

**PONDICHERRY UNIVERSITY**  
**DEPARTMENT OF PHYSICAL EDUCATION**  
**NCTE- Regulations,**  
**Scheme of Examination and Syllabus for the**  
**Master of Physical Education Course (M.P.Ed., 2023-2024 onwards)**  
**(FOUR SEMESTERS - CBCS)**

**Preamble:**

The Master of Physical Education (M.P. Ed) two years (Four Semesters, Choice Based Credit System) programme is a professional programme meant for preparing Physical Education Teachers for senior secondary (Class XI and XII) level as well as Assistant Professor/Directors/Sports Officers in Colleges/Universities and teacher educators in Colleges of Physical Education.

**Course objectives:**

To enable the students to

- ✓ Attain wholesome development through physical education and sports
- ✓ Produce resourceful physical education teachers
- ✓ Encourage participation of students in sports and physical education activities
- ✓ Create awareness of health and fitness among all the stakeholders
- ✓ Acquire professional skills in various games and sports for teaching learning purpose
- ✓ Gain knowledge of the rules, regulation and their interpretation for “officiating” in sports and games
- ✓ Inculcate the ability to organize sports and games in a professional manner
- ✓ Gain knowledge on scientific principles from allied subjects in Physical Education & Sports
- ✓ Understand the concepts and role of different methods of sports training
- ✓ Develop desirable health habits and social integration of sportspersons

**1.0 Intake**

40 students in one unit each year as specified by NCTE.

**1.1 Eligibility**

(a) Bachelor of Physical Education (B.P. E, B.P. Ed) or equivalent with at least 50 % of marks.(  
up to 2015-16 one year B.P. Ed)

OR

Bachelor of Science (B.Sc.) in Physical Education with at least 50% marks.

(b) The reservation in seats and relaxation in the qualifying marks for SC/ST/OBC/EWS and other categories shall be as per the rules of the Central Government/State Government, whichever is applicable.

## 1.2 Admission Procedure:

Admission shall be made on merit on the basis of marks obtained in the entrance examination (written test, skill test, interview and percentage in qualifying examination) or any other selection process as per the policy of the University & Central Government

## 1.3. Scheme of selection:

The selection of candidates for the M.P. Ed degree course is based on the following

### CRITERIA FOR A GRAND TOTAL OF 100 MARKS

- a) Entrance (written) examination -Objective Type Multiple Choices Questions **400 Marks**  
(400 marks converted to 50 Marks)
  - b) Physical Fitness Test (100mts Run, shot put & 12/8 minutes (Run/Walk Test) **30 Marks**
  - c) Games Proficiency Test in any one of the following games (Badminton, Basketball, Cricket, Football, Handball, Hockey, Kabbadi, Kho-Kho, Tennis and Volleyball) **20 Marks**
- i. Entrance Examination converted to 50 Marks
  - ii. Practical Examination conducted for 50 Marks

**Total 100 Marks**

## 2.0 Duration:

The M.P.Ed programme is for the duration of two Academic years that is, **four semesters**. However, students shall be permitted to complete the programme requirements within a maximum period of three years from the date of admission to the programme.

## 3.0 The CBCS System:

All programmes shall run on Choice Based Credit System (CBCS). It is an instructional package developed to suit the needs of students, to keep pace with the developments in higher education and the quality assurance expected of it in the light of liberalization and globalization in higher education.

## 4.0 Course:

The term course usually referred to, as “papers” is a component of a programme. All courses need not carry the same weightage. Each course defines specific learning objectives and learning outcomes. A course may be designed to comprise Lectures/Tutorials/Laboratory Work/ Field Work/ Outreach Activities/ Project Work/

Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc. or a combination of some of these.

### **5.0 Courses in M.P. Ed Programme:**

The M.P. Ed Programme consists of a number of courses, the term “Course” is applied to indicate a logical part of subject matter of the programme and is invariably equivalent to the subject matter of a “paper” in the conventional sense. The following are the various categories of courses for the M.P.Ed. Programme.

- **Theory**
- **Core Course**
- **Elective Course**
- **Practicum**
- **Compulsory Course (Track and Field)**
- **Dissertation**
- **Teaching / Coaching Practices**
- **Internship**

### **6.0 Semesters:**

An academic year is divided into two Semesters. Each semester will consist of 17-20 weeks of academic work equivalent to 100 actual teaching days. The ‘odd semester’ may be scheduled from July to December and ‘even semester’ from December to May. The institution shall work for a minimum of 36 working hours in a week (five or six days a week).

### **7.0 Working days:**

There shall be at least 200 working days per year exclusive of admission and examination processes etc.

### **8.0 Credits:**

The term 'Credit' refers to a unit by which the programme is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or one and half / two hours of practical work/field work per week. The term “Credit” refers to the weight given to a course, usually in relation to the instructional hours assigned to it. The total minimum credits, required for completing M.P.Ed. Programme is 128 credits and for each semester 32 credits.

## 9.0 Evaluation:

CBCS as adopted by Pondicherry University will be the method of Evaluation

### 9.1 Breakup of Internal/ External End Semester Exams:

1. All subjects in a PG programme shall carry an Internal Assessment component to the extent of 40 marks and End Semester for 60 marks.
2. In case of Laboratory /Field/Project work based subjects, appropriate distribution of marks for Practical Record/ Project Report, Practical end-Semester exam, Viva, if any by the respective Programme Committee.
3. A student shall not be permitted to repeat any course only for the purpose of improving the grade.

### 9.2 Break up of Internal Assessment Marks

Each teacher shall organize a continuous assessment of each of the courses assigned to him/her. The internal assessment marks shall be given as per the following

9.3	<b>Breakup:</b>	<b>Marks</b>
	<b>Internal Assessment Tests / Term Papers / Quizzes (Two)</b>	<b>2 x 15 = 30</b>
	<b>Seminars/ Assignments/ Presentations/ Attendance/ Viva, etc.</b>	<b>1x 10 = 10</b>
	<b>Internal Total</b>	<b>40</b>

### Internal Assessments

A schedule of Internal Assessment tests shall be prepared at the very beginning of the semester. Internal Assessment marks shall be displayed within a week from the date of conduct of examination and all corrected answer papers shall be given back to students with comments, if any. It is mandatory for all students to participate in all the Internal Assessment tests and in various course-work related activities for award of the above marks.

### 9.4. End- semester examinations

An End Semester examination shall be conducted for all courses offered in the department. The duration of the end semester examination shall be for 3 hours.

1. A schedule of End Semester examinations be prepared and displayed by the department at least one-month ahead of the conduct of the examination.
2. No student who has less than 70% attendance in any course shall be permitted to attend the end-semester examination and he shall be given grade of FA-failure due to lack of attendance. He shall be asked to repeat that course the next time it is offered.

3. Each teacher shall prepare a model question paper, a Panel of external examiners and submit the same to the Head of the Department.

### **9.5. Supplementary Exam**

A failed student who meets the attendance requirement and has a minimum of 40% in internal assessment marks may be permitted to register for the next end-semester examination or in the following semester itself.

Students who have failed due to insufficient attendance and / or less than 40% in Internal Assessment marks should repeat the course as and when it is offered.

### **10.0 Classification of Final Results:**

For the purpose of declaring a candidate to have qualified for the degree of Master of Physical Education in the First class / Second class / Pass class or First Class with Distinction, the marks and the corresponding CGPA earned by the candidate in Core Courses will be the criterion. It is further provided that the candidate should have scored the First / Second Class separately in both the grand total and end Semester (External) examinations.

### **11.0 Grievance Redresses Committee:**

The department shall form a Grievance Redresses Committee for each course in each department with the course teacher / Director or the HOD and the faculty as the members. This Committee shall solve all grievances of the students.

### **12.0 Revision of Syllabi**

Syllabi of every course will be revised according to the regulation of the NCTE.

### **13.0 Award of the M.P. Ed Degree**

A candidate shall be eligible for the award of the degree of M.P.Ed. Only if he/she has earned the minimum required credit of 128 including bonus credits of the programme prescribed above.

# COURSE SCHEME AND SCHEME OF EXAMINATIONS

## SEMESTER I

Part-A : Theoretical Course ( 400 Marks )						
Course Code	Title of the Papers	Weekly Contact Hour	Credit	Internal Marks	External Marks	Total Marks
Core Course						
MPCC- 101	Research Process in Physical Education&Sports Sciences	4	4	40	60	100
MPCC-102	Physiology of Exercise	4	4	40	60	100
MPCC-103	Test and Measurement and Evaluation in Physical Education	4	4	40	60	100
Elective Course (Anyone)						
MPEC-104	Yogic Sciences	4	4	40	60	100
MPEC-105	Sports Technology					
Part B: Practical Course ( 400 Marks )						
MPPC-106	Track and Field-I Aii Running Events & Relay	6	4	40	60	100
MPPC-107	Laboratory Practical - I Test and Measurement (according to the test and measurements theory paper)	6	4	40	60	100
MPPC-108	Yoga / Aerobics	6	4	40	60	100
Game of Specialization – I as offered by the department (from MPPC 109- 119)						
MPPC-109	Basketball	6	4	40	60	100
MPPC-110	Cricket	6	4	40	60	100
MPPC-111	Football	6	4	40	60	100
MPPC-112	Handball	6	4	40	60	100
MPPC-113	Hockey	6	4	40	60	100
MPPC-114	Kabaddi	6	4	40	60	100
MPPC-115	Kho-Kho	6	4	40	60	100
MPPC-116	Tennis	6	4	40	60	100
MPPC-117	Volleyball	6	4	40	60	100
MPPC-118	Badminton	6	4	40	60	100
MPPC-119	Softball	6	4	40	60	100
	Total	6	4	40	60	100

## SEMESTER -II

Part-A : Theoretical Course ( 400 Marks )						
Course Code	Title of the Papers	Weekly Contact Hour	Cred it	Internal Marks	External Marks	Total Marks
Core Course						
MPCC-201	Applied Statistics in Physical Education & Sports	4	4	40	60	100
MPCC-202	Sports Biomechanics & Kinesiology	4	4	40	60	100
MPCC-203	Athletic Care and Rehabilitation	4	4	40	60	100
Elective Course ( Anyone)						
MPEC-204	Sports Journalism and Mass Media	4	4	40	60	100
MPEC-205	Advance Sports Management in Physical Education					
Part B: Practical Course ( 400 Marks )						
MPPC-206	Track and field - II Jumping Events & hurdles	6	4	40	60	100
MPPC-207	Laboratory Practical – II Biomechanics & Kinesiology (5 tests each) (according to the Biomechanics & Kinesiology theory paper)	6	4	40	60	100
MPPC-208	Teaching Lessons of Indigenous Activities and Sports- 5 Lessons (4 Internal & 1 External)	6	4	40	60	100
Game of Specialization-I Teaching Coaching and Officiating Game of Specialization - I (from MPPC 209 -219 )						
MPPC-209	Basketball	6	4	40	60	100
MPPC-210	Cricket	6	4	40	60	100
MPPC-211	Football	6	4	40	60	100
MPPC-212	Handball	6	4	40	60	100
MPPC-213	Hockey	6	4	40	60	100
MPPC-214	Kabaddi	6	4	40	60	100
MPPC-215	Kho-Kho	6	4	40	60	100
MPPC-216	Tennis	6	4	40	60	100
MPPC-217	Volleyball	6	4	40	60	100
MPPC-218	Badminton	6	4	40	60	100
MPPC-219	Softball	6	4	40	60	100
	Total	6	4	40	60	100

### SEMESTER III

Part-A : Theoretical Course ( 400 Marks )						
Course Code	Title of the Papers	Weekly Contact Hour	Credit	Internal Marks	External Marks	Total Marks
Core Course						
MPCC-301	Scientific Principles of Sports Training	4	4	40	60	100
MPCC-302	Sports Medicine	4	4	40	60	100
MPCC-303	Health Education and Sports Nutrition	4	4	40	60	100
Elective Course (Anyone)						
MPEC-304	Sports Engineering	4	4	40	60	100
MPEC-305	Physical Fitness and Wellness					
Part - B: Practical Course ( 400 Marks )						
MPPC-306	Track and Field - III Throwing Events & Gymnastics	6	4	40	60	100
MPPC-307	Laboratory Practical – III Sports Medicine and Physiotherapy (according to the Sports Medicine and Physiotherapy theory paper)	6	4	40	60	100
MPPC-308	Internship	6	4	40	60	100
Games Specialization-II as offered by the department (from MPPC 309 -319 )						
MPPC-309	Basketball	6	4	40	60	100
MPPC-310	Cricket	6	4	40	60	100
MPPC-311	Football	6	4	40	60	100
MPPC-312	Handball	6	4	40	60	100
MPPC-313	Hockey	6	4	40	60	100
MPPC-314	Kabaddi	6	4	40	60	100
MPPC-315	Kho-Kho	6	4	40	60	100
MPPC-316	Tennis	6	4	40	60	100
MPPC-317	Volleyball	6	4	40	60	100
MPPC-318	Badminton	6	4	40	60	100
MPPC-319	Softball	6	4	40	60	100
	Total	6	4	40	60	100



### SEMESTER -IV

Part-A : Theoretical Course ( 400 Marks )						
Course Code	Title of the Papers	Weekly contact Hour	Credit	Internal Marks	External Marks	Total Marks
Core Course						
MPCC-401	Information & Communication Technology (ICT) in Physical Education	4	4	40	60	100
MPCC-402	Sports Psychology and Sports Sociology	4	4	40	60	100
MPCC-403	Dissertation	4	4	40	60	100
Elective Course (Anyone)						
MPEC-404	Value and Environmental Education	4	4	40	60	100
MPEC-405	Education Technology in Physical Education and Sports					
Part - B: Practical Course ( 400 Marks )						
MPPC-406	Track and Field- IV Combined Events	6	4	40	60	100
MPPC-407	Laboratory Practical – IV Exercise Physiology & Sports Psychology (5 tests each) (according to the Exercise Physiology & Sports Psychology theory paper)	6	4	40	60	100
MPPC-408	Officiating Lessons of Track and Field/ Lessons (4 Internal & 1 External)	6	4	40	60	100
Games Specialization- II Teaching Coaching and Officiating Games Specialization– II ( from MPPC 409-419 )						
MPPC-409	Basketball	6	4	40	60	100
MPPC-410	Cricket	6	4	40	60	100
MPPC-411	Football	6	4	40	60	100
MPPC-412	Handball	6	4	40	60	100
MPPC-413	Hockey	6	4	40	60	100
MPPC-414	Kabaddi	6	4	40	60	100
MPPC-415	Kho-Kho	6	4	40	60	100
MPPC-416	Tennis	6	4	40	60	100
MPPC-417	Volleyball	6	4	40	60	100
MPPC-418	Badminton	6	4	40	60	100
MPPC-419	Softball	6	4	40	60	100
	Total	6	4	40	60	100

**SYLLABUS**  
**Semester I**  
**Theory Courses**

**MPCC-101 RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES**

**Learning Objectives:**

- Introduce Research and its various aspects to the learner
- Give an overview of the types of Research
- Give a clear understanding of the sampling techniques
- To provide an understanding on writing a Research Proposal and Report

**UNIT I – Introduction**

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

**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.

**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**

Chaptalization 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, Referencing and Bibliography writing.

### **Learning Outcome:**

- Comprehend various aspects of Research and understand its types
- Competency in formulating the steps and sampling in research
- Capability to prepare a Research Proposal and a Report

### **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, Londonl Routledge Press

Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; 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 Rothstain, 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.

## **MPCC-102 PHYSIOLOGY OF EXERCISE**

**Objectives:** After studying this paper the student teachers will be able:

1. To know the effect of exercise on skeletal system.
2. To know the effect of exercise on cardiovascular system.
3. To know the effect of exercise on Respiratory system.
4. To understand metabolism and energy transfer.
5. To understand the climatic conditions, sports performance & ergogenic aids

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

Macro & Micro Structure of the Skeletal Muscle, Chemical Composition. Sliding Filament theory of Muscular Contraction. Types of Muscle fibre. Muscle Tone, Chemistry of Muscular Contraction – Heat Production in the Muscle, Effect of exercises and training on the muscular system.

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

Heart Valves and Direction of the Blood Flow – Conduction System of the Heart – Blood Supply to the Heart – Cardiac Cycle – Stroke Volume – Cardiac Output – Heart Rate – Factors Affecting Heart Rate – Cardiac Hypertrophy – Effect of exercises and training on the Cardio vascular system.

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

Mechanics of Breathing – Respiratory Muscles, Minute Ventilation – Ventilation at Rest and During Exercise. Diffusion of Gases – Exchange of Gases in the Lungs – Exchange of Gases in the Tissues – Control of Ventilation – Ventilation and the Anaerobic Threshold. Oxygen Debt – Lung Volumes and Capacities – Effect of exercises and training on the respiratory system.

### **UNIT IV – Metabolism and Energy Transfer**

Metabolism – ATP – PC or Phosphagen System – Anaerobic Metabolism – Aerobic Metabolism – Aerobic and Anaerobic Systems during Rest and Exercise. Short Duration High Intensity Exercises – High Intensity Exercise Lasting Several Minutes – Long Duration Exercises.

**UNIT V – Climatic conditions and sports performance and ergogenic aids** Variation in Temperature and Humidity – Thermoregulation – Sports performance in hot climate, Cool Climate, high altitude. Influence of: Amphetamine, Anabolic steroids, Androstenedione, Beta Blocker, Choline, Creatine, Human growth hormone on sports performance. Narcotic, Stimulants: Amphetamines, Caffeine, Ephedrine, Sympathomimetic amines. Stimulants and sports performance.

Note: Laboratory Practicals in Physiology be designed and arranged internally.

## **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.
- 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 Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company.

## **MPCC-103 TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION**

### **Learning Objectives**

1. To understand the importance of test, measurement and evaluation in the field of physical education which is applicable for evaluating administer a variety of tests, health and fitness.
2. To learn the administration of test for conducting research

### **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 Considerations.

### **UNIT II – Motor Fitness Tests**

Meaning and Definition of Motor Fitness. Test for 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 – Muscular Fitness – Kraus Weber Minimum Muscular Fitness Test.

### **UNIT III – Physical Fitness Tests**

Physical Fitness Test: AAHPERD Health Related Fitness Battery (revised in 1984), ACSM Health Related Physical Fitness Test, Roger's Physical Fitness Index. Cardio vascular test; Harvard step test, 12 minutes run / walk test, Multi-stage fitness test (Beep test), Agility Test: Hexagonal Obstacle Test.

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

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, Anthropometric Measurements: Method of Measuring Height: Standing Height, Sitting Height. Method of measuring Circumference: Arm, Waist, Hip, Thigh. Method of Measuring Skin folds: Triceps, Sub scapular, Suprailiac.

### **UNIT V – Skill Tests**

Specific Sports Skill Test: Badminton: Miller Wall Volley Test, French Short Serve Test. Basketball: Johnson Basketball Test, Harrison Basketball Ability Test. Hockey: Friendel Field Hockey Test, Harban's Hockey Test, Volleyball, Russel Lange Volleyball Test, Brady Volleyball Test. Football: Mor-Christian General Soccer Ability Skill Test Battery, Johnson Soccer Test, Mc-Donald Volley Soccer Test. Tennis: Dyer Tennis Test.

### **Learning outcomes**

1. Understand the Test, Measurement and Evaluation in physical education, Health and Fitness.
2. Know about the different types of skill test for different sports and games.
3. Apply the tests in minor & major research areas.
4. Analyse the performance and movements in the field of sports.
5. Evaluate the battery test and others tests prescribed for knowing various information out of it.

**Note: Practical of indoors and out-door tests be designed and arranged internally.**

### **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

### **MPEC-104 Yogic Sciences (Elective)**

#### **Learning Objectives**

1. To understand and apply the underlying concepts of Yoga
2. To promote knowledge and awareness of skeletal alignment and body mechanics, emphasizing a safe and intelligent use of the body
3. To cultivate breath control, relaxation techniques and kinesthetic awareness

#### **Unit I – Introduction**

Meaning and Definition of Yoga. Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, 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 – Kapalabhati – Trataka – Nauli – Basti, Bandhas: Meaning, Techniques and Benefits of Jalendra Bandha, Jihva Bandha, Uddiyana Bandha, Mula Bandha.

## **Unit IV – Mudras**

Meaning, Techniques and Benefits of Hasta Mudras, Asamyuktahastam, Samyuktahastam , 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-Power Yoga. 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.

### **Learning outcomes**

1. Understand the basic Concepts of Yoga
2. Apply the principles of Yoga to live healthy and active life style.
3. Promote the awareness of health through yoga
4. Analyse the techniques and of body posture to bring out healthy change.
5. Develop the knowledge through practice, participate and organize.

**Note: Laboratory Practical's will be designed and arranged internally.**

### **REFERENCE:**

- George Feuerstein, (1975). Text Book of Yoga. London: MotilalBansaridass Publishers (P) Ltd.
- Gore, (1990), Anatomy and Physiology of Yogic Practices. Lonavata: KanchanPrakashan.
- 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.
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- Kenghe. C.T. (1976). Yoga as Depth-Psychology and para-Psychology (Vol-I): Historical Background, Varanasi: BharataManishai.
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- 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 SatyanandaSaraswathi. (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: Kaivalyadham.

## **MPEC-105 SPORTS TECHNOLOGY (Elective)**

### **Learning Objectives**

1. To understand the procedure of selection and use of various sports technologies.
2. To learn the method of construction and installation of sports surface
3. Help to improve knowledge about modern playing equipment

### **UNIT I – Sports Technology**

Meaning, definition, purpose, advantages and applications, General Principles and purpose of instrumentation in sports, Workflow of instrumentation and business aspects, Technological impacts on sports.

### **UNIT II – Science of Sports Materials**

Adhesives- Nano glue, nanomoulding technology, Nano turf. Foot wear production, Factors and application in sports, constraints. Foams- Polyurethane, Polystyrene, Styrofoam, closedcell and open-cell foams, Neoprene, Foam. Smart Materials – Shape Memory Alloy (SMA), Thermo chromic film, High-density modelling foam.

### **UNIT III – Surfaces of Playfields**

Modern surfaces for playfields, construction and installation of sports surfaces. Types of materials – synthetic, wood, polyurethane. Artificial turf. Modern technology in the construction of indoor and outdoor facilities. Technology in manufacture of modern play equipment. Use of computer and software in Match Analysis and Coaching.

### **UNIT IV – Modern equipment**

Playing Equipment: Balls: Types, Materials and Advantages, Bat/Stick/ Racquets: Types, Materials and Advantages. Clothing and shoes: Types, Materials and Advantages. Measuring equipment: Throwing and Jumping Events. Protective equipment: Types, Materials and Advantages. Sports equipment with Nano Technology, Advantages.

## **UNIT V – Training Gadgets**

Basketball: Ball Feeder, Mechanism and Advantages. Cricket: Bowling Machine, Mechanism and Advantages, Tennis: Serving Machine, Mechanism and Advantages, Volleyball: Serving Machine Mechanism and Advantages. Lighting Facilities: Method of erecting Flood Light and measuring luminous. Video Coverage: Types, Size, Capacity, Place and Position of Camera in Live coverage of sporting events.

### **Learning outcomes**

1. Plan, develop, communicate, implement, and evaluate technology-infused strategic plans.
2. Maintain and manage a variety of digital tools and resources for use in technology-rich sports environment
3. Design, develop, and implement technology-rich sports program that model of sports field and promote digital age best practices in teaching, playing and assessment.
4. Find out how successful were the teachers' efforts in contributing to the realization of the fundamental objectives of sports.
5. Assessments which learning experiences were effective in promoting and enhancing learning, which teaching methods and techniques are effective in the realization of the sports objectives.

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

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- Finn, R.A. and Trojan P.K. (1999) “Engineering Materials and their Applications” UK: Jaico Publisher.
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- Walia, J.S. Principles and Methods of Education (Paul Publishers, Jullandhar), 1999.
- Kochar, S.K. Methods and Techniques of Teaching (New Delhi, Jullandhar, Sterling Publishers Pvt. Ltd.), 1982
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## **MPCC-201 APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS**

### **Learning Objectives**

1. Gain knowledge about statistics
2. To testing the existing theories/trainings and modifying
3. To develop systematic and scientific approach
4. Ability to interpret the data's

### **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. 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.

### **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.

### **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 in Statistics; Line diagram, Bar diagram, Histogram, Frequency Polygon, Ogive Curve.

### **UNIT V – Inferential and Comparative Statistics**

Tests of significance; Independent “t” test, Dependent “t” test – chi – square test, level of confidence and interpretation of data. Meaning of correlation – co-efficient of correlation – calculation of co-efficient of correlation by the product moment method and rank difference method. Concept of ANOVA and ANCOVA.

## **Learning outcomes**

1. Understand and apply the statistics in research.
2. Organize the samples and sampling techniques which is relevant to the study.
3. Apply the statistics in research thesis for evaluation.

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

## **REFERENCE**

- Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc
- Clark D.H. (1999) Research Problem in Physical Education 2nd edition, Eaglewood Cliffs, Prentice Hall, Inc.
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- 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.

## **MPCC-202 SPORTS BIOMECHANICS AND KINESIOLOGY**

### **Learning Objectives**

1. The primary objective of Biomechanics is to gain a better understanding of the cause-effect mechanisms of sports motions.
2. To understand the mechanical cause-effect relationships that determines the motions of living organisms. "In Human Performance."
3. Biomechanics contributes to the description, explanation, and prediction of the mechanical aspects of humanexercise, sport and play.
4. Sports biomechanics can be considered as the bridge between the knowledge of sports science and the principles of mechanical analysis and has an important role not only in improving the athletic performance, but also in increasing the safety of the athletes.
5. Kinesiology to improve performance by learning how to analyze the movements of the human body and to discover their underlying principles.
6. The study of kinesiology is an essential part of the educational experience of students of physical education and sports.

## **UNIT I – Introduction**

Meaning, nature, role and scope of Applied Kinesiology and Sports Biomechanics. Meaning of Axis and Planes, Dynamics, Kinematics, Kinetics, Statics Centre of gravity -Line of gravity plane of the body and axis of motion, Vectors and Scalars.

## **UNIT II – Muscle Action**

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.

## **UNIT III – Motion and Force**

Meaning and definition of Motion. Types of Motion: Linear motion, angular motion, circular motion, uniform motion. Principles related to the law of Inertia, Law of acceleration, and law of counter force. Meaning and definition of force- Sources of force -Force components .Force applied at an angle - pressure -friction -Buoyancy, Spin - Centripetal force - Centrifugal force.

## **UNIT IV – Projectile and Lever**

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

## **UNIT V – Movement Analysis**

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

## **Learning Outcomes**

Describe the kinematics of projectile motion and factors influencing projectile trajectory.

1. Identify, analyze, and solve various biomechanical problems.
2. Demonstrate an understanding of kinetic concepts including inertia, force, torque, and impulse.
3. Identify the major factors involved in the angular kinematics of human movement.
4. Define Newton's laws of physics.
5. Identify the steps involved in finding the center of gravity.
6. The student will: Critically evaluate forms of information related to **kinesiology**, health, and physical education.
7. Students will develop information literacy skills and abilities essential for adult learning.

8. Describe fundamental principles of Kinesiology, including anatomy and physiology, teaching movement related skills, health promotion, physiological response to exercise, and the mechanics and control of movement.
9. Utilize oral and written communication that meets appropriate professional and scientific standards in Kinesiology.

**Note: Laboratory practical's will be designed and arranged for students internally**

#### **REFERENCE:**

- Deshpande S.H. (2002). ManavKriyaVigyan – Kinesiology (Hindi Edition) Amravati: Hanuman VyayamPrasarak Mandal.
- Hoffman S.J. Introduction to Kinesiology (Human Kinesiology publication In.2005.
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- 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.

### **MPCC-203 ATHLETIC CARE AND REHABILITATION**

#### **Learning Objectives**

1. By learning the subject the students will be aware of the various injury in sports.
2. The students after learning will gain knowledge about the treatment of various injury in sports.
3. After completion of this subject the students will learn how to give rehabilitation.
4. This subject will also make the student learn about prevention of injuries.

#### **UNIT I – Corrective Physical Education**

Definition and objectives of corrective physical Education. Posture and body mechanics, Standards of Standing Posture. Value of good posture, Drawbacks and causes of bad posture. Posture test – Examination of the spine.

## **UNIT II – Posture**

Normal curve of the spine and its utility, Deviations in posture: Kyphosis, lordosis, flat back, Scoliosis, round shoulders, Knock Knee, Bow leg, Flat foot. Causes for deviations and treatment including exercises.

## **UNIT III – Rehabilitation Exercises**

Passive, Active, Assisted, Resisted exercise for Rehabilitation, Stretching, PNF techniques and principles.

## **UNIT IV – Massage**

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 manipulation: Effleurage – Pressure manipulation: Petrissage Kneading (Finger, Kneading, Circular) ironing Skin Rolling – Percussion manipulation: Tapotement, Hacking, Clapping, Beating, Pounding, Slapping, Cupping, Poking, Shaking Manipulation, Deep massage.

## **UNIT V – Sports Injuries Care, Treatment and Support**

Principles pertaining to the prevention of Sports injuries – care and treatment of exposed and unexposed injuries in sports – Principles of apply cold and heat, infrared rays – Ultrasonic, Therapy – Short wave diathermy therapy. Principles and techniques of Strapping and Bandages.

## **Learning outcomes**

1. Understand the primary responsibilities the sports trainer has in preventing sports injuries and providing initial care for injured athletes.
2. Demonstrate the basics of sport first aid during and after game situation.
3. Recognise and appropriately treat common sports injuries and conditions from onset through rehabilitation.
4. Identify and apply knowledge of anatomy to the design and execution of research studies.

**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)**

## **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.  
Rathbone, J.I. (1965) Corrective Physical education, London: W.B. Saunders & Co.  
Stafford and Kelly, (1968) Preventive and Corrective Physical Education, New York.

## **MPEC-204 SPORTS JOURNALISM AND MASS MEDIA (Elective)**

### **Learning Objectives**

1. To promote the awareness of sports through journalism
2. To learn the techniques to sports organization through media
3. To know about Sports journalism and mass media contribution in sports field

### **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 in: 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, Commonwealth 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.

### **Learning outcomes**

1. Understand the basic Journalism and Mass Media in Journalism.
2. Apply the media in sports field for promotion.
3. Promote the awareness of Sports organization and Sports Journalism.
4. Develop the knowledge through Journalism and Mass Media, participate and organize.

### **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,.
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- 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.
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## **MPEC-205 ADVANCE SPORTS MANAGEMENT IN PHYSICAL EDUCATION AND SPORTS (Elective)**

### **Learning Objectives**

1. To identify the basic principles of Sports Management.
2. To know about organizational management and leadership.
3. To identify important issues and future trends in the field of sports management
4. Understand curriculum according to the needs of the students
5. Construct the curriculum for various levels
6. Update the present need which is mandatory

## **UNIT I –Sports Management Principles and Practices**

Definition, Importance. Basic Principles and Procedures of Sports Management. Functions of Sports Management. The sports Manager –managing in the sports Environment –Management Function in sports –The Sports Manager: Basics of sports Management-Managing in the Sports Environment-Management functions in sports-Motivating Abilities: Fundamentals.

## **UNIT II – Program Management and planning in Sports organization**

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. Planning in sports organization: Preparing the organization for planning- Long term planning- Creating a medium term National Plan.

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

Purchase and Care of Supplies of Equipment, Guidelines for selection of Equipments and Supplies, Purchase of equipments and supplies, Equipment Room, Equipment and supply Manager. Guidelines for checking, storing, issuing, care and maintenance of supplies and equipments. Meaning of Events-Event Management, Designing an event-5C's (Conceptualization, Costing, Canvