

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## Semester - I

<b>Part A: Theoretical Course</b>				
<b>Course Code</b>	<b>Title of the Papers</b>	<b>Internal Marks</b>	<b>External Marks</b>	<b>Total Marks</b>
<b>Core Course</b>				
<b>MPCC-101</b>	Research Process in Physical Education & Sports Sciences	30	70	100
<b>MPCC-102</b>	Physiology of Exercise.	30	70	100
<b>MPCC-103</b>	Yogic Sciences	30	70	100
<b>Elective Course (Anyone)</b>				
<b>MPEC-101</b>	Tests, Measurement and Evaluation in Physical Education	30	70	100
<b>MPEC-102</b>	Sports Technology			
<b>Part-B Practical Course</b>				
<b>MPPC-101</b>	Track and Field (I) : Running Events	50	50	100
<b>MPPC-102</b>	Sports Major – I: Swimming And Gymnastics	50	50	100
<b>MPPC-103</b>	Karate / Self Defense and Adventure Sports	50	50	100
<b>MPPC-104</b>	Class Room Teaching Lessons (4+1) one from each theory subject and one for External	50	50	100
<b>Total</b>		320	480	800

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**Semester - II**

<b>Part A: Theoretical Course</b>				
<b>Course Code</b>	<b>Title of the Papers</b>	<b>Internal Marks</b>	<b>External Marks</b>	<b>Total Marks</b>
<b>Core Course</b>				
<b>MPCC-201</b>	Applied Statistics in Physical Education & Sports	30	70	100
<b>MPCC-202</b>	Sports Biomechanics & Kinesiology	30	70	100
<b>MPCC-203</b>	Athletic Care and Rehabilitation	30	70	100
<b>Elective Course (Anyone)</b>				
<b>MPEC-201</b>	Sports Journalism and Mass Media	30	70	100
<b>MPEC-202</b>	Sports Management and Curriculum Designs in Physical Education			
<b>Part-B Practical Course</b>				
<b>MPPC-201</b>	Track & Field – II: Shot put Discus and Javelin Throws, High, Long and Triple Jump	50	50	100
<b>MPPC-202</b>	Sports Major – II: Basketball and Cricket (Fundamental Skills, Individual Tactics, Officiating and Lead-up Games)	50	50	100
<b>MPPC-203</b>	Yoga: Asanas, Pranayam and Kriyas	50	50	100
<b>MPPC-204</b>	Teaching Lessons: Sports Major – 4 lessons Track & Field- 4 lessons	50	50	100
<b>Total</b>		320	480	800

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## Semester - III

<b>Part A: Theoretical Course</b>				
Course Code	Title of the Papers	Internal Marks	External Marks	Total Marks
<b>Core Course</b>				
<b>MPCC-301</b>	Scientific Principles of Sports Training	30	70	100
<b>MPCC-302</b>	Sports Medicine	30	70	100
<b>MPCC-303</b>	Health Education and Sports Nutrition	30	70	100
<b>Elective Course (Anyone)</b>				
<b>MPEC-301</b>	Sports Engineering And Technology	30	70	100
<b>MPEC-302</b>	Physical Fitness and Wellness			
<b>Part-B Practical Course</b>				
<b>MPPC-301</b>	Sports Major – III: Football and One Racket Sports (Fundamental Skills, Individual Tactics, Officiating and Lead-up Games)	50	50	100
<b>MPPC-302</b>	Sports Major – IV: Volleyball and Handball (Fundamental Skills, Individual Tactics, Officiating and Lead-up Games)	50	50	100
<b>MPPC-303</b>	Officiating of Track & Fields and Sports Activities – Taught in SEM – I, II, III and IV	50	50	100
<b>MPPC-304</b>	Internship on a Team Game*/ Project Work on Practical Activities*	50	50	100
<b>Total</b>		320	480	800

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**Semester – IV**

<b>Part A: Theoretical Course</b>				
<b>Course Code</b>	<b>Title of the Papers</b>	<b>Internal Marks</b>	<b>External Marks</b>	<b>Total Marks</b>
<b>Core Course</b>				
<b>MPCC-401</b>	Information & Communication Technology (ICT) in Physical Education And Sports	30	70	100
<b>MPCC-402</b>	Psychology and Sociology of Sports	30	70	100
<b>MPCC-403</b>	Dissertation	30	70	100
<b>Elective Course (Anyone)</b>				
<b>MPEC-401</b>	Value and Environmental Education	30	70	100
<b>MPEC-402</b>	Education Technology in Physical Education and Sports			
<b>MPEC-403</b>	Gender Studies In Physical Education And Sports			
<b>Part–B Practical Course</b>				
<b>MPPC-401</b>	Hammer or Pole Vault or Combined Events – Triathlon, Pentathlon, Heptathlon and Decathlon: (Fundamental Skills, Individual Tactics, Officiating )	50	50	100
<b>MPPC-402</b>	Sports Specialization (One): Among Track & Field, Yoga and Sports Major (Technique of Officiating, Fundamental and Advanced Skill, Tactics, Strategies, Game Practice and Lead-up Games.	50	50	100
<b>MPPC-403</b>	Coaching Lessons on Sports Specialization Five internal practice lessons and one Final Lesson	50	50	100
<b>MPPC-404</b>	Lab Practical (25 marks in each subject)(Any Four) A) Physiology of Exercise B) Kinesiology and Sports Biomechanics C) Sports Psychology D) Measurement & Evaluation in Physical Education E) Sports Management	50	50	100
<b>Total</b>		320	480	800
		1280	1920	3200

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## PART-A

### THEORY COURSES

#### Semester-I

#### MPCC-101: RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES

##### UNIT 1 – Introduction to Research

- 1.1 Meaning and Definition of Research.
- 1.2 Need, Nature and Scope of Research in Physical Education & Sports.
- 1.3 Classification of Research- Basic, Action and Applied Research.
- 1.4 Location of Research Problem, Criteria for selection of a research problem. Method of collecting data and its salient features.

##### UNIT 2 – Methods of Research & Experimental Research

- 2.1 Descriptive Methods of Research - Survey Study, Case study.
- 2.2 Historical Research – Meaning, Sources and criticism of Historical Research: Primary Data and Secondary Data.
- 2.3 Experimental Research: Meaning, Nature and Importance, Steps of Experimental Research. Meaning of Variable, Types of Variables.
- 2.4 Experimental Design, Meaning & Types.

##### UNIT 3 – Sampling

- 3.1 Meaning and Definition of Sample and Population, Statistic and parameter.
- 3.2 Sampling and its importance.
- 3.3 Probability Sampling: Random sampling, Systematic Sampling, Cluster sampling, Stratified Sampling. Area & Multistage sampling.
- 3.4 Non- Probability Sampling: Purposive, Judgment, Quota Sampling.

##### UNIT 4 – Research Proposal and Report

- 4.1 Research Proposal: Meaning, Significance, Method of Writing Research proposal
- 4.2 Hypothesis: Meaning Characteristics, Types, and testing of hypothesis
- 4.3 Method of writing Thesis / Dissertation, Importance of review of related literature.
- 4.4 Research report: Format, writing style, common faults and characteristics of Research report. Style of writing foot notes and bibliography.

##### REFERENCE :

- Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc
- Clarke David. H & Clarke H, Harrison (1984) Research processes in Physical Education, New Jersey; Prentice Hall Inc.
- Craig Williams and Chris Wragg (2006) Data Analysis and Research for Sport and Exercise Science, London|Routledge Press
- Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illinois; Human Kinetics;
- Kamlesh, M. L. (1999) Research Methodology in Physical Education and Sports, New Delhi
- Moses, A. K. (1995) Thesis Writing Format, Chennai; PoompugarPathippagam 2 years M.P.Ed Curriculum 17
- Rothstain, A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: PrenticeHall, Inc
- Subramanian, R, Thirumalai Kumar S & Arumugam C (2010) Research Methods in Health, Physical Education and Sports, New Delhi; Friends Publication
- Moorthy A. M. Research Processes in Physical Education (2010); Friend Publication, New Delhi

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## MPCC-102: PHYSIOLOGY OF EXERCISE

### UNIT 1 – Skeletal Muscles and Exercise

- 1.1 Macro & Micro Structure of the Skeletal Muscle, Chemical Composition, Types of Muscle fiber, Muscle Tone.
- 1.2 Nerve supply to muscle, concept of neuromuscular transmission.
- 1.3 Sliding Filament theory of Muscle Contraction, Chemistry of Muscular Contraction –Heat Production in the Muscle.
- 1.4 Effect of exercises and training on the muscular system.

