

NATIONAL UNIVERSITY



Syllabus for M. P. Ed (One Year Course)

Effective from the Session: 2020 (January to December)

Syllabus for M. P. Ed Course

Session 2020

Course Outline

Total Semester -02, Total Marks-1100, Total Credits- 44

Theoretical :

Semester-1

Course No		Course Name	Full Marks	Credits
		Research Methods and Elementary Statistics	100	4
		Exercise Physiology	100	4
		Science of Sports Training	100	4
		Management of Physical Education	100	4
		Health Education	100	4
			500	20

Semester-2

Course No		Course Name	Full Marks	Credits
		Sports Biomechanics	100	4
		Sports Psychology	100	4
		Test Measurement and Evaluation in Physical Education	100	4
		Sports Sociology	100	4
		Sports Medicine	100	4
			500	20

Practical :

Course No		Course Name	Full Marks	Credits
		Practical Teaching	100	4

Semester-1

Course No		Course Name	Full Marks	Credits
		Research Methods and Elementary Statistics	100	4
		Exercise Physiology	100	4
		Science of Sports Training	100	4
		Management of Physical Education	100	4
		Health Education	100	4
			500	20

Detailed Syllabus

Theoretical:

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Research Methods and Elementary Statistics		

UNIT- I

1. Introduction :

- 1.1 Meaning and definition of Research.
- 1.2 Need and Importance of Research in physical education and sports.

2. Types of Research :

- 2.1 Basic Research
- 2.2 Applied Research
- 2.3 Action Research

3. Research Problem :

- 3.1 Formulation of Research Problem.
- 3.2 Location and Criteria of Selecting a Problem.
- 3.3 Limitations and Delimitations.

4. Meaning and Types of Hypothesis.

UNIT- II

5. Historical Research :

- 5.1 Meaning of Historical Research.
- 5.2 Importance and Scope of Historical Research in physical education and sports.
- 5.3 Historical Sources.
- 5.4 Criteria of Admitting Historical Sources as Evidences (Internal and External Criticism).

6. Survey Studies :

- 6.1 Meaning of survey.
- 6.2 Tools of Survey Research –
Questionnaire – Meaning, Construction, Characteristics and Procedure of Administration.

Interview – Types and Conduct of Interview.

Normative Surveys – Characteristics, Purpose and Procedure.

UNIT- III

7. Experimental Research :

- 7.1 Meaning of Experimental Research.
 - 7.2 Experimental Designs.
 - 7.3 Control of Experimental factors.
8. Meaning and Critical Thinking of Philosophical Research and its pitfall.

UNIT- IV

9. Research Proposal and Report :

- 9.1 Meaning of Research Proposal and Report.
- 9.2 Qualities of a Good Research.
- 9.3 Parts of Research Report.
- 9.4 Preparation of Research Report.

UNIT-V

Elementary Statistics :

10. Introduction :

- 10.1 Meaning and Importance of Statistics.
- 10.2 Meaning of Data and Types of Data.
- 10.3 Frequency Table – Meaning and Construction.

11. Fundamentals of Statistics :

- 11.1 Measures of Central Tendency – Mean, Median, Mode, Computation from grouped and ungrouped data.

- 11.2 Measures of Variability – Range – Quartile deviation, Standard deviation, Computation from grouped and ungrouped data.
- 11.3 Normal Curve – Definition and Principles of normal curve, Relation between binomial and normal curve, Properties of normal curve, Skewness, kurtosis.
- 11.4 Percentile and Quartiles – Standard Scales – T- scale, Z- scale, Sigma scale, Significance of T – ratio and F – ratio, Chi – square test.
- 11.5 Correlation – Meaning, Co – efficient of correlation, computation of co – efficient of correlation by Rank order method and Product moment method.

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Exercise Physiology		

UNIT- I

1. Introduction :

- 1.1 Definition of physiology, Exercise and Exercise physiology.
- 1.2 Importance and Role of exercise physiology in the field of physical education and sports.

