techniques of Strapping and Bandages

RECOMMENDED REFERANCE

- Fritz, S. (2013) Sports & Exercise Massage. Elsevier mosby ISBN-13: 978-0323083829 ISBN10: 032308382X .
- Magee, D. (2011). Athletic and Sport Issues in Musculoskeletal Rehabilitation. St. Louis:Mo. Elsevier/Saunders.13: 979 .
- McKone, W. (1997). Osteopathic Athletic Health Care. London: Chapman & Hall.13: 978.
- Miniaci, A, & Iannotti, J. (2014). Disorders of the Shoulder. Philadelphia: Wolter. Kluwer/Lippincott Williams & Wilkins Health.ISBN-13: 978-1451130584.10: 145.
- Puddu, G. Giombini, A. & Selvanetti, A. (2001). Rehabilitation of Sports Injuries. Berlin: Springer.ISBN-13: 978-3540674757. 10: 354.

SEMESTER-IV SPORTS JOURNALISM

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE810403	SPORTS JOURNALISM	ELECTIVE	3	3

COURSE OBJECTIVES:

- To apprise the students about the origin and evolution of journalism and mass media.
- To synthesize a basic concept of reporting and editing.
- To appraise the varied aspects of advertising.

COURSE LEARNING OUTCOMES:

- Apply the concept of reporting and editing.
- Illustrate and apply the advertising concepts.
- Interpret the concept of journalism and mass media

1. MODULE – I

- 1.1. Meaning, Definition, Evolution & scope of Sports Journalism,
- 1.2. Ethics of Journalism – Canons of journalism
- 1.3. Sports Ethics and Sportsmanship,
- 1.4. Reporting Sports Events,
- 1.5. National and International Sports News Agencies,

2. MODULE – II

- 2.1. Introduction to mass communication - The concept of mass media - Mass media in India and its present status.
- 2.2. Mass media institutions in India – Government media units
- 2.3. Press registrar of India, Press council of India - Indian news agencies media educational institutions.
- 2.4. The concept of journalism - the function of press - Press freedom and responsibility and the theories of press - Current trends in journalism.
- 2.5. Sports Photography: Equipment- Editing – Publishing. Mass Media in Journalism: Radio and T.V. Commentary

3. MODULE –III

- 3.1. Reporting, Functions, responsibilities and qualities of reporter - Functional differences of reporters – Special Correspondents, Foreign Correspondents, Columnists, Free lancers, Roving Reporters,
- 3.2. Structure of Advertising - Functions of advertising, Psychology of advertising,
- 3.3. Types of advertising – Advertising media, Structure of advertising agency.
- 3.4.Editing –Magazines – Modern trends of headlines writing – Electronic news editing – Picture editing – Outline writing
- 3.5.Editorial writing – Types of editorials and analysis of editorials.

4. MODULE –IV

- 4.1.Methods of editing a Sports report.
- 4.2.Evaluation of Reported News.
- 4.3.Interview with and elite Player and Coach.
- 4.4.Practical assignments to observe the matches and prepare report and news of the same;
- 4.5.Visit to News Paper office and TV Centre to know various departments and their working.
- 4.6.Preparation of Portfolio of newspaper cuttings of sports news (national & international) for the Semester.

5. MODULE – V

- 5.1. Leads: Introduction and Definition, Importance of Leads. Principles of Leads.
- 5.2. Construction and types of leads - leads for sports reports, individual and Team games.

- 5.3. Track and field events, entries of score board and statistics
Editing Copy reading and handling sports news.
- 5.4. Design and make-up of the sports page elementary.
- 5.5. Knowledge of typography and various process of printing. Newspaper style and slant.

Recommended References:

- Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi : Surjeet Publications
- Ahiya B.N. Chobra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication
- Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication
- Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press.
- Kannan K (2009) Soft Skills, Madurai: Madurai: Yadava College Publication
- Mohit Chakrabarti (2008): Value Education: Changing Perspective, New Delhi: Kanishka Publication.
- Billings, A., Butterworth, M., & Turman, P. (2012). Communication and sport. Thousand Oaks,
- Billings, A. (2014)Routledge handbook of sport and new media. RoutledgeISBN-13: 978-0415532761 ISBN-10: 0415532760
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- Sandvoss, C., Real, M., & Bernstein, A. (2012). Bodies of discourse. New York, NY: Peter Lang.ISBN-13: 978-1433111730ISBN-10: 143311173X
- Deninger, D. (2012). Sports on television. New York: Routledge.ISBN-10: 0415896762 ISBN-13: 978-0415

**SEMESTER-IV
DISSERTATION**

COURSE CODE	TITLE OF THE COURSE	TYPE OF THE COURSE	HOURS PER WEEK	CREDITS
PE030405	DISSERTATION (PROJECT AND VIVA)	CORE	2	2+1

COURSE OBJECTIVES

- To enable the students to develop skills and competencies for conducting rigorous, theoretically correct and practically relevant research in Physical Education & Sports

COURSE LEARNING OUTCOMES:

After completing this course, the students will be able to

- Develop scholarly inquiry into a problem or issues, involving a systematic approach of gathering and analysis of information/data, leading to production of a structured report.

