

Department of Physical Education, Central University of Kashmir

Choice Based Credit System (CBCS)  
Scheme and Course Structure for

**M.P.Ed. 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 (Internal)	--	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**

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**Objectives:**

1. To impart knowledge about the sampling in the research methodology.
2. To provide the information about different methods in research problems
3. To understand about the experimental research.
4. To give the basic concept of inferential and comparative statistics in physical education.

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

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**UNIT-I Sampling**

- Meaning and Definition of Sample and Population.
- Types of Sampling: Probability Methods; Simple random sampling, stratified random sampling, cluster Sampling, systematic sampling, Multistage Sampling.
- Non-Probability Methods: Quota Sampling, purposive sampling, sequential sampling, snowball sampling

**Unit-II Methods of Research**

- Analytical, Philosophical, Qualitative Research and quantitative research
- Descriptive Research Methods: 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
- 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
- Meaning of correlation – Co-efficient of correlation: Product moment method and rank difference method.
- Concept of ANOVA and 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.

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- Sharma, Y. P. Physical Education and Research Methodology. New Delhi; Reliance Publishing House, 1997
- 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

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M.P.Ed. Semester-IV

Max Marks -100

Credit= 4

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

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**Objective:** This course focuses on how the body (and its systems) responds to the differing types of intensities of exercise. For students who wish to pursue further studies in exercise physiology, a thorough mastery of this fundamental information is extremely important and provides the foundation for more advanced study in exercise bioenergetics, biochemistry and physiology.

**Outcomes:**

1. Knowledge of the acute and chronic physiological changes that occur in the body in response to exercise stress.
  2. Knowledge in the performance, understanding and interpretation of basic physiological assessment such as Health Related and Skill Related Fitness.
  3. Knowledge of Prescription of Exercise for Health and Fitness.
  4. An appreciation of research in exercise physiology.
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**UNIT-I Physiology of Health Related and Skill Related Fitness**

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

**UNIT-II Recovery Process**

- Metabolism of food products.
- Physiological aspects of fatigue.
- Restoration of energy stores.
- Recovery oxygen and Nutritional aspects of performance.

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

- Prerequisites for Exercise Prescription
  - Medical Clearance
  - Stop test indicators
  - 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
  - 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  $Vo_2$
  - $a - Vo_2$  diff
  - Double product
  - Determining appropriate exercise intensity
  - Karronen formula.
- Energy Cost
  - Energy Cost of Level Walking
  - Energy cost of uphill walking.
  - 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. 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.

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M.P.Ed. Semester-IV

Max Marks -100

Credit= 3

MPED-C-404: GAMES-IV

**Objective:** To equip the students with the knowledge of different techniques, measurement, rules, required skills in Cricket & Volleyball and to increase self-confidence through practical application.

**Outcomes:**

1. Illustrate the various physical characteristics of Cricket & Volleyball.
2. Describe the fundamental techniques of Cricket & Volleyball.
3. Impart knowledge about the basics rules of Cricket & Volleyball.
4. Understand about the specifications of equipments in Cricket & Volleyball.
5. Examine the basic concept of conducting the tournaments and officiating of Cricket & Volleyball.

**Cricket**

- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials & scoring.
- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills
- *Teaching: Preparation, methods & demonstration of lessons*

**Volleyball**

- Current laws and their interpretations; Dimensions, equipment specifications;
- Duties and responsibilities of officials & scoring.
- Fundamental skills
- Advanced skills and tactics
- Specific exercise and drill related to different skills
- Biomechanical analysis of skills
- *Teaching: Preparation, methods & demonstration of lessons*

**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.
- Saggarr 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.

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M.P.Ed. Semester-IV

Max Marks-100

Credit = 3

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

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**Objective:** To equip the students with the knowledge of different techniques, measurement, rules, required skills in shot-put & hurdles and to increase self-confidence through practical application.

**Outcomes:** After successful completion of the course, the students will be able to:

1. Illustrate the various physical characteristics of shot-put & hurdles.
  2. Describe the fundamental techniques of shot-put & hurdles.
  3. Impart knowledge about the basics rules of shot-put & hurdles.
  4. Understand about the specifications of equipments in shot-put & hurdles.
  5. Examine the basic concept of conducting the tournaments and officiating of shot-put & hurdles.
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**Shot-Put**

- Analysis of Shot-Put Techniques
- Shot-Put Depends on Those Factors
- Bio - Mechanical Principles
- Types of Shot-Put Techniques
- Layout Shot-Put Circle and Landing Sector
- Rules of Shot-Put
- *Teaching: Preparation, methods & demonstration of lessons*

**Hurdles**

- Fundamental Principles of Hurdling
- Physical Requirements of a Hurdler
- Teaching Progression of Hurdle Race
- Hurdles Techniques
- Hurdles Distance and Height
- Rules of Hurdles
- *Teaching: Preparation, methods & demonstration of lessons*

**SUGGESTED READINGS:**

- Ken Sparks & Garry Bjorklund.: Long – Distance Runner’s Guide to Training and Racing, Prentice – Hall, Inc., Englewood Cliffs, New Jersey – 07632 (1984).

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- 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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M.P.Ed. Semester-IV

Max Marks-50

Credit = 2

**MPED-C-406: YOGA**

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**Objectives:**

1. To teach the basics of yoga.
2. Students learn about the different Asanas and Pranayama in yoga.

**Outcomes:**

1. The student will be able to identify poses using the sanskrit name.
  2. The student will be able to categorize poses from a list by increasing level of difficulty.
  3. The student will be able to sequence three poses according to a practice.
  4. The student will be able to work quietly without disturbing classmates.
  5. The student will be motivated to continue the activity outside of class.
  6. The student will develop a greater sense of body self esteem and appreciation for the art of yoga.
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**UNIT-I Asanas**

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

**UNIT-II 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: Kaixydahmoe
- 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.

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