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LEARNING OUTCOMES-BASED CURRICULUM  
FRAMEWORK (LOCF)

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POSTGRADUATE PROGRAMME IN PHYSICAL  
EDUCATION



JANUARY 1, 2020

**SCHOOL OF STUDIES IN PHYSICAL  
EDUCATION**



# **SCHOOL OF STUDIES IN PHYSICAL EDUCATION**

**Pt. Ravishankar Shukla University  
Raipur 492 010, Chhattisgarh**



## **Syllabus**

**MASTER OF PHYSICAL EDUCATION**

**M.P.Ed**  
(Semester System)

**Session**

## 2020-2021

### Preamble

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## **1. INTRODUCTION**

In the contemporary age of technology and science, Physical Education programme occupies an important place in the education system. This high-tech epoch has mechanised the human life and curbed the manual labour to its bare minimum. In context to the vibrant and contextual changes of the world it is essential to assimilate the Physical Education curriculum in the Courses. The increasing rate of physical inactivity in alarming are has an urge to call for such curriculum to decrease the rate and prevalence of disease in the modern era. Moreover, the pace of growth of research and development in each facet of the society has increased the leisure to its greatest extent. In this scenario, all round development including physical, mental, emotional and cultural is inescapable. Hence, Physical Education is given a prime importance in school as well in higher education. To create awareness towards physical fitness and make the students socially active is a prime importance of the Physical Education. Physical Education is focused towards developing healthy lifestyles and physical fitness among the students via emerging their physical competence, knowledge about safety and confidence.

The wide range of activities of physical education fraternity can merge physiological, psychological and sociological environment in totality to nurture a harmonic community It is very much vital to devise a significant programme of Physical Education in the beginning of the session and then accomplish it effectively in an organized way. The physical education program is steadfast to make physically, mentally and socially stable

students who will be proven as the nation builders and allocate their efforts to construct a new and healthy society.

The aim of Physical Education programme is to make healthy, physically fit, socially active and morally stable builders of a new society and true defenders of their nation. The aim of Physical Education programmes is imparting health, comprehensive and harmonious development of human body and their functions.

There is heartfelt necessity of constituting a well-defined curriculum of Physical Education and execute in wider level to promote with specialized human knowledge.

## **2. LEARNING OUTCOME BASED APPROACH TO CURRICULUM PLANNING IN PHYSICAL EDUCATION.**

The learning outcome of Physical Education is tending towards wide range of activities. In addition to developing lifelong physical competence it is supposed to inculcate positive values, generic skills and positive attitude in the students. It should motivate the students to engage in routine physical activities. To enable the students to demonstrate their knowledge about physical fitness and to maintain a health enhancing level of fitness. It is expected that students will understand the basic principles of lifetime wellness and disseminates this to the community and society. Students will learn new curriculum considering new educational trend and comply with technology.

### **2.1 NATURE AND EXTENT OF M.P.Ed. PROGRAMME IN PHYSICAL EDUCATION**

Physical education imparts knowledge through physical mode or in other words, learning in physical context is the basic nature of physical education. To develop physical competence through specific knowledge and skills. It affords a holistic vision of societal, personal and environmental health. The extent of physical education is the following:

- Skills Development including developing skills like agility, IQ, Strength, Speed, endurance, flexibility and complete fitness

- Developing good health through physical and recreational activities
- Sportsmanship -through including yoga, games of teamwork etc.
- Integration of physical, social, mental and spiritual activities.

## **2.2 AIMS OF MASTER'S DEGREE PROGRAM IN PHYSICAL EDUCATION**

Physical Education integrates the education process by principally converging on body or physique without which the education of a child is incomplete. Following are the aims:

1. Master's degree level Physical education program is determined towards developing consciousness towards health and accountable for developing physical, mental and social domain of an individual.
2. To ensure global competitiveness by developing national and international generic skills through facilitating teaching modes.
3. It strives to make a perfect balance between and curricular and co-curricular activities. It not only develops progressive change within an individual but also instruct team spirit in them.
4. Unceasingly leading individuals towards attaining better life the field of physical education is inspiring young minds to develop better and healthy nation by sustaining the challenges of life.
5. The master's degree program assimilates physical education with communication skills, media knowledge, research considering new pedagogies and social context to maintain its relevance in current scenario.
6. Overall, it aims to indulge to perfectly blend the amalgamation of recreational activities with academics to enhance the inclusive qualities of young minds and bodies.

### 3. Post Graduate Attributes in Physical Education

A Postgraduates (physical education) are expected to have the following attributes:

(a) In-depth knowledge

The post graduate program of physical education provides thorough understanding of the subjects along with allied areas related to physical education and sports. It provides important linkage between theory and practice of various issues in physical education and sports. Additional knowledge of the subject matter is also provided with this post graduate program.

(b) Academic literacy

The post graduate attribute of post graduate program encompass advanced professional and skill related knowledge in the field of physical education and sports so that it provides a base to be an expert and imminent member of a particular community.

(c) Impressive communication

It is essential to gather information in such a way that it can be analysed and organised properly. It is also essential for a student to communicate ideas in an effective manner both in written and spoken form. It also includes the ability to communicate own idea to even a general population. The added part is the capacity to use information technology as means of effective communication.

(d) Logical and analytical thinking

A postgraduate program entails student to make aware about relevant problems associated with a particular field and then use logical and analytical thinking to solve it by providing new insight such as training scheduled preparation, program for all age groups.

(e) Research oriented mindset

The program inculcates research oriented mindset, allowing for original ideas and ability to use to well established norms in research and enquiry to propound new theory or ideas for community health and fitness.

(f) Judgment



The program allows student to deal with complex issues with sound judgment without proper background data and then able to put forth conclusions effectively. The students also deal with judgement of capacity and ability of sports performance.