TEACHING LEARNING STRATEGIES:

- The dissertation topic should be approved by the committee comprising of external subject expert
- The students shall be encouraged to take part in discussion, use of library, seminars & presentations.

MODE OF TRANSACTION

- Viva/ Seminars/ Theme Papers/Assignments/ Presentations/Self-Study etc.

PART- B

PRACTICAL COURSES

TRACK AND FIELD

MODULE I

- 1.1 Introduction: History and development of Track and Field events
- 1.2 Organizational setup of Track and Field Athletics
- 1.3 Major competitions and National and International levels

MODULE II

- 2.1 Rules and Officiating in Track and Field; Principles of officiating
- 2.2 Track and Field layout and Marking

MODULE III

- 3.1 Fundamental techniques of Track events, Sprint events – Running form, starting and finishing technique.
- 3.2 Middle and long distance running
- 3.3 Walking events – walking technique
- 3.4 Hurdles Events – Hurdling technique

MODULE IV

- 4.1 Fundamental techniques of Jumping events; Long jump – Mechanics of Jumping Hang style and hitch-kick techniques-Approach run, Take off, action in the air landing.
- 4.2. High jump – Straddle-role and Fosbury techniques

MODULE V

- 5.1 Fundamental Technique of Throwing Events – Mechanics of throwing.
- 5.2 The shot put, Technique-Initial stance, glide/turn, throwing position, release recovery.
- 5.3 The discus throw, Technique-initial stance preliminary swing, the turn throwing position, release, recovery.
- 5.4 The javelin throw, Technique-the grip, carry, five-stride rhythm release, recovery.
- 5.5 The hammer throw, Technique-the grip, initial position, preliminary swing, the turn release and reverse.

MODULE VI

- 6.1 Combined Events-Decathlon and Heptathlon – General principles of training for combined events.

MODULE VII

- 7.1 Pedagogic Principles of Track and Field Training:
 - a) Periodization of training – preparatory training build up training –high performance training.
 - b) Training plans – Long term plan, yearly plan, monthly and weekly schedule, day's program physical qualities.

MODULE VIII

8.1 Training Means and Methods

- a) Conditioning
- b) Warming Up – general and specific
- c) Development of physical fitness and motor qualities.
- d) Specific training for techniques development tactics- effect of training in attitude.

MODULE -IX

9.1 Talent Identification

9.2 Training youth athletes and women athletes

9.3 Psychological preparation for competition in track and field.

MODULE -X

10.1 Common Injuries in Track And Field during Training and Competitions

10.2 Prevention, treatment and rehabilitation of athletic injuries.

10.3 Doping and its control

Recommended References

- Carr, Gerry R Fundamentals of Track and Field, Mumbai The Marine Sports 1995.
- Ekta. Teaching and Coaching Athletics, New Delhi: Sports Publication. 2003.
- Emmanuel, George Athletic meet- Marking, Rules, Directions, Cicily George: Kottayam 2001
- Lawson, Gerald, World Record Breakers in Track and Field Athletics, New York: Human Kinetics, 2000
- Thani V. Encyclopedia of Track and Field, New Delhi: Sports Publication. 2003

BASKETBALL

MODULE -I

1.1 History and development of Basketball

1.2 Organizational setup of Basketball at national and international level.

1.3 Distinguished personalities

MODULE -II

2.1 Rules and officiating the Game - duties of officials

2.2 Coach, captain, game observation

2.3 Individual and group scouting and statistical analysis of players and matches

2.4 Objective and subjective tests.

MODULE -III

3.1 Organizational setup at the International Level-FIBA

3.2 Structure of the National Federation,

MODULE-IV

4.1 The Court-Dimensions and Markings

4.2 Equipment and its measurement

4.3 Teaching Aids

MODULE-V

- 5.1 Fundamental Skills- Dribbling-Basic and reverse dribbling
- 5.2 Ball Handling-Grip. Pivoting, Stride stop. Jump Stop
- 5.3 Passing- Chest Pass, Over Head Pass, Bounce Pass
- 5.5 Shooting. The Set Shot, The Jump Shot, The Lay-Up Shot
- 5.6 The Rebound-Boxing out, Tipping-in, Defensive catching, Offensive catching
- 5.7 Defending- Stance, Defense against a dribbler, Marking a passer, Preventing pass reception

MODULE VI

- 6.1 Advance Skills-Cross over dribbling, between the legs dribbling, behind the back dribbling, fake and drive, tip off during jump ball
- 6.2 Advanced Shooting- The Hook Shot, The Slam Dunk
- 6.4 Fake and Drive.

MODULE-VII

- 7.1 Dribbling Drills - Dribbling reaction, dribbling cones, dribbling tag, traffic jam dribbling
- 7.2 Passing Drills- Wall passing. piggy in the middle, 2-player passing drill, Machine gun passing
- 7.3 Shooting Drills One player drill, around the world, lay-up drill, three-man shooting drill
- 7.4 Rebound Drills-One-Player drill, Tipping in drill, one on one drill
- 7.5 Defensive Drills-Zig-Zag drills, Denial drill, Two on Two play.
- 7.6 Fast break drills with three players and five players.

MODULE -VIII

- 8.1 Selection of teams and organization of short-term camps
- 8.2 teaching and coaching aids and gadgets
- 8.3 Lay out construction and maintenance of playground, equipment management
- 8.4 Precautions and remedial measures of basketball injuries.