### UNIT 2 – Cardiovascular System and Exercise

- 2.1 Conduction System of the Heart- Blood Supply to the Heart- Stroke Volume- Cardiac Output.
- 2.2 Blood Flow at rest and during exercise – hemodynamic principle.
- 2.3 Heart Rate-Factors Affecting Heart Rate- Regulation of Heart rate, Cardiac Hypertrophy.
- 2.4 Effect of exercises and training on the Cardio vascular system. Cardiac diseases and therapeutic exercises.

### UNIT 3 – Respiratory System and Exercise

- 3.1 Mechanism of Breathing –Respiratory Muscles, Pulmonary- Ventilation at Rest and During Exercise.
- 3.2 Exchange of Gases in the Lungs –Exchange of Gases in the Tissues- Control of Ventilation- Oxygen Debt/ EPOC.
- 3.3 Vo<sub>2</sub> max: concept, determination and its implication in sports performance.
- 3.4 Effect of exercises and training on the respiratory system.

### UNIT 4 – Metabolism and Energy Transfer

- 4.1 Metabolism- ATP-PC or Phosphagen System-Lactic Acid System –Anaerobic Metabolism- Aerobic Metabolism.
- 4.2 Aerobic and Anaerobic Systems during Rest and Exercise.
- 4.3 Energy supply at Short Duration High Intensity Exercises –High Intensity Exercise Lasting Several Minutes- Long Duration Exercises.
- 4.4 Measurement of energy cost of an activity.

### UNIT 5 – Climatic conditions and sports performance and ergogenic aids

- 5.1 Variation in Temperature and Humidity- Thermoregulation.
- 5.2 Sports performance in hot climate, Cool Climate, high altitude.
- 5.3 Ergogenic Aid- Androstenedione, Beta Blocker, Choline, Creatine, Human growth hormone on sports performance.
- 5.4 Doping agents: Narcotics, Stimulants, Amphetamines, Caffeine, Ephedrine, Sympathomimetic amines. Stimulants and sports performance.

#### REFERENCES:

- Amrit Kumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: PoompugarPathipagam.
- BeotraAlka, (2000) Drug Education Handbook on Drug Abuse in Sports: Sports Authority of India Delhi.
- Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs.
- David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics.
- Fox, E.L., and Mathews, D.K. (1981). The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing.
- Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co.
- Richard, W. Bowers. (1989). Sports Physiology. WMC: Brown Publishers.
- William, D. McAradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company.

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## MPCC-103: YOGIC SCIENCE

### UNIT 1 – Introduction of Yoga

- 1.1. Meaning and Definition of Yoga.
- 1.2. Different schools of yoga.
- 1.3. Yoga: A mind-body medicine.
- 1.4. Yoga: Complementary Alternative Medicine (CAM).

### UNIT 2 – Methods of Yoga

- 2.1 Meaning, types and techniques of Kriya.
- 2.2 Meaning, types and techniques of Asana.
- 2.3 Meaning, types and techniques of Pranayama.
- 2.4 Meaning, types and techniques of Meditation.

### UNIT 3 – Effects of Yogic Practices

- 3.1 Effects of Kriya on various systems of human body.
- 3.2 Effects of Asana on various systems of human body.
- 3.3 Effects of Pranayama on various systems of human body.
- 3.4 Effects of Meditation on various systems of human body.

### UNIT 4 – Applied Aspect of Yoga

- 4.1 Yoga for Health and Wellness
- 4.2 Yoga as therapy
- 4.3 Yoga for Sports Performance
- 4.4 Yoga and Relaxation

### REFERENCE:

1. George Feuerstein, (1975). Text Book of Yoga. London: MotilalBansaridassPublishers(P)Ltd.
- Gore, (1990).
2. Anatomy and Physiology of Yogic Practices. Lonavata: KanchanPrkashan.
3. Helen Purperhart (2004),The Yoga Adventure for Children. Netherlands: A Hunter House book.
4. Iyengar, B.K.S.(2000), LightonYoga. New Delhi: Harper Collins Publishers.
5. Karbelkar N.V. (1993) PatanjaliYogasutraBhashya (Marathi Edition) Amravati: Hanuman VyayamPrasarakMandal.
6. Kenghe.C.T. (1976). Yogaas Depth-Psychology and para-Psychology (Vol-I): Historical Background, Varanasi: BharataManishai.
7. Kuvalyananada Swami & S.L. Vinekar, (1963), Yogic Therapy – Basic Principles and Methods. NewDelhi: Govt. of India, Central Health Education and Bureau.
8. MoorthyA.M. & Alagesan.S. (2004) Yoga Therapy. Coimbatore: Teachers Publication House.
9. Swami Kuvalayanda, (1998), Asanas. Lonavala: Kaivalyadhama.
10. Swami SatyananadaSarasvati. (1989), Asana Pranayama Mudra Bandha. Munger: Bihar School of Yoga.
11. Swami SatyanandaSaraswathi. (1984), KundaliniandTantra, Bihar: YogaPublicationsTrust.
12. Swami Sivananda, (1971), The Science of Pranayama. Chennai: A Divine Life Society Publication.
13. Thirumalai Kumar. S and Indira.S (2011)Yogain Your Life, Chennai: The Parkar Publication.
14. Tiwari O.P. (1998), Asanas- Why and How. Lonavala: Kaivalyadham.

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## MPEC-101: TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION (Elective)

### UNIT 1– Introduction

- 1.1. Meaning and Definition of Test, Measurement and Evaluation.
- 1.2. Need and Importance of Measurement and Evaluation, Principles of Evaluation, Criteria of a good Test.
- 1.3. Define Norms. Meaning, Definition and Classification of Validity, Reliability and Objectivity.
- 1.4. Grading in Physical Education: Kinds of Grade, Basis of Grading.

### UNIT 2 –Physical Fitness Test and Motor Fitness Tests

- 2.1 Meaning and Definition of Motor Fitness. Test for Motor Fitness: Indiana Motor Fitness Test (For elementary and high school boys, girls and College Men), JCR test, Oregon Motor Fitness Test, Canadian Motor Fitness Test. Muscular Fitness – Kraus Weber Minimum Muscular Fitness Test.
- 2.2 Motor Ability Test: Barrow Motor Ability Test.
- 2.3 Health Related Fitness Test: AAHPERD Health Related Fitness Battery, Rogers's Physical Fitness Index.
- 2.4 Cardiovascular Test: Harvard Step Test, Cooper 12 Minutes Run and Walk Test, Beep Test.

### UNIT 3 – Physiological and Anthropometric Test

- 3.1 Aerobic Capacity: The Bruce Treadmill Test Protocol.
- 3.2 Anaerobic Capacity: Margaria- Kalamen Test, Wingate anaerobic test.
- 3.3 Method of Measuring Standing Height and Sitting Height. Method of measuring Circumference: Arm, Waist, Hip, Thigh and Skin folds: Biceps, Triceps, Sub scapular, Suprailiac.
- 3.4 Assessment of Body Composition, Measurement of Somatotyping.

### UNIT 4 – Skill Tests

- 4.1 Badminton Test: Miller Wall Volley Test. Basketball Test: Johnson Basketball Test, Harrison Basketball Ability Test. Tennis Test: Dyer Tennis Test.
- 4.2 Football Test: Mc-Donald Volley Soccer Test. Volleyball Test: Russel Lange Volleyball Test, Brady Volleyball Test.
- 4.3 Hockey Test: Friendel Field Hockey Test, Harban's Hockey Test.
- 4.4 Psychological test - Kinesthetic Perception, Reaction Ability Test, SCAT, Achievement Motivation.