(g) Employability

The program attributes also encompasses employment related issues with transferable skills that are necessary for employment purpose. It enhances employment related options while improvement in professional development. It also includes self governing learning ability for life long professional development. The program can develop ability for self employment.

(f) Independence and creativity

Students are expected to display creativity in work while doing it independently. They are also expected to show adaptability in changing atmosphere and environment.

(h) Ethical consciousness

Students are expected to show sound social responsibility. They apprise philosophical and social issue in the context of physical education and sports. They are expected to show respect in terms of cultural diversity.

(i) Collaboration / Team work :

Students will demonstrate the aptitude to work as as a team and respect other team members views and ideas. They will demonstrate the ethics of group culture and work for the common interest of that particular group. Students also develop team work and collaboration for event management.

(j) Leadership :

Students will demonstrate ability to take challenges of coaching, training of budding sportspersons apart from showing the skills to formulate training plan for sportsperson.

(k) Contribution to society:

Students will demonstrate ability to work with physically / mentally challenged sportsperson. They also demonstrate special ability to work for geriatric population for their physical and mental welfare.

#### **4. Qualification Descriptors for M.P.Ed. Course in Physical Education**

1. Demonstrate transferable skills and particular subject related know-how that is conducive for grabbing employment opportunities.
2. Ability to solve real life problems by virtue of subjects knowledge and transferrable skills and search of solution of a problem area.
3. Able to know the own learning requirements in new trends, knowledge base area, research or professional material.
4. Able to select appropriate methodology for quantitative and qualitative research as well as providing scientific evidence of problem with the help of analysis of data from various sources.
5. Able to develop self evaluation while planning and managing classroom teaching in physical education.
6. A thorough knowledge in specialized area with keen interest in gaining information on latest development in specialized field.
7. Demonstrate systematic knowledge and principles of areas under curriculum while able to clearly analyse scientific facts regarding area of study.
8. Demonstrate an understanding of important theories, principles and concepts.
9. Aptitude to apply fundamental concepts and principles outside the background in which they were first studied as well as aptitude to apply fundamental concepts and principles in an employment perspective.
10. Demonstrate skills to carry out SWOT analysis of own performance.

11. Demonstrate capacity to improve own knowledge base in the area of coaching and preparing training plan for sportsperson.
12. Demonstrate capacity to conduct coaching and prepare training plan for physically challenged sportsperson.
13. Demonstrate clear understanding to prepare and execute plan for elderly population.

### **5. Programme Learning Outcomes for M.P.Ed. Course in Physical Education**

1. Demonstrate a clear, methodological and scientific knowledge of the academic field of physical education and knowledge of different allied branches of physical education with its application along with link of these branches with other allied areas.
2. An in-depth knowledge about producing physical education professionals that suits the need of research, government and private sector, education etc.
3. Demonstrate the capacity to apply the knowledge of various theories and principles in identifying problems in physical education, sports organization, sports coaching and then solve these problems with apt use of knowledge.
4. Ability to use qualitative and quantitative data for betterment of society.
5. Ability to solve problems in interdisciplinary research.
6. Demonstrate and practice ethical behaviour by providing correct scientific information while creating safe research environment for participants.
7. Ability to respect intellectual, copyright issues and environmental issues.
8. Demonstrate unbiased attitude towards sportspersons while preparing them for competition.

9. Ability to work with physically challenged sportsperson.
10. To use their indepth knowledge for welfare of geriatric population.

## 2020-21

| <b>SCHEME OF EXAMINATION FOR SESSION 2020-2022</b> |              |   |   |                     |
|--|--------------|---|---|---------------------|
| <b>SCHOOL OF STUDIES IN PHYSICAL EDUCATION</b>     |              |   |   |                     |
| <b>PT. RAVISHANKAR SHUKLA UNIVERSITY, RAIPUR</b>   |              |   |   |                     |
| <b>MPEd (Semester I to IV)</b>                     |              |   |   |                     |
| <b>July 2020-December 2020</b>                     |              |   |   |                     |
| <b>First Semester</b>                              | <b>Paper</b> | <b>Title of Paper</b>                                 | <b>Marks</b>                                    |                     |
|  |              |   | <b>(External)</b>                               | <b>(Internal)**</b> |
|  | <b>I</b>     |   | Professional Preparation and curriculum designs | <b>80</b>           |
| <b>II</b>  |              | Test Measurement and evaluation in Physical Education | <b>80</b>                                       | <b>20</b>           |

|                                |               |                                       |                    |                    |
|--------------------------------|---------------|---------------------------------------|--------------------|--------------------|
|                                | <b>III</b>    | Exercise physiology                   | <b>80</b>          | <b>20</b>          |
|                                | <b>IV</b>     | Management of physical education      | <b>80</b>          | <b>20</b>          |
|                                | <b>P-1</b>    | Practical Officiating in Sports/Games | <b>100</b>         | <b>100</b>         |
|                                |               |                                       |                    |                    |
|                                |               | <b>Total</b>                          | <b>600</b>         |                    |
| <b>January 2021-June 2021</b>  |               |                                       |                    |                    |
| <b>Second Semester</b>         | <b>Pap er</b> | <b>Title of Paper</b>                 | <b>(Extern al)</b> | <b>(Intern al)</b> |
|                                | <b>I</b>      | Training methods                      | <b>80</b>          | <b>20</b>          |
|                                | <b>II</b>     | Biomechanics                          | <b>80</b>          | <b>20</b>          |
|                                | <b>III</b>    | Statistics and Computer               | <b>80</b>          | <b>20</b>          |
|                                | <b>IV</b>     | Research Process                      | <b>80</b>          | <b>20</b>          |
|                                | <b>P-I</b>    | Practical – Performance Testing       | <b>100</b>         | <b>100</b>         |
|                                |               |                                       |                    |                    |
| <b>July 2021-December 2021</b> |               |                                       |                    |                    |
| <b>Third Semester</b>          | <b>Pap er</b> | <b>Title of Paper</b>                 | <b>(Extern al)</b> | <b>(Intern al)</b> |
|                                | <b>I</b>      | Scientific Coaching Methods           | <b>80</b>          | <b>20</b>          |
|                                | <b>II</b>     | Sports Psychology                     | <b>80</b>          | <b>20</b>          |
|                                | <b>III</b>    | Sports Medicine                       | <b>80</b>          | <b>20</b>          |
|                                | <b>IV</b>     | Specialization theory                 | <b>80</b>          | <b>20</b>          |
|                                | <b>P-I</b>    | Practical Advanced Coaching lesson    | <b>100</b>         | <b>100</b>         |
|                                |               |                                       |                    |                    |
|                                |               | <b>Total</b>                          | <b>600</b>         |                    |
| <b>January 2022-June 2022</b>  |               |                                       |                    |                    |
| <b>Fourth Semester</b>         | <b>Pap er</b> | <b>Title of Paper</b>                 | <b>(Extern al)</b> | <b>(Intern al)</b> |
|                                | <b>I</b>      | Health education                      | <b>80</b>          | <b>20</b>          |