MODULE -IX

- 9.1 Warming up and Stretching
- 9.2 Diet and Mental attitude

Recommended References

- Drewett, Jim. Basketball @ Internet Linked, London: Ticklock Publishing Ltd. 2001
- Jain, Naveen. Play and Learn Basketball, New Delhi Sports Publications, 2005.
- Sharma Basketball Skills and Rules, New Delhi: Sports Publications 2005.

CRICKET

MODULE-I

- 1.1 History and development of cricket-Bodyline and Ashes Series, Historical development of Cricket in England, Australia, West Indies, South Africa, New Zealand, India, Pakistan, Sri Lanka, Zimbabwe and Bangladesh
- 1.2 History of Women's cricket.
- 1.3 History of Indian cricket
- 1.4 History of One-day cricket
- 1.5 History of World Cup Cricket
- 1.6 History of Twenty-Twenty Cricket

MODULE-II

- 2.2 Cricket Controlling Bodies and its Organizational Set up- ICC, MCC and TCCB
- 2.3 Organizational setup, aims and objectives of B.C.C.I.
- 2.4 Standing committees of B.C.C.I.
- 2.5 Major tournaments organized by B.C.C.I.

MODULE-III

- 3.1 Layout and maintenance of the oval.
- 3.2 Dimensions of the field.
- 3.3 Pitch-Types of Pitches and preparation and maintenance of a Turf Wicket
- 3.4 Essential equipment, measurements of equipment.
- 3.5 Teaching Aids
- 3.6 Warming up, importance of warming up.

MODULE-IV

- 4.1 Fundamental skills-Batting-Basics, Defensive strokes, Attacking strokes, Modern improvised strokes Running between the wickets and Drills to improve the batting skills
- 4.2 Bowling-Basics, Out swinger, in swinger, Reverse swing, Off spin and its variations, Leg spin and its variations and Drills to improve the bowling skills.
- 4.3 Fielding-Ground fielding. (Stationary, on the run and Slide stop) Catching (High Low, Flat and Reflex Catching)
- 4.4 Wicket Keeping-Drills to improve the wicket keeping skills.

MODULE-V

- 5.1 The laws of cricket with interpretations.
- 5.2 Officials in Cricket
- 5.3 Umpires and their duties.
- 5.4 Duties before the match
- 5.5 Duties during the interval
- 5.6 Duties after the match.
- 5.7 Signals, Unofficial and additional signals

MODULE-VI

- 6.1 Captaincy: Qualities of a good captain.
- 6.2 Duties of captain
- 6.3 Symptom of bad captaincy.

MODULE-VII

- 7.1 Criteria for selection of players at various levels.
- 7.2 Warming up, conditioning and training process.
- 7.3 Training methods.
- 7.4 Planning a Coaching camp: Annual, Weekly and daily plan.

MODULE VIII

- 8.1 Psychological qualities of cricket player.
- 8.2 Method of developing psychological qualities. Psychological Skills Training.

MODULE-IX

- 9.1 Injuries in cricket, prevention and first aid.
- 9.2 Nutrition for cricket players.

MODULE-X

- 10.1 Modern Trends in Cricket
- 10.2 Cricket Vocabulary, Award winners and Records.

Recommended References

- A Handbook of Practical Training in Cricket, Mumbai: Jaico Publishing House, 1998

- Bose, Mihir. A History of Indian Cricket, New Delhi: Rupa& Co. 1990.
- Bradman, Donald. The Art of Cricket, London: Robson Books, 1998
- Coaching Youth Cricket, Australian Cricket Board, New York: Human Kinetics. 2000.
- Elliot, Bruce et al. The Science of Fast Bowling, Mumbai Marine Sports 2001
- Rundell, Michael. The Dictionary of Cricket, London: George Allen & Unwin. 1985.
- Smith, Tom. New Cricket Umpiring and Scoring, London: Weidenfeld& Nicolson. 2004
- Stewart, Alec. The Young Cricketer, London: DK. 1999.
- The Laws of Cricket (2000 Code 2nd Edition 2003) Issued by BCCI.
- Tyson, Frank. Learn Cricket with Frank Tyson, New Delhi: Rupa& Co. 2002.
- Wills Book of Excellence. Cricket, Hyderabad: Orient Longman Limited. 1987.
- Wisden Cricketer's Almanack 2006.

FOOTBALL

MODULE-I

- 1.1 Origin, history and development of the game
- 1.2 Organizational set up of Soccer in National and International level-administrative set up of FIFA:
- 1.3 Major competitions at International and National level.

MODULE-II

- 2.1 Rules of the game and their interpretations
- 2.2 Mechanism of officiating, quality of officials
- 2.3 Lay out and maintenance of football field
- 2.4 Equipment specifications of the game
- 2.5 Players and match officials.

MODULE-III

- 3.1 Pre-requisite qualities of football players: physical qualities, motor qualities, psychological characteristics and sociological aspects.