### REFERENCES :

- Authors Guide (2013) ACSM's Health Related Physical Fitness Assessment Manual, USA: ACSM Publications
- Collins, R.D., & Hodges P.B. (2001) A Comprehensive Guide to Sports Skills Tests and Measurement (2<sup>nd</sup> 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, 2<sup>nd</sup> 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 Publishing Co. Inc
- 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, 3<sup>rd</sup> Edition, Dallas TX: The Cooper Institute for Aerobics Research



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## MPEC-102: SPORTS TECHNOLOGY (Elective)

### UNIT I – Sports Technology

- 1.1 Meaning, definition, purpose, advantages and applications,
- 1.2 General Principles and purpose of instrumentation in sports,
- 1.3 Workflow of instrumentation and business aspects, Technological impacts on sports.
- 1.4 Adhesives- Nano glue, nanomoulding technology, Nano turf. Foot wear production, Factors and application in sports, constraints.

### UNIT II – Surfaces of Playfields

- 2.1 Modern surfaces for playfields, construction and installation of sports surfaces.
- 2.2 Types of materials – synthetic, wood, polyurethane. Artificial turf.
- 2.3 Modern technology in the construction of indoor and outdoor facilities.
- 2.4 Technology in manufacture of modern play equipments.

### UNIT III – Modern Equipment

- 3.1 Playing Equipments: Balls: Types, Materials and Advantages, Bat/Stick/ Racquets: Types, Materials and Advantages.
- 3.2 Clothing and shoes: Types, Materials and Advantages.
- 3.3 Measuring equipments: Throwing and Jumping Events.
- 3.4 Protective equipments: Types, Materials and Advantages. Sports equipment with nano technology, Advantages.

### UNIT IV – Training Gadgets

- 4.1 Basketball: Ball Feeder, Cricket: Bowling Machine, Tennis: Serving Machine, Volleyball: Serving Machine.
- 4.2 Lighting Facilities: Method of erecting Flood Light and measuring luminous.
- 4.3 Video Coverage: Types, Size, Capacity, Place and Position of Camera in Live coverage of sporting events.
- 4.4 Use of computer and software in Match Analysis and Coaching.

**Note:** Students should be encouraged to design and manufacture improvised sports testing equipment in the laboratory/workshop and visit sports technology factory/ sports goods manufacturers.

### REFERENCE:

1. Charles J.A. Crane, F.A.A. and Furness, J.A.G. (1987) “Selection of Engineering Materials”
2. UK: Butterworth Heiremann. Finn, R.A. and Trojan P.K. (1999) “Engineering Materials and their Applications”UK: Jaico
3. Publisher.
4. John Mongilo, (2001), “Nano Technology 101 “New York: Green wood publishing group.
5. Walia, J.S. Principles and Methods of Education (Paul Publishers, Jullandhar), 1999.
6. Kochar, S.K. Methods and Techniques of Teaching (New Delhi, Jullandhar, Sterling
7. Publishers Pvt. Ltd.), 1982 2 years M.P.Ed Curriculum | 22
8. Kozman, Cassidy and Jackson. Methods in Physical Education (W.B. Saunders Company, Philadelphia and London), 1952.

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## Semester-II

### Theory Courses

### MPCC-201: APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS

#### UNIT 1 – Introduction to Applied Statistics

- 1.1 Meaning, Definition, Function, need and importance of applied Statistics and concept of Bio-statistics.
- 1.2 Meaning of the terms- Population, Sample, Data-types, and Variables-types. Constructions of Frequency table. Graphical representation- Cumulative, Ogive and Percentile, Parametric and Non-Parametric statistics.
- 1.3 Measures of Central Tendency (Mean, median and mode): Meaning, Purpose, Calculation and advantages.
- 1.4 Measures of Variability and its type (Range, Quartile Deviation, Average Deviation, Standard Deviation): Meaning, Purpose, Calculation and advantages of variability.

#### UNIT 2 – Probability Distributions and Standard Scale

- 2.1 Meaning of probability, Normal curve, Principle of Normal Curve– Properties of normal Curve.
- 2.2 Divergence form normality – Skewness and Kurtosis.
- 2.3 Calculation and advantage of Scale: Sigma scale, Z-Scale, Hull Scale and T- scale.
- 2.4 Level of Significance and Degree of Freedom.

#### UNIT 3 – Comparative Statistics

- 3.1 Correlation: Meaning, Types and Magnitude. Co-efficient of correlation.
- 3.2 Calculation of correlation-Rank difference and Product moment (Grouped data and ungrouped data).
- 3.3 Construction of Norms.
- 3.4 Concept: Regression and Prediction, Biserial, Partial and Multiple Correlation.

#### UNIT 4 – Inferential Statistics/ Significance of means and other statistic

- 4.1 Standard error, type-I & type II error, one tailed and two tailed test.
- 4.2 Dependent and independence “t”- test with interpretation of the results.
- 4.3 Nonparametric test: Chi Square test.
- 4.4 Concept of ANOVA and ANCOVA.

#### REFERENCE

- Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc
- Clark D.H. (1999) Research Problem in Physical Education 2<sup>nd</sup> edition, Eaglewood Cliffs, Prentice Hall, Inc.
- Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics;
- Kamlesh, M. L. (1999) Reserach Methodology in Physical Education and Sports, New Delhi
- Rothstain A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc
- Sivaramakrishnan. S. (2006) Statistics for Physical Education, Delhi; Friends Publication
- Thirumalaisamy (1998), Statistics in Physical Education, Karaikudi, SenthilkumarPublications.

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## MPCC-202: SPORTS BIOMECHANICS AND KINSESIOLGY

### UNIT 1 – Introduction

- 1.1 Meaning, Nature, Role and Scope of Applied Kinesiology and Sports Biomechanics.
- 1.2 Historical Development of Sports Biomechanics.
- 1.3 Statics, Dynamics: Kinematics, Kinetics. Stability, Equilibrium, Work, Power and Energy.
- 1.4 Centre of gravity -Line of Gravity, Plane and Axis, Vectors and Scalars.

### UNIT 2 – Kinesiological Aspects of Human Movement

- 2.1 Concept of Origin, Insertion and Action of muscles.
- 2.2 Origin and Insertion: Muscles of Upper Extremities- Pectoralis Major and Minor, Deltoid, Biceps, Triceps (Anterior and Posterior), Trapezius, Serratus, Abdominis.
- 2.3 Origin and Insertion: Muscles of Lower Extremities- Sartorius, Rectus femoris, Quadriceps, Hamstring, Gastrocnemius.
- 2.4 Action of muscles: Upper and Lower Extremities.

### UNIT 3 – Mechanical Concept

- 3.1 Motion & Force: Meaning, Definition and Types.
- 3.2 Lever: Meaning, Definition, Types, Principles and Body Levers.
- 3.3 Projectile: Concept, Types and Factors Influencing Projectile Motion. Equations and Principles of Projectile Motion.
- 3.4 Pressure, Friction & Fluid Resistance: Water Resistance, Air Resistance-Aerodynamics.

### UNIT 4 – Movement Analysis

- 4.1 Analysis of Movement: Types of analysis: Kinesiological, Biomechanical. Cinematographic.
- 4.2 Methods of analysis – Qualitative, Quantitative, Predictive.
- 4.3 Analysis of Fundamental Movements-Walking & Running.
- 4.4 Analysis of Games and Sports Techniques-Throwing (Putting the shot) & Jumping (Horizontal and Vertical).

**Note: Laboratory Practical should be designed and arranged for Students Internally.**

#### Biomechanics Practical:

1. Determination of Average and Instantaneous Velocity.
2. Drawing (S-T) Curve and (V-T) Curve.
3. Determination of Co-efficient of Elasticity of Different Balls.
4. Determination of Cg by Reaction Board/ Mass Centre method.
5. Determination of Work done for a Vertical Jump.
6. Scientific Filming of a Movement.
7. Drawing a Kinegram of a Movement.
8. Analysis of Distance and Time of a Movement.
9. Measurement of Angle using Goniometer.
10. Measurement of Centrifugal Force.