2. Neuro – muscular system and Exercise :

- 2.1 Structure and function of muscles.
- 2.2 Muscle fibre type (Red and white muscle).
- 2.3 Mechanism of muscular contraction.
- 2.4 Relaxation.
- 2.5 Motor neuron and transmission of nerve impulse.
- 2.6 Bio- electric potentials.
- 2.7 Reaction time, Motor unit, Muscle cramp, Posture, Equilibrium, Muscle soreness, Proprioceptors, Muscular fatigue.

3. Effect of Exercise and Training on muscular system.

UNIT- II

4. Bio-energetic :

- 4.1 Concept of work, energy and power.
- 4.2 Fuel for muscular work.
- 4.3 The energy system – Aerobic and anaerobic metabolism.
- 4.4 Energy cost.

5. Circulatory system and Exercise :

- 5.1 Effect of exercise and training on heart and circulatory system.
- 5.2 Implication of changes in Pulse rate, Blood pressure and Cardiac

- output.
- 5.3 Blood flow due to exercise stress.
- 5.4 Role of Cardio-Vascular system in physical education and sports.

UNIT- III

6. The Respiratory System and Exercise :

- 6.1 Oxygen transport.
- 6.2 Significance of vital capacity.
- 6.3 Second wind and oxygen debt.
- 6.4 Breath holding and Breathing exercise.
- 6.6 Respiratory Quotient.

7. Nutrition and physical Performance :

- 7.1 Food and energy.
- 7.2 Diet and Athletic diet (Protein, Carbohydrate, Fat).
- 7.3 Effect of malnutrition on sports performance.

- 8. Physiological aspects for the development of strength, endurance, speed and coordination.

UNIT- IV

- 9. New concept of Physical Fitness, Fitness-well-being and active life style, Body weight control.

10. The Female in Athletics :

- 10.1 Structural sex differences.
- 10.2 Physiological sex differences.
- 10.3 Strength differences – Weight training and its effects.

11. Factors affecting performance :

Temperature, Altitude, Smoking tobacco, Alcohol and Drugs.

UNIT-V

- 12. Endocrine system and exercise, Disease and exercise.

13. The Unified Athlete and Monitoring Training Progress :

- 13.1 Training, Conditioning and Stress.
- 13.2 Warm up and Warm down.
- 13.3 Physiology of Warm up.
- 13.4 Monitoring Training Progress.

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Science of Sports Training		

UNIT – I

1. Sports Training

1.1 Definitions of Conditioning, Training and Coaching

1.2 Aim, Tasks and Characteristics of Sports Training.

1.3 Principles of Sports Training.

2. Training Load

2.1 Important Features of Training Load

2.2 Principles of Intensity and volume of Load

2.3 Adaption Process and Conditions of Adaption

2.4 Overload, its Causes and Symptoms, Tackling of over Load

UNIT – II

Training for Motor Components – I (Conditional Abilities)

3. Strength

3.1 Definition and Forms of Strength

3.2 Factors Determining Strength

3.3 Principles of Strength Training

3.4 Methods and Means of Strength Training.

4. Endurance

4.1 Definition and Forms of Endurance

4.2 Factors Determining Endurance

4.3 Methods and Means of Endurance Training

5. Speed

5.1 Definition and Forms of Speed

5.2 Factors Determining Speed

5.3 Methods and Means of Speed Training

5.4 Speed Barrier and How to Tackle it.

UNIT –III

Training for Motor Components – II

6. Flexibility

6.1 Definition and Forms of Flexibility

6.2 Factors Determining Flexibility

6.3 Methods and Means of Flexibility Training.

7. Coordinative Abilities

7.1 Definition of Coordinative Abilities

7.2 Characteristics of Coordinative Abilities

7.3 Importance of Coordinative Abilities

UNIT –IV

8. Technique Training

8.1 Definition of Skill, Style, Technique and Technical Training

8.2 Characteristics of Technique

8.3 Phases of Skill Acquisition

8.4 Causes and Correction of Faults

9. Tactical Training

9.1 Definition of Tactics and Strategy

9.2 Basic Tactical Concepts – Attacking, Defensive and High Performance Tactics.

9.3 Methods of Tactical Training.

UNIT –V

10. Planning and Organization of Training

10.1 Definition and Importance of Planning

10.2 Principles of Planning

10.3 Systems of Planning

11. Periodization

11.1 Definition and Types of Periodization

11.2 Content of Training for Different Periods

12. Competition Planning and Preparation

12.1 Meaning and Importance of Competition

12.2 Frequency of Competition

12.3 Forms of Competition

12.4 Direct Preparation for an Important Competition .

Reference Book:

Dick W . Frank. Sports Training Principles, London: Lepus Book.