MODULE-IV

- 4.1 Fundamental techniques of soccer: Kicking - Push-pass, low drive, outside foot kick, banana kick, high drive, chip pass, half volley, side volley, overhead kick.
- 4.2 Heading:- Heading the ball, throw in, feints with the ball, tackling.
- 4.3 Goal keeping - Collecting over rolling the ball, flying ball at hip level, chest level, head level, over the head level, punching the ball, diving for the ball, movements of the goal keeper

MODULE-V

- 5.1 Tactics of the game; Team formation systems, W-M, 3-2-5, 4-2-4, 4-3-3, 4-4-2
- 5.2 Rational distribution of players, Total football.
- 5.3 Attacking tactics: Position attack, counter attack, elements of attack-dribbling, feinting, shooting at goal- team work and individuality, elements of defense, marking, non-marking, zonal covering, combined marking, challenging the ball, tackling, playing safe and taking risk, specialist players and all rounder substitution.

MODULE VI

- 6.1 Training soccer play: General principles, warming up-general and specific, conditioning
- 6.2 Periodization of training, long term and short term training plan
- 6.3 Fundamental training, set piece play, pressure training, recovery, conduct of coaching program for short duration

MODULE-VII

- 7.1 Selection of players, identification of talents, basic training, team preparation
- 7.2 Role of a coach before, during and after the game
- 7.3 Psychological preparation for competitions

MODULE-VIII

8.1 Common injuries in football: Knee injuries, head injuries, back injuries

8.2 Prevention treatment and rehabilitation of injuries

8.3 Nutrition for football players.

Recommended References

- ASEP. Officiating Soccer, New York: Human Kinetics.2004.
- Bauer, Gerhard. Soccer Techniques, Tactics and Teamwork, New York: Sterling Publishing Co. 1993
- Macdonald, Malcolm. How to Score Goals, London: The Kingwood Press. 1985.
- Moynihan, John. Soccer Focus, London: Simon and Schuster. 1989
- NSCAA. The Soccer Coaching Bible, New York: Human Kinetics.2004.
- Rees, Roy and Meer, Cor Van Der. Coaching Soccer Successfully, New York: Human Kinetics. 2003
- Reilly T et al. Science and Football, London: E & F.N. Spon. 1988.
- Reilly, Thomas and William, A. Mark. Science and Soccer, London: Routledge 2003
- Smith, Dave et al. Football Skills and Tactics, Octopus Publishing Group 2002.
- Ward, Adam and Lewin, Trevor Junior Football, London: Bounty Books. 2003

HANDBALL

MODULE-I

1.1 Origin, history and development of the game.

1.2 Organizational set up of handball in National and International level-administrative set up of International and National Federation.

1.3 Major competitions at International and National level.

MODULE-II

2.1 Rules of the game and their interpretations; mechanism of officiating, quality of officials.

2.2 Lay out and maintenance of indoor and outdoor handball courts

2.3 Equipment specifications of the game, players and match officials.

MODULE-III

3.1 Selection of players, pre-requisite qualities of handball players: physical qualities, motor qualities, psychological characteristics and sociological aspects.

MODULE-IV

4.1 Fundamental techniques of handball - Teaching coaching passing, dribbling, shooting goal-keeping throw-in, throw-off, goal throw, free throw etc.

MODULE-V

5.1 Tactics of the game; Team formation systems of play

5.2 Attacking tactics: Position attack, counter attack, elements of attack-dribbling, feinting, shooting at goal-penalty shoot, team work and individuality, elements of defense, marking, non marking, zonal covering fast-break

MODULE-VI

6.1 Training handball; general principles, warming up-general and specific, conditioning

6.2 Periodization of training, training for the development of basic fitness qualities of long term and short term training plan.

6.3 Fundamental training, pressure training, recovery, conduct of coaching program for short duration.

MODULE-VII

7.1 Selection of players, identification of talents, basic training, team preparation

7.2 Role of a coach before, during and after the game

7.3 psychological preparation for competitions.

MODULE-VIII

8.1 Common injuries in handball shoulder injury, elbow injury. knee injuries, head injuries, back injuries ankle injury

8.2 Prevention, treatment and rehabilitation of injuries.

REFERENCES1. Jain D. Play and Learn Handball, New Delhi: KhelSahitya Kendra. 2005.

VOLLEYBALL

MODULE-I

1.1 History of volleyball, the development of game in the world, volleyball in Asia, volleyball in India

1.2 Organizational set up FIVB, AVC, and VFI

1.3 Recipients of Arjuna award and Dronacharya award.

MODULE-II

21 Warming up, importance of warming up, principles of warming up, methods of warming up: general, specific and competition warming up, warm down

22 Court making: Construction and maintenance of volleyball court essential and additional equipment in volleyball

23 Rules of volleyball and their interpretation.

24 Duties of officials, Beach volleyball

MODULE-III

3.1 Teaching and training of the techniques with analysis of volleyball pass (overhead pass) under hand pass (Dig pass), underhand service, tennis service, upper hand back pass, floating service, pass in jump straight smash, smash with body turn, wrist outward smash, wrist inward smash, hesitation and smash, zig-zag smash back-court attack, rising bail attack, Jump service, one man pass with back rolling volley pass with back rolling, forward dive and pass, single block, group block and setup. Training the setter and attack on direct pass from back court.

