

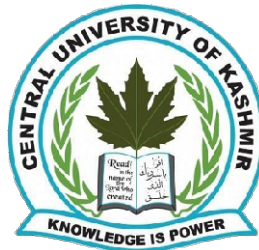
**COURSE STRUCTURE AND SYLLABUS**

**For**

**Master of Physical Education (M.P.Ed.) Programme**

**Duration: 2 Years (4 Semesters)**

**(w.e.f. Session 2020)**



**Department of Physical Education, School of Education  
Central University of Kashmir-Tullamulla Campus Ganderbal**

**Department of Physical Education, Central University of Kashmir**

**Semester I**

<b>Course Code</b>	<b>Course Title</b>	<b>Type of Course</b>	<b>Credit Value</b>	<b>MSE</b>	<b>ESE</b>	<b>Total</b>
MPED-C-101	Advanced Sports Psychology	Core	4	50	50	100
MPED-C-102	Sports Training-I	Core	4	50	50	100
MPED-C-103	Sports Biomechanics	Core	4	50	50	100
MPED-C-104	Games-I	Core (Practical)	3	50	50	100
MPED-C-105	Track & Field-I	Core (Practical)	3	50	50	100
Skill Enhancement Course	Credit Based Choice System	Core	4	50	50	100
<b>Total</b>			<b>22</b>	<b>300</b>	<b>300</b>	<b>600</b>

**Semester II**

<b>Course Code</b>	<b>Course Title</b>	<b>Type of Course</b>	<b>Credit Value</b>	<b>MSE</b>	<b>ESE</b>	<b>Total</b>
MPED-C-201	Sports Training-II	Core	4	50	50	100
MPED-C-202	Test, Measurement and Evaluation	Core	4	50	50	100
MPED-C-203	Health and Fitness	Core	4	50	50	100
MPED-C-204	Games-II	Core (Practical)	3	50	50	100
MPED-C-205	Track & Field-II	Core (Practical)	3	50	50	100
MPED-C-206	Study Tour	Core	2	50 (Internal)	--	50
Ability Enhancement Course	Credit Based Choice System	Core	4	50	50	100
<b>Total</b>			<b>24</b>	<b>350</b>	<b>300</b>	<b>650</b>

**Department of Physical Education, Central University of Kashmir**

**Semester III**

<b>Course Code</b>	<b>Course Title</b>	<b>Type of Course</b>	<b>Credit Value</b>	<b>MSE</b>	<b>ESE</b>	<b>Total</b>
MPED-C-301	Research Methodology and Applied Statistics –II	Core	4	50	50	100
MPED-C-302	Sports Medicine	Core	4	50	50	100
MPED-C-303	Exercise Physiology–I	Core	4	50	50	100
MPED-C-304	Games–III	Core (Practical)	3	50	50	100
MPED-C-305	Track & Field-III	Core (Practical)	3	50	50	100
Open Generic Elective	Credit Based Choice System	Core	4	50	50	100
<b>Total</b>			<b>22</b>	<b>300</b>	<b>300</b>	<b>600</b>

**Semester IV**

<b>Course Code</b>	<b>Course Title</b>	<b>Type of Course</b>	<b>Credit Value</b>	<b>MSE</b>	<b>ESE</b>	<b>Total</b>
MPED-C-401	Research Methodology and Applied Statistics–II	Core	4	50	50	100
MPED-C-402	Exercise Physiology–II	Core	4	50	50	100
MPED-C-403	Dissertation	Core	8	100	100	200
MPED-C-404	Games-IV	Core (Practical)	3	50	50	100
MPED-C-405	Track & Field-IV	Core (Practical)	3	50	50	100
MPED-C-406	Yoga	Core (Practical)	2	50	--	50
<b>Total</b>			<b>24</b>	<b>350</b>	<b>300</b>	<b>650</b>

Department of Physical Education, Central University of Kashmir

Choice Based Credit System (CBCS)  
Scheme and Course Structure for  
M.P.Ed. Semester I

Course Code	Course Title	Type of Course	Credit Value	MSE	ESE	Total
MPED-C-101	Advanced Sports Psychology	Core	4	50	50	100
MPED-C-102	Sports Training-I	Core	4	50	50	100
MPED-C-103	Sports Biomechanics	Core	4	50	50	100
MPED-C-104	Games-I	Core (Practical)	3	50	50	100
MPED-C-105	Track & Field-I	Core (Practical)	3	50	50	100
Skill Enhancement Course	Credit Based Choice System	Core	4	50	50	100
<b>Total</b>			<b>22</b>	<b>300</b>	<b>300</b>	<b>600</b>

**MPED Semester I**

**Max Marks-100**

**Credit= 4**

**MPED-C-101: ADVANCED SPORTS PSYCHOLOGY**

**Objective:** To impart knowledge about the sports psychology in physical education.

**Outcome:** Students learn the basic concept and factors of sports psychology in physical education.

**Relevance:** In the area of Physical Education and sports it is broadly used.

**UNIT-I Introduction**

- Sports Psychology- Its Importance in The Field of Physical Education and Sports.
- Personality- Theories of Personality.
- Cognitive Process- Memory and Thinking. Principles of Motor Skill Learning.
- Psychological Factors Affecting Sports Performance

**UNIT-II Exploring Athletic Performance: Key Constructs**

- Motivation in Sports- Types, Theories and Dynamics
- Goal-setting in Sports and Using imagination in sport: mental imagery and mental practice in athletes.
- Group Dynamics, Group Cohesion and Leadership in Sports.
- Long and Short Term Psychological Preparation for Performance/ Competition.
- Spectators and Sports Performance.

**UNIT-III Psychobiology of Sport and Exercise**

- Relationship Between Exercise and Improved Mental Health.
- Burnout in Athletes; Models, Symptoms and Measurement of Burnout. Recommendations for Athletes, Coaches and Parents.
- Psychological Predictors of Athletic Injury. Psychological Response to Injury and Rehabilitation.
- Drug Abuse in Sports and Exercise. Combating Drug Abuse in Sport.

**UNIT-IV Psychological Tests**

- Ethics in Sports Psychology
- Types of Psychological Test; Questionnaire based and Instrument based tests
- Tests for Psychological Variables: (Procedure, Administration, Scoring and Analysis)

**Questionnaire**

1. Personality
2. Anxiety
3. Team Cohesion
4. Achievement Motivation
5. Mental-Toughness
6. Self-Efficacy

**Instrumental Test**

1. Pass-Along Test
2. Tachistoscope
3. Reaction Timer
4. Finger Dexterity Board
5. Depth Perception Box
6. Kinesthesiometer Board

**SUGGESTED READINGS:**

- Aidan P. Moran. (2004). Sport and Exercise Psychology: A Critical Introduction. Routledge 27 Church Road, Hove, East Sussex BN3 2FA LONDON AND NEW YORK
- Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT)
- Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.
- John D Lauther (2000) Psychology of Coaching. Ner Jersy: Prenticce Hall Inc.
- John D. Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.
- Miroslaw Vauks & Bryant Cratty (1999). Psychology and the Superior Athlete. London: The Macmillan Co.
- Richard, H. Cox. (2002). Sport Psychology: Concepts and Applications. Fifth Edition. McGraw Hill Companies, Inc. 1221 Avenue of the Americas, New York.
- 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 Febiger.
- 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 Kimpton Publishers.