Harre, Dietrich, Principles of Sports Traing, Berlin: Sportverlag

Matveyev L.P Fundamentals of Sports Training, Moscow: Progress Publishers.

Pish Wilfred, The Complete Manual of Sports Science, London: A and C Black

Singh H. Science of Sports Training, New Delhi: D.V.S Publications

Tandon D.K Uppal A.K Alegaonkar P.M and Singh Kanwaljeet Scientific Basis of Physical Education and Sports, Delhi: Friends Publications.

Uppal A.K Scientific of Sports Training, Delhi: Friends Publications.

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Management of Physical Education		

UNIT –I

1. Introduction :

- 1.1 Meaning of management and Sports management.
- 1.2 Aims and objectives of sports management.
- 1.3 Scope of sports management.
- 1.4 Theories of management.
- 1.5 Functions of a manager.
- 1.6 Qualities of a good administrator.

2. Administrative set up of Schools, Colleges and Universities with special reference of physical education.

UNIT –II

3. Physical Education Activities:

- 3.1 Criteria for selecting of physical education activities.
- 3.2 Planning in physical education activities.
- 3.3 Construction of curriculum, Steps in curriculum development.

4. Classification of physical education curriculum :

- 4.1 Types of classification .
- 4.2 Purpose and values.
- 4.3 Medical examination.

UNIT –III

5. Physical Education Budget :

- 5.1 Guiding factors for budget preparation.
- 5.2 Physical education fund.
- 5.3 Rules for preparation of budget.
- 5.4 Criteria for a good budget.

6. Record and Register, Teacher's work dairy, Stock register, Maintenance of account, Cumulative record of physical and medical examination.

UNIT –IV

7. Organization and Management :

- 7.1 **Track and Field :** Lay out of track and field, Committees and duties, Essential materials, Order of events, Opening and Closing ceremony.
- 7.2 Conducting methods of games and sports (league, knock out, Meet and Combined).

7.3 **Intramural games** : Meaning, Objectives and Principles of intramural games.

7.4 **Extramural games** : Meaning, Objectives and Principles of extramural games.

8. Play Day :

8.1 Concept of Play day.

8.2 Objectives and Principles of Play day.

UNIT –V

9. Supervision :

9.1 Definition and Objectives of supervision.

9.2 Principles and Process of supervision.

9.3 Duties of supervisor pertaining to administrator.

10. Evaluation :

10.1 Definition, Scope, Purpose and Method of evaluation.

10.2 Criteria for evaluation of supervisor.

10.3 Follow up of evaluation.

11. Leadership :

11.1 Meaning of leadership.

11.2 Qualities of a good leader.

12. Facilities and Equipment :

12.1 Purchase procedure of equipment.

12.2 Care and maintenance of equipment.

12.3 Function of the supervisor pertaining to facilities and equipment.

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Health Education		

UNIT –I

1. Health :

1.1 Concept of health.

1.2 Definition of health.

1.3 National health programme in Bangladesh.

2. Health Education :

- 2.1 Meaning of health education.
- 2.2 Aims and objectives of health education.
- 2.3 Approaches of health education.

UNIT –II

3. School Health Service :

- 3.1 Meaning and Objectives of school health services.
 - 3.2 Medical examination.
 - 3.3 Common childhood diseases and their control.
4. Nutritional service.
5. Mental health, dental health and eye health.
6. School health records.

7. Healthful School environment :

- 7.1 Meaning of healthful school environment.
- 7.2 Point to be kept in mind for healthful school environment.
- 7.3 Role of physical education teacher in relation to school health services.