MODULE-IV

4.1 Organization of competitions: Types of competitions and organization of competitions

4.2 Systems of conducting the competition and world, Asia, Commonwealth, regional and national levels.

4.3 Methods of drawing, fixtures, to divide positions at the end of competitions.

4.4 Philosophy of officiating-mechanics of officiating, steps to improve officiating.

4.5 Pre-requisite characteristics of a volleyball player.

MODULE-V

- 5.1 Tactics: Tactical training, individual tactics in service, service reception, setup, attack block and defense
- 5.2 Group tactics: 1) Service reception: 6 men reception, 5 men reception. 4 men reception, 3 men reception, 2 men reception
- 5.3 Attacking combinations: attack by 2.3 front row players and back row players and methods of teaching attacking combinations.
- 5.4 Defense: Methods of teaching the defense system. Free ball defense (defense with no block). 2-1-3 forward angle defense. 2-1-3 backward angle defense. 2-0-4 defense system. 1-2-3 defense system. 2-2-2 defense system. 1-1-4 defense system 3-0-3 defense system. 3-1-2 defense system. Covering of the attack and methods of teaching

MODULE-VI

- 6.1 Test and measurements: Specific test for volleyball (endurance, speed, flexibility, explosive straights of arms and legs, jumping ability and speed endurance).
- 6.2 Tests for skills: Service- dig pass, volley pass, set up test, attack test, defense test.
- 6.3 Selection of players and team composition: Talent selection, selection of a team, selection of team captain, selection of starting six for immediate participation in competitions, team composition, scouting, preparation of scout report, procedures, areas scouted, using of scout report in individual player coaching and team coaching.

MODULE-VII

- 7.1 Psychological characteristics of a volleyball player: Psychological qualities required to specific position, methods of developing psychological qualities.
- 7.2 Grading the team before, during and after the match, tactics of substitution and time-out, rhythm of the game, switching of players, direct preparation of a team for a decisive competition.

MODULE-VIII

- 8.1 Complex training, functional training, pressure training, concentration training, will training, situational training, small court games.

MODULE-IX

- 9.1 Periodization and planning, long term plan, annual plan, weekly and daily plan
- 9.2 Injuries in volleyball prevention and first aid measures nutrition of volleyball players, fatigue and recovery measures.

Recommended References

- Arora, Monika. Volleyball Coaching Manual, New Delhi Sports Publications 2005
- Jain D. Volleyball-Skills and Drills, New Delhi: Sports Publications, 2003.
- Jain, Renu. Play and Learn Volleyball, New Delhi: Sports Publications, 2005.
- Official Volleyball Rules, FIVB. 2005

MODEL QUESTION PAPERS

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

Semester I

Faculty of Education

PE030101 - RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

1. What is plagiarism?
2. What is literature review?
3. Write the guidelines for constructing questionnaire.
4. Explain case study method.
5. What is data?
6. Types of sampling.
7. Explain case study method.
8. Explain the meaning of research.
9. What is observation method?
10. What is secondary data?

(8 x 1 = 8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

11. Explain the need for research design.
12. What is research hypothesis?
13. What are the factors determining sample design?
14. What are the criteria of a good research?
15. Explain the different methods of collecting data.
16. Explain range and standard deviation
17. Define mean, median and mode.
18. Comment on the characteristics of a good sample design.

(6 x 2 = 12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

19. Explain Qualitative research.
20. Elaborate on the need and importance of research in recreation, leisure & sports.
21. Explain the contents of research proposal.
22. Discuss the problems encountered by researcher in India.

(2 x 5 = 10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

I Semester

Faculty of Education

PE030102–PHYSIOLOGY OF EXERCISE

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

1. What are motor units?
2. What are the different muscle fiber types?
3. Stroke Volume.
4. Total lung capacity
5. Difference between muscle soreness and cramp?
6. Direct calorimetry.
7. Explain Neuro muscular fatigue.
8. Resting metabolic rates.
9. Define exercise physiology.
10. Central nervous system

(8 x 1 = 8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

11. Explain the types of muscle contraction.
12. Write about Respiratory responses to acute exercise.
13. What are the factors to be considered while planning exercise program for kids?
14. Explain basic energy systems
15. Explain types of muscle contraction.
16. Explain the mechanism of pulmonary ventilation.
17. Define sliding filament theory.
18. Comment on exercise adaptations of muscle fiber types .

(6 x 2 12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

19. Effect of exercise on cardiovascular system.
20. Explain the role of Exercise Physiology in the field of physical education.
21. Explain different type of energy systems.
22. Discuss structure and function of exercising muscle.

(2 x 5 = 10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

I Semester

Faculty of Education

**PE030103-TEST, MEASUREMENT AND EVALUATION IN PHYSICAL
EDUCATION**

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** of the following questions. Each question carries a weight of 1)

1. Define test.
2. Define norms.
3. What you mean by cardio respiratory endurance?
4. Benefits of anthropometric measurements.
5. Explain cooper test.
6. Define posture.
7. Define reliability coefficient.
8. Scoring procedure of Miller wall volley test.
9. What is the test items used in Leilich basketball test?
10. What is body composition?

(8 x 1 = 8)

Section B

(Answer any six of the following questions. Each question carries a weight of 2)

11. Define the taxonomy of educational objectives.
12. Which are the items included in the JCR test?
13. Explain Rating scale.
14. Define the steps of test construction and evaluation of a physical performance test.
15. Note on psychomotor test.
16. Define evaluation.
17. Define cognitive test.
18. Define the criterion for selection of a test.