**M.P.Ed.Semester I**

**Max Marks-100**

**Credit = 4**

**MPED-C-102: SPORTS TRAINING-I**

**Objective:** To impart knowledge about the concepts of sports training.

**Outcome:** Students learn the basic concept of sports training in physical education.

**Relevance:** Training in school, colleges, institutions, universities and sports clubs

**UNIT-I Introduction**

- Meaning and Definition of Sports Training, Coaching, and Conditioning.
- Aims and Characteristics of Sports Training.
- Training Means and Methods.
- Principles of Sports Training.

**UNIT-II Sports Performance**

- Nature and Definition of Sports Performance.
- Model of Sports Performance.
- Performance Factors.
- Inter Relationship among Performance Capacity and Training Structure.

**UNIT-III Training Load And Recovery**

- Definition of Load and Types of Load.
- Component / Factors of Training Load, Super Compensation, Adoption Process, Over Load.
- Judgement of Load, Symptoms and Causes, Method of Tackling over Load.
- Factors Effecting Recovery and Means of Recovery.

**UNIT-IV Motor Abilities and Their Development**

- Strength: Definition and classification of strength, Methods for Improve Strength.
- Endurance: Definition and classification of endurance, Methods for Improve Endurance.
- Speed: Definition and Factors determining speed, Methods for Improve Speed.
- Flexibility: Definition and classification of flexibility, Methods for Improve Flexibility.
- Coordinative Ability: Definition and classification of ability, Methods for Improve Coordinative Ability.

**SUGGESTED READINGS:**

- Dick W. Frank: Sports Training Principal, London: Lepus Books.
- Ali J.: Elements of Physical Education, Khel Sahitya Kendra, New Delhi, 2005.
- Matveyew, L.P.: Fundamentals of Sports Training Moscow progress.
- Singh, H. Science of Sports Training, D.V.S. Publication, N. Delhi, 1991.



**M.P.Ed.Semester I**

**Max Marks-100**

**Credit = 4**

**MPED-C-103: SPORTS BIOMECHANICS**

**Objective:** To impart knowledge about the Biomechanics (Principles of Physics).

**Outcome:** Students learn the basic concepts of physics and its effects in physical education and sports.

**Relevance:** It is widely used for improvisation in field of physical education and sports technology.

**UNIT-I Introduction**

- Kinesiology and Biomechanics; Areas of study
- Importance of biomechanics and kinesiology in Physical Education and Sports.
- Cardinal planes and axes of movement: (a) sagittal plane and frontal axis; (b) frontal plane and sagittal axis; (c) Horizontal plane and vertical axis.
- Lever: types of levers and their mechanical advantage and disadvantage with special reference to physical education and sports application

**Unit-11 Muscles and Joints**

- Types of muscles & Joints.
- Neuromuscular concept of muscles: All and none law, reciprocal innervations.
- Structure of cyclic & acidic motor action and movement combination
- Qualities of Motor Movements
  - Movement rhythm
  - Movement coupling
  - Movement flow
  - Movement precision
  - Movement amplitude

**UNIT-III Force, Friction and Fluid Dynamics**

- Force:
  - Definition and Explanation
  - Internal and External Forces
  - Centripetal and Centrifugal Forces
- Friction:
  - Definition and Explanation
  - Type of Friction: Static and Kinetic
  - Coefficient of Static and Kinetic Friction
  - Gravitational Force
- Fluid Dynamics:
  - Air and water Resistance
  - Buoyancy Force and Flotation
  - Introduction of Drag
  - Introduction of Magnus Effect

**UNIT-IV Movement Patterns – The Essence of Sports Biomechanics**

- Newton's Laws of Motion
  - Law of Inertia (Linear Motion)
  - Law of moment of Inertia (Angular Motion)
  - Law of Momentum (Linear Motion)
  - Law of Angular Momentum (Angular Motion)
  - Law of Action and Reaction (Linear Motion)
  - Law of Action and Reaction (Angular Motion)
- Projectile and principles of projectile
- Linear and angular kinematics and kinetics
- Analysis of fundamental movements (Walking, Running, Jumping & Throwing)

**SUGGESTED READINGS:**

- Basis of Human Motion. 8<sup>th</sup> ed, Brown & Benchmark.
- Gowitzke, B.A. and Milner, M. Scientific Bases of Human Movement. (3rd. Ed.) Baltimore: Williams and Wilkins,(1988).
- Grimshaw, Paul., Lees, Adrian., Flower, Neil.,&Burden, Adrian. Sports and Exercise Biomechanics. Taylor &Francis.
- Groves, R and Camaine, D. Concepts in Kinesiology. (2nd. Ed.). Philadelphia: Saunders College Publishing,(1983).
- Hall, S.J., Basic Biomechanics, London, Mosby,1991.
- Hay, J. The biomechanics of sport techniques. (2nd. Ed.). Englewood Cliffs: Prentice-Hall, (1978).
- Hay, J. & Reid, J. The Anatomical and Mechanical Bases of Human Motion. Englewood Cliffs: Prentice-Hall,(1982).
- Luttegens, Kathryn., Deutsch, Helga., Hamilton, Nancy. Kinesiology-Scientific Basis of Human Motion. 8<sup>th</sup> Ed, Brown & Benchmark.
- Nordin, M. & Frankel, V. Basic Biomechanics of the Musculoskeletal System, Philadelphia: Lea & Febiger,(1990).
- Northrip, J., Logan, G. & McKinney, W. Analysis of Sport Motion. (3rd. Ed). Dubuque: William C. Brown,(1983).
- Rasch, P. Kinesiology and Applied Anatomy. Philadelphia: Lea & Febiger,(1989).
- Thompson, C. Manual of Structural Kinesiology. (10th Ed.). St. Louis: Times Mirror/ Mosby College Publishing,(1985).

