

Shree H. V. P. Mandal's

**Degree College of Physical Education, Amravati.**

(An Autonomous College)

**FACULTY OF Interdisciplinary Studies and Vocational Education**

**(Physical Education Group)**



**Syllabus**

**OF**

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

**(Credit Based Semester Pattern)**

**Program Code:MPED**

**Introduced from the Session 2015-2016**

**Programme Outcomes :-** Define learning outcomes for **Master Physical Education** which Encourages a holistic approach based on a socio-ecological perspective. promote greater integration and balance between the social and physical sciences . contextualize physical education with a set of attitudes and values that signify the importance of movement as a valued human practice . centralize and acknowledge that the individual, in his / her search for personal meaning, once Educated in Health and Physical Education, would be able to make positive contributions to the Enhancement of Society . Promote the learning of new skills . Enhance, extend, inform and critique the deliberate use of exercise, play, sport and other forms of physical activity within and individual and societal context .

**Programme Specific Outcome :-**

Make a unique contribution to balanced development and living . Movement being essential to be a human . Learning focused on movement and students need to be engaged in it. a medium for developing skills across diverse areas of endeavor . Fostering a pedagogy based around critical thought and action .

**Semester I**

**15 MPED 101 RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS**

**UNIT I – Introduction to Research**

Meaning and Definition of Research – Need, Nature and Scope of research in Physical Education. Classification of Research, Location of Research Problem, Criteria for selection of a problem, Qualities of a good researcher.

**UNIT II – Methods of Research**

Descriptive Methods of Research; Survey Study, Case study, Introduction of Historical Research, Steps in Historical Research, Sources of Historical Research: Primary Data and Secondary Data, Historical Criticism: Internal Criticism and External Criticism. Philosophical research: meaning, steps, pitfalls and data synthesis

**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.

**UNIT IV – 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 V – Research Proposal and Report**

Chapterization of Thesis / Dissertation, Front Materials, Body of Thesis – Back materials. Method of Writing Research proposal, Thesis / Dissertation; Method of writing abstract and full paper for presenting in a conference and to publish in journals ,Mechanics of writing Research Report, Footnote and Bibliography writing.

**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; Poompugar Pathippagam

Rothstein, A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, 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

## **COURSE OUTCOMES :**

1. To define research and describe the research process and research methods.
2. To understand the research context within the area of physical Education and sports.
3. To understand the processes and requirements for conducting successful research in physical education and sports.
4. Understand and apply basic research methods.
5. Students use print and electronic library resources effectively and appropriately.
6. To understand the process of sampling, the uses of questionnaires as data-gathering instruments, how a survey is carried out in terms of process and method, the uses of surveys and to be able to capture their own data.
7. Understand and apply basic research methods including research design, data analysis, and interpretation.
8. Students develop testable hypotheses, differentiate research design, evaluate aptness of research conclusions, and generalize them appropriately.
9. Students design and conduct quantitative or qualitative research studies in laboratory or field settings.
10. Students use research data to formulate or evaluate new research questions, using reason and persuasion in a logical argument.
11. To know how to apply the basic aspects of the research process in order to plan and execute a research proposal and research report.
12. To be able to present, review and publish scientific articles.

## **15 MPEd102 PHYSIOLOGY OF EXERCISE**

### **UNIT I – Introduction to Exercise Physiology and Bioenergetics**

- Meaning, Definition and Importance of Physiology of Exercise.
- Sources of Muscular Energy
- ATP – Structure and Functions
- Sources of Muscular Energy
- ATP – PC or Phosphagen System
- Anaerobic Glycolysis
- Aerobic Sources - Aerobic Glycolysis, Krebs Cycle, ETS (Electron Transport System).
- Aerobic and Anaerobic Sources of Energy at Rest and During Exercise.

## **UNIT II – Skeletal Muscles and Exercise**

- Microscopic Structure of Muscle Fibre
- Types of Muscle Fibre, Chemical Composition of Muscle
- Sliding Filament theory of Muscular Contraction.
- Effect of Exercises and Training on the Muscular System
- Physiology of Muscular Fatigue
- Muscle Tone, Second Wind, Oxygen Debt

## **UNIT III – Cardiovascular System and Exercise**

- Physiology of Blood Circulation
- Cardiac Cycle
- Stroke Volume
- Cardiac Output
- Blood Pressure
- Heart Rate
- Cardiac Hypertrophy
- Effect of Exercises and Training on the Cardiovascular System- at Rest, During Sub-maximal Exercise and Maximal Exercise
- Regulation of Blood Flow at Rest and During Exercise

## **UNIT IV – Respiratory System and Exercise**

- Physiological Mechanism of Respiration
- Respiratory Muscles
- Various Respiratory Capacities
- Ventilation at Rest and During Exercise.
- Diffusion of Gases
- Exchange of Gases in the Lungs
- Exchange of Gases in the Tissues
- Anaerobic Threshold.
- Effect of Exercises and Training on the Various Respiratory Capacities.

## **UNIT V – Climatic Conditions and Sports Performance and Ergogenic Aids**

- Thermoregulation – Physiological Mechanism
- Sports Performance in Hot and Cold climate
- Heat Illness- Causes, Symptoms and their Treatment.
- High Altitude Training – Merits, Demerits, and Physiological Adaptation
- Effects of Ergogenic Aids – Advantages and Disadvantages

*Note: Laboratory Practical in Physiology be designed and arranged internally.*

*Measurement of: Vital capacity techniques, Blood pressure, Haemoglobin content, Blood Lactate/ Blood Glucose, Respiratory Rate, HR:  $HR_{max}$ ,  $HR_{Recovery}$ ,  $HR_{Peak}$*

## **REFERENCES:**

Amrit Kumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: Poompugar Pathipagam.

Beotra Alka, (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.

Sandhya Tiwaji. (1999). Exercise Physiology. Sports Publishers.

Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications.

Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication.

William, D. Mc Ardle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company.

William D. McArdle, Frank I. Katch, Victor L. Katch (2006). Essentials of Exercise Physiology.

### **COURSE OUTCOMES:**

- Describe and apply the fundamental and advanced concepts of exercise physiology.
- Define and describe the term exercise physiology
- Recognize the energy system for aerobic and anaerobic components of exercise.
- Summarize the underlying physiological basis of physical fitness, physical training, health and wellness.
- Discover the nutritional aspect of fitness and performance.
- Comprehend the physiological changes and adaptations during exercise in different environmental conditions

## **15 MPEd103 Yogic Sciences**

### **Unit I – Introduction**

Meaning and Definition of Yoga. Astanga Yoga: Yama, Niyama, Asana, Pranayama, Prathyahara, Dharana, Dhyana, Samadhi, Concept of Yogic Practices; Principles of Breathing – Awareness – Relaxation, Sequence – Counter pose – Time – Place – Clothes – Bathing – Emptying the bowels – Stomach – Diet – No Straining – Age – Contra- Indication – Inverted asana – Sunbathing.