(6 x 2 = 12)

Section C

(Answer any two of the following questions. Each question carries a weight of 5.)

19. Which are factors effecting reliability?
20. Brief note on weight training monitoring.
21. Define test, measurement and evaluation? Explain the importance in the field of sports.
22. Define validity. Explain the criterions and factors affecting validity.

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

II Semester

Faculty of Education

PE030201 – APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

I. Answer any **eight** of the following questions

1. Statistics and types of statistics
2. Type I and Type II errors
3. Sampling and types of sampling
4. One tail and two tail tests
5. Level of significance
6. Degrees of freedom
7. Types of statistical data
8. Sampling error
9. Independent test
10. Frequency distribution

(8x1=8)

PART-B

II. Write short note on any **six** of the following questions

11. Correlation and types of correlation
12. Normal curve and divergence from normality
13. Statistics and their uses in physical education field
14. Partial and multiple correlation
15. Explain mean, median, mod of grouped and ungrouped data
16. Independent and depended 't' test
17. Testing of hypothesis and difference between statistical and null hypothesis
18. Explain range and standard deviation

(6x2=12)

PART-C

III. Write essay on any **two** of the following questions

19. Calculate r of following data
 - i. A – 12,8,11,2,4,7,5,6,13,18
 - ii. B - 11,14,9,5,12,15,2,7,13

Find Spearman's rank correlation coefficient between X and Y for this set of data:

X - 13 20 22 18 19 11 10 15
Y - 17 19 23 16 20 10 11 18

Find out F ratio of the following data

X – 9 10 11 13 15 12 10 8

Y – 12 14 15 16 10 8 11
Z – 20 18 12 16 17 10 13 9 13

20. Calculate mean median and standard deviation of following class interval

Class Interval	Frequency
15 – 25	60
25 – 35	35
35 – 45	22
45 – 55	18
55 – 65	15

(2 x5=10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

II Semester

Faculty of Education

PE030202 –SPORTS BIOMECHANICS AND KINESIOLOGY

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

1. What is Biomechanics?
2. What is Electromyography (EMG)?
3. What is Force Plate?
4. What is Centripetal Force?
5. What is Friction?
6. Define Stability.
7. Define Inertia.
8. Define Buoyancy
9. What is the law applicable at the time of take-off in long jump?
10. What is Buoyancy?

(8 x 1 = 8

Section B

(Answer any **six** questions. Each question carries a weight of 2)

11. What is biomechanics and how is it different from the two common meanings of kinesiology?
12. What are the specific foci of kinematic and kinetic analyses, and provide some examples?
13. Name and define the three kinds of muscle actions
14. What is an example of the Force– Motion Principle in human movement?
15. What factors should be considered when defining the appropriate range of motion for a particular movement?
16. Explain Wind Tunnel test.
17. Restate Newton's Three Laws of Motion in Angular Kinetic terms.
18. Why do golf balls have dimples?

(6 x 2 = 12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

19. Which biomechanical principles are relevant to the pushup exercise? How does changing hand position from a wide base of support to a narrow base of support modify the importance of these principles?
20. Elaborate on the need and importance kinesiology and biomechanics in physical education.
21. Explain the biomechanics of high jump Technique.
22. Discuss the problems encountered by researcher in Kinesiology and biomechanics.

(2 x5 = 10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

III Semester

Faculty of Education

PE030301-SCIENTIFIC PRINCIPLES OF SPORTS TRAINING

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

1. What are the symptoms of over load?
2. What are the methods of Tactical training?
3. Explain Repetition method.
4. What are the rules governing Performance checks and motor test?
5. Explain Main and Build-up competitions?
6. What are the Phases of skill acquisition?
7. Explain the importance of Coordinative abilities?
8. What are the important features of Training load?
9. What are the factors affecting recovery process?
10. Explain Interval method?

(8 x 1 = 8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

11. Explain the methods of development of Flexibility.
- 12 Explain Periodization and its types.
11. Explain the importance of talent identification.
- 12 Explain the training methods of coordinative abilities.
- 13 What is Wind Sprint?
- 14 What are the basic tactical concepts?
- 15 Explain how to tackle over load.
- 16 What are the qualities of a good coach?

(6 x 2 = 12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

12. What are the important features of training load?
13. Explain Principles of Training load.
14. What are the Training methods to improve endurance?
15. Explain the Principles and methods of Strength Training.

(2 x 5 = 10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

III Semester

Faculty of Education

PE030302- INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

IN PHYSICAL EDUCATION

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

1. What is Computer?
2. What is CPU?
3. What is mean by free software ?
4. What is Word Processor?
5. What is Clipboard ?
6. What is Spreadsheet?
7. What is a chart in Excel?
8. What is slide transition?
9. How can you change the font color in PowerPoint?
10. What is LAN

(8 x 1 = 8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

1. What are the difference between hardware and software?
2. What is the difference between Editing and Formatting?
3. Elaborate the features of M S Word.
4. Explain the procedure for inserting headers and footer in word.
5. Explain the advantages of I T Act2000
6. Explain the procedure for changing font, font size and font color in word
7. Explain different type of networks
8. Explain primary memory and secondary memory **(6 x 2 = 12)**