#### REFERENCE:

1. Deshpande S.H.(2002). ManavKriyaVigyan – Kinesiology (Hindi Edition) Amravati: Hanuman VyayamPrasarakMandal.
2. Hoffman S.J. Introduction to Kinesiology (Human Kinesiology publication In.2005).
3. Thomas. (2001). Manual of structural Kinesiology, New York: Me Graw Hill.
4. Uppal A.K. Lawrence Mamta MP Kinesiology(Friends Publication India 2004)
5. Uppal, A (2004), Kinesiology in Physical Education and Exercise Science, Delhi Friends publications.
6. Williams M (1982) Biomechanics of Human Motion, Philadelphia; Saunders Co.
7. Hay, J. G. (1970). *The biomechanics of sports techniques*. Englewood Cliffs, N.J.: PrenticeHall, Inc.
8. Simonian, C. (1911). *Fundamentals of sport biomechanics*. Englewood Cliffs, N.J.: PrenticeHall Inc.
9. Hall, J.S. (1991). *Basic Biomechanics*. The McGraw-Hill Companies, Inc. First Edition 1991, Brown and Benchmark Publishers.
10. Knudson, D. (2007). *Fundamentals of Biomechanics*. Chico, USA: Springer Publication.

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## MPCC-203: ATHLETIC CARE AND REHABILITATION

### UNIT 1 – Introduction

- 1.1 Meaning, Definition and Importance of Rehabilitation.
- 1.2 Steps of Rehabilitation.
- 1.3 Types of Rehabilitation.
- 1.4 Guiding Principles of Rehabilitation.

### UNIT 2 – Basic Rehabilitation

- 2.1 Definition, Principles Precaution, Indication & Contraindication of Strapping/ Tapping.
- 2.2 Objectives and Principles of rehabilitation
- 2.3 Rehabilitation Techniques: Proprioceptive Neuromuscular Facilitation (PNF), Isotonic, Isometric, Isokinetic Stretching.
- 2.4 Rehabilitation exercises: Passive, Active, Assisted and Resisted, Continuous Passive Movement (CPM).

### UNIT 3 – Corrective Physical Education

- 3.1 Definition and objective of corrective Physical Education.
- 3.2 Standard of Standing Posture, Value of Good Posture.
- 3.3 Pasture Test: Examination of Spine.
- 3.4 Deviation of Posture: Kyphosis, Lordosis, Flat Back, Scoliosis, Round Shoulder, Knock Knee, Bow Leg, Flat Foot, Symptom ,Causes and Treatment with exercises.

### UNIT 4 – Therapeutic Modalities

- 4.1 Meaning, Need Importance of Physiotherapy.
- 4.2 Guiding Principles of Therapeutic Modalities.
- 4.3 Different Types of Therapeutic Modalities (Cryotherapy, Superficial thermotherapy, Penetrating thermotherapy, Electrical Stimulation).
- 4.4 Massage: Principles and Classification of massage of massage, Physiological, Chemical and Psychological effects of massage.

### REFERENCES:

- Doherty. J. Meno. Wetb, Moder D (2000) Track & Field, Englewood Cliffs, Prentice Hal Inc.  
Lace, M. V. (1951) Massage and Medical Gymnastics, London: J & A Churchill Ltd.  
McOoyand Young (1954) Tests and Measurement, New York: Appleton Century.  
Naro, C. L. (1967) Manual of Massage and, Movement, London: Febra and Febra Ltd.  
Rathbome, J.I. (1965) Corrective Physical education, London: W.B. Saunders & Co.  
Stafford and Kelly, (1968) Preventive and Corrective Physical Education, New York

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## MPEC-201: SPORTS JOURNALISM AND MASS MEDIA (Elective)

### UNIT 1 – Introduction

- 1.1 Meaning and Definition of sports Journalism, History, objectives and obligations of sports journalism.
- 1.2 Reporting of Sports Events- Traditional and open source reporting.
- 1.3 Concept of Sports Bulletin: Structure of sports bulletin – Compiling a bulletin – Types of bulletin.
- 1.4 Role of Journalism in the Field of Physical Education – General news reporting and sports reporting.

### UNIT 2 – Mass Media

- 2.1 Concept, Characteristics and function of Mass Media.
- 2.2 Commentary – Running commentary on the radio – Sports expert's comments.
- 2.3 Role of Advertisement in Journalism.
- 2.4 Sports Photography: Equipment- Editing – Publishing.

### UNIT 3 – Report Writing on Sports

- 3.1 Brief review of Olympic Games, Asian Games, Commonwealth Games, World Cup, National Games and Indian Traditional Games.
- 3.2 Preparing report of an Annual Sports Meet for Publication in Newspaper.
- 3.3 Methods of editing a Sports report, Critical Appraisal of Reported News.
- 3.4 Sports ethics and sponsorship.

### UNIT 4 – Journalism

- 4.1 Sports organization and Sports Journalism.
- 4.2 Organization of Press Meet, Press Release.
- 4.3 Interview with Elite Player and Coach.
- 4.4 Practical assignments to observe the matches and prepare report and news of the same.

### REFERENCE:

- Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi : Surjeet Publications
- Ahiya B.N. Chobra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication
- Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication
- Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press.
- Kannan K (2009) Soft Skills, Madurai: Madurai: Yadava College Publication
- MohitChakrabarti (2008): Value Education: Changing Perspective, New Delhi: Kanishka Publication.,.
- Padmanabhan. A &Perumal A (2009), Science and Art of Living, Madurai: Pakavathi Publication
- Shiv Khera (2002), You Can Win, New Delhi: Macmillan India Limited.
- Varma A.K. (1993) Journalism in India from Earliest Times to the Present Period. Sterling publication Pvt. Ltd.

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## **MPEC-202: SPORTS MANAGEMENT AND CURRICULUM DESIGN IN PHYSICAL EDUCATION (Elective)**

### **UNIT 1 – Introduction to Sports Management**

- 1.1 Concept of Management and Sports Management-Early and Modern Concept.
- 1.2 Principles and Functions of Sports Management.
- 1.3 Objectives of Personnel Management, Role of Personnel Manager in an organization, Personnel recruitment and selection.
- 1.4 Programme development, Factors of programme development, Importance and steps in programme development.

### **UNIT 2 – Sports Sponsorship and Sports Economics**

- 2.1 Definition of Sponsorship, Process and Objectives of Sponsorship.
- 2.2 Structure of Sponsorship, Categories of Sponsorship, Role of Intermediaries, Sponsorship Proposal.
- 2.3 Basic Understanding of Sports Economics, Micro & Macro Economic analysis of Sports.
- 2.4 Basic Understanding of Sports Finance, Preparation of Budget.

### **UNIT 3 – Competitive Sports and Public Relation**

- 3.1 Concept of Competitive Sports, Management Guidelines for School, College and University Sports Program.
- 3.2 Guidelines for Selection of Equipments and Supplies, Guidelines for checking, storing, issuing, care and maintenance of Equipments and Supplies.
- 3.3 Principles of Public relation Programme, Planning the Public Relation Programme.
- 3.4 Public Relation in School and Communities, Public Relation and Media.

### **UNIT 4 – Curriculum**

- 4.1 Meaning and Definition of curriculum.
- 4.2 Principles of Curriculum Construction: Students centered, Activity centered, Community centered.
- 4.3 Theories of Curriculum Development.
- 4.4 Factors affecting Curriculum and Evaluation of Curriculum.

#### REFERENCE:

- Aggarwal, J.C (1990). Curriculum Reform in India – World overviews, Doaba World Education Series – 3 Delhi: Doaba House, Book seller and Publisher.
- Arora, G.L. (1984): Reflections on Curriculum, New Delhi: NCERT. 2 years M.P.EdCurriculum | 27
- Bonnie, L. (1991). The Management of Sports. St. Louis: Mosby Publishing Company, Park House.
- Bucher A. Charles, (1993) Management of Physical Education and Sports (10<sup>th</sup> ed.,) St. Louis: Mobsy Publishing Company.
- Carl, E, Willgoose. (1982. Curriculum in Physical Education, London: Prentice Hall.
- Chakraborty&Samiran. (1998). Sports Management. New Delhi: Sports Publication.
- Charles, A, Bucher & March, L, Krotee. (1993). Management of Physical Education and Sports. St. Louis: Mosby Publishing Company.
- Chelladurai, P. (1999). Human Resources Management in Sports and Recreation. Human Kinetics.
- John, E, Nixon & Ann, E, Jewett. (1964). Physical Education Curriculum, New York: The Ronald Press Company.
- McKernan, James (2007) Curriculum and Imagination: Process, Theory, Pedagogy and Action Research., U.K. Routledge
- NCERT (2000). National Curriculum Framework for School Education, New Delhi: NCERT.
- NCERT (2000). National Curriculum Framework for School Education, New Delhi: NCERT.
- NCERT (2005). National Curriculum Framework-2005, New Delhi: NCERT.
- Williams, J.F. (2003). Principles of Physical Education. Meerut: College Book House.
- Yadvnider Singh. Sports Management, New Delhi: Lakshay Publication.

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## Semester-III

### Theory Courses

#### MPCC-301: SCIENTIFIC PRINCIPLES OF SPORTS TRAINING

##### UNIT 1 – Introduction to Sports Training

- 1.1 Meaning and definition of Sports Training and Sports Coaching.
- 1.2 Aims and characteristics of Sports Training.
- 1.3 Principles of Sports Training.
- 1.4 Philosophy of Sports Training and Coaching.

##### UNIT 2 – Training Load and Adaptation

- 2.1 Meaning, definition of Training Load and components of Training Load and variation of Load distribution.
- 2.2 Training load and adaptation process. Concept of Super Compensation. Factors affecting recovery process.
- 2.3 Concept of Overload causes of Overload, symptoms of Overload and remedial measures of Overload.
- 2.4 Principles of overload.

##### UNIT 3 – Components of Motor Fitness and Training Method

- 3.1 Strength: Meaning and Forms of Strength. Factors determining Strength. Methods to improve Strength- Weight Training, Isometric, Isotonic, Circuit Training.
- 3.2 Speed: Meaning and Forms of Speed. Factors determining speed. Methods to improve speed- Repetition method, Downhill Run, Parachute Running, Wind Sprints (In's and Out's method) Pace Runs and Differential Paces.
- 3.3 Endurance: Meaning and forms of Endurance. Factors determining Endurance, Methods to improve Endurance- Continuous method, Interval method, Repetition method, Cross country, Fartlek Training, Altitude Training.
- 3.4 Coordinative Abilities and Flexibility: Meaning and Forms. Factors determining coordinative abilities and flexibility (plyometric Training, Sensory Method, different types of Stretching).

##### UNIT 4 – Periodization, Planning and Tactical Training

- 4.1 Periodization- Meaning and Types of Periodization. Different phases of Periodization and their contents.
- 4.2 Training plan- Meaning, Principles and types of Training (Micro, Meso and Macro), Short term and Long Term.
- 4.3 Tactical Training- Meaning of Tactics and Strategy. Difference between Tactics and Strategy. Different types of Tactics (Individual and Team Tactics). Training through Competition- Importance of Competition as Method of Training.
- 4.4 Psychological preparation during training phase. Types of doping and their bad effects.

##### REFERENCES :

- BeotraAlka, (2000), Drug Education Handbook on Drug Abuse in Sports. Delhi: Sports Authority of India.
- Bunn, J.N. (1998) Scientific Principles of Coaching, New Jersey Engle Wood Cliffs, Prentice Hall Inc.
- Cart, E. Klafs&Daniel, D. Arnheim (1999) Modern Principles of Athletic Training St. Louis C. V. Mosphy Company
- Daniel, D. Arnheim (1991) Principles of Athletic Training, St. Luis, Mosby Year Book
- David R. Mottram (1996) Drugs in Sport, School of Pharmacy, Liverpool: John Moore University
- Gary, T. Moran (1997) – Cross Training for Sports, Canada : Human Kinetics
- Hardayal Singh (1991) Science of Sports Training, New Delhi, DVS Publications
- Jensen, C.R. & Fisher A.G. (2000) Scientific Basic of Athletic Conditioning, Philadelphia

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## MPCC-302: SPORTS MEDICINE

### UNIT 1 – Introduction

- 1.1 Meaning, definition and importance of Sports medicine.
- 1.2 Historical Development of Sports Medicine as a Discipline.
- 1.3 Sports Medicine as a Profession.
- 1.4 Sports Medicine as an Inter disciplinary Subject: Physiological Psychological and Sociological Aspect.

### UNIT 2 – Doping

- 2.1 Drugs in Sports: Use, Misuse and Abuse in Sports.
- 2.2 Doping Agents: Classification, Drugs banned by WADA, Dope Test.
- 2.3 Effects and adverse effects of doping agents.
- 2.4 Guideline of Controlling Doping.

### UNIT 3 – Head and Spine Injuries and Management

- 3.1 Head, Neck and Spine Injuries, Causes, symptom, Degrees of Injury.
- 3.2 Prevention of Injuries of Head, Neck and Spine.
- 3.3 Exercises injury management: Flexion, Compression, Hyper extension, Rotation, Spinal range of Motion and Free hand exercises.
- 3.4 Treatment of Injuries of Head, Neck and spine.

### UNIT 4 – Upper and Lower Extremity Injuries and Management

- 4.1 Causes and Symptoms of Various Injuries of Upper and Lower extremities.
- 4.2 Prevention of Injuries: Supporting and adding Techniques and Equipment for Lower and Upper extremities.
- 4.3 Exercise for Injuries Management: Breathing Exercises, Relaxation Techniques, Free hand Exercises, Stretching and Strengthening exercise of various parts of upper and Lower extremities.
- 4.4 Treatment of common upper and lower extremity's injuries: Sprain, Strain, Dislocation, Fracture and Contusion.

### REFERENCES:

- Christopher M. Norris. (1993). Sports Injuries Diagnosis and Management for Physiotherapists. East Kilbride: Thomson Litho Ltd.
- James, A. Gould & George J. Davies. (1985). Physical Therapy. Toronto: C.V. Mosby Company.
- Morris B. Million (1984) Sports Injuries and Athletic Problem. New Delhi: Surjeet Publication.
- Pande. (1998). Sports Medicine. New delhi: KhelShitya Kendra
- The Encyclopedia of Sports Medicine. (1998). The Olympic Book of Sports Medicine, Australia: Tittel Blackwell Scientific publications.
- Practical: Anthropometric Measurements.



# Syllabus for M.P.Ed course (2-years) of Calcutta University

## MPCC-303 HEALTH EDUCATION AND SPORTS NUTRITION

### UNIT 1 – Health Education

- 1.1 Concept, Dimensions, Spectrum and Determinants of Health.
- 1.2 Definition of Health, Health Education, Objectives and principles of health Education.
- 1.3 Mental Health.
- 1.4 Population Health, Social Health and Occupational Health.

### UNIT 2 – Health Problems in India

- 2.1 Hypokinetic Diseases-Obesity, Cardio Vascular Diseases and Diabetics.
- 2.2 Degenerated Diseases- Aging, Arthritis, Spondylosis.
- 2.3 Various health organizations and their Role.
- 2.4 Problems of Healthful School and Community Environment.

### UNIT 3 – Health and Hygiene

- 3.1 Meaning and Type of Hygiene.
- 3.2 Effect of Alcohol and tobacco on Health.
- 3.3 Components of Lifestyle Management.
- 3.4 Management of Blood Pressure and Stress.

### UNIT 4 – Sports Nutrition

- 4.1 Meaning and Definition of Sports Nutrition and its role, Role of Macro and Micro-nutrition in Exercise.
- 4.2 Concept and pattern of BMI.
- 4.3 Maintenance of Healthy Life style.
- 4.4 Role of Diet and Exercise in Weight Management.