**M.P.Ed. Semester I**

**Max Marks -100**

**Credit= 3**

**MPED-C-104: GAMES-I**

**Objective:** To teach the basics of game and its related skill.

**Outcome:** Students learn about the different techniques and skills in Football & Badminton.

**Relevance:** It is broadly used in the school, institute, and universities curriculum.

**Football & Badminton**

**Unit-I Teaching in Football**

- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials & scoring.
- Teaching: Preparation, methods & demonstration of lesson

**Unit-II Training in Football**

- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills

**Unit-III Teaching in Badminton**

- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials & scoring.
- Teaching: Preparation, methods & demonstration of lesson

**Unit-IV Training in Badminton**

- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills

**SUGGESTED READINGS:**

- John, V, Bunn: The Arts of officiating Sports, Prentice – Hall, Inc., Englewood Cliffs, N.J.
- John, W. Dunn: scientific Principles of Coaching, Prentice Hall, Englewood Cliffs, N.J.
- H.C. Buck: Rules of Games and Sports.
- Be Clar: Science of Coaching, A.S. Barhas and Co., New York.
- R.L. Anand: Playing Field Manual, NIS Publication.
- Physical Education & Health. (Dr. A.K. Uppal, Dr. G.P. Gautam)
- Physical and Health Education (Mr. V.D. Sharma & Granh Singh)
- Yoga & Health Education (Dr. R.K.S. Dagarm Dr. Shiv Kumar Chauhan and S.S Mann)
- Turner and Mouison: Personnel and Community Health.
- Dehl: Healthful Living, McGraw Hill
- Daiymple: Foundations of Health
- Obertauffer: School Health Education
- Jobs Suttan: Health for Effective living, N.Y., Mcgraw Hill Books Co., Inc., 1958.

**M.P.Ed. Semester I**

**Max Marks-100**

**Credit = 3**

**MPED-C-105: TRACK & FIELD-I**

**Objective:** To teach the basics of Athletics and its related skill.

**Outcome:** Students learn about the different techniques and skills in Discus Throw & Long Distance.

**Relevance:** It is broadly used in the school, institute, and universities curriculum.

**Discus Throw & Long Distance**

**UNIT-I Discus Throw**

- Analysis of Discus Throw Techniques
- Points to Note for Total Movement of Throw
- Path of Discus and Learning Stages for Throwing Discus

**UNIT-II Technique and Measurement**

- Types of Discus Throw Techniques
- Layout Discus Throw Circle and Landing Sector
- Rules of Discus Throw

**UNIT-III Long Distance Race**

- Physical Characteristics for Long Distance Runners
- Essential Physiological Requirements of a Runner
- Fundamentals of Running

**UNIT-IV Technique and Measurement**

- Running Technique (General Principles of Running)
- Running Basic Tactics and Teaching of Running Style
- Layout Marathon Route and Rules

**SUGGESTED READINGS:**

- Ken Sparks & Garry Bjorklund.: Long – Distance Runner’s Guide to Training and Racing, Prentice – Hall, Inc., Englewood Cliffs, New Jersey – 07632 (1984).
- Thani V.: Encyclopedia of Track & Field (with Latest Rules), Khel Sahitya Kendra – 4264/3, Ansari Road, Darya Ganj, New Delhi (2003).
- Jain R.: Play and Learn Track and Field, Khel Sahitya Kendra – 4264/3, Ansari Road, Darya Ganj, New Delhi (2003).
- Dasmohapatra S.C.: The Athletics Guide, Sanjay K. Mohanty Publication (India) Barabati Stadium Cuttack, Orissa (1996).
- Sharma P.D.: Olympics–Athens to Atlanta 1896 – 1996, Friends Publications (India), 918, Dr. Mukherji Nagar, Delhi (1998–99).

**Department of Physical Education, Central University of Kashmir**

**Choice Based Credit System (CBCS)  
Scheme and Course Structure for  
M.P.Ed. Semester II**

<b>Course Code</b>	<b>Course Title</b>	<b>Type of Course</b>	<b>Credit Value</b>	<b>MSE</b>	<b>ESE</b>	<b>Total</b>
MPED-C-201	Sports Training-II	Core	4	50	50	100
MPED-C-202	Test, Measurement and Evaluation	Core	4	50	50	100
MPED-C-203	Health & Fitness	Core	4	50	50	100
MPED-C-204	Games–II	Core (Practical)	3	50	50	100
MPED-C-205	Track & Field-II	Core (Practical)	3	50	50	100
MPED-C-206	Study Tour	Core	2	50 (Internal)	--	50
Ability Enhancement Course	Credit Based Choice System	Core	4	50	50	100
<b>Total</b>			<b>24</b>	<b>350</b>	<b>300</b>	<b>650</b>

**M.P.Ed.Semester II**

**Max Marks-100**

**Credit = 4**

**MPED-C-201: SPORTS TRAINING-II**

**Objective:** To impart knowledge about the concepts of sports training.

**Outcome:** Students learn the basic concept of sports training in physical education.

**Relevance:** Training in school, colleges, institutions, universities and sports clubs.

**UNIT-I Periodisation**

- Meaning and Aim of Periodisation, Top form (Peaking).
- Types of Periodisation, Single, Multiple Periodisation.
- Aim and Contents of Various Periods, Double and Triple, Preparatory Period, Competition Period, Transitional Period.
- Competition: Definition, Meaning and Importance, Classification of Competition, Competition Frequency.

**UNIT-II Planning**

- Meaning, Definition and Importance of Planning.
- Principles of Planning.
- Types of Training Plan.
- Steps Formulation of Plan and Training Session.

**UNIT-III Motor Development, Technique and Talent Identification**

- Define of Technique, Skill, Style, Strategy and Tactics.
- Meaning and Definition of Talent Identification.
- Step for Talent Identification and its Promotion.
- Introduction, Stages of Development and Training Implications.

**UNIT-IV Sports Competition**

- Definition and Important / Function of Competition.
- Competition System.
- Competition Frequency.
- Direct Preparation for a Competition.

**SUGGESTED READINGS:**

- Dick W. Frank: Sports Training Principal, London: Lepus Books.
- Ali J.: Elements of Physical Education, Khel Sahitya Kendra, New Delhi, 2005.
- Matveyew, L.P.: Fundamentals of Sports Training Moscow progress.
- Singh, H.: Science of Sports Training, D.V.S. Publication, N. Delhi, 1991.

**M.P.Ed. Semester II**

**Max Marks -100**

**Credit= 4**

**MPED-C-202: TEST, MEASUREMENT AND EVALUATION**

**Objective:** To convey the facts about the test, measurement and evaluation.

**Outcome:** Students learn about the basics tests used in the fields.

**Relevance:** In the area of Physical Education and sports it is broadly used.

**Unit-1 Introduction**

- Concept of test, measurement and evaluation in physical education
- Interrelationship between test, measurement and evaluation
- Basic function of test, measurement and evaluation with relation to physical education
- Importance of Measurement and evaluation in Physical Education

**Unit-II Measurement and Evaluation**

- Test: Classification of tests, Criteria of a good test: Validity, Reliability, Objectivity
- Standard and Norms, Levels of Measurement, Principles of Evaluation.
- Construction of test: Physical fitness test, Knowledge tests, Sports skill tests, Organization and administration of tests results.