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

1. Define computer. Explain its the advantages and disadvantages
2. What is an electronic spread sheet? what are the advantages and disadvantage of spread sheet?
3. What is chart? Which are the different type of chart? How to create a chart in excel?
4. How the following tasks are performed in PowerPoint?
 - Copy a slide
 - Inserting picture in slide

- Inserting a movie clip

(2x5= 10)

MASTER OF PHYSICAL EDUCATION AND SPORTS
III Semester
Faculty of Education
PE800301 - SPORTS PSYCHOLOGY
(ELECTIVE)
(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any eight of the following questions. Each question carries a weight of 1)

1. What is Sports Psychology?
2. What is Stress?
3. What is mean by attention?
4. What is imagery?
5. Define self-confidence.
6. What is frustration?
7. Define personality
8. Define motivation.
9. What are extrinsic rewards?
10. Define leadership

(8 x 1 = 8)

Section B

(Answer any **six** of the following questions. Each question carries a weight of 2)

11. Define goal setting. What are the different types of goal settings?
12. Define anxiety .what are different methods of anxiety reduction techniques?
13. What is attention? Explain its dimensions
14. What is self-confidence and explain self-efficiency theory
15. What is aggression and explain its types
16. What is motor skill acquisition and explain its phases
17. Define emotion and explain its types
18. Explain importance of motivation in peak performance

(6 x 2 = 12)

Section C

(Answer any **two** of the following questions. Each question carries a weight of 5.)

19. What is sports psychology and explain its nature and scope?
20. Define Attention and explain its importance and dimensions.
21. What is personality? Briefly explain any two theories of personality.
22. What is leadership? explain components of effective leadership.

(2x5=10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

III Semester

**Faculty of Education
PE810301 -YOGIC SCIENCES**

(ELECTIVE)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

2. Define Chakrasana
3. Define Sarvangasana.
4. Define Vrikshasana
5. Define Padmasana.
6. How many activities are there in pranayama?
7. What are the limbs of yoga? (Ashtanga yoga)
8. Explain dhyana.
9. Define Yama and Niyama.
10. Explain Dhanurasana.
11. Explain Kriya in yoga.

(8 x 1 = 8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

12. Explain eight limbs of Yoga
13. What is the difference between Yoga and Exercise?
14. Comment on Principles of Breathing –Awareness & Relaxation.
15. Explain Hatha yoga.
16. Benefits of Chakras in yoga
17. Explain Ardha Matsyendrasana.
18. Explain garudasana.
19. Benefits of yoga in the field of physical education.
20. Explain the need & importance of surya namaskar.

(6 x 2 =12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

21. Role of Yoga in Psychological Preparation of athlete. Explain.
22. Effect of Yoga on Circulatory System.
23. Explain any three sitting asanas and its benefits?
24. Explain the role of yoga in physical education and sports.
25. Explain the psychological effects of pranayama.

(2 x 5 =10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

III Semester

Faculty of Education

**PE800302– HEALTH EDUCATION AND SPORTS NUTRITION
(ELECTIVE)**

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

- 1 What is Micro Nutrient?
- 2 What is DASH Diet?
- 3 What is Balanced Diet?
- 4 What are the classes of Lipids?
- 5 What is Hyponatremia?
- 6 What is Estimated Average Requirements?
- 7 What is Paleo Diet?
- 8 Name the Types of Sports Drinks?
- 9 Explain the Role of micro nutrients in sports performance.
- 10 Explain the Types of Amino Acids.

(8 x 1 = 8)

Section -B

(Answer any **six** questions. Each question carries a weight of 2)

- 11 Explain the effect of Dehydration on exercise performance.
- 12 What is the role of Micro nutrients in sports performance?
- 13 What are the factors influencing energy metabolism?
- 14 Explain the effect of supplements in performance.
- 15 What is the role of protein in muscle recovery?
- 16 Explain Blood Type diet.
- 17 Explain the effect of fluid intake on exercise.
- 18 Explain dietary reference intakes.

(6 x 2 = 12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

- 19 Explain diet types.
- 20 Explain the role of fluids in sports performance.
- 21 Explain the effect of any five supplements in performance.
- 22 Explain the role of Lipids in Physical activity.

(2x5=10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

III Semester

Faculty of Education

PE810302 -PHYSICAL FITNESS WELLNESS AND LIFE STYLE MANAGEMENT

(ELECTIVE) (2021 admissions onwards)

Time: Three hours

Section- A

Max. Weight: 30

(Answer any **eight** questions. Each question carries a weight of 1)

1. Define Explosive Strength
2. What is tidal volume?
3. Mental Age and Chronological Age
4. Define Life expectancy
5. Vo2 Max.
6. What is Agility?
7. Diabetic Mellitus
8. Give the name of any two methods used to measure body composition?
9. Name the activities suitable for developing physical fitness
10. What are the signs of an emotionally healthy person? (8x1=8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

11. Differentiate low and high impact physical activities with examples
12. What you mean by Sarcopenia and Osteopenia?
13. Explain the important principles of developing Flexibility
14. What are the factors influencing muscular endurance?
15. Explain about the common injuries associated with fitness exercise program
16. What are the stages of Puberty?
17. Explain the dimensions of wellness
18. What are the different types of intimacy? (6x2=12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