### REFERENCES:

- Bucher, Charles A. "Administration of Health and Physical Education Programme".  
Delbert, Oberteuffer, et. al." The School Health Education".  
Ghosh, B.N. "Treaties of Hygiene and Public Health".  
Hanlon, John J. "Principles of Public Health Administration" 2003.  
Turner, C.E. "The School Health and Health Education".  
Moss and et. At. "Health Education" (National Education Association of U.T.A.)  
Nemir A. "The School Health Education" (Harber and Brothers, New York).  
Nutrition Encyclopedia, edited by Delores C.S. James, The Gale Group, Inc.  
Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and Robertson.  
Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons.

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## MPEC-301: SPORTS ENGINEERING AND TECHNOLOGY (Elective)

### UNIT 1 – Introduction

- 1.1 Meaning of Sports Engineering.
- 1.2 Human motion detection and recording, human performance assessment.
- 1.3 Equipment and facility designing.
- 1.4 Sports related instrumentation and measurement (Fitness gadgets and Software/ applications).

### UNIT 2 - Mechanics of Engineering Materials

- 2.1 Concept of internal force, axial force, shear force, bending movement, torsion, energy expenditure, strain energy.
- 2.2 Method to find displacement of structure.
- 2.3 Biomechanics of daily and common activities –Gait, Posture, Body levers, Ergonomics.
- 2.4 Mechanical principles in movements such as lifting, walking, running, throwing, jumping, pulling, pushing etc.

### UNIT 3- Sports Dynamics

- 3.1 Introduction to Dynamics.
- 3.2 Kinematics of particles – rectilinear plane and curvilinear motion Coordinate system.
- 3.3 Kinetics of particles – Newton’s laws of Motion.
- 3.4 Work, Energy, Impulse and momentum.

### UNIT 4 – Infrastructural Development, Maintenance and life cycle costing

- 4.1 Sports Infrastructure: Gymnasium, Pavilion, Swimming Pool, Indoor Stadium, Out-door Stadium, Play Park, Academic Block, Administrative Block, Research Block, Library, Sports Hostel, etc.
- 4.2 Requirements: Air ventilation, Day light, Lighting arrangement, Galleries, Store rooms, Office, Toilet Blocks (M/F), Drinking Water, Sewage and Waste Water disposal system, Changing Rooms ( M/F), Sound System (echo-free), Internal arrangement according to need and nature of performed activity, Corridors and Gates for free movement of people, Emergency provisions of lighting, fire and exits, Eco-friendly outer surrounding. Maintenance staff, financial consideration.
- 4.3 Building process and maintenance phase: design phase (including brief documentation), construction phase functional (occupational) life, Re-evaluation, refurbish, demolish. Maintenance policy, preventive maintenance, corrective maintenance, record and register for maintenance.
- 4.4 Facility life cycle costing: Basics of theoretical analysis of cost, total life cost concepts, maintenance costs, energy cost, capital cost and taxation.

### REFERENCE:

- Franz K. F. et. al., Editor, Routledge Handbook of Sports Technology and Engineering (Routledge, 2013)  
Steve Hake, Editor, The Engineering of Sport (CRC Press, 1996)  
Franz K. F. et. al., Editor The Impact of Technology on Sports II (CRC Press, 2007)  
Helge N., Sports Aerodynamics (Springer Science & Business Media, 2009)  
Youlin Hong, Editor Routledge Handbook of Ergonomics in Sport and Exercise (Routledge, 2013)  
Jenkins M., Editor Materials in Sports Equipment, Volume I (Elsevier, 2003) Colin White, Projectile Dynamics in Sport: Principles and Applications.

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## MPEC-302: PHYSICAL FITNESS AND WELLNESS (Elective)

### UNIT 1 – Introduction

- 1.1 Meaning and Definition" of Physical Fitness, Physical Fitness Concepts and Techniques,
- 1.2 Principles of physical fitness, Physiological principles involved in human movement.
- 1.3 Components of Physical Fitness. Leisure time physical activity and identify opportunities in the community to participate in this activity.
- 1.4 Current trends in fitness and conditioning, components of total health fitness and the relationship between physical activity and lifelong wellness.

### UNIT 2 – Nutrition and aerobic exercise

- 2.1 Nutrients; Food Choices, Food Guide Pyramid, food sources, Comparison of food values. Weight Management-proper practices to maintain, lose and gain. Eating Disorders, Proper hydration
- 2.2 Cardio respiratory Endurance Training; proper movement forms, i.e., correct stride, arm movements, body alignment; proper warm-up, cool down, and stretching, monitoring heart rates during activity.
- 2.3 Assessment of cardio respiratory fitness and set goals to maintain or improve fitness levels.
- 2.4 Cardio respiratory activities including i.e. power walking, pacer test, interval training, incline running, distance running, aerobics and circuits.

### UNIT 3 – Anaerobic Exercise

- 3.1 Resistance Training for Muscular Strength and Endurance; principles of resistance training,
- 3.2 Safety techniques (spotting, proper body alignment, lifting techniques, spatial, awareness. and proper breathing techniques).
- 3.3 Weight training principles and concepts; basic resistance exercises (including free hand exercise, free weight exercise, weight machines, exercise bands and tubing. medicine balls, fit balls)
- 3.4 . Modern concept of weight training, Advanced techniques of weight training.

### UNIT 4 – Flexibility Exercise

- 4.1 Flexibility Training, Relaxation Techniques and Core Training.
- 4.2 Safety techniques (stretching protocol; breathing and relaxation techniques)
- 4.3 types of flexibility exercises (i.e. dynamic, static),
- 4.4 Develop basic competency in relaxation and breathing techniques. Pilates, Yoga.

### REFERENCE:

1. David K. Miller & T. Earl Allen, Fitness, A life time commitment, Surjeet Publication Delhi 1989.
2. Dificore Judy, the complete guide to the postnatal fitness, A & C Black Publishers Ltd. 35 Bedford row, London 1998
3. Dr. A.K. Uppal, Physical Fitness, Friends Publications (India), 1992.
4. Warner W.K. Oeger& Sharon A. Hoeger, Fitness and Wellness, Morton Publishing Company, 1990.
5. Elizabeth & Ken day, Sports fitness for women, B.T. Batsford Ltd, London, 1986.
6. Emily R. Foster, KarynHartiger& Katherine A. Smith, Fitness Fun, Human Kinetics Publishers 2002.
7. Lawrence, Debbie, Exercise to Music. A & C Black Publishers Ltd. 37, Sohe Square, London 1999
8. Robert Malt. 90 day fitness plan, D.K. publishing, Inc. 95, Madison Avenue, New York 200

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## Semester-IV

### Theory Courses

#### MPCC-401: ICT IN PHYSICAL EDUCATION AND SPORTS

##### UNIT 1 – Fundamentals of Computers

- 1.1 Characteristics, Types, Functions, Advantages & Applications of Computers.
- 1.2 Hardware of Computer: Input, Output & Storage Devices.
- 1.3 Software of Computer: Concept & Types application in Physical Education and Sport.
- 1.4 Concepts, Types & Functions of Computer Networks, Internet and its applications, Web Browsers & Search Engines, Legal & Ethical Issues.

##### UNIT 2– Communication & Classroom Interaction

- 2.1 Concept, Elements, Process & Types of Communication, Communication Barriers & Facilitators of Communication and cloud computing.
- 2.2 Communicative Skills in English - Listening, Speaking, Reading & Writing.
- 2.3 Concept & Importance of ICT, Need of ICT in Education, Scope of ICT: Teaching-Learning Process, Publication, Evaluation, Research and Administration.
- 2.4 Challenges in Integrating ICT in Physical Education.

##### UNIT 3 – MS Office Applications

- 3.1 Word: Main Features & their uses in Physical Education.
- 3.2 Excel: Main Features & their applications in Physical Education.
- 3.3 Access: Creating a Database, Creating a Table, Queries, Forms & Reports on Tables and its Uses in Physical Education.
- 3.4 Power Point: Preparation of Slides with Multimedia Effects, MS Publisher: Newsletter & Brochure.