UNIT – III

8. Nutrition :

- 8.1 Meaning of food, nutrient and nutrition.
- 8.2 Balance diet.
- 8.3 Nutritional diseases.
- 8.4 Food hygiene.
- 8.5 Malnutrition, adulterating and food additives.

UNIT – IV

9. Community and environment sanitation :

- 9.1 Housing.
 - 9.2 Criteria for healthful housing.
 - 9.3 Air pollution, light and noise.
 - 9.4 Water born diseases.
- 10. International Health Agencies – WHO, UNICEF, UNDP.**

UNIT – V

11. Communicable diseases :

- 11.1 Meaning of communicable diseases.
- 11.2 Brief description of following communicable diseases and their prevention –
Tuberculosis, Chicken pox, Measles, Malaria, Rabies, AIDS, and Hepatitis (Jaundice).

12. Non – communicable diseases :

12.1 Meaning of non – communicable diseases.

12.2 Brief description of following non – communicable diseases and their prevention – Diabetes, Cancer, Heart diseases.

Semester-2

Course No		Course Name	Full Marks	Credits
		Sports Biomechanics	100	4
		Sports Psychology	100	4
		Test Measurement and Evaluation in Physical Education	100	4
		Sports Sociology	100	4
		Sports Medicine	100	4
			500	20

Detailed Syllabus

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Sports Biomechanics		

UNIT – I

1. Introduction –

1.1 Definition and Meaning of Kinesiology

1.2 Historical Development.

1.3 Role of Kinesiology in physical Education and sports.

1.4 Movement Analysis – Kinesiological Analysis and Mechanical analysis.

2. Anatomical and physiological fundamentals of human movements.

2.1 Joints and its types, systems those are involved in movements.

2.2 Study of movements and muscular involvement of various joints-

(Shoulder joint, Elbow joint, Hip joint, knee joint and Ankle joint)

UNIT – II

3. Introduction

- 3.1 Definition and Meaning of Bio - Mechanics
- 3.2 Historical development of Bio - Mechanics
- 3.3 Relationship with other science
- 3.4 Importance in Physical Education and Sports.

4. Fundamentals of Mechanics

- 4.1 Motion – Linear, Angular and General motion.
- 4.2 Relationship between linear and angular motion.
- 4.3 Projectile motion
- 4.4 Plane and Axis
- 4.5 Lever wheel Axle and pulling.

UNIT – III

5. Kinematics

- 5.1 Meaning
- 5.2 Distance, Displacement, Speed, Velocity, Acceleration

6. Kinetics –

- 6.1 Meaning
- 6.2 Force, Momentum, Impulse and Torque
- 6.3 Work, Power and Energy
- 6.4 Equilibrium and pressure
- 7. External Force

Force of Gravity, Centrifugal force, Friction, Spin-Effect of spin.

UNIT – IV

Bio Mechanical Analysis

8. Analysis

- 8.1 Meaning, purpose and general outline

8.2 Analysis of Fundamental movements – Walking, Running, Jumping, Throwing, Lifting, Pulling, Pushing and Catching

8.3 Analysis of Sports Techniques – Football, Cricket, Handball, Volleyball, Basketball, Badminton, Table Tennis, Track and Field, Gymnastics and Weight Lifting.

UNIT – V

Bio Mechanical Investigation

9.1 Methods of Investigation in Bio – mechanics

9.2 Determination CG of human body

9.3 Cinematography

9.4 Dynamometry

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Sports Psychology		

UNIT – I

1. Introduction :

- 1.1 Definition of Psychology and Sports Psychology.
- 1.2 Nature and Scope of Sports Psychology in physical education.
- 1.3 Psychology as a positive science.
- 1.4 The relation between physical education teachers/Coaches and their students/trainees.
- 1.5 Role of a Sports Psychologist for teams and for individual athlete.

2. Heredity and Environment :

- 2.1 Meaning of heredity and environment.
- 2.2 Nature of heredity.
- 2.3 Effect and importance of heredity and environment on individual difference in physical education.

UNIT – II

3. Sensation and Perception :

- 3.1 Meaning of sensation, and perception.
- 3.2 Neural mechanism of sensation and perception.
- 3.3 Nature, Characteristics and types of sensation and perception.