|  |            |   |             |           |
|--|------------|---|-------------|-----------|
|  | <b>II</b>  | Psychology of coaching and counseling                       | <b>80</b>   | <b>20</b> |
|  | <b>III</b> | Sports physiotherapy  | <b>80</b>   | <b>20</b> |
|  | <b>IV</b>  | Project/Foundation of physical education and current trends | <b>80</b>   | <b>20</b> |
|  | <b>P-I</b> | Practical – Physiological and Psychological assessment      | <b>80</b>   | <b>20</b> |
|  |            | <b>Total</b>  | <b>600</b>  |           |
|  |            | <b>Grand total [Semester I + II + III + IV]</b>             | <b>2400</b> |           |

***Detailed Syllabus for***  
*Master of Physical Education Course*

**Semester I: Paper I**

Professional Preparation and Curriculum designs

**Learning Outcome**

- To understand the ever evolving curriculum of physical education
- To develop opportunities to construct & design the curriculum of PE in broader aspects realizing the age group, gender consideration and physiological basis.
- To know about that intramural and extramural tournaments
- To Know about the role of curriculum design for effective teaching and learning in physical education

UNIT-I

#### Foundation of professional preparation

1. Ideals of Indian Democracy: Contribution of Physical Education.
2. Forces and factor effecting Education Policies and programs – social, religious, economic and political. Education and professional preparation in physical education in India with those in USA, USSR and UK.

#### UNIT-II

1. Under graduate preparation of professional areas of health education, physical education and recreation. Purpose of under graduate preparation.  
Administration, curriculum, laboratory experiences, field experiences, Laboratory Experiences, Field Experiences, Teaching Practice and Professional competences to be developed. Facilities and special resources for Library.
2. Post Graduate preparation of professional personnel: Purposes of post graduate studies, admission requirements, sports, curriculum, area of specialization and concentration on core areas, Research requirement, Methods of instruction.
3. In service education of professional personnel: Nature and scope of in service education; Responsibility for in service training, Role of administration, Physical Education Training Institute, Supervisors, the professional, and in – service training programmes. In service through individual efforts, apprenticeship on the job projects. Survey and reports, critical appraisal of existing types of post graduate programs.

#### UNIT-III

1. Importance of Curriculum Development Factors affecting curriculum, changing needs of student, national and professional policies
2. The Role of the teacher in curriculum development.
3. Principles of Planning: Understanding the capacity characteristics and needs of the learner. Evaluation and follow up.

4. selecting material for instruction – classification of activities for different age group and sexes. Progress in curriculum. Cultural influences in the choice of activities flexibility of programme material.

#### UNIT-IV

##### Selecting methods of teaching

1. Grouping of students for instruction, lecture, projects, activities, demonstration,
2. Block of period, total time allotment for a given activity, teaching aids, conditioning
3. Special gadgets to concentrate on development of particular skills or activity, provision for individual differences.

Development program for different levels of education: Kindergarten, elementary school, Middle School, High School and Higher Secondary School, College and University, Special institution (Technical School & orphan hostel) special days, national days etc.

#### UNIT V

1. Co-education in physical education – Interrelating the Programs for boys and girls. Activities suitable for co-education, levels at which co-education is desirable, special provision for development of girls programme.
2. Evaluation and follow up process in physical education – nature, importance and procedure for evaluation in physical education, follow-up: curriculum followed in colleges of physical education – BPE, MPEd, BPEd. In physical Education, M. Phil. Etc. committees recommendation: NCE – CBSE, UGC recommendation on curriculum for schools and colleges.



Semester I: Paper II

**M. P. Ed. Semester I: Paper II**

Test Measurement and Evaluation in Physical

Education

STUDENT LEARNING OUTCOMES :

1. The students will learn the concept of testing.
2. The clarification regarding measurement and evaluation will be learnt by students.
3. The students will learn the assessment process of basic fitness components.
4. The students will learn about assessment of skill from different games.
5. The students will learn how to assess psycho-social elements of sportsperson.

UNIT-I

1. Meaning of evaluation.
2. Nature and scope of evaluation program.
3. Need and importance of evaluation in the field of physical education.
4. Principles of Evaluation.

UNIT-II

1. Criteria of test selection (reliability, validity, objectivity and norms), Administrative feasibility and educational application,
2. Classification of test, standardized tests (objective and subjective test).
3. Construction of test, Knowledge tests (written and skill tests).
4. Suggestions for administering test - Medical Examination, Testing Personnel, Time of testing, Economy of testing, Test record, Preparation of reports, Construction of tables & graphs and Purpose of reporting.

UNIT-III

Measurements of Organic Function Motor fitness and General Motor Ability.