##### UNIT 4 – ICT Integration in Teaching Learning Process, E-Learning & Web Based Learning

- 4.1 Approaches to Integrating ICT in Teaching Learning Process.
- 4.2 Project Based Learning (PBL), Co- Operative Learning, Collaborative Learning.
- 4.3 ICT and Constructivism: A Pedagogical Dimension.
- 4.4 E-Learning, Web Based Learning, Visual Classroom.

##### REFERENCES:

1. B. Ram, New Age International Publication, Computer Fundamental, Third Edition-2006
2. Brain under IDG Book. India (p) Ltd Teach Yourself Office 2000, Fourth Edition- 2001
3. Douglas E. Comer, The Internet Book, Purdue University, West Lafayette in 2005
4. Heidi Steel Low price Edition, Microsoft Office Word 2003- 2004
5. ITL Education Solution Ltd. Introduction to information Technology, Research and Development Wing-2006
6. Pradeep K. Sinha&Priti. Sinha. Foundations computing BPB Publications -2006.
7. Rebecca Bridges Altman Peach pit Press, Power point for window, 1999
8. Sanjay Saxena, Vikas Publication House, Pvt. Ltd. Microsoft Office for ever one, Second Edition.

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## MPCC-402: PSYCHOLOGY AND SOCIOLOGY OF SPORTS

### UNIT 1 – Introduction

- 1.1 Meaning, Definition, History, Need and Importance of Sports Psychology. Present Status of Sports Psychology in India.
- 1.2 Motor Learning: Basic Considerations in Motor Learning Theories.
- 1.3 Motor Perception – Factors Affecting Perception – Perceptual Mechanism.
- 1.4 Personality: Meaning, Definition, Structure – Measuring Personality Traits. Effects of Personality on Sports Performance.

### UNIT 2 – Psychological Factors Affecting Sports Performance:

- 2.1 Motivation: Meaning, Definition and Types, Motivation and sports performance.
- 2.2 Anxiety and Stress: Meaning, Definition, Nature, Types, Causes and Sports Performance.
- 2.3 Aggression: Meaning and Definition, Aggression and Sports Performance.
- 2.4 Goal Setting- Meaning and Definition, Process of Goal Setting in Physical Education and Sports. Relaxation: Meaning and Definition, types and methods of psychological relaxation.

### UNIT 3 – Sports Sociology:

- 3.1 Meaning and definition of Sports Sociology.
- 3.2 Sports as Social Institutions, Sports and Socialization. National Integration through Sports.
- 3.3 Fans and Spectators: Meaning and definition, Effects of Audience on Sports performance. Sports Aggression and Violence. Sports and Politics.
- 3.4 Leadership: Meaning, Definition, types. Leadership and Sports Performance, Leadership Theories.

### UNIT 4 – Social Structure of Sports:

- 4.1 Group: Definition, Meaning and Types.
- 4.2 Group Size, Groups on Composition, Group Cohesion, Group Interaction, Group Dynamics.
- 4.3 Sports Social Crisis Management – Women in Sports: Sports Women in our Society, Participation pattern among Women, Gender inequalities in Sports.
- 4.4 Socio Economic Status and Sports. Current Problems in Sports and Future Directions.

**Practicals:** At least five experiments related to the topics listed in the Units above should be conducted by the students in laboratory. (Internal assessment.) Psychological Tests: Types of Psychological Test: Instrument based tests: Pass-along test – Tachistoscope – Reaction timer – Finger dexterity board – Depth perception box – Kinesthesiometer board. Questionnaire: Sports Achievement Motivation, Sports Competition Anxiety Test (SCAT). PST.

### REFERENCES:

1. B. J. Cratty. Psychology of Contemporary sports Champaign: Human Kinetics Publishers,
2. John M. Silva & Roberts. Psychological Foundations of Sport. Champaign: Human Kinetics Publishers.
3. Diane Gills, Psychological Dynamics of sports. Champaign: Human Kinetics Publishers.
4. Cox, Sports Psychology. Champaign: Human Kinetics Publishers.
5. Richard M. Sumin, "Psychology in Sports, Methods & Application. New Delhi: Surjeet Publication.

## **Syllabus for M.P.Ed course (2-years) of Calcutta University**

### **MPCC-403 DISSERTATION**

1. A candidate shall have dissertation for M. P. Ed. – IV Semester and must submit his/her Synopsis and get it approved by the Head of Department on the recommendation of D.R.C. (Departmental Research Committee).
2. A candidate selecting dissertation must submit his/her dissertation not less than one week before the beginning of the IV<sup>th</sup> Semester Examination.
3. The candidate has to face the Viva-Voce conducted by DRC.

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## MPEC-401 VALUE AND ENVIRONMENTAL EDUCATION (Elective)

### UNIT 1 – Introduction to Value Education.

- 1.1 Values: Meaning, Definition, Concepts of Values. Value Education: Need, Importance and Objectives.
- 1.2 Moral Values: Need and Theories of Values. Classification of Values: Basic
- 1.3 Values of Religion, Classification of Values.
- 1.4 Meaning and Definition, Personal and Communal Values, Consistency, Internally consistent, internally inconsistent, Judging Value System, Commitment, Commitment to values.

### UNIT 2 – Environmental Education

- 2.1 Definition, Scope, Need and Importance of environmental studies.,
- 2.2 Concept of environmental education, Historical background of environmental education,
- 2.3 Celebration of various days in relation with environment, Plastic recycling & prohibition of plastic bag / cover,
- 2.4 Role of school in environmental conservation and sustainable development, Pollution free ecosystem.

### UNIT 3 – Rural Sanitation and Urban Health

- 3.1 Rural Health Problems, Causes of Rural Health Problems,
- 3.2 Points to be kept in Mind for improvement of Rural Sanitation,
- 3.3 Urban Health Problems, Process of Urban Health, Services of Urban Area,
- 3.4 Suggested Education Activity, Services on Urban Slum Area, Sanitation at Fairs & Festivals, Mass Education.

### UNIT 4 – Natural Resources and related environmental issues:

- 4.1 Water resources, food resources and Land resources,
- 4.2 Definition, effects and control measures of: Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution
- 4.3 Management of environment, Sustainable development of environment
- 4.4 Govt. policies and Role of pollution control board.

### REFERENCE:

1. Miller T.G. Jr., Environmental Science (Wadsworth Publishing Co.)
2. Odum, E.P. Fundamentals of Ecology (U.S.A.: W.B. Saunders Co.) 1971.
3. Rao, M.N. & Datta, A.K. Waste Water Treatment (Oxford & IBH Publication Co. Pvt. Ltd.) 1987
4. Townsend C. and others, Essentials of Ecology (Black well Science)
5. Heywood, V.H. and Watson V.M., Global biodiversity Assessment (U.K.: Cambridge University Press), 1995.
6. Jadhav, H. and Bhosale, V.M. Environmental Protection and Laws (Delhi: Himalaya Pub. House), 1995.
7. Mc. Kinney, M.L. and Schoel, R.M. Environmental Science System and Solution (Web enhanced Ed.) 1996.
8. Miller T.G. Jr., Environmental Science (Wadsworth Publishing Co.)

# Syllabus for M.P.Ed course (2-years) of Calcutta University

## **MPEC-402: EDUCATION TECHNOLOGY IN PHYSICAL EDUCATION AND SPORTS (Elective)**

### **UNIT 1 – Nature, Scope and Systems Approach to Physical Education and Communication**

- 1.1 Educational technology-concept, Nature and Scope. Forms of educational technology: teaching technology, instructional technology.
- 1.2 Usage of educational technology: integrated, complementary, supplementary stand-alone (independent); programmed learning stage.
- 1.3 Systems Approach to Education and its Components: Goal Setting, Task Analysis, Content Analysis, Context Analysis and Evaluation Strategies; Instructional Strategies and Media for Instruction.
- 1.4 Effectiveness of Communication in instructional system; Communication -Modes, Barriers and Process of Communication.