4. Memory, Image and Imagination :

- 4.1 Meaning of memory, image and imagination.
- 4.2 Types of memory, image and imagination.
- 4.3 Factors of memory.
- 4.4 Motor creativity their roles in physical education.

UNIT – III

5. Human Growth and Development :

- 5.1 Meaning of growth and development.
- 5.2 Nature and stages of growth and development.
- 5.3 Process and Principles of growth and development.
- 5.4 Stages of development – Mental development, Emotional development and Social development.

6. Intelligence :

- 6.1 Concept of intelligence.
- 6.2 Assessment of intelligence.

UNIT – IV

7. Learning process :

- 7.1 Concept of learning process.
- 7.2 Concept of Motor learning.
- 7.3 Factors affecting motor learning.
- 7.4 Factors and Conditions promoting the learning of motor skills.

8. Motivation :

- 8.1 Meaning and definition of motivation.
- 8.2 Types of motivation.
- 8.3 Techniques of enhancement motivation.
- 8.4 Importance of motivation in physical education and sports.

UNIT – V

9. Psychology of competition :

- 9.1 Nature and Types of Competition, Different reinforcement in competitions.
- 9.2 Exercise and Psychotherapy, Control of mood, Anxiety, Bio-feedback.

10. Personality :

- 10.1 Meaning, definition and nature of personality.
- 10.2 Development of personality.

11. Guidance and Counseling :

- 11.1 Meaning and Definition of Guidance and Counseling.
- 11.2 Need and Importance of Guidance and Counseling.

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Test Measurement and Evaluation in Physical Education		

UNIT – I

1. Introduction :

- 1.1 Meaning of the terms- Test Measurement and Evaluation.
- 1.2 Need and Importance of test, measurement and evaluation.
- 1.3 Principles of evaluation.
- 1.4 Criteria of a good test.

UNIT – II

2. Fitness Tests :

- 2.1 Coopers 12 – min Run/Walk Test.
- 2.2 J. C. R Test.
- 2.3 A A H P E R D Youth Fitness Test.
- 2.4 Indiana Motor Fitness Test.
- 2.5 Rogers P. F. I Test.
- 2.6 Harvard step Test.
- 2.7 IOWA Posture Test.

UNIT – III

3. Skill Tests :

- 3.1 Dyer Tennis Test.
- 3.2 Russel Lange Volleyball Test.
- 3.3 Mc – Donald Soccer Test.
- 3.4 Goal Shooting Test for Hockey.
- 3.5 Johnson Basketball Ability test.
- 3.6 Lockhart Mc Pherson Badminton Test.
- 3.7 Miller Wall volley Test.

UNIT-IV

4. Grading :

- 4.1 Concept of grading in Physical Education.
- 4.2 Purpose of grading.
- 4.3 Evaluation Criteria.
- 4.4 Methods to evaluate achievement.

5. **Social Efficiency Test :**

5.1 Mc Cloy's Behaviour Rating Scale.

5.2 Social Distance Scale.

UNIT-V

6. **Kin anthropometry :**

6.1 Meaning and Definition of kin anthropometry.

6.2 Anthropometric Instruments.

6.3 Role in physical education and sports.

6.4 Measurement of body mass, height, length, width, girth, skin folds and body proportion.

7. **Somatotyping.**

8. **Body Composition :**

8.1 Meaning.

8.2 Body composition and performance.

8.3 Measurement of body density, Percentage of body fat and Lean body mass.

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Sports Sociology		

UNIT – I

1. **Sports Sociology :**

1.1 Meaning, Nature and Scope of sports sociology.

1.2 Sports as a social Phenomenon.

1.3 Sports sociology as an academic discipline.

1.4 Social factors (appearance, social ability, aspiration level and audience) and their influences on participation in sports.

UNIT – II

2. **Sports and Micro-social system :**

2.1 Study of sports groups.

2.2 Group interaction, competition and cooperation.

2.3 Qualities and Role of a sports leader.

2.4 Sports and Culture.

UNIT – III

3. Sports and Macro – social system :

- 3.1 Socialization through games and sports.
- 3.2 Relationship between sports and socializing institutions (family, school and educational systems).
- 3.3 Sports and Politics.
- 3.4 Sports and Economy.
- 3.5 Sports and Sponsorship.