**Unit-III Physical Fitness Tests and Motor Fitness Tests**

- AAHPER Youth Physical Fitness Test, Roger Strength Test, Borrow Motor Ability Test.
- Endurance test: Harvard Step Test, Cooper's 9/12 Minutes run/ walk Test.
- Agility test: - Quadrant jump, Semo test, Side step test
- Flexibility test: - Sit & reach test, Side split test.
- Balance test: - Stork stand test (Static), Bass stick test (Static), Nelson balance beam test (Dynamic).

**Unit-IV Test for Measuring Sports Skill**

- **Basketball:** Johnson Basketball Test, Knox Basketball Test, AAPHERD Basketball Test Battery
- **Badminton:** Lockhart and Mc Pherson Badminton Test, French Short and Long Service Test, Miller Wall-Volley Test.
- **Field Hockey:** Friedel Field Hockey Test, SAI Hockey Skill Test, Chapman Ball Control Test.
- **Soccer:** Johnson Soccer Test, Mc. Donald Soccer Test
- **Volleyball:** Brady's Volleyball Test, Russel Lange Volleyball Skill Test, AAHPER Volleyball Test, SAI Volleyball Test.

**SUGGESTED READINGS:**

- Authors Guide (2013) ACSM's Health Related Physical Fitness Assessment Manual, USA: ACSM Publications
- Awasare, Vivek G. & Joshi, A.R. (2015) Test, Measurement & Evaluation in Physical Education, Nagpur : Amit Brothers Publications

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- Barrow, H.M. and Gee, M.C., A practical approach to test measurement in physicaleducation, Henry kimpton, London. 1979.
- Charde, S.K., Hussain, Showkat&Kanwar, A.R. (2013) Test, Measurement and Evaluation in Physical Education, Nagpur: Amit Brothers Publications
- Clake, H.H and Clarke, D.H. Application of Measurement to Physical Education, Englewood Cliffs, NJ, Prentice Hall, 1991.
- Collins, R.D., & Hodges P.B. (2001) A Comprehensive Guide to Sports Skills Tests and Measurement (2 nd edition) Lanham: Scarecrow Press
- Cureton T.K. (1947) Physical Fitness Appraisal and Guidance, St. Louis: The C. Mosby Company
- Getchell B (1979) Physical Fitness A Way of Life, 2nd Edition New York, John Wiley and Sons, Inc
- Jenson, Clayne R and Cynt ha, C. Hirst (1980) Measurement in Physical Education and Athletics, New York, Macmillan Publising Co. Inc
- Johnson, B.L and Nelson, J.K, Practical Measurement for Evaluation in Physical Education, Delhi, Surjeet Publications, 1988.
- Kansal D.K. (1996), “Test and Measurement in Sports and Physical Education, New Delhi: DVS Publications
- Kansal, D.K, A practical approach to test measurement & evaluation, Sports and Spiritual Science Publication: New Delhi, 2012.
- Krishnamurthy (2007) Evaluation in Physical Education and Sports, New Delhi; Ajay Verma Publication
- Lacy, A.C, Measurement & evaluation in physical; education and exercise science, Daryl fox, 2015.
- Marrow James R., A.W. Jackson, Measurement and Evaluation in Human Performance Human Kinetics Publisher, Urban Champaign, Illinois, U.S.A, 1995.
- Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, 3<sup>rd</sup> Edition, Dallas TX: The Cooper Institute for Aerobics Research
- Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3rd Edition.Champaign IL: Human Kinetics
- Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in PhysicalEducation and Sports. New Delhi; Friends Publications



**M.P.Ed. Semester II**

**Max Marks -100**

**Credit = 04**

**MPED-C-203: HEALTH & FITNESS**

**Objective:** To impart knowledge about Health Education and Fitness.

**Outcome:** Students acquired knowledge about the nutrition, health disease etc. in the subject.

**Relevance:** Many of the people suffered from the health related diseases and nutrition, it will help in the concerned area.

**Unit-I Concept of Health**

- Health-its objectives and spectrum.
- Health education, its importance and principles.
- Role of genetics and environment in achieving health.
- Health-related physical fitness. Community health programme, Health appraisal & health instructions.

**Unit-II Concept of Fitness**

- Definition and meaning of Fitness.
- Skill Related and Health Related Physical Fitness.
- Relationship of fitness and health fitness to develop health of an individual.
- Wellness revolution.

**Unit-III Life Style and Health Fitness Relationship**

- Meaning of active life style.
- Physical Inactivity and associated health risks.
- Types, causes, symptoms and management of Diabetes & Hypertension.
- Types, causes, symptoms and management of Atherosclerosis & Arthritis

**Unit-IV Nutrition**

- Nutrition; Meaning & Basic Nutrition guidelines.
- The essential nutrient and their importance in the human body; Obesity and its hazard. Measurement of body fat.
- Factors to consider for developing nutrition plan. Energy Balance and Weight Control.
- Design diet plan and exercise schedule for weight gain and loss, Diet (before activity, during activity and after activity)

**SUGGESTED READINGS:**

- Authors Guide (2013) ACSM's Health Related Physical Fitness Assessment Manual, USA: ACSM Publications
- Awasare, Vivek G. & Joshi, A.R. (2015) Test, Measurement & Evaluation in Physical Education, Nagpur: Amit Brothers Publications

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- Charde, S.K., Hussain, Showkat & Kanwar, A.R. (2013) Test, Measurement and Evaluation in Physical Education, Nagpur: Amit Brothers Publications
- Collins, R.D., & Hodges P.B. (2001) A Comprehensive Guide to Sports Skills Tests and Measurement (2 nd edition) Lanham: Scarecrow Press
- Cureton T.K. (1947) Physical Fitness Appraisal and Guidance, St. Louis: The C. Mosby Company
- Getchell B (1979) Physical Fitness A Way of Life, 2nd Edition New York, John Wiley and Sons, Inc
- Jenson, Clayne R and Cynt ha, C. Hirst (1980) Measurement in Physical Education and Athletics, New York, Macmillan Publising Co. Inc
- Charde, S.K., Hussain, Showkat & Kanwar, A.R. (2013) Test, Measurement and Evaluation in Physical Education, Nagpur: Amit Brothers Publications
- Kansal D.K. (1996), “Test and Measurement in Sports and Physical Education, New Delhi: DVS Publications
- Krishnamurthy (2007) Evaluation in Physical Education and Sports, New Delhi; Ajay Verma Publication
- Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, 3rd Edition, Dallas TX: The Cooper Institute for Aerobics Research
- Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3rd Edition. Champaign IL: Human Kinetics
- Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in Physical Education and Sports. New Delhi; Friends Publications