**1. Organic function: Cardiovascular respiratory function.**

- a. Cooper's 12 minute continuous run / walk test.
- b. Tuttle's pulse ration test.
- c. Harvard step test and its modification.

**2. Motor Fitness –**

- a. Oregon motor fitness test
- b. JCR test
- c. Canada fitness test
- d. AAHPER youth fitness test.
- e. Fitness gram

**3. General motor ability-**

General motor ability test.

#### UNIT-IV

##### **1. Test for strength:**

- a. Strength, Roger's physical fitness index and suggested changes
- b. Kraus-Weber test

##### **2. Test for skills:**

- a. Tests Volleyball-Brady test, Russell and Lange test
- b. Basket ball-Johnson test, Knox test
- c. Soccer-Mc Donald test, Johnson test
- d. Field Hockey-Harbans Singh field hockey test
- e. Badminton-Miller test,
- f. Dyer tennis test.

#### UNIT-V

1. Measures of posture-IOWA posture test
2. Behaviour rating scale
3. Mental health
4. Sociometric
5. Motor educability
6. Personality inventory
7. Somatotype

## **Semester I: Paper III**

### **Exercise physiology**

#### STUDENT LEARNING OUTCOMES :

1. Understand the bases of movement and physiology and muscular movement.
2. Understand aerobic and anaerobic components of exercise.
3. Learn to plan diet for athlete and understand importance of nutrition and drug for athlete.
4. Should be able to assess and monitor effect of exercise on different systems of body.
5. Able to understand physiological aspect of training to plan training program.

#### UNIT-I

1. Skeletal Muscle, Structure, function and Characteristics
2. Chemical composition of skeletal muscle
3. Gross structure of Skeletal Muscle ,Muscle fiber type
4. Microscopic structure, structure of the myofibril.
5. Contractile mechanism, Molecular basis of the contraction of skeletal muscle, Heat production and thermo-dynamics of muscle contraction

#### UNIT-II

##### **Neuro-muscular concepts**

1. Neuron and motor unit transmission of nerve impulses, bio-electrical potentials

2. Nerve to nerve synapse, Neuro muscular junction and transmission of nerve impulse across it.
3. Proprioception and kinesthesia. Tone, posture and Equilibrium.
4. Effect of exercise/training on neuro-muscular system

#### UNIT-III

##### **Bio-energetics**

1. Fuel for muscular work. Aerobic and anaerobic metabolism
2. Energy for muscular contraction and biochemical changes during muscular contraction, short duration high intensity exercise, long duration exercise.

#### UNIT-IV

##### **Physiological changes due to exercise. Effect of exercise and training on:**

1. Heart and circulatory systems.
  - a. Blood circulation and functioning of the heart
  - b. Blood supply to heart and skeletal muscle
  - c. Regulation of blood flow during exercise.
2. Respiratory system
  - a. Function of respiratory system
  - b. Oxygen debt & recovery rate, Second wind.
  - c. Effect of exercise on respiratory system.
3. A brief discussion on effect of exercise on other systems.

#### UNIT-V

1. Other physiological aspects of exercise and sports
2. Concept of physical fitness and physical training, warming up conditioning and fatigue
3. Energy cost of various sports activity.

## **Semester I: Paper IV**

### **Management of physical education**

#### STUDENT LEARNING OUTCOMES :

1. To describe organization and administration of sports programme.
2. To analyze and interpret sports philosophy, business systems, sports management, public administration and marketing techniques.
3. To develop decision-making, and problem-solving skills required for their role in the profession of physical education and sports.
4. To know about how to organize sports competition
5. To demonstrate the applicability of the concept of Financial Management in sport.
6. To explain the concept of Supervision and its application in sports.

#### UNIT-I

1. Review of principle and philosophy in of Education, Physical Education, Recreation and Health education.
2. Progressive concept of administration/ management. General administration theories.
3. Personal and material management programming for instruction and activities.
4. Hierarchy of education administration in Central, State local authorities and Individual Institution in India.

#### UNIT-II

1. Responsibilities of General Administration, technical Experts & Professionals.
2. Selected problems in Management / Administration
3. Professional preparation, professional ethics class discipline, student teaching.

#### UNIT-III

1. Budget and Finance: Budget heads principles of accounting financial power of different authorities, Sources of income auditing, terms of sanctions and purpose.
2. Staff job analysis, qualifications, requirement, supervision, training, leave, retirement deputation fringe benefits and staff meetings.
3. Office management's gathering data, programming and scheduling (Calendar, Timetable, thing that requires periodical attention) storing data (Filing), General office procedure like correspondence interview.

#### UNIT-IV

1. Management of sports in school, college & universities, Inter-University, District State & National level.
2. Indian and International Olympic association, SAI.
3. Public relation and promotional activities including-press relations, publications, Public speeches, assemblies, exhibitions demonstration, special events, staff, student welfare.

#### UNIT-V

##### **SUPERVISION**

1. Definition of Supervision
2. Scope of Supervision
3. Guiding Principles of supervision
4. Method of Supervision:
  - a. Visitation
  - b. Conference
  - c. Bulleting
  - d. Demonstration

##### **Functions of Supervisions**

1. Administrative duties

2. Duties pertaining to facility & Equipment
3. Duties pertaining to instruction
5. Duties pertaining to supervision
6. Duties pertaining to professional Growth

**Practical -Officiating in Sports and Games**

**Semester II: Paper I**

**Paper I -Training methods-**

STUDENT LEARNING OUTCOMES :

1. The students will become skillful for preparing training schedule.
2. The students will become proficient in designing training plan.
3. The student will learn to frame exercise sequence for development of different fitness component.
4. The assessment of training load and periodization planning will be learnt by the students.
5. The evaluation and the results of sportsperson progress can be presented by students through graphics.