UNIT- IV

4. Sports and Society :

- 4.1 Sports as a social institution.
- 4.2 Recreation and its scope through games and sports.
- 4.3 Sports as an element of society.
- 4.4 Sports as an element of cultural development.
- 4.5 Sports as an art.

UNIT- V

5. Social factors concerning sports in society :

- 5.1 Social stratification in sports.
- 5.2 Demonstration in sports.
- 5.3 Sports and Women.
- 5.4 Problems regarding Professionalization of children in sports.
- 5.5 Sports and older and adults.

Paper Code:	Marks: 100	Credits: 4	Class Hours: 120
Paper Title:	Sports Medicine		

UNIT- I

1. Introduction :

- 1.1 Meaning and Definition of Sports Medicine.
- 1.2 Need of Medical care in sports.
- 1.3 The sports medicine team and organization of Sports Medicine programme.

2. Prevention of Sports injury :

- 2.1 Pre-participation examination.
- 2.2 Conditioning programme.
- 2.3 Avoiding dehydration and overheating.
- 2.4 Protective and supportive equipment.
- 2.5 Taping, bandaging, padding and orthotics.

3. Basic concept of Evaluation of the ill and injured athlete. Basic concept of Emergency Assessment of the injured athletes.

UNIT- II

4. Athletic injures :

- 4.1 Definition and causes, Injury classification.
 - 4.2 Common athletic injures and their treatment (strain, Sprain, Dislocation, Fractures, Contusions).
 - 4.3 Soft tissues and Hard tissues injuries.
 - 4.5 Inflammation and different steps of wound healing.
5. Common regional injures and their management – Head, neck, face, thorax, abdomen, Upper limbs and lower limbs(Shoulder, elbow, wrist, hip, knee and ankle joints).

UNIT- III

6. Therapeutic modalities and procedure :

- 6.1 Physical therapy – Cryotherapy, Thermo therapy, Hydrotherapy, Electro therapy, Infrared rays, Wax bath, Sauna bath, Massage, Steam bath, Contrast bath, Short-wave diathermy and Ultrasound.
- 6.2 Concept of electrical muscle stimulator, dialups and laser therapy.

UNIT- IV

7. Drugs and Athletic performance :

- 7.1 Use and abuse of drugs in sports.
 - 7.2 Analgesics.
 - 7.3 Anti - inflammatory medication.
 - 7.4 Corticosterons.
8. Doping – Definition, doping classes, problems of dope, control – Anabolic steroid.

UNIT- V

9. Rehabilitation :

- 9.1 Definition, Aims and objectives of rehabilitation.
 - 9.2 Scope of rehabilitation.
 - 9.3 Goals of rehabilitation.
 - 9.4 Programme of rehabilitation – Special forms of exercise.
10. Brief description of therapeutic modalities used in rehabilitation.

Practicle :

Paper Code:	Marks: 100	Credits: 4	Class Hours: ----
Paper Title:	Practical Teaching		

Practical Teaching :

Any one Game / Sport to be chosen by the students from the following list –

- | | |
|---------------|---------------|
| 1. Football | 6. Swimming |
| 2. Cricket | 7. Gymnastics |
| 3. Athletics | 8. Badminton |
| 4. Volleyball | 9. Basketball |
| 5. Handball | 10. Kabaddi. |

Marks Distribution of Practical Teaching

Teaching and Coaching Ability (Lesson Plan)	- 50
Dissertation	- 35
Viva – Voce	- 15
	<hr/> 100

Contents of Dissertation :

UNIT – 1

1. History – Historical development of the Game/Sports at national and international level.
2. Organization – National Bodies, International Bodies.

UNIT – 11

2. Lay out of play field. – Rules of the game / sports.

UNIT – 111

3. Techniques – Individual & Team technique.

UNIT – 1V

4. Training – Short term and Long term training plan.

UNIT – V

5. Records – National and International game / sports records.

UNIT – VI

6. Performance – Personal performance in game / sports.