**M.P.Ed. Semester II**

**Max Marks -100**

**Credit= 3**

**MPED-C-204: GAMES-II**

**Objective:** To teach the basics of the games and its related skills.

**Outcome:** Students learn about the different techniques and skills in Kho-Kho & Kabaddi.

**Relevance:** It is broadly used in the school, institute, and universities curriculum.

**Kho-Kho & Kabaddi**

**Unit-1 Teaching in Kho-Kho**

- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials &scoring.
- Teaching: Preparation, methods & demonstration of lesson

**Unit-II Training in Kho-Kho**

- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills

**Unit-III Teaching in Kabaddi**

- Origin and Historical Development at international and national level;
- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials &scoring.
- Teaching: Preparation, methods & demonstration of lesson

**Unit-IV Training in Kabaddi**

- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills

**SUGGESTED READINGS:**

- John, V, Bunn: The Arts of officiating Sports, Prentice Hall, Inc., Englewood Cliffs, N.J.
- John, W. Dunn: Scientific Principles of Coaching, Prentice Hall, Englewood Cliffs, N.J.
- H.C.Buck: Rules of Games and Sports.
- B Clare: Science of Coaching, A.S. Barhas and Co., New York.
- R.L. Anand: Playing Field Manual, NIS Publication.
- Dr. A.K.Uppal & Dr. G.P.Gautam.Physical Education & Health.
- Mr. V.D.Sharma&Granh Singh.Physical and Health Education
- Turner and Mouison: Personnel and Community Health.
- Dehl: Healthful Living, McGraw Hill
- Daiymple: Foundations of Health
- Obertauffer: School Health Education
- Jobs Suttan: Health for Effective living, N.Y., Mcgraw Hill Books Co., Inc., 1958.

## M.P.Ed. Semester II

Max Marks-100

Credit = 3

### MPED-C-205: TRACK & FIELD-II

**Objective:** To teach the basics of Athletics and its related skills.

**Outcome:** Students learn about the different techniques and skills in Relay Race & Long Jump.

**Relevance:** It is broadly used in the school, institute, and universities curriculum.

### Relay Race & Long Jump

#### UNIT-I Relay Race

- The Aims of Technique in Relays
- Physical Requirements of a Runner
- Teaching Progression to Learn Relay Exchange

#### UNIT-II Technique and Measurement

- Types Baton Exchanging Methods
- Procedure of Stagger Marking
- Rules of Relay Race

#### UNIT-III Long Jump

- Analysis of Long Jump Techniques
- Qualities of a Long Jumper
- Teaching Progression of Long Jump

#### UNIT-IV Technique and Measurement

- Different Styles of Long Jump
- Runway and Landing Area
- Rules of Long Jump

#### SUGGESTED READINGS:

- Ken Sparks & Garry Bjorklund.: Long – Distance Runner’s Guide to Training and Racing, Prentice – Hall, Inc., Englewood Cliffs, New Jersey – 07632 (1984).
- Thani V.: Encyclopedia of Track & Field (with Latest Rules), Khel Sahitya Kendra– 4264/3, Ansari Road, Darya Ganj, New Delhi (2003).
- Jain R.: Play and Learn Track and Field, Khel Sahitya Kendra – 4264/3, Ansari Road, Darya Ganj, New Delhi (2003).
- Dasmohapatra S.C.: The Athletics Guide, Sanjay K. Mohanty Publication (India) Barabati Stadium Cuttack, Orissa (1996).
- Sharma P.D.: Olympics–Athens to Atlanta 1896 – 1996, Friends Publications (India), 918, Dr. Mukherji Nagar, Delhi (1998–99).

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Choice Based Credit System (CBCS)  
Scheme and Course Structure for  
M.P.Ed. Semester III

Course Code	Course Title	Type of Course	Credit Value	MSE	ESE	Total
MPED-C-301	Research Methodology and Applied Statistics –II	Core	4	50	50	100
MPED-C-302	Sports Medicine	Core	4	50	50	100
MPED-C-303	Exercise Physiology–I	Core	4	50	50	100
MPED-C-304	Games–III	Core (Practical)	3	50	50	100
MPED-C-305	Track & Field-III	Core (Practical)	3	50	50	100
Open Generic Elective	Credit Based Choice System	Core	4	50	50	100
<b>Total</b>			<b>22</b>	<b>300</b>	<b>300</b>	<b>600</b>

**M.P.Ed. Semester III**

**Max Marks -100**

**Credit= 4**

**MPED-C-301: RESEARCH METHODOLOGY AND APPLIED STATISTICS-I**

**Objective:** To convey the in-depth knowledge about the research methodology.

**Outcome:** Student learns the experimental design, research methods and its terminology.

**Relevance:** It is used to conduct the research in physical education and related fields.

**Unit-1 Introduction to Research**

- Meaning and definition of research
- Nature of research and classification of Research
- Qualities of good research and good researcher
- Need and scope of research in physical education and sports.

**Unit-II Research Problem and Hypothesis**

- Research Problem: Identifying, locating and selecting a research problem
- Criteria of selecting a research problem. Limitation and Delimitation in research
- Hypothesis, Importance and types of hypothesis. Formulating and Characteristics of a good hypothesis.

**Unit-III Literature Review, Data Sources and Tools**

- Literature Review: importance of literature review, methods of writing literature review.
- Data Source: Primary and Secondary Sources
- Characteristics of Measuring tool: Validity, Reliability, Objectivity and Norms;
- Selection of tool: Standardised tool & Self Constructed.

**Unit-IV Descriptive Statistics**

- Mean, Median and Mode, Mean Deviation, Standard Deviation.
- Meaning of probability- Normal Curve, Principles of normal curve – Properties of normal curve. Divergence from normality – Skewness and Kurtosis.
- Graphical Representation in Statistics; Line diagram, Bar diagram, Histogram, Frequency Polygon.
- Parametric and non-parametric statistics.

**SUGGESTED READINGS:**

- Best J.W., Research in Education (4th ed.). New Delhi; Prentice Hall inc.,1982.
- Clarke, H. David Research Processes in Physical Education Recreation & Health. Prentice Hall inc., 1985
- Garrett, H.E. (1981). *Statistics in psychology and education*. New York: VakilsFeffer and Simon Ltd.
- Kamlesh, M.L. Methodology of Research in Physical Education and Sport (4th ed.). New Delhi; Sports Publication, 2014.
- Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). *Introduction to research: A guide for the health science professional*. Landon: J.B. Lippincott Company.

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- Scott, M. Gladys (ed.) Research Methods in health, physical education and recreation. Washington, D.C., American Association for Health, Physical Education and Recreation, 1968.
- Sharma, Y. P. Physical Education and Research Methodology. New Delhi; Reliance Publishing House, 1997
- Thomas Jerry R., Nelson Jack K. & Silverman, Stephen J. Research Methods in Physical Activity. Human Kinetics: Champaign, 2005.
- Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
- Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.