UNIT-I

1. Brief historical sketch of development of Competitive sports in India.
2. Introduction to motor development.
3. Sports training.
4. Its aims, Tasks and characteristics.
5. Principles of sports training.

## UNIT-II

1. Training Load: Important features of training load [Intensity, Density, Duration and Frequency].
2. Principles of Training load, Relationship between load and adaptation, conditions of adaptation, principles of over load. Causes and symptoms of over load, tackling of over load.
3. Training plans long term and short term plans,
4. Periodisation (Single double and triple). Cyclic process of training. Training session.

## UNIT-III

### **Training for Important Motor Components**

1. **Strength** – Forms of strength, characteristics of strength,, principle of strength, strength training, means and methods, strength training for children and women.
2. **Endurance** – Forms of endurance, characteristics of endurance, endurance training, means and methods.

## UNIT-IV

1. **Flexibility** – Form of Flexibility, Methods of development of flexibility.
2. **Coordinative abilities** – Characteristics of coordination abilities, importance of coordinative abilities. Classification of coordinative abilities, Training means and methods.
3. **speed** – form of speed, characteristics of speed, basis of speed, training means and method.

## UNIT-V

1. Planning and organization of training, Importance of Planning, Principles of planning, Contents for various periods of training.



2. Evaluation of training, Items to be included in evaluation programme, Forms of diagram and graphical presentation for evaluation and checking progress.

## **Semester II: Paper II**

### **Biomechanics**

#### STUDENT LEARNING OUTCOMES :

1. The students will learn the fundamentals of biomechanics applied in sports condition.
2. They will also learn the meaning and concept of linear and angular motion.
3. The students will understand the application of biomechanical principles.
4. They will also learn to carry out biomechanical analysis of sportsperson movements.
5. The role of fluid mechanism in sports will also be learnt by the students.

#### UNIT-I

##### **Introduction**

1. Meaning of Bio-mechanics, Bio-mechanics in Physical Education, Sports and Research
2. Fundamental Skills - Basic and Specific
3. Movement Analysis - Kinensiological Analysis, Mechanical Analysis and Bio-mechanical Analysis.

## UNIT-II

1. Linear, angular and general motion
2. Distance and Displacement (Linear and Angular)
3. Space and Velocity (Linear and Angular) Acceleration (Linear and Angular Uniform Motion)
4. Units of Relationship of Linear and Angular motion, Centrifugal and Centripetal Forces
5. Newton's Laws of motion as applicable to Linear and Angular Motion.
6. Lever and its application.

## UNIT-III

1. Force – Meaning, Units of Force, Effects of Force, Sources of Force, Components and Resultant, Friction Pressure.
2. Work, Power and Energy
3. Movement of Force, Movement of Inertia

## UNIT-IV

1. Freely falling bodies, Projectiles, Momentum and Impact
2. Stability (Static and Dynamic), Initiating Rotation in the Air.
3. Spin, Impact and Elasticity.
4. Fluid Mechanics, Air Resistance and Water resistance.

## UNIT-V

1. Analysis of fundamental skills – Walking Running, Throwing, Lifting, Pulling, Catching and Climbing
2. Analysis of Sports Skills of games & sports: Athletics, Basket ball, Volley ball, Badminton, Foot ball, Cricket etc.

**Semester: II**  
**Statistics and Computers**  
**Paper: III**

STUDENT LEARNING OUTCOMES :

1. To explain and evaluate various measures of central tendency.
2. To evaluate and interpret the outcomes of correlation matrix, i.e. correlation coefficient, strength, direction and significance level.
3. To train the students to apply the different statistical tests for hypothesis testing.
4. Students shall be able to use and apply a wide variety of specific statistical methods.
5. To interpret a set of descriptive statistics and understand the limitations of each measure.
6. To Know about the MS Office Applications in physical education

**Unit – I:**

- Meaning and definition of Statistics
- Need and Importance of Statistics in Physical Education
- Basic Concept of following terminologies:
  - Populations
  - Samples
  - Sample frame
  - Sampling Techniques
- Scales of Measurements (Nominal, Ordinal, Interval and Ratio)
- Types of Variables

**Unit – II:**

- Frequency Distribution
  - Simple Frequency Distribution
  - Cumulative Frequency
- Different types of Graphs
- Measures of Central Tendency
  - Meaning, characteristics of good measures of central tendency and uses
- The Mean
  - Meaning, characteristics, uses and calculation from ungrouped and grouped data
- The Median

Meaning, characteristics, uses and calculation from ungrouped and grouped data

- The Mode

Meaning, characteristics, uses and calculation from ungrouped and grouped data

### **Unit – III:**

- Measures of Variability

Meaning, characteristics of good measures of variability and uses

- The Range

Meaning, characteristics, uses and calculation from ungrouped and grouped data

Relative and absolute measures

- The Quartiles Deviations

Meaning, characteristics, uses and calculation from ungrouped and grouped data

Relative and absolute measures

- The Mean Deviation

Meaning, characteristics, uses and calculation from ungrouped and grouped data

Relative and absolute measures

- The Standard Deviation

Meaning, characteristics, uses and calculation from ungrouped and grouped data

Relative and absolute measures

- The Normal Curve

Definition, Characteristics, Divergence from normality (Skewness and Kurtosis)

### **Unit –IV:**

#### **Making Inferences**

- Basic Concept of following terminologies:

Hypothesis

Types of Hypothesis

Types of Error

Degrees of Freedom

Level of Significance

- Independent Sample  $t$  -test

- Related Sample  $t$  -test

- One Way Analysis of Variance (One Way ANOVA)

- Pearson Correlation Coefficient

- Spearman Correlation Coefficient

- Scale for construction of Norms

T- Scale

6  $\sigma$  Scale

7  $\sigma$  Scale

**Unit – V:**

- Introduction to computers
- Types of Computers
- Hardware and Software of Computer
- Working with internet and basic software
- Basic introduction of data analysis software

**Semester II: Paper IV**

**Research Process**

STUDENT LEARNING OUTCOMES :

1. To understand the research perspective in physical education and sports.
2. Develop ability to understand research process and to frame research problems independently.
3. Students learn to use print and electronic library resources effectively and appropriately, understand and apply data collection tools.
4. Able to prepare research proposal and research report following standard methods.
5. To develop capacity to successful conduct research in physical education and sports and publish scientific articles.