19. Explain competitive anxiety?
20. Explain motivational and mental toughness?
21. What are the components of Health Related Physical Fitness and how to improve these components?
22. What are benefits of Muscular fitness in body systems?
23. Explain the changes occur to body systems associated with aging. (2x5=10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

IV Semester

Faculty of Education

PE030401– SPORTS MEDICINE

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

- 1 What is Sports Medicine?
- 2 What is Therapeutic Exercise ?
- 3 What is Balanced Training Exercise?
- 4 What is Strengthening Exercise?
- 5 What is Mobilization Exercise?
- 6 What is GAIT Training ?
- 7 What is Gym-ball Exercise?
- 8 Name of the major Sports Injuries?
- 9 Explain Acute Injury.
- 10 Explain the P.R.I.C.E Therapy. (8 x 1 = 8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

- 11 Explain basic rehabilitation.
- 12 What is Neuro Muscular facilitation?
- 13 What Isotonic and Isokinetic stretching?
- 14 Explain the danger of stretching.
- 15 What are the advantage of stretching?
- 16 Explain Spine Injuries.
- 17 Explain Head Injuries.
- 18 Explain Wrist and Finger injuries. (6 x 2 = 12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

- 19 Explain Coordination exercise, balance training exercise.
- 20 Explain the spine injuries and exercise.
- 21 Explain the Upper extremity injuries and exercise.
- 22 Explain the Lower extremity injuries and exercise.

(2 x 5 = 10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

IV Semester

Faculty of Education

PE030402– SPORTS MANAGEMENT AND CURRICULUM DESIGN IN PHYSICAL EDUCATION

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

1. Define Management.
2. What is Curriculum design?
3. Importance of Management
4. Basic Principles of Management
5. What are the Qualities of a good Manager?
6. Need of Volunteers Management.
7. What is Personal Management?
8. Explain procedure of sports management.
9. What do you mean by check list?
10. What is time management?

(8 x 1 = 8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

11. Explain SWOT Analysis
12. Differentiate between Sports events and non-sports events
13. Enumerate Communicating with staff.
14. Explain Waste Management.
15. What are the benefits of competitive sports program?
16. Explain the basic idea of managing spectators
17. Comment on the Benefits of Checking, Storing, Issuing, care and Maintenance of equipment.
18. What are the factors affecting curriculum?

(6 x 2 = 12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

19. Explain in detail in various sources of curriculum materials.
20. Explain what are the different objectives of curriculum research.
21. Elaborate the sports day management process in a school.
22. What are the different methods of evaluation?

(2 x 5 = 10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

IV Semester

Faculty of Education

**PE800403 :ATHLETIC CARE AND REHABILITATION
(ELECTIVE)**

(2021 Admissions onwards)

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

1. What are the objectives of Sports Medicine?
2. What are the causes of overuse injuries?
3. What are the stages of healing?
4. Define Athletic care
5. Define Whirlpool
6. Explain Tennis Elbow
7. Explain the difference between dislocation and subluxation
8. Expand MEAT in first Aid
9. Ligaments of the knee
10. Different types of Sprains

(8 x 1 = 8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

11. Role of warming up in an exercise program
12. Write a brief history of Sports medicine in India
13. Write about the common skin injuries
14. First aid for concussion
15. Causes of shoulder injuries
16. Explain Sprain ,Strain and fractures
17. Write about advance therapeutic modalities.
18. Types of Skin Wounds

(6 x 2 = 12)

Section C

(Answer any **two** questions. Each question carries a weight of 5.)

19. What are the common predisposing factors of athletic injuries?
20. Elaborate about the various first aid protocols for athletic soft tissue injuries
21. Role of Massage in the treatment of athletic injuries
22. Meaning, definition and importance of Athletic Care & Rehabilitation

(2 x 5 = 10)

MASTER OF PHYSICAL EDUCATION AND SPORTS

Month and Year

**IV Semester
Faculty of Education**

PE810403 - SPORTS JOURNALISM

**(ELECTIVE)
(2021 admissions onwards)**

Time: Three hours

Max. Weight: 30

Section- A

(Answer any **eight** questions. Each question carries a weight of 1)

1. Define sports Journalism?
2. Define Sports Events
3. Define media
4. Define reporting.
5. Explain National and International Sports Agencies.
6. Who is a Free Lancer?
7. Define Foreign Correspondent.
8. What is Editing?
9. What is Outline Writing?
10. What are the Qualities of a Good Reporter?

(8 x 1 = 8)

Section B

(Answer any **six** questions. Each question carries a weight of 2)

11. Explain the concept of reporting.
12. What is Mass Media?
13. Explain the functional difference of reporters.
14. Define Editing.
15. What is editorial writing?
16. Write a short note on Mass media in India.
17. Discuss the method of interviewing an elite athlete.
18. Comment on latest trends in Sports Journalism.

(6 x 2 = 12)

Section C

(Answer any two questions. Each question carries a weight of 5.)

19. Elaborate on the meaning, evolution & scope of Sports Journalism.
20. Describe the duties, responsibilities & qualities of a good reporter and editor.
21. Explain Mass Communication, Mass media and Mass media in India and its present stage.
22. Comment on the recent trends, types and development in Editing.

(2 x 5 = 10)