**M.P.Ed. Semester III**

**Max Marks -100**

**Credit= 4**

**MPED-C-302: SPORTS MEDICINE**

**Objective:** To impart knowledge about the sports medicine in physical education.

**Outcome:** Student learns the basic concept of different therapy, injuries, massage and rehabilitation in physical education and sports.

**Relevance:** In the area of Physical Education and sports it is broadly used.

**Unit-1 Sports Medicine and Sports Injuries**

- Sports Medicine: Meaning, Definition and Objectives.
- Scope and Importance of Sports Medicine.
- Sports Injuries: Classification, Causes and Prevention.
- First Aid - Objectives & Principles of First Aid.

**UNIT-II Doping in Sports**

- Meaning, Classification of Doping, its side Effects.
- Ergogenic aids & Doping in Sports, Doping: methods and effects on health; Role and importance of WADA & NADA in Doping.
- Prohibited Substance, Method and Athletes Responsibilities.
- Side Effect of Prohibited Substances.

**UNIT-III Physiotherapy and Massage**

- Definition – Guiding principles of physiotherapy & Importance of physiotherapy;
- Therapeutic modalities: Cryotherapy, hydrotherapy and thermotherapy (I/R lamps, wax bath);
- Electrotherapy: TENS, short wave diathermy, microwave diathermy, ultra sound;
- Massage: Different manipulations used in massage.

**Unit-IV Rehabilitation**

- Rehabilitation: Meaning & Contribution of Physical Education Teachers and Coaches.
- Principles of Rehabilitation;
- Therapeutic Exercise: Definition and Scope – Principles of Therapeutic Exercise – Classification;
- Effects and uses of Therapeutic exercise – passive Movements (Relaxed, Forced and passive - stretching) – active movements (concentric, Eccentric and static)

**SUGGESTED READINGS:**

- Armatrong & Tucker: Injuries in Sports (London: Staples Pres).
- Christine, M. D., (1999). Physiology of sports and exercise. USA: Human Kinetics.
- Conley, M. (2000). Bioenergetics of exercise training. In T.R. Baechle, & R.W. Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
- David, R. M. (2005). Drugs in sports, (4th Ed). Routledge Taylor and Francis Group.



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- Hunter, M. D. (1979). A dictionary for physical educators. In H. M. Borrow & R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74). Philadelphia: Lea &Febiger.
- Jeyaprakash, C. S., Sports Medicine, J.P. Brothers Pub., New Delhi, 2003.
- Khanna, G.L., (1990). Exercise physiology & sports medicine. Delhi:Lucky Enterprises.
- Mathew, D.K. & Fox, E.L, (1971). Physiological basis of physical education and athletics. Philadelphia:W.B. Saunders Co.
- Pandey, P.K., (1987). Outline of sports medicine, New Delhi: J.P. Brothers Pub.
- Ray, Steven & Tryin Richard: Sports Medicine (New Jersey Englo cliffs, Prentice Hall, 1983).
- Williams, J. G. P. (1962). Sports medicine. London: Edward Arnold Ltd.

**M.P.Ed. Semester III**

**Max Marks -100**

**Credit= 4**

**MPED-C-303: EXERCISE PHYSIOLOGY-I**

**Objective:** To impart knowledge about the exercise physiology in physical education.

**Outcome:** Student learns the basic concept of different systems, physiological concepts in physical education.

**Relevance:** fitness centre, health clubs, schools, colleges, institutes gym or wider area of health related exercises.

**Unit-1 Fundamentals and Neuromuscular Function**

- Skeletal Muscle: Function of Skeletal Muscle; Sliding Filament Theory of muscular contraction;
- The basic energy systems: ATP-PCr System, Glycolytic System & Oxidative system;
- Nerve control of exercising muscle: Neuron structure, neuromuscular junction;
- Neural transmission & motor response.

**Unit-II Ergogenic Aids and Sports**

- Pharmacological Agents: Amphetamine,  $\beta$ -blockers, Diuretics;
- Hormonal agents: Anabolic steroids & Human growth hormone;
- Physiological agents: Erythropoietin, Oxygen Supplementation, Bicarbonate loading, Phosphate loading;
- Nutritional agents: Amino acids, Creatine & L-Carnitine.

**Unit-III Exercise in Different Environmental Conditions**

- Thermoregulatory control of heat exchange and effectors that alter body temperature;
- Exercise in hot condition: Physiological response and health risks;
- Exercise in cold condition: Physiological response and health risks;
- High altitude exercise: Physiological response and health risks.

**Unit-IV Gerontology and Exercise**

- Aging:
  - Body size and Composition difference;
  - Physiological response to acute exercise;
  - Special Issues (Environmental stress, Longevity).
- Sex Differences:
  - Body size and Composition difference;
  - Physiological response to acute exercise;
  - Special issues (menstrual dysfunction, eating disorders);

**SUGGESTED READINGS:**

- Jack H. Wilmore, David L. Costill, (1994). Physiology of Sport and Exercise. Human Kinetics.
- Katch F.L. and McArdle W.D (2010) Nutrition, Weight Control and Exercise. Philadelphia, Lea &Febiger.
- Allen W. Jakson, James R. Morrow (1999) Physical Activity for Health &fitness. Human Kinetics.
- Tiwari, Sandhya, (1999).Exercise Physiology.Sports Publications
- David N. Camaione (1993). Fitness Management.WCB Brown & Benchmark.

**M.P.Ed. Semester III**

**Max Marks-100**

**Credit= 3**

**MPED-C-304: GAMES-III**

**Objective:** To teach the basics of Games and its related skills.

**Outcome:** Students learn about the different techniques and skills in Handball & Hockey.

**Relevance:** It is broadly used in the school, institute, and universities curriculum.

**Handball & Hockey**

**Unit-1 Teaching in Handball**

- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials & scoring.
- Teaching: Preparation, methods & demonstration of lesson

**Unit-II Training in Handball**

- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills

**Unit-III Teaching in Hockey**

- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials & scoring.
- Teaching: Preparation, methods & demonstration of lesson

**Unit-IV Training in Hockey**

- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills

**SUGGESTED READINGS:**

- Jain D (2003). Play & Learn Handball. Khel Sahitya Kendra. New Delhi.
- Kleinman, I. (2009). Complete Physical Education Plans. 2nd Ed. Human Kinetics, USA.
- Page, J. (2000). Ball Games. Lerner Sports Publisher, USA.
- Phillips, B.E. (2009). Fundamental Handball. Kessinger Publishers, USA.
- Schmottlach N Mcmanama J (1997). Physical Education Handbook. 9th Edition. Allyn & Bacon. London.
- Schmottlach, N. and McManama (2005). Physical Education Activity Handbook. Benjamin Cummings, USA.
- Surhone, L.M. et al (2010). Team Handball. Betascript Publishing, USA
- International Hockey Federation (2003). Rules of the Game of Hockey with Guidance for Players and Umpires. International Hockey Federation. India.
- Jain D (2003). Hockey Skills & Rules. khel Sahitya Kendra. New Delhi.
- Narang P (2003). Play & Learn Hockey. Khel Sahitya Kendra. New Delhi.
- Pecknold, R. and Foeste, A. (2009). Hockey: Essential Skills. McGraw Hills, USA.
- Rossiter, S. (2003). Hokcey the NHL Way: Goaltending Illustrated Edition. Sterling Publishers, USA.
- Thani Yograj (2002). Coaching Successfully Hockey. Sports Publication. Delhi.