UNIT-I

Meaning of research, Need and importance and its scope in physical education. Type of research, survey of related literature, need for library search, library sources, Preparation of Bibliography and abstract.

UNIT II

Formulation and development of research problem: location of research problem. Criteria in selecting the research problem. Formulation of hypothesis.

UNIT III

- a) Historical research: scope of historical research in Physical Education. Historical evidence, validity of historical data.

b) Philosophical Research: Brief Introduction.

#### UNIT IV

Survey studies: Place of survey Research in Physical Education. Tools of survey research, questionnaire and interviews, case studies. Definition of case studies, Importance of case studies. Characteristics of case studies, data collection in case studies.

#### UNIT V

Experimental Research

- a) Meaning, scope, and nature. Control of experimental factors. Experimental designs.
- b) Research Proposal and preparation of research report.

#### **Practical:**

##### Part A

Assessment of:

1. Cardiovascular fitness
2. Motor fitness
3. Motor educability
4. Health related fitness
5. Strength
6. Somatotype
7. body composition
8. body proportion

##### Part B

Field Work: a candidate has to conduct one test on at least 10 subject and prepare a report.

Seminar:2 Seminar to be presented on field work

**Semester III: Paper I**  
**Scientific Coaching Methods**

STUDENT LEARNING OUTCOMES :

1. The student will develop to design preparation of technique learning.
2. The students will have more confidence in their knowledge of the subject matter related to tactics development.
3. The students will demonstrate the ability to resolve problems related to long term and short term training plan.
4. The students will learn to develop training session.
5. The students will learn to prepare plan related to psychological training for sportsperson.

UNIT-I

1. Historical development of coaching schemes in India.
2. Philosophy of coaching and qualities of coach.
3. Introduction to motor development, stages of motor development.

UNIT II

1. Technical preparation – Fundamental methods for the development of technique in sports. Stages of technical development, grounding, causes and correction of faults.
2. Tactical preparation – Tactical concepts, methods of tactical training.

UNIT III

Psychological preparation

1. Psychology of a coach and his trainees
2. Individual differences, psychological potentiality
3. Development of will power, stress, anxiety, frustration control
4. Planning for competitions. Main and build up competition. Frequency, preparation for competition.

UNIT IV

1. Preparation for competition. Competition system. Competition frequency.



2. Preparation for competition – Long term and Short term plans.
3. Arrangement of training session. Post competition plan.

#### UNIT V

1. Diet for sportsmen during training and pre-post competition, time for diet.
2. Use of drugs and their ill effects. Ergogenic aids – its use in competitive sports.
3. Talent identification, steps for talent identification.

## **Semester III: Paper II**

### **Sports Psychology**

#### STUDENT LEARNING OUTCOMES :

1. The students will acquire the knowledge about applied psychology.
2. A Students will come to know about basic concept of sports psychology.
3. Students will understand the methods of investigation used in sports psychology.
4. The students will gain knowledge about the pre, during and post completion psychological preparation.
5. The students will learn to assess psychological problems of sportsperson through testing.

#### UNIT-I

1. The meaning, nature and scope of sports psychology.
2. Development of sports psychology.
3. Relationship of sports psychology with other sports sciences.
4. Importance of sports psychology for physical education.

#### UNIT II

1. Methods of investigation in sports psychology, its importance.
2. Various methods used in sports psychology.
3. Different test to be used in sports psychology.

#### UNIT III

1. Growth and development, factor affecting growth and development.
2. Individual differences and their influence on physical activity.
3. Psychological aspects of action regulation.
4. Importance of action regulation in physical activities, psychological characteristics of physical activities.

#### UNIT IV

1. Psychological aspects of competition, psychology of sports competition.

2. Psychological characteristics of pre-competition, competition and post competition.
3. Motivation, meaning of motive, role of motive, attitudes, interest for physical activity, importance of motivation in peak performance.

#### UNIT V

1. Cognitive process in physical activities, characteristics of cognitive process in sports.
2. The importance of perception in physical activities.
3. The function of thinking and imagination in physical activity.
4. The role of memory in physical activities.
5. The importance of attention in sports and its relationship with cognitive process.

## **Semester III: Paper III**

### **Sports Medicine**

#### STUDENT LEARNING OUTCOMES :

1. Understand the basic various components of sports medicine and athletic care.
2. Learn to plan diet for athlete and understand importance of nutrition and drug for athlete.
3. Should be able to assess body composition, understand its relation to performance and understand environmental stress on performance.
4. Learn to develop exercise regime for all.
5. Learn extension services of sports medicine for special population.

#### UNIT-I

1. Definition of sports medicine, it's aims and objectives
2. Brief History, of sports medicine.
3. Physiological, pathological and psychological problems of sportsmen.

#### UNIT II

1. Nutrition: Athletic nutrition malnutrition, low cost High calorie diet role of vitamins, minerals, salts. Carbohydrate loading. Diet before competition and after competition
2. Doping: Agents, effect, dope test and sanctions. Role of WADA and NADA

#### UNIT III

1. Work capacity under different environmental conditions. Thermoregulation and sports.
2. Physique and performance. Somatotypes.

#### UNIT IV

1. Prophylactic health-care. Health related fitness.
2. Aging & sports.
3. Women in sports. Pregnancy and exercises.

#### UNIT V

1. Common old age problems namely – arthritis, heart diseases and diabetes. Role of exercise in rehabilitation.
2. Obesity and weight control.
3. Adapted physical Education – Physically & Mentally challenged persons.
4. Exercise prescription.