### **Unit II – Asanas and Pranayam**

Loosening exercise: Techniques and benefits. Asanas: Types- Techniques and Benefits, Surya Namaskar: Methods and benefits. Pranayama: Types- Methods and benefits. Nadis: Meaning, methods and benefits, Chakras: Major Chakras- Benefits of clearing and balancing Chakras.

### **Unit III – Kriyas**

Shat Kriyas- Meaning, Techniques and Benefits of Neti – Dhauti – Kapalapathi- Trataka – Nauli – Basti, Bandhas: Meaning, Techniques and Benefits of Jalendhar Bandha, Jihva Bandha, Uddiyana Bandha, Mula Bandha.

### **Unit IV – Mudras**

Meaning, Techniques and Benefits of Hasta Mudras, Asamyukta hastam, Samyukta hastam , Mana Mudra, Kaya Mudra, Banda Mudra, Adhara Mudra. Meditation: Meaning, Techniques and Benefits of Meditation – Passive and active, Saguna Meditation and Nirguna Meditation.

### **Unit V – Yoga and Sports**

Yoga Supplemental Exercise – Yoga Compensation Exercise – Yoga Regeneration Exercise-. Role of Yoga in Psychological Preparation of athlete: Mental Wellbeing, Anxiety, Depression Concentration, Self Actualization. Effect of Yoga on Physiological System: Circulatory, Skeletal, Digestive, Nervous, Respiratory, Excretory System.

*Note: Laboratory Practicals be designed and arranged internally.*

## REFERENCE:

George Feuerstein, (1975). Text Book of Yoga. London: Motilal Bansaridass Publishers (P) Ltd.

Gore, (1990), Anatomy and Physiology of Yogic Practices. Lonavata: Kanchan Prkashan.

Helen Purperhart (2004), The Yoga Adventure for Children. Netherlands: A Hunter House book.

Iyengar, B.K.S. (2000), Light on Yoga. New Delhi: Harper Collins Publishers.

Karbelkar N.V.(1993) Patanjali Yogasutra Bhashya (Marathi Edition) Amravati: Hanuman Vyayam Prasarak Mandal

Kenghe. C.T. (1976). Yoga as Depth-Psychology and para-Psychology (Vol-I): Historical Background, Varanasi: Bharata Manishai.

Kuvalyananada Swami & S.L. Vinekar, (1963), Yogic Therapy – Basic Principles and Methods. New Delhi: Govt. of India, Central Health Education and Bureau.

Moorthy A.M. & Alagesan. S. (2004) Yoga Therapy. Coimbatore: Teachers Publication House.

Swami Kuvalayanda, (1998), Asanas. Lonavala: Kaivalyadhama.

Swami Satyananada Sarasvati. (1989), Asana Pranayama Mudra Bandha. Munger: Bihar School of Yoga.

Swami Satyananda Saraswathi. (1984), Kundalini and Tantra, Bihar: Yoga Publications Trust.

Swami Sivananda, (1971), The Science of Pranayama. Chennai: A Divine Life Society Publication.

Thirumalai Kumar. S and Indira. S (2011) Yoga in Your Life, Chennai: The Parkar Publication.

Tiwari O.P. (1998), Asanas-Why and How. Lonavala: Kaivalyadhama.

Ronghe Prafulla N., Physiology of Yoga

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## COURSE OUTCOMES:

1. Differentiate between various paths of yoga
2. Apply and demonstrate various benefits of yoga to be applied in the field of sports
3. Relate Yoga with health and wellness

## 15 MPEd104CORRECTIVE PHYSICAL EDUCATIONAND REHABILITATION

### Unit I – Corrective Physical Education

Definition, objectives and Scope of corrective physical Education. Body Types. Rehabilitation Principles and program, Rehabilitation of athletic injuries: Passive, Active, Assisted, Resisted exercise for Rehabilitation, Stretching, PNF techniques and principles.

### Unit II – Posture

Meaning, Definition of posture and postural education. Dynamic and static postures, common postural deformities: Kyphosis, lordosis, Scoliosis, Knock Knee, Bow leg, Flat foot. Causes for deviations and treatment including corrective exercises.

Posture test – Examination of the spine, Kyphosis, Lordosis, Scoliosis, Knock Knee, Bow leg, Flat foot. Drawbacks and causes of bad posture

### **Unit III – Preventive Measures of Sports Injuries**

Protective Sports Equipments, Training and conditioning techniques, Nutritional considerations, Environmental considerations, Mechanism and characteristic of sports trauma, Bandaging and Tapping, Tissue response to injury, Psychological intervention for sports injuries, Warm up and Cool down.

### **Unit IV – Massage Manipulation**

Brief history of massage – Massage as an aid for relaxation – Points to be considered in giving massage – Physiological , Chemical, Psychological effects of massage – Indication / Contra indication of Massage – Classification of the manipulation used massage and their specific uses in the human body – Stroking, Pressure, Percussion, Shacking

### **Unit V – Therapeutic Modalities**

Care and treatment of exposed and unexposed injuries in sports – Cryotherapy, Hydrotherapy, Whirlpool, contrast bath, infrared rays , Ultraviolet Ray, Ultrasound, , Short wave diathermy therapy, IFT, Wax, traction.

*Note: Each student shall submit Physiotherapy record of attending the Clinic and observing the cases of athletic injuries and their treatment procedure.(To be assessed internally)*

*Projects on use of modalities in common sports injuries*

### **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.  
Mc Ooyand 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.

### **COURSE OUTCOMES:**

- Illustrate and apply the concepts of sports injuries and rehabilitation.
- Interpret the concept of therapeutic aspects of exercise.
- Demonstrate and take care of the preventive and curative aspect of sports injuries.
- Apply the concept of rehabilitation of sports injuries
- Interpret the concept toward positive lifestyle.

## **15 MPed104 HEALTH EDUCATION AND SPORTS NURTITION**

### **Unit - I Health Education**

Concept, Dimensions, Spectrum and Determinants of Health

Definition of Health, Health Education, Health Instruction, Health Supervision

Aim, objective and Principles of Health Education

Health Service and guidance instruction in personal hygiene

### **Unit - II Health Problems in India**

Communicable and Non Communicable Diseases

Obesity, Diabetes, Malnutrition, Adulteration in food, Environmental sanitation, Explosive, Population,

Personal and Environmental Hygiene in schools

Objective of school health service, Role of health education in schools

Health Services - Care of skin, Nails, Eye health service, Nutritional service, Health appraisal, Health record, Healthful school environment, first- aid and emergency care etc.

### **Unit- III Hygiene and Health**

Meaning of Hygiene, Type of Hygiene, dental Hygiene, Effect of Alcohol on Health, Effect of Tobacco on Health, Life Style Management, Management of Hypertension, Management of Obesity, Management of Stress and diabetes

### **Unit - IV Introduction to Sports Nutrition**

Meaning and Definition of Sports Nutrition, Role of nutrition in sports, Basic Nutrition guidelines, Nutrients: Ingestion to energy metabolism (Carbohydrate, Protein and Fat), Role of carbohydrates, Fat and protein during exercise.

### **Unit - V Nutrition and Weight Management**

Concept of BMI (Body mass index), Obesity and its hazard, Dieting versus exercise for weight control Maintaining a Healthy Lifestyle, Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss.

### **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.

### **COURSE OUTCOMES:**

- Understand the concept of holistic health through fitness and wellness
- Explain the concept of physical fitness , health related and motor fitness
- Evaluate primary health status
- Prepare fitness schedules& evaluate fitness

## **Semester II**

### **15 MPEd109 APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS**

#### **UNIT I – Introduction**

- Meaning and Definition of Statistics.
- Function, need and importance of Statistics.
- Types of Statistics.
- Meaning of the terms, Population, Sample, Data, types of data.
- Variables; Discrete, Continuous
- Nature of scale: Nominal, ordinal, Interval.
- Parametric and non-parametric statistics.

#### **UNIT II – Data Classification, Tabulation and Measures of Central Tendency**

Meaning, uses and construction of frequency table. Meaning, Purpose, Calculation and advantages of Measures of central tendency – Mean, median and mode on grouped and ungrouped data.

### **UNIT III – Measures of Dispersions and Scales**

Meaning, Purpose, Calculation and advances of Range, Quartile Deviation, Mean Deviation, Standard Deviation, Probable Error. Meaning, Purpose, Calculation and advantages of scoring scales; Sigma scale, Z Scale, Hull scale, T Scale, percentile

### **UNIT IV – Probability Distributions and Graphs**

Normal Curve. Meaning of probability- Principles of normal curve – Properties of normal curve. Divergence from normality – Skewness and Kurtosis. Graphical Representation of data in Statistics; Scattered, Line diagram, Bar diagram, Histogram, Frequency Polygon, Ogive Curve.

### **UNIT V – Inferential 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 – calculation of co-efficient of correlation by the product moment method and rank difference method. Concept of ANOVA (One Way) and Theory of ANCOVA.

Note : It is recommended that the theory topics be accompanied with practical, based on computer software of statistics.

### **Collection, tabulation, analysis and interpretation of 3 projects**

### **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, Senthilkumar Publications.

### **COURSE OUTCOMES:**

- Know how to organize, manage, and present data.
- Explore and organize data for analysis.
- Use and apply a wide variety of specific statistical methods.
- Demonstrate understanding of the properties of probability and probability distributions.
- Demonstrate understanding of the probabilistic foundations of inference.
- Apply inferential methods relating to the means of Normal distributions.
- Understand the concept of the sampling distribution of a statistic, and in particular describe the behavior of the sample mean.
- Effectively communicate results of statistical analysis.
- Demonstrate understanding of statistical concepts embedded in their courses.
- Demonstrate proficiency in analyzing data using methods embedded in their courses.
- Demonstrate ability to select appropriate methodologies for analysis based on properties of particular data sets.

## **15 MPEd110SPORTS BIOMECHANICS**

### **UNIT I – Introduction**

Meaning, Importance and scope of kinesiology and Sports Biomechanics. Meaning of Axis and Planes, Static and Dynamics, Kinematics, Kinetics, Centre of gravity -Line of gravity Vectors and Scalars.

## **UNIT II – Muscle and Joints Action**

Muscle- Origin, Insertion and action of muscles: Pectoralis major and minor, Deltoid, Biceps, Triceps (Anterior and Posterior), Trapezius, serratus, Sartorius, Rectus femoris, Abdominis, Quadriceps, Hamstring, Gastrocnemius.

Joints – Types, Structure, Movements

## **UNIT III – Motion and Force**

Meaning and definition of Motion. Types of Motion: Linear motion, angular motion, uniform and non-uniform motion. Principles of Newton law of Motion -Law of Inertia, Law of acceleration, and Law of action and reaction. Meaning and definition of force- Sources of force -Force components, Centripetal force - Centrifugal force. Force applied at an angle -pressure -friction -Buoyancy, Spin -.

## **UNIT IV – Projectile and Lever**

Freely falling bodies -Projectiles -Equation of projectiles, equilibrium -Factors influencing equilibrium - Guiding principles for equilibrium -static and dynamic equilibrium. Meaning of work, power, energy, kinetic energy and potential energy. Leverage -classes of lever - practical application. Aerodynamics: Water resistance - Air resistance -.

## **UNIT V – Movement Analysis**

Analysis of Movement: Types of analysis: Kinesiological, Biomechanical, and Muscular Analysis. Cinematographic. Methods of analysis – Qualitative, Quantitative, Predictive,

**Note: Laboratory practical should be designed and arranged for students internally.**  
3 skills of track and field events (Cinematographic)

## **REFERENCE:**

Deshpande S.H.(2002). Manav Kriya Vigyan – Kinesiology (Hindi Edition) Amravati :Hanuman Vyayam Prasarak Mandal.

Hoffman S.J. Introduction to Kinesiology (Human Kinesiology publication In.2005).

Steven Roy, & Richard Irvin. (1983). Sports Medicine. New Jersey: Prentice hall.

Thomas. (2001). Manual of structural Kinesiology, New York: Me Graw Hill.

Uppal A.K. Lawrence Mamta MP Kinesiology(Friends Publication India 2004)

Uppal, A (2004), Kinesiology in Physical Education and Exercise Science, Delhi Friends publications.

Williams M (1982) Biomechanics of Human Motion, Philadelphia; Saunders Co.

## **COURSE OUTCOMES:**

- Explain the basic mechanical concepts and will be able to interpret its relation to human body movements
- Organize and specify the overall goal of the course.
- Apply and analyze the factors of mechanical laws involved in human movement.
- Explain the principles of movement analysis
- Analyze the mechanical principles of motor skills and sports related skills along with their proper techniques and corrective measures.

## **15 MPed111 TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION**

### **UNIT I – Introduction**

Meaning and Definition of Test, Measurement and Evaluation. Need and Importance of Measurement and Evaluation. Criteria for Test Selection – Scientific Authenticity. Meaning, definition and establishing Validity, Reliability, Objectivity. Norms – Administrative Feasibilities.

### **UNIT III – Motor Fitness and Motor Ability Tests**

Meaning and components of Motor Fitness. Indiana Motor Fitness Test (for elementary and high school boys, girls and College Men) Oregon Motor Fitness Test (Separately for boys and girls) - JCR test. Motor Ability; Barrow Motor Ability Test – Newton Motor Ability Test –, Motor Educability Test,

### **UNIT II – Physical Fitness Tests**

Physical Fitness Meaning and Components, AAHPERD: Youth Physical Fitness, Health Related Physical Fitness, Functional Fitness; Roger's physical fitness Index. Harvard step test, 12 minutes run / walk test, Multi-stage fitness test (Beep test), Kraus Weber Minimum Muscular Fitness Test.

### **UNIT IV – Anthropometric and Aerobic-Anaerobic Tests**

Anthropometric Measurements: Method of Measuring Height: Standing Height, Sitting Height. Method of measuring Circumference: Arm, Waist, Hip, Thigh. Method of Measuring (Body Composition) Skin folds: Biceps, Triceps, Sub scapular, Suprailiac. Physiological Testing: Aerobic Capacity: The Bruce Treadmill Test Protocol, 1.5 Mile Run test for college age males and females. Anaerobic Capacity: Margaria-Kalamen test, Wingate Anaerobic Test,

### **UNIT V – Skill Tests**

Specific Sports Skill Test: Badminton: Miller Wall Volley Test. Basketball: AAHPERD Basketball Test, Harrison Basketball Ability Test. Cricket: Sutcliff Cricket test. Harban's Hockey Test, Volleyball, Russel Lange Volleyball Test,. Football: Moor-Christian General Soccer Ability Skill Test Battery, Johnson Soccer Test, Tennis: Dyer Tennis Test.

*Note: Practicals of indoor and out-door tests be designed and arranged internally.*

*Projects on 5 fitness and 5 skill tests*

### **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
- Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3<sup>rd</sup> Edition. Champaign IL: Human Kinetics
- Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in Physical Education and Sports. New Delhi; Friends Publications

### **COURSE OUTCOMES:**

- Explain the basics of measurement and evaluation of various test and measurement techniques.
- Develop the concepts of measurement and evaluation in physical education and sports
- Develop ability to construct new tests for various need related to Physical Education and Sports with scientific authenticity
- To analyze various test and performance related to physical education

## **15 MPEd114 THEORY OF ATHLETICS**

- Unit I**
1. Historical development of Athletics at National and International levels.
  2. National body controlling Athletics and its units.
  3. International bodies controlling athletics and their affiliated units.
  4. Major National and International competitions.

**Unit II      Officiating and Lay out of Play Fields**

1. Rules and their interpretations.
2. Mechanics of officiating.
3. Layout and marking of Track.
4. Layout and making of field events.

**Unit III      Skill and Techniques**

1. Skill and Techniques of track events.
2. Skill and Techniques of field events.
3. Methods of teaching and training of skills and techniques of different track events and field events.

- Unit IV**
1. Preparation of training schedule for different events of track sprints, middle distance, long distance relays and hurdles and steeplechase.
  2. Preparation of training schedules for different field events Long jump, High jump, Pole vault, Shot put, Discus throw, Javelin throw and Hammer throw.
  3. Short term, Long term training plans and periodisation.

- Unit V**
1. Duties and functions of different officials for a standard competition.
  2. Technical equipments for track and field events.

**References :**

1. Scientific teaching and training of Athletic - K. Bosen, NSNIS, Patiyala Publication
2. Track and Field marking - U. C. Thakur - H. V. P. M. Publication
3. Modern Principles of athletic training - The C. V. Mosby company London
4. Coaching and care of Athletics - Sports Education technologies, New Delhi
5. AFI, Rule book
6. YmdZ nW Ed\_2 \_jXmZr Iob-Hy\$X {Z` moOZ \_mnZ aoIm\$H\$Z- `w.gr. R>mHw\$a - EM. ihr.nr.E\_. nãbrHo\$eZ

**COURSE OUTCOMES:**

- Interpret the concept of therapeutic aspects of exercise.
- Demonstrate and take care of the preventive and curative aspect of sports injuries.
- Apply the concept of rehabilitation of sports injuries
- Interpret the concept toward positive lifestyle.

## **15 MPEd114SPORTS JOURNALISM AND MASS MEDIA (Elective)**

### **UNIT I Introduction**

Meaning and Definition of Journalism, Ethics of Journalism – Canons of journalism- Sports Ethics and Sportsmanship – Reporting Sports Events. National and International Sports News Agencies.

### **UNIT II Sports Bulletin**

Concept of Sports Bulletin: Journalism and sports education – Structure of sports bulletin – Compiling a bulletin – Types of bulletin – Role of Journalism in the Field of Physical Education: Sports as an integral part of Physical Education – Sports organization and sports journalism – General news reporting and sports reporting.

### **UNIT III Mass Media**

Mass Media in Journalism: Radio and T.V. Commentary – Running commentary on the radio – Sports expert's comments. Role of Advertisement in Journalism. Sports Photography: Equipment- Editing – Publishing.

### **UNIT IV Report Writing on Sports**

Brief review of Olympic Games, Asian Games, Common Wealth Games World Cup, National Games and Indian Traditional Games. Preparing report of an Annual Sports Meet for Publication in Newspaper. Organization of Press Meet.

### **UNIT –V Journalism**

Sports organization and Sports Journalism – General news reporting and sports reporting. Methods of editing a Sports report. Evaluation of Reported News. Interview with and elite Player and Coach.

Practical assignments to observe the matches and prepare report and news of the same; visit to News Paper office and TV Centre to know various departments and their working. Collection of Album of newspaper cuttings of sports news.

### **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
- Mohit Chakrabarti (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.
- Venkataiah. N (2009) Value Education,- New Delhi: APH Publishing Corporation. 43

### **COURSE OUTCOMES:**

- Apply the concept of reporting and editing.
- Illustrate and apply the advertising concepts.
- Interpret the concept of journalism and mass media

### **Semester III**

## **15 MPEd201 SCIENTIFIC PRINCIPLES OF SPORTS TRAINING Preference I**

- UNIT - I**
1. Introduction to Sports Training & Coaching
    - a) Meaning, definitions, aim and objectives of Sports Training and Coaching.
    - b) Characteristics of Sports Training.
    - c) Principles of Sports Training and Coaching
  2.
    - a) Qualities and qualifications of a successful coach.
    - b) Nature and scope of coaching profession

- UNIT - II**
1.
    - a) Sports Talent Identification and Development
    - b) Psychological and sociological factors in training competition.
  2.
    - a) Technique : Meaning of technique, skill and style, significance of technique training in different sports.
    - b) Factors affecting technique training, phases of technique training and their implications.

- UNIT - III**
1. Training Load and Recovery:
    - a) Factors of training load: quality of movement, types of exercise, load volume, load intensity
    - b) Principles of Loading.
    - c) Over Load : meaning, causes, symptoms and tackling
    - d) Adaptation process- factors affecting recovery, means of faster recovery.
  2. Meaning, forms, factors determining and training methods of
    - a) Strength, b) Speed c) Endurance d) Flexibility e) Co-ordinative abilities:

- UNIT - IV**
1. Tactical Training : Meaning of strategy and tactics, difference between strategy and tactics, significance of tactics, tactical training means.
  2. Competitions : Types and importance of competitions as a methods of training.
  3. Environmental factors and Sports Training.

- UNIT - V**
1. Periodisation - Meaning and types of periodisation, contents of training and coaching for different periods.
  2. Planning- Meaning, principles and types of training plans.
  3. Monitoring of the training schedule.

#### **REFERENCE BOOKS:**

1. Dick Franek W. "Sports Training Principles" 1<sup>st</sup> edition 1980: Henry Kimpton Publishers Ltd. Leigon Road London NWS2QL
2. Herre Dictrich , "Principles of Sports Training", 1982 Sports verlag, Germany.
3. Matyeyer L.P. , "Fundamentals of sports training", 2<sup>nd</sup> Edition 1981, Published by Progress Publishers Mosco, Russia
4. Singh Hardyal;"Science of Sports Training" (New Delhi, Dvs Publications ) 1997, Kirti Nagar, Kalkaji, New Delhi.
5. Uppal A.K. Principles of Sports Training ( Delhi : Friends Publications) 2001
6. Uppal A.K. Science of Sports Training ( Delhi : Friends Publications) 2009
7. Lawther John D. Psychology of Coaching (Prentice Hall, Inc. Engle wood Cliffs)

#### **COURSE OUTCOMES:**

- understand the concept, Scientific principles and forms of sports training.
- develop Methods of Training for all of the Fitness components
- Technical and Tactical training methods to develop

- acquaint the students with dimensions and actual markings of different play fields, courts and arenas.
- Factors Influencing Training Programme

## 15 MPEd202 SPORTS MEDICINE

*Practicals: Lab. Practical and visit to Physiotherapy Centre to observe treatment procedure of sports injuries; data collection of sports injury incidences, Visit to TV Centre etc. should be planned internally.,*

3 Projects on sports injuries

### 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 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: Khel Shitya Kendra

The Encyclopedia of Sports Medicine. (1998). The Olympic Book of Sports Medicine, Australia: Tittel Blackwell Scientific publications.

Practical: Anthropometric Measurements,

### COURSE OUTCOMES:

## 15 MPEd 202 SPORTS MEDICINE

- UNIT - I Introduction to Sports Medicine
- Meaning, concept and scope of Sports Medicine
  - Historical back ground of Sports Medicine
  - Need and importance of Sports Medicine
- Hygiene and Athlete :
- Sports hygiene: Meaning, concept and scope
  - Personal hygiene; Bodily cleanliness, personal belongings,
  - Hygiene in camps and competitions
- UNIT - II Health Hazards in sports
- Dope : History, definition, classification and their adverse effects on Health and Sports performance
  - Role of Managers and Coaches in controlling the dope problems
  - Malnutrition among athletes and its correction, Environmental Stress
- Safety in sports
- Gymnasium, play ground and swimming pool safety
  - Safety appliances in different sports and their uses
  - Provisions of safety rules in competitive sports and principles of safety
- UNIT - III Sports Injuries :

- i. Classification of injuries in sports
- ii. Causes of injuries in sports
- iii. Role of rules and regulations in prevention of injuries
- iv. General preventive measures to minimize sports injuries
- v. Specific preventive measures to minimize sports injuries

#### UNIT - IV Management of Sports Injuries

Soft tissue injuries : Signs, Symptoms and Management of -

- i. Abrasions, Blisters, Lacerations, Puncture wounds, Corn, Contusions
- ii. Muscle strains, Tendon injuries, Bursitis & Sprains
- iii. Dislocations : Causes, Signs, Symptoms and Management
- iv. Fractures : Types, Causes, Signs, Symptom and Management
- v. Head Injuries

#### UNIT - V Physiotherapy and its use in the treatment and rehabilitation in sports injuries.

- i. Exercise therapy : Types and Principles
- ii. Massage Therapy : Types, Techniques, Indication and Contra indications.
- iii. Therapeutic Modalities
- iv. Different forms of Hydrotherapy and thermotherapy
- v. Hot and Cold Packs, Whirlpool, Contrast bath, Parafin bath
- vi. Infrared, Ultra-violet, Ultra Sonic, Short wave diathermy, Electric Muscle Stimulation, Indications and Contra-indications of each therapy

#### Reference Books Recommended :

1. Marua K. Anderson, Malissa marlin : "Quick References Guide for sports injury Management"
2. Dr. P.K. Pande Sports Medicine
3. Griffith H. Winter : " Complete guide to sports, injuries.
4. Borozne, Joseph and bechar stanley, safely in team sports.
5. Clarke Kenneth S: Drugs and the coach
6. Borozne, Joseph and Pechar stanly: Administration and Supervision for Safety in Sports.
7. Ryan A.J. and Fred L. Athman : " Sports Medicine"
8. Johnson W.R. : Science and Medicine of exercise and sports.
9. Govindarajulu N. Sports Medicine, Friends Publications, New Delhi, India

Practicals: Lab, Practicals and visit to Physiotherapy Centre to observe treatment procedure of sports injuries; data collection of sports injury incidences, visit to TV centre etc. should be planned internally. 3 Projects on sports injuries.

#### COURSE OUTCOMES:

- Importance of sports medicine
- Scope of sports medicine
- Role of sports medicine expert in enhancing sports performance
- Sports injuries, their prevention, management and rehabilitation
- Ill effects of drug use.

## **15 MPed203 SPORTS MANAGEMENT AND CURRICULUM DESIGN IN PHYSICAL EDUCATION (Core)**

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

Definition, Importance. Basic Principles and Procedures of Sports Management. Functions of Sports Management. Personal Management: Objectives of Personal Management, Personal Policies, Role of Personal Manager in an organization, Personnel recruitment and selection.

### **UNIT II – Programme Management**

Importance of Programme development and the role of management, Factors influencing programme development. Steps in programme development, Competitive Sports Programs, Benefits, Management Guidelines for School, Colleges Sports Programs, Management Problems in instruction programme, Community Based Physical Education and Sports program, Budget and Office Management.

### **UNIT III – Equipments and Public Relation**

Purchase and Care of Supplies of Equipment, Guidelines for selection of Equipments and Supplies, Equipment Room, Equipment and supply Manager. Guidelines for checking, storing, issuing, care and maintenance of supplies and equipments. Public Relations in Sports: Planning the Public Relation Program – Principles of Public Relation – Public Relations in School and Communities – Public Relation and the Media. Marketing

### **UNIT IV – Curriculum**

Meaning and Definition of Curriculum. Principles of Curriculum Construction: Students centred, Activity centred, Community centred, Forward looking principle, Principles of integration, Theories of curriculum development, Conservative (Preservation of Culture), Relevance, flexibility, quality, contextually and plurality. Approaches to Curriculum; Subject centred, Learner centred and Community centred, Curriculum Framework.

### **UNIT V – Curriculum Sources**

Factors that affecting curriculum: Sources of Curriculum materials – text books – Journals – Dictionaries, Encyclopaedias, Magazines, Internet. Integration of Physical Education with other Sports Sciences – Curriculum research, Objectives of Curriculum research – Importance of Curriculum research. Evaluation of Curriculum, Methods of evaluation.

#### **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.
- 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, 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.

#### **COURSE OUTCOMES:**

- Identify issues relevant to modern physical education and sport management. Explore the area as a career perspective
- To describe organization and administration of sports programmes.
- To analyze and interpret sports philosophy, sports sociology, business systems, sports management, public administration and marketing techniques.
- To develop opportunities to construct & design the curriculum of PE in broader aspects realizing the age group, gender consideration and physiological basis

### **15 MPEd204 SPORTS ENGINEERING (Elective)**

#### **Unit - I Introduction to sports engineering and Technology**

Meaning of sports engineering, human motion detection and recording, human performance, assessment, equipment and facility designing and sports related instrumentation and measurement.

#### **Unit - II Mechanics of engineering materials**

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

#### **Unit- III Sports Dynamics**

Introduction to Dynamics, Kinematics to particles – rectilinear and plane curvilinear motion coordinate system. Kinetics of particles – Newton's laws of Motion, Work, Energy, Impulse and momentum.

#### **Unit- IV Building and Maintenance:**

Sports Infrastructure- Gymnasium, Pavilion, Swimming Pool, Indoor Stadium, Out-door Stadium, Play Park, Academic Block, Administrative Block, Research Block, Library, Sports Hostels, etc.

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 activity to be performed, Corridors and Gates for free movement of people, Emergency provisions of lighting, fire and exits, Eco-friendly outdoorsurrounding. Maintenance staff, financial consideration.

**Building process:-** 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.

#### **Unit – V 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**
- Eric C. et al., Editor **Sports Facility Operations Management** (Routledge, 2010)

## COURSE OUTCOMES:

- Design, properties and testing of sports equipment;
- Explain the concepts of designing sports shoes, sports surfaces, racquets, bats and clubs;
- Explain the principles of equipment performance and matching;
- Design sports equipment based on the rules of governing sporting bodies;
- Demonstrate the capability of designing protective equipment;
- Calculate mechanical properties of equipment;
- Explain principles of quantification of performance and optimisation of training with sports biomechanics methods;
- Explain the principles of holistic innovation of sports equipment;
- Design customised sports equipment for elite athletes;
- Test sports equipment.

## 15 MPEd204PHYSICAL FITNESS AND WELLNESS (Elective)

### Unit I – Introduction

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

### Unit II – Nutrition

Nutrients; Nutrition labelling information, Food Choices, Food Guide Pyramid, Influences on food choices- social, economic, cultural, food sources, Comparison of food values. Weight Management-proper practices to maintain, lose and gain. Eating Disorders, Proper hydration, the effects of performance enhancement drugs

### Unit III – Aerobic Exercise

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. Assessment of cardio respiratory fitness and set goals to maintain or improve fitness levels. Cardio respiratory activities including i.e. power walking, pacer test, interval training, incline running, distance running, aerobics and circuits.

### Unit IV – Anaerobic Exercise

Resistance Training for Muscular Strength and Endurance; principles of resistance training, Safety techniques (spotting, proper body alignment, lifting techniques, spatial, awareness. and proper breathing techniques). 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) Advanced techniques of weight training

### Unit V – Flexibility Exercise

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

### Reference:

- David K. Miller & T. Earl Allen, Fitness, A life time commitment, Surjeet Publication Delhi 1989.  
Dificore Judy, the complete guide to the postnatal fitness, A & C Black Publishers Ltd. 35 Bedford row, London 1998  
Dr. A.K. Uppal, Physical Fitness, Friends Publications(India), 1992. Warner W.K. Oeger & Sharon A. Hoeger, Fitness and Wellness, Morton Publishing Company, 1990.  
Elizabeth & Ken day, Sports fitness for women, B.T. Batsford Ltd, London, 1986.  
Emily R. Foster, Karyn Hartiger & Katherine A. Smith, Fitness Fun, Human Kinetics Publishers 2002.  
Lawrence, Debbie, Exercise to Music. A & C Black Publishers Ltd. 37, Sohe Square, London 1999  
Robert Malt. 90 day fitness plan, D.K. publishing, Inc. 95, Madison Avenue, New York 2001

### COURSE OUTCOMES:

- Understand the concept of holistic health through fitness and wellness
- Explain the concept of physical fitness , health related and motor fitness
- Evaluate primary health status
- Prepare fitness schedules& evaluate fitness

## Semester IV

### 15 MPEd209 INFORMATION & COMMUNICATION TECHNOLOGY (ICT) IN PHYSICAL EDUCATION

#### Unit I – Communication & Classroom Interaction

Concept, Elements, Process & Types of Communication  
Communication Barriers & Facilitators of communication  
Communicative skills of English - Listening, Speaking, Reading & Writing  
Concept & Importance of ICT Need of ICT in Education  
Scope of ICT: Teaching Learning Process, Publication Evaluation, Research and Administration  
Challenges in Integrating ICT in Physical Education

#### Unit II – Fundamentals of Computers

Characteristics, Types & Applications of Computers Hardware of Computer: Input, Output & Storage Devices Software of Computer: Concept & Types  
Computer Memory: Concept & Types  
Viruses & its Management  
Concept, Types & Functions of Computer Networks Internet and its Applications  
Web Browsers & Search Engines Legal & Ethical Issues

#### Unit III –Applications of MS Office and SPSS

MS Word: Main Features &its Uses in Physical Education  
MS Excel: Main Features &its Applications in Physical Education  
MS Access: Creating a Database, Creating a Table, Queries, Forms & Reports on Tables and its Uses in Physical Education  
MS Power Point: Preparation of Slides with Multimedia Effects  
MS Publisher: Newsletter & Brochure  
Introduction to SPSS for data analysis

#### Unit IV – ICT Integration in Teaching Learning Process

Approaches to Integrating ICT in Teaching Learning Process  
Project Based Learning (PBL)  
Co-Operative Learning  
Collaborative Learning  
ICT and Constructivism: A Pedagogical Dimension

#### Unit V – E-Learning & Web Based Learning

E-Learning  
Web Based Learning  
virtual Classroom

**Practical examinations on two techniques: MS office/SPSS/E-Learning/Computer applications**

#### REFERENCES:

B. Ram, New Age International Publication, Computer Fundamental, Third Edition-2006  
Brain under IDG Book. India(p) Ltd Teach Yourself Office 2000, Fourth Edition-2001  
Douglas E. Comer, The Internet Book, Purdue University, West Lafayette in 2005

Heidi Steel Low price Edition, Microsoft Office Word 2003- 2004  
ITL Education Solution Ltd. Introduction to information Technology, Research and Development Wing-2006  
Pradeep K. Sinha & Priti;Sinha, Foundations computing BPB Publications -2006.  
Rebecca Bridges Altman Peach pit Press, Power point for window, 1999  
Sanjay Saxena, Vikas Publication House, Pvt. Ltd. Microsoft Office for ever one, Second Edition-2006

#### COURSE OUTCOMES:

- Correlate the of ICT & Education Technology in Physical Education and Sports concepts with the sports and athlete specific situations
- Integrate the knowledge about Communication Process and Teaching for learner.
- List down the Information Technology utilized in the field of sports.
- Analyze the issues related to Internet, Networking, E-learning and Cyber Security

### 15 MPEd210SPORTS PSYCHOLOGY

#### UNIT I - Introduction

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

#### UNIT II -

##### Psychological aspects of Sports

Achievement Motivation, Assessment of Achievement Motivation. Imagery, Self Efficacy, Anxiety, Aspiration, Stress, Aggression, Self Concept, will to win, Focus and Flow

#### UNIT III – Goal Setting

Meaning and Definition, Process of Goal Setting in Physical Education and Sports. 4cs (Concentration, Control, Confidence, Commitment); Relaxation: Meaning and Definition, Types and Methods of Psychological relaxation. Assessment of psychological aspects of sports

#### UNIT IV – Sports Sociology

Meaning and Definition – Sports and Socialization of Individual Sports as Social Institution. National Integration through Sports. Fans and Spectators: Meaning and definition, Advantages and disadvantages on Sports Performance. Leadership: Meaning, Definition, types. Leadership and Sports Performance.

#### UNIT V – Group Cohesion

Group: Definition and Meaning, Group Size, Groups on Composition, Group Cohesion, Group Interaction, Group Dynamics. Current Problems in Sports and Future Directions – Sports Social Crisis Management – Women in Sports: Sports Women in our Society, Participation pattern among Women, Gender inequalities in Sports.

**Practicals:** *At least five experiments related to the topics listed in the Units above should be conducted by the students in laboratory. (Internal assessment.)*

*Practical: Finger Dexterity, perception: Depth, size, distance, weight, time; Mirror terset, steadiness,*

#### REFERENCES:

Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.

- Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Test, New Delhi: National Council of Educational Research and Training Publication.
- Jain. (2002), Sports Sociology, Heal Sahety Kendre Publishers.
- Jay Coakley. (2001) Sports in Society – Issues and Controversies in International Education, Mc-Craw Seventh Ed.
- John D Lauther (2000) Psychology of Coaching. Ner Jersey: 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, 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.
- Kamlesh, ML (2011). Psychology in Physical Education and Sport

#### **COURSE OUTCOMES:**

- Correlate the psychological concepts with the sports and athlete specific situations
- Integrate the knowledge about personality, motor learning for behavior modification of athletes
- Relate different theories of motor learning with its influence on motor perception and related cognitive abilities of athletes.
- List down the strategies for motivation utilized in the field of sports.
- Analyze the issues related to social behavior based on physiological structure and function

### **15 MPed211 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 Semester Examination.
3. The candidate has to face the Viva-Voce conducted by DRC.

#### **COURSE OUTCOMES:**

- Identifying and selecting the problem. Defining the problem of Dissertation.
- Making Specific and related Literature survey. ( Collection of 20-30 abstracts in the area related to the study/problem)
- Defining the procedure and developing a methodology of/ for the study on hand.
- Designing the study and preparation of a proposal to be justified in the colloquium.
- Formulation of Hypothesis.
- Collection of Data, Analysis of data, Analysis of results, Discussion of results, Interpretation of results.
- Drawing conclusion and making recommendations.
- Writing of abstract.

- Understanding the Format of writing dissertation.
- Proposing a model of Research problem for further Researchers.

**15 MPED 212**  
**Theory of Sports Specialization (Badminton)**

- Unit- I**
- i. History and development of Badminton game in India and abroad.
  - ii. Major competition / tournaments at National and International level.
  - iii. Different Badminton Association / Federation at National and International level.
  - iv. Records of Nationals, Asian Games, Olympics and performance of India at International level.

- Unit- II**
- i. Layout of Badminton court with dimensions and types of flooring.
  - ii. Facilities required for Badminton Hall / Stadium with their size.
  - iii. Rules and laws of Badminton game.
  - iv. Officials : Their qualifications, Duties and Powers.

- Unit- III**
- i. Fundamental skills of Badminton game- Teaching, Coaching and analysis of skills.
  - ii. Lead up games and drills for the development of fundamental skills.
  - iii. Technical and tactical preparation for different offensive and defensive skills.
  - iv. Standardized tests of Badminton skill and playing ability.

- Unit- IV**
- i. Short term and long term training and coaching plans.
  - ii. Preparation of long term plan (Periodization)
  - iii. Physical and Motor fitness components required for Badminton players.
  - iv. Methods of developing Physical and Motor fitness components.

- Unit – V**
- i. Qualities and qualifications of Badminton coach.
  - ii. Duties and responsibilities of a coach.
  - iii. Selection criteria for Badminton player and team.
  - iv. Modern technologies evolved for assistance in Badminton coaching and training.

**Suggested Readings**

1. Deepak Jain – Teaching and Coaching Badminton.
2. Lokesh Thani – Skills and Tactics
3. R. Stanton Hales : Badminton ( Sixth Edition)
4. Judy Hash Nandan C.M. Jones, Beginning Badminton Science of Teaching and Coaching.

**COURSE OUTCOMES**

- 1) To provide details knowledge regarding rules regulations skills , strategies and tactics of Badminton . to enhance performance to regular practices
- 2) To provide teaching and coaching opportunities to students
- 3) To provide opportunities to organize different level of tournament

**15 MPED 212**  
**Theory of Sports Specialization (Football)**

Unit I i. History of the Game and Development of Football

- ii. Construction and Marking of Play grounds
- iii. Laws of the Game and their interpretations
- iv. International and National Body of Football-FIFA, AIFF
- v. National and International levels of football tournament
- vi. Awards in Football

Unit II Techniques

- i. Technique without Ball
- ii. Technique with Ball
- iii. Fundamental skills of the Game.
- iv. Step of Skill Teaching.
- v. Relationship between Tactics, Techniques and Fitness.
- vi. Motor Fitness requires for a Football players and their training methods.

Unit III Principles of Play

- i. Principles of Attack
- ii. Principles of Defence
- iii. Attacking Tactics
- iv. Defending Tactics
- v. Qualifications and duties of officials, Signals of officials.
- vi. Qualifications and qualities of Coach

Unit IV Systems of Play or Formations

- i. 2:2:1:5 Scottish Formation
- ii. 3:2:5 WM formation
- iii. 4:2:4 Balanced formation
- iv. 4:3:3 Full balanced
- v. 4:4:2 Defence wing formation
- vi. 3:5:2 Midfield oriented formation

vii. Advantages, Importance and situation of set plays

#### Unit V Fitness Training of Footballer-

- i. Endurance training
- ii. Strength training
- iii. Speed training
- iv. Pressure training
- v. Criteria of team selection

#### References:

1. Ken Jones, Play the game Soccer (The Hamlyn Publishing Group Limited, New York)
2. Richard Widdows, Football Techniques and Tactics ( The Hamlyn Publishing Co. Ltd., London)
3. Sigi Schmid & Bob Alego, Complete conditioning for Soccer ( Human Kinetics, USA)
4. William Thomson, Teaching Soccer (Surjeet Publication, Delhi)
5. Stan Liversedge, Let's Play Soccer ( Octopus Books Ltd. , London)
6. N. P. Sharma, Football ( Khel Sahitya Kendra, N. Delhi)
7. Hardayal Singh, Science of Sports Coaching (DVS Publications New Delhi)
8. Biru Mal and B.C. Kapri A to Z Soccer (Friends Publications New Delhi – 110009)

#### COURSE OUTCOMES

- 1) To provide details knowledge regarding rules regulations skills , strategies and tactics of Football. to enhance performance to regular practices
- 2) To provide teaching and coaching opportunities to students
- 3) To provide opportunities to organize different level of tournament

#### 15 MPED 212

#### Theory of Sports Specialization ( Volleyball)

- UNIT - I History of Volleyball
- i. Origin and development
  - ii. Volleyball in India and Asia
  - iii. FIVB - National and International Associations and their units.
  - iv. Major Tournaments : National and International level.
  - v. Awards in Volleyball
- UNIT - II
- i. Types, Construction and Marking of Volleyball Courts
  - ii. Construction and Marking of Volleyball Court.
  - iii. Rules of Volleyball and its interpretations.
  - iv. Qualifications and responsibilities of Officials.
  - v. Different signals of Officials.
  - vi. Process of filling the score sheet.
- UNIT - III
- i. Fundamental skills

- ii. Teaching Techniques of Fundamental Skills
- iii. Drills and lead up games for different skills.
- iv. Dive and Role

- UNIT - IV
- i. Individual and Team strategies.
  - ii. Individual and team tactics.
  - iii. Attacking tactics
  - iv. Defending tactics
  - v. Qualifications and qualities of Volleyball Coach

- UNIT - V
- i. Motor fitness components require for Volleyball players.
  - ii. Training Methods for Volleyball fitness development.
  - iii. Qualifications of Basketball Coach
  - iv. Short term and long term training plan for a Volleyball team.
  - v. Selections criteria for Volleyball player and Volleyball team.

### **Books Recommended:**

1. Volleyball Skills and tactics - Sagar S. K., Sports Pub., Delhi, 1994
2. Volleyball for coaches and teachers - Heck Ann, Wm. C. Brown, Iowa, 1985
3. Training Volley Ball : Step to Success- Ferguson Bonnie Jill , Champaign: Leisure Press, 1957
4. The skills of the game - Nicholls Ketin, Wittshire: The Crowwood Press, 1986
5. Niyam, Kaushalya Aur Tantra ( Hindi)- Gayakwad Sandeep Kumar, Yavatmal Sat Chikitsa Prasarak Mandal Dr. Babas, 2007
6. Volley for man and woman- Dhanraj V. Hubert, 7<sup>th</sup> Ed. New Delhi: YM.C.A. Publishing house, 1969
7. Volleyball: Basic & advance - Sandhu Gurbakhsh Singh, Chandigarh: The sport people, 1982
8. Volleyball : Basic and Advanced-Singh Sandhu, 1<sup>st</sup> Chandigarh: The Sports People, 1982
9. Modern Volleyball ; for teacher, coach and player- Nicholls Keith, 1<sup>st</sup> ed.-London: Lepus Book, 1978
10. Insights and strategies for winning volleyball-Hebert Michael R. -1<sup>st</sup> ed.-USA: Leisure Press, 1991

### **COURSE OUTCOMES**

- 1) To provide details knowledge regarding rules regulations skills , strategies and tactics of Volleyball. to enhance performance to regular practices
- 2) To provide teaching and coaching opportunities to students
- 3) To provide opportunities to organize different level of tournament

## **15 MPED 212**

### **Theory of Sports Specialization ( Basketball)**

- UNIT - I
- i. History of Basketball Game
  - ii. Origin and development of the game
  - iii. Basketball in Asia and India
  - iv. Federation / Association of Basketball : National and International and their units

- v. Major Tournaments : National and International level

- UNIT - II
- i. Types, Construction and Marking of Basketball Grounds / Courts.
  - ii. Original Rules of Basketball game and their interpretation
  - iii. Rules of Amateur Basketball game and their interpretation
  - iv. Qualifications and duties of officials
  - v. Principles and mechanics of officiating

- UNIT - III
- i. Fundamental skills of Basketball game
  - ii. Teaching Techniques for Fundamental Skills
  - iii. Drills and lead up games for different skills.
  - iv. Standardized tests of Basketball Playing ability

- UNIT - IV
- i. Individual and Team strategies and tactics with ball and without ball.
  - ii. Offensive and defensive strategies.
  - iii. Tactical training-its meaning and importance
  - iv. Selection criteria of Basketball player and Basketball team

- UNIT – V
- i. Motor fitness components require for Basketball players.
  - ii. Training Methods for fitness development.
  - iii. Qualifications of Basketball Coach
  - iv. Short term and long term training plan for a Basketball team.

#### **Books Recommended:**

1. Basketball Sikhe ( Hindi) - Dikshit Suresh, Delhi: Sports Publication, 2006
2. Winning Basketball systems - Warren William E., 1st ed.-Boston: Allyn and bacon, Inc., 1941
3. Basket ball Coaching Manual - K. kanika, Delhi: Sports Pub., 2005
4. Basketbal: A manual for coaches, instructors and players- Dettow Boris, Sportvertag Berlin, 1984
5. Basketball multiple offense and defense-Dean Smith, 1<sup>st</sup> ed. - Englewood cliffs: Prentice Hall, 1981
6. Basketball- Srivatsan S, Patiala: NIS Publication, 1971
7. Basketball: A manual for coaches, instructors and players, Hercher Wolfgang, Sportvertag Berlin, 1984
8. Multiple defenses for winning basketball: Herris Deimer, New york: Parket, 1971
9. Modern Basketball Team Techniques- Mike Harkins Harry L, 1<sup>st</sup> ed. New york: Parket publishing company Inc., 1985
10. Basketball for man and woman- Abraham CC, Calcutta: Y.M.C.A. Publishing house, 1956
11. The basketball coach guides to success- Bunn John W-Englewood: Prentice Hall, Inc. , 1961
12. Basketball : The basics for coach and player-Ambler Vic, London: Faber and Faber limited, 1979
13. Basketball techniques for woman: Neal Patsy, New York: The ronals press company, 1966
14. The Theory and science of basketball-Cooper John M. Siedentop Daryl, 2nd London: Henry Kimpton, 1975
15. Principles of basketball-Moontasir Abbas, Bombay: Skanda Publications, 1979

#### **COURSE OUTCOMES**

- 1) To provide details knowledge regarding rules regulations skills , strategies and tactics of Basketball. to enhance performance to regular practices
- 2) To provide teaching and coaching opportunities to students
- 3) To provide opportunities to organize different level of tournament

**15 MPED 212**  
**Theory of Sports Specialization (Aquatics)**

- Unit I    i.    Origin and Development  
          ii.   National and International Associations and their units.  
          iii. Aquatic Sports coming under FINA
- Unit II    i.    National and International Competitions  
          ii.   Rules and their interpretations of Swimming  
          iii. Rules and their interpretations of Water Polo
- Unit III        Methods of Training and coaching in Aquatics  
                  i) Swimming    ii) Water polo
- Unit IV    i.    Development of Modern Competitive strokes.  
          ii.   Fundamental skills of swimming.  
          iii. Fundamental skills of Water-Polo
- Unit V    i.    Officials and their duties in Swimming and Water Polo.  
          ii.   Faults and correction of stroke techniques.  
          iii. Different types of Swimming pools , Safety and sanitary rules

**Reference:**

1. Counsilman, James E, The Science of Swimming, S. Chand & Company Ltd., New Delhi, India, 1989
2. Maglischo, Ernest W. Swimming Fastest, Human Kinetics Publishers Ltd. Leads, England, 2003
3. Counsilman, James E. , Competitive Swimming Manual, S. Chand & Company Ltd., New Delhi, India. 1984
4. Google. Co. in FINA Handbook, 2007-2012.

**COURSE OUTCOMES**

- 1) To provide details knowledge regarding rules and regulations, skills , strategies and tactics of Aquatics . to enhance performance to regular practices .
- 2) To provide teaching and coaching opportunities to students .
- 3) To provide opportunities to organize different level of tournament .