### **UNIT 2 – Instructional Design**

- 2.1 Instructional Design: Concept, Views.
- 2.2 Process and stages of Development of Instructional Design.
- 2.3 Overview of Models of Instructional Design; Instructional Design for Competency Based Teaching.
- 2.4 Models for Development of Self Learning Material.

### **UNIT 3 – Audio Visual Media**

- 3.1 Audio-visual media - meaning, importance and various forms Audio/Radio: Broadcast and audio recordings.
- 3.2 Script writing, pre-production, post-production process and practices, Audio Conferencing and Interactive Radio Conference.
- 3.3 Video/Educational Television: Telecast and Video recordings Strengths and limitations, Use of Television and CCTV in instruction and Training.
- 3.4 Use of animation films for the development of children's imagination.

### **UNIT 4 – New Horizons of Educational Technology**

- 4.1 Recent innovations in the area of ET interactive video - Hypertext, video-texts, optical fiber technology - laser disk, computer conferencing.
- 4.2 Procedure and organization of Teleconferencing/Interactive video-experiences of institutions, schools and universities.
- 4.3 Recent experiments in the third world countries and pointers for, India with reference to Physical education.
- 4.4 Recent trends of Research in Educational Technology and its future with reference to education.

### **REFERENCE:**

1. AmitaBhardwaj, 'New Media of Educational Planning'. Sarup of Sons, New Delhi-2003
2. Bhatia and Bhatia, 'The Principles and Methods of Teaching', New Delhi :Doaba House,1959.
3. 'Communication and Education', D. N. Dasgupta, Pointer Publishers
4. 'Education and Communication for development', O. P. Dahama, O. P. Bhatnagar, Oxford Page 68 of 71 IBH Publishing company, New Delhi
5. 'Essentials of Educational Technology', MadanLal, Anmol Publications
6. K. Sampath, A. Pannirselvam and S. Santhanam. 'Introduction to Educational Technology' (New Delhi: Sterling Publishers Pvt. Ltd.): 1981.
- 7.



# Syllabus for M.P.Ed course (2-years) of Calcutta University

## **MPEC-403: GENDER STUDIES IN PHYSICAL EDUCATION AND SPORTS**

### **UNIT 1 - Introduction**

- 1.1 Meaning of Gender, Transgender and third Gender,
- 1.2 The role of Physical Education and Sports in addressing Gender issues:
- 1.3 Women's and Girl's health and wellbeing, Self esteem, Self empowerment;
- 1.4 Social inclusion and social integration of Women and Girls.

### **UNIT 2 – Gender Issues and Curriculum**

- 2.1 Gender Identity and Gender Issues in Curriculum and Physical Education
- 2.2 Gender Identities and Socialization Practices in family, schools, other formal and informal institutions,
- 2.3 Physical Education curriculum and the gender question,
- 2.4 Construction of gender in curriculum framework since Independence,

### **UNIT 3 – Gender Equity**

- 3.1 Concept of gender equity, importance, objectives
- 3.2 Attitude of Women toward Physical Education and Sports,
- 3.3 Teacher as an agent of change, Challenging and transforming Gender norms.
- 3.4 Promoting Gender equity through Physical Education and Sports:**

### **UNIT 4 – Application and Research of Gender Studies**

- 4.1 Claiming space, access to resources, structures and leadership.
- 4.2 Choice of Sports, Traditional Games and Competitions, Incentives,
- 4.3 Women in sports and media (print and electronic),
- 4.4 Review of researches on Gender studies in Physical Education and Sports.

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# Syllabus for M.P.Ed course (2-years) of Calcutta University

## PART-B

### PRACTICAL COURSES

Course Code	Subject	Cumulative Internal Assessment	End SEM external assessment	Total
<b>SEM - I</b>				
MPPC 101	Track & Field – I: Sprint, Middle & Long Distance Running, Relay and Hurdles. Developing essential Components like Physical and Motor Fitness, Technical and Tactical aspects.	50	50	100
MPPC 102	Sports Major – I: Swimming And Gymnastics (Fundamental Skills, Individual Tactics, Officiating and Lead-up Games)	50	50	100
MPPC 103	Karate / Self Defense and Adventure Sports	50	50	100
MPPC 104	Class Room Teaching Lessons (4+1) one from each theory subject and one for External	50	50	100
<b>SEM - II</b>				
MPPC 201	Track & Field – II: Shot put Discus and Javelin Throws, High, Long and Triple Jump	50	50	100
MPPC 202	Sports Major – II: Basketball and Cricket (Fundamental Skills, Individual Tactics, Officiating and Lead-up Games)	50	50	100
MPPC 203	Yoga: Asanas, Pranayam and Kriyas	50	50	100
MPPC 204	Teaching Lessons: Sports Major – 4 No and Track& Field- 4 No	50	50	100
<b>SEM - III</b>				
MPPC 301	Sports Major – III: Football and One Racket Sports (Fundamental Skills, Individual Tactics, Officiating and Lead-up Games)	50	50	100
MPPC 302	Sports Major – IV: Volleyball and Handball (Fundamental Skills, Individual Tactics, Officiating and Lead-up Games)	50	50	100
MPPC 303	Officiating of Track & Fields and Sports Activities – Taught in SEM – I, II, III and IV	50	50	100
MPPC 304	Internship on a Team Game*/ Project Work on Practical Activities*	50	50	100
<b>SEM - IV</b>				
MPPC 401	Hammer throw or Pole Vault or Combined Events – Triathlon, Pentathlon, Heptathlon and Decathlon: (Fundamental Skills, Individual Tactics, Officiating )	50	50	100
MPPC 402	Sports Specialization (One): Among Track & Field, Yoga and Sports Major (Technique of Officiating, Fundamental and Advanced Skill, Tactics, Strategies, Game Practice and Lead-up Games.	50	50	100
MPPC 403	Coaching Lessons on Sports Specialization Five internal practice lessons and one Final Lesson	50	50	100
MPPC 404	Lab Practical (25 marks in each subject)(Any Four) A) Physiology of Exercise B) Kinesiology and Sports Biomechanics C) Sports Psychology D) Measurement & Evaluation in Physical Education E) Sports Management	50	50	100

\*Preparation and maintenance of grounds, care of equipments, learn the office procedure of organizing Inter College / University / State Level Competition. Assist in regular Teaching / Training Programme and necessary event management.

The theoretical part of the course is divided into the following parts: lexicology, morphology, syntax, phonology. Lexicology is that part of the theoretical course which deals with the vocabulary of a language, the words that comprise it. The vocabulary is the most obvious part of a language: it is immediately apprehended by the users of language. The course of English lexicology, is of great practical importance. It helps to acquire a better understanding of the facts of the language, a more conscious approach to them and therefore a sounder practical knowledge. Language as a social phenomenon is connected with thought (thinking) and with the social life of the speech community in question. Language directly and immediately reacts to changes in social life. English phonetics a theoretical course. 324 Pages • 1970 • 8.81 MB • 1,186 Downloads • English. by V. A. Vassilyev. English phonetics and phonology : a practical course : second edition = 183 Pages • 2005 • 9.61 MB • 6,417 Downloads • New! A Manual of English Phonetics and Phonology: Twelve Lessons with an Integrated Course in Phonetic. 183 Pages • 2005 • 9.61 MB • 6,417 Downloads • New! A Manual of English Phonetics and Phonology: Twelve Lessons with an Integrated Course in Phonetics. CAMBRIDGE English Phonetics and Phonology. 307 Pages • 2013 • 3.98 MB • 64,748 Downloads. The following course of theoretical grammar serves to describe the grammatical structure of the English language as a system where all parts are interconnected. The difference between theoretical and practical grammar lies in the fact that practical grammar prescribes certain rules of usage and teaches to speak (or write) correctly whereas theoretical grammar presents facts of language, while analyzing them, and gives no prescriptions. Unlike school grammar, theoretical grammar does not always produce a ready-made decision. In language there are a number of phenomena interpreted differently by