#### Semester III: Paper IV

#### **Specialization**

#### STUDENT LEARNING OUTCOMES :

1. Learn advance concepts of games and sports.
2. Learn the layout and construction of Game/Sports ground/Courts.
3. Learn the mechanics of the Game/Sports.
4. Learn to develop training methods related to Game/Sports.
5. Develop coaching skill for advance skill/strategies of Game/Sports.

#### UNIT-I

#### Skills, Techniques and strategies:

1. Advance skills of games / sports.
2. Techniques, Tactics and strategies of game / sports.

#### UNIT II

#### Officiating of games / sports.

1. Rules and their interpretation.
2. Mechanics of officiating.

#### UNIT III

#### Play field, Sports bodies and Organization.

1. Construction, layout and maintenance of play field and equipment.

2. Structure and function of Federation and Associations.
3. National and International competition.
4. Organization of competitions and coaching camps.

#### UNIT IV

1. Skill test, Mechanics of games / sports.
2. Analysis of scientific principles applied to different skills / techniques.

#### UNIT V

1. Training Method: for improving the performance in games / sports.
2. Training Schedule.

#### **Practical -Advanced Coaching Lesson**

## **Semester IV: Paper I**

### Health education

#### STUDENT LEARNING OUTCOMES :

1. Understand the health system of India.
2. Develop understanding of various aspects of school health.
3. Develop understanding on effect of environment on health.
4. To get acquainted with communication Diseases.
5. Learn causes prevention and rehabilitation of non-communication diseases.

#### **UNIT-I**

1. Health
  - a. Concept of health
  - b. Various level of health care in India
  - c. Role of heredity and genetics in achieving positive health
2. Health education
  - a. Meaning of health education
  - b. Aim and content of health education
  - c. Approaches of health education
  - d. Latest trend in health education

#### **UNIT-II**

1. School health services
  - a. Meaning and objectives of school health services and school health programs aspect of school health services
2. Healthful school environment

#### **UNIT-III**

1. Community and environmental sanitation

- a. Housing
- b. Pollution, light, noise and temperature
  - i. Population policy, population dynamic and population explosion
    - ii National family welfare program
  - ii. Sex education

#### UNIT-IV

##### 1. Communicable diseases

- a. Meaning of epidemiological approach of communicable diseases brief description of following communicable diseases and their prevention
  - i. Tuberculosis
  - ii. Chicken pox, measles, mumps
  - iii. Malaria and filarial
  - iv. Rabies
  - v. STD and AIDS
  - vi. Hepatitis (Jaundice)

#### UNIT-V

##### 1. Non-communicable diseases

- a. Meaning of non communicable diseases
- b. Brief description of following non communicable diseases and their prevention: Heart diseases, Cancer, diabetes.
- c. Stress assessment and management through exercise.



## **Semester IV: Paper II**

### **Psychology of coaching and counseling**

#### STUDENT LEARNING OUTCOMES :

1. Students will become familiar with the concept of guidance and counseling.
2. Students will be acquainted with the assessment of psychological potential of sports person.
3. The student will be able to understand counseling process.
4. The concept of group counseling will learnt by the students.
5. The student will learn about diagnosis of psychological problems in sportsperson.

#### **UNIT-I**

Psychological assessment of the players, capacity of the player psychological preparation for pre, during and post competition. Pep talk, Self confidence. Emotional maturity. Emotional intelligence.

#### **UNIT-II**

Counseling process introduction. Preparation for counseling.

- a. Readiness
- b. Pre counseling interview
- c. Case history
- d. Process of counseling
- e. The first interview

- f. Reassurance
- g. Winning confidence
- h. Advising

Counseling relationship – content and process. Physical setting. Privacy value orientation. Acceptance. Understanding. Report. Communication and empathy. Attentiveness. Counseling relationship. Counseling process.

### **UNIT-III**

Psychological testing and diagnosis – introduction. Limitation of the use of psychological tests. Type of psychological tests. Test used in counseling situations. Test interpretation in counseling. Not – test client appraisal techniques. Autobiography. Anecdotal records. Rating Scale. Cumulative records. Pupil data questionnaires. Case studies. Psychodiagnostics, limitation of diagnosis. Common diagnostic classification systems in counseling.

### **UNIT-IV**

Counseling interview – introduction, interviewing its essential aspects association of ideas contained within interview. Shifts in conversation, Opening and closing remark, recurrent reference, Inconsistencies and gaps. Review, Non verbal communication in interview. Counselee. Counselor of relationship. Interviewing techniques in counseling. Structuring the counseling relationship degree of lead, silence. Relationship techniques. Sharing of experience.

### **UNIT-V**

Group counseling – Introduction. Case for group counseling, emerging field of group counseling. Structuring groups, limitation and assumptions of group counseling. Mechanisms of group counseling. Types of groups. Group counseling – its value. The process of group counseling. Individual and group counseling similarities. Differences between individual and group counseling.

Special areas in counseling – Introduction, family group consultation

Counseling families. Counseling with parents, counseling the delinquent, counseling reluctant clients, structuring. Counseling women.

## Semester IV: Paper III

### Sports physiotherapy

#### STUDENT LEARNING OUTCOMES :

1. Student will learn about injuries and rehabilitation.
2. Apply therapeutic modalities and exercise therapy.
3. Student will learn and apply preventive and curative aspect of sports injuries.
4. help to learn to...
5. Interpret the concept toward positive lifestyle.

#### UNIT-I

##### Introduction

1. Review of anatomy and physiology of various muscles, joints and their function and action, physiological changes due to exercise – cardio-respiratory muscles, nervous systems.
2. Causes of injuries – intrinsic, excentric factors
3. Types of sports injury
4. Load deformation curve, response to stress, inflammation healing.