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- Walter, R. and Johnson, M. (2009). Hockey Plays and Strategies. Human Kinetics, USA.
- Weekes, D. (2003). The Biggest Book of Hockey Trivia. Greystone Books, USA.
- Wukovits, J.F. (2000). History of Hockey 1st Ed. Lucent Books, USA.

**M.P.Ed. Semester III**

**Max Marks-100**

**Credit = 3**

**MPED-C-305: TRACK & FIELD-III**

**Objective:** To teach the basics of Athletics and its related skills.

**Outcome:** Students learn about the different techniques and skills in Sprints & High Jump.

**Relevance:** It is broadly used in the school, institute, and universities curriculum.

**Sprints & High Jump**

**UNIT-I Sprints**

- Analysis of Sprint Techniques
- Factors for Good Sprinter
- Teaching Stages (Progression) of Sprint Run

**UNIT-II Technique and Measurement**

- Types of Start Techniques
- Types of Finishing Techniques
- Track Layout Procedure and Rules of Track

**UNIT-III High Jump**

- Analysis of High Jump Techniques
- Qualities of a High Jumper
- Teaching Progression (Stage) for High Jumper

**UNIT-IV Technique and Measurement**

- Different Styles of High Jump
- Runway and Landing Pit
- Rules of High Jump

**SUGGESTED READINGS:**

- Ken Sparks & Garry Bjorklund.: Long – Distance Runner’s Guide to Training and Racing, Prentice – Hall, Inc., Englewood Cliffs, New Jersey – 07632 (1984).
- Thani V. Encyclopedia of Track & Field (with Latest Rules), Khel Sahitya Kendra – 4264/3, Ansari Road, Darya Ganj, New Delhi (2003).
- Jain R.: Play and Learn Track and Field, Khel Sahitya Kendra – 4264/3, Ansari Road, Darya Ganj, New Delhi (2003).
- Dasmohapatra S.C.: The Athletics Guide, Sanjay K. Mohanty Publication (India) Barabati Stadium Cuttack, Orissa (1996).
- Sharma P.D.: Olympics–Athens to Atlanta 1896 – 1996, Friends Publications

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Choice Based Credit System (CBCS)  
Scheme and Course Structure for  
M.P.Ed. Semester IV

Course Code	Course Title	Type of Course	Credit Value	MSE	ESE	Total
MPED-C-401	Research Methodology and Applied Statistics–II	Core	4	50	50	100
MPED-C-402	Exercise Physiology–II	Core	4	50	50	100
MPED-C-403	Dissertation	Core	8	100	100	200
MPED-C-404	Games-IV	Core (Practical)	3	50	50	100
MPED-C-405	Track & Field-IV	Core (Practical)	3	50	50	100
MPED-C-406	Yoga	Core (Practical)	2	50	--	50
<b>Total</b>			<b>24</b>	<b>350</b>	<b>300</b>	<b>650</b>

**M.P.Ed. Semester IV**

**Max Marks -100**

**Credit= 4**

**MPED-C-401: RESEARCH METHODOLOGY AND APPLIED STATISTICS-II**

**Objective:** To impart knowledge about the research methodology.

**Outcome:** Students learn the basic concept of Research methodology and its terminology.

**Relevance:** It is used to conduct the research in physical education and related fields.

**UNIT-I Sampling**

- Meaning and Definition of Sample and Population. Types of Sampling
- Probability Methods; Systematic Sampling, Cluster Sampling, Stratified Sampling. Area Sampling – Multistage Sampling.
- Non-Probability Methods; Convenience Sample, Judgement Sampling, Quota Sampling.

**Unit-II Methods of Research**

- Descriptive, Analytical, Philosophical, Experimental, Qualitative Research
- Descriptive Research Methods: Survey - definition, types, scope and importance
- Historical Research Method: Purpose and scope of historical research;
- Sources of Historical data; Historical Criticism.

**UNIT-III Experimental Research**

- Experimental Research – Meaning, Nature and Importance,
- Meaning of Variable, Types of Variables.
- Experimental Design - Single Group Design, Reverse Group Design, Repeated Measure Design, Static Group Comparison Design, Equated Group Design, Factorial Design.
- Writing of Research Report: Basic writing guidelines; Thesis and Dissertation format.

**Unit-IV Inferential and Comparative Statistics**

- Tests of significance; Independent “t” test, Dependent “t” test – chi – square test.
- Level of confidence and interpretation of data. Null hypothesis; one and two tailed tests; Type I and Type II errors.
- Meaning of correlation – co-efficient of correlation – calculation of co-efficient of correlation by the product moment method and rank difference method.
- Concept of ANOVA and ANCOVA; Use of SPSS.

**SUGGESTED READINGS:**

- Best J.W., Research in Education (4th ed.). New Delhi; Prentice Hall inc., 1982.
- Clarke, H. David Research Processes in Physical Education Recreation & Health. Prentice Hall inc., 1985.
- Kamlesh, M.L. Methodology of Research in Physical Education and Sport (4<sup>th</sup> ed.). New Delhi; Sports Publication, 2014.
- Scott, M. Gladys (ed.) Research Methods in health, physical education and recreation. Washington, D.C., American Association for Health, Physical Education and Recreation, 1968.
- Thomas Jerry R., Nelson Jack K. & Silverman, Stephen J. Research Methods in Physical Activity. Human Kinetics: Champaign, 2005.
- Sharma, Y. P. Physical Education and Research Methodology. New Delhi; Reliance Publishing House, 1997

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- Weimer. Jon Research Techniques in Human Engineering, Prentice Hall: New Jersey, 1994.
- Mark F. Smith: Research methods in sports; BEBC Distribution, Albion Close, Parkstone 2010



**M.P.Ed. Semester IV**

**Max Marks -100**

**Credit= 4**

**MPED-C-402: EXERCISE PHYSIOLOGY-II**

**Objective:** To impart knowledge about the exercise physiology in physical education.

**Outcome:** Student learns the basic concept of different systems, physiological concepts in physical education.

**Relevance:** fitness centre, health clubs, schools, colleges, institutes gym or wider area of health related exercises.

**UNIT-I Physiology of Health Related and Skill Related Fitness**

- Health Related Fitness
  - Components
  - Benefits
  - Development
- Skill-Related Fitness
  - Components
  - Benefits
  - Development

**UNIT-II Adapted Physical Education**

- Exercise and Fitness for physically challenged subjects.
  - Categories of physically challenged subjects.
  - Exercise and fitness review in physically challenged subjects.
- Fitness Assessment in Disabled
  - Anaerobic capacity and power
  - Aerobic capacity
  - Electro cardio graphic response to exercise
  - Muscular strength/endurance
  - Flexibility
  - Body composition
  - Appropriate fitness assessment: disability conditions, protocol selection specificity.

**UNIT-III Prescription of Exercise for Health and Fitness**

- Prerequisites for Exercise Prescription
  - Medical Clearance
  - Stop test indicators
  - Health Appraisal flowchart
  - Administrative guidelines for pre-testing situation
- Formulation and guidelines of Exercise Program
  - Consent form
  - Steps for program formulation
  - Rationale for formulating an individualized exercise program
  - Protocol Guidelines
  - Monitoring exercise intensity
  - Administrative guidelines for testing situation

**UNIT-IV Cardiovascular Dynamics and Energy cost**

- Major Concepts in Calculations of Cardiovascular Dynamics
  - The fick equation: determining cardiac output
  - Absolute and relative  $V_{O_2}$
  - $a - V_{O_2}$  diff
  - Double product
  - Mean arterial pressure
  - Determining appropriate exercise intensity

- Karronenformula.
- EnergyCost
  - Energy Cost of LevelWalking
  - Energy cost of uphillwalking.
  - Energy cost of running
- Energy cost for sub maximal exercise testing and related math
  - Stepping
  - Cycling
  - Swimming

**SUGGESTED READINGS:**

- Jack H. Wilmore, David L. Costill, (1994). Physiology of Sport and Exercise. Human Kinetics.
- Katch F.L. and McArdle W.D (2010) Nutrition, Weight Control and Exercise. Philadelphia, Lea &Febiger.
- Allen W. Jackson, James R. Morrow (1999) Physical Activity for Health & fitness. Human Kinetics.
- Tiwari, Sandhya, (1999). Exercise Physiology. Sports Publications
- David N. Camaione (1993). Fitness Management. WCB Brown & Benchmark.

**M.P.Ed. Semester IV**

**Max Marks -100**

**Credit= 3**

**MPED-C-404: GAMES-IV**

**Objective:** To teach the basics of Games and its related skills.

**Outcome:** Students learn about the different techniques and skills in Cricket & Volleyball.

**Relevance:** It is broadly used in the school, institute, and universities curriculum.

**Cricket & Volleyball**

**Unit-I Teaching in Cricket**

- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials & scoring.
- Teaching: Preparation, methods & demonstration of lesson

**Unit-II Training in Cricket**

- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills

**Unit-III Teaching in Volleyball**

- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials & scoring.
- Teaching: Preparation, methods & demonstration of lesson

**Unit-IV Training in Volleyball**

- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills

**SUGGESTED READINGS:**

- American Volleyball Coaches Association (2005). Volleyball: Skills & Drills. Human Kinetics, USA.
- FIVB (1996). Backcourt Spiking in Modern Volley Ball. FIVB. Chennai.
- Kenny, B. and Gregory, C. (2006). Volleyball: Steps to Success. Human Kinetics, USA.
- Sagar SK (1994). Cosco Skills Stactics - Volley Ball. Sport Publication. Delhi.
- Scates AE (1993). Winning Volley Ball. WC Brown. USA.
- Scates, A. and Linn, M. (2002). Complete Conditioning for Volleyball. Human Kinetics, USA.
- Shondell, D. and Reynaud, C. (2002). The Volleyball Coaching Bible. Human Kinetics, USA.

**M.P.Ed. Semester IV**

**Max Marks-100**

**Credit = 3**

**MPED-C-405: TRACK & FIELD-IV**

**Objective:** To teach the basics of Athletics and its related skills.

**Outcome:** Students learn about the different techniques and skills in Shot-Put & Hurdles.

**Relevance:** It is broadly used in the school, institute, and universities curriculum.

**Shot-Put & Hurdles**

**UNIT-I Shot-Put**

- Analysis of Shot-Put Techniques
- Shot-Put Depends on Those Factors
- Bio - Mechanical Principles

**UNIT-II Technique and Measurement**

- Types of Shot-Put Techniques
- Layout Shot-Put Circle and Landing Sector
- Rules of Shot-Put

**UNIT-III Hurdles**

- Fundamental Principles of Hurdling
- Physical Requirements of a Hurdler
- Teaching Progression of Hurdle Race

**UNIT-IV Technique and Measurement**

- Hurdles Techniques
- Hurdles Distance and Height
- Rules of Hurdles

**SUGGESTED READINGS:**

- Ken Sparks & Garry Bjorklund.: Long – Distance Runner’s Guide to Training and Racing, Prentice – Hall, Inc., Englewood Cliffs, New Jersey – 07632 (1984).
- Thani V.: Encyclopedia of Track & Field (with Latest Rules), Khel Sahitya Kendra – 4264/3, Ansari Road, Darya Ganj, New Delhi (2003).
- Jain R.: Play and Learn Track and Field, Khel Sahitya Kendra – 4264/3, Ansari Road, Darya Ganj, New Delhi (2003).
- Dasmohapatra S.C.: The Athletics Guide, Sanjay K. Mohanty Publication (India) Barabati Stadium Cuttack, Orissa (1996).
- Sharma P.D.: Olympics–Athens to Atlanta 1896 – 1996, Friends Publications (India), 918, Dr. Mukherji Nagar, Delhi (1998–99).

**M.P.Ed.Semester IV**

**Max Marks-50**

**Credit = 2**

**MPED-C-406: YOGA**

**Objective:** To teach the basics of yoga.

**Outcome:** Students learn about the different Asanas and Pranayama in yoga.

**Relevance:** It is broadly used in the school, institute, and universities curriculum.

**UNIT-I Asanas**

- Elements of Yoga
- Various Asanas and their advantages:
  - Sitting Position
  - Standing Position
  - Lying Position

**UNIT-I Pranayama and Meditation**

- Various types of Pranayama
- Meditation – Types and Techniques
- Officiating and Scoring in Yoga Competitions

**SUGGESTED READINGS:**

- Brown, F. Y. (2000). How to use yoga. Delhi: Sports publication.
- Gharote, M. L. & Ganguly, H. (1988). Teaching Methods for yogic practices. Lonawala: Kaixy dahmoe
- Rajjan, S. M. (1985). Yoga Strengthening of relaxation for sports man. New Delhi: Allied Publishers.
- Singh, S. P. & Yogi, M. (2010) Foundations of Yoga. Standard Publication, India.