#### UNIT-II

##### Common regional injuries

1. Mechanism of injury clinical feature of injuries
2. Injuries of head, neck and face
3. Injury involving upper limbs
4. injuries involving thorax, abdomen and back
5. injuries involving lower limbs

#### UNIT-III

##### Common sports injuries

1. Common injuries found in various sports
2. Mechanism of injuries in various sports activity

3. Basic on field assessment and management, RICE, first aid, moving the injured athlete
4. Bandaging, crape.

#### UNIT-IV

1. Sports massage
2. Core stability
3. Protective equipment
4. Injury in children, women and elderly

#### Practical demonstration

1. Uses of crape bandage, banding technical
2. Electrical modulation
3. Use of thera band, exercise ball, Medicine ball
4. Visit to health club / fitness camps
5. Visit to sauna bath / steam bath

## Semester IV: Paper IV

### Foundation of physical education and current trends

#### STUDENT LEARNING OUTCOMES :

1. To understand principles and philosophies of physical education and cultivate positive values and attitudes for the development of an active and healthy lifestyle.
2. To acquire good health, physical fitness and bodily coordination through participating regularly in physical activity.
3. To promote desirable moral behaviors, cooperation in communal life, ability to make decisions, and the appreciation of aesthetic movement
4. To Know the importance of sports journalism and mass media for sports.
5. To established the relationship of Yoga and Sports.

#### UNIT-I

##### Philosophical foundation of physical education

1. Idealism
2. Pragmatism
3. Naturalism
4. Existentialism and other philosophies

#### UNIT-II

1. Journalism & Sports journalism
  - a. Meaning, concept, scope
  - b. Basic principles of sports reporting, source of sports news
  - c. News gathering process
2. Reporting for print media and electronic media
3. Editing, writing for various media
4. Layout and design for print media

### UNIT-III

Adapted physical education

1. Introduction to adapted physical education – meaning, definition, aims and objectives.
2. Classification of disabilities
3. Development of adapted physical education program
  - a. Guiding principles
  - b. Special adapted physical education program for different categories

### UNIT-IV

Communication skills. Types of communication. Methods of communication. Official communication. Reports, minutes and agenda. Circular, notice, office orders, note sheet and memo etc.

Press release, media conferencing and invitation

Verbal and non verbal communication

### UNIT-V

Yoga and fitness

1. Introduction to Yoga: The concept, Meaning, definition and tradition of Yoga.
2. Meaning, definition and importance of Yoga and Health in life. Theories of Health, Various exercises benefits of Yoga- asanas and their values vis-à-vis other systems.
3. Life pattern and Yoga, Effects of yoga upon bodily function, Role of yoga asanas in modern living.

4.3.

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## **Practical: Physiological and Psychological assessment**

### **Part A**

Physiological assessment of:

1. Heart Rate
2. Respiratory Rate
3. Peak flow Rate
4. Hemoglobin
5. Blood Pressure
6. Nutritional Assessment

#### PART B

Psychological assessment:

1. Paper pencil test
2. Psychomotor test

Field Work: a candidate has to conduct one test on at least 10 subject and prepare a report.

Seminar: 2 Seminar to be presented on field work

### **7.TEACHING -LEARNING PROCESS**

It is crucial to decide the style of teaching and match it with the style and need of learners. To set an appropriate balance between physical, social, psychological, and psycho-motor abilities of the learners is a challenge for the teacher. The teacher itself should be competent enough to gain the knowledge and execute at the level of learners' end. The teacher should be capable to foresee the difference in the different types of learners before deciding the process or style of teaching. Moreover, the teacher should elucidate and determine the factors affecting learning.

The purpose of teaching learning method would be fulfilled if the learner would understand what the teacher is teaching or if the teacher would understand what the requirement of learners is.

The following methods of teaching are suggested here-

- a. Question-answer session
- b. Learning through E-Resources
- c. Class tests
- d. Teaching through Models/prototypes
- e. Group Discussion
- f. Project work
- g. Group or team-based activity
- h. Internship
- i. Educational Tours
- j. Industrial visits
- k. Student/Faculty Exchange Program
- l. Self-Study
- m. Online Classes
- n. Online Quiz
- o. Project Work etc.
- p. Presentations
- q. Case Studies

Following are steps proposed for the process of teaching-

1. Interactive Session- students should be encouraged to speak or communicate with their fellows in the class about the pre decided topics related to curriculum.
2. Group Discussion- on a topic of a lesson group discussion can be conducted among selected students within a limited time frame to explore about the topic.



3. Question Answer Session- The Students can be encouraged to ask their doubts in the classroom to boost their morale and to get-rid-of their confusions.
4. Class Tests- Scheduled or Unscheduled Class Tests can be taken in the classroom. Unscheduled tests will analyse how much student prepare himself in the past few days.
5. Presentations- Preparing students for classroom presentations related to the classroom topic will empower them to understand the other students' requirement and develops an empathetic vision towards teacher in the classroom. Presentation will also lift teaching skills in the student and improves confidence in the class.
6. Case Studies- Through Real and Imaginary Cases to be taught in the classroom, the students may develop their decision making and managerial skills.
7. Assignments- After the class, the assignment can be given to the students as a supportive mode of teaching. They will explore some of the tasks from themselves to enhance their learning habits. This may increase the regular habit of learning among the students.
8. Study Material Distribution- The teacher before taking the class may distribute the study materials through mail or other online mode. This will help students to prepare themselves before the class for better understanding.
9. Teaching through Audio-Visual Learning- Using Teaching Aids are always better than lecture method. The audio-visual mode of learning prevents the monotony of lecture method and retains the contents for longer time in the mind of learners.

10. Collecting feedback from learners- collecting feedback about the content, teaching mode, teacher, etc. from the learners will facilitate the teacher to realize the needs of the students. Teachers may improve their performance based on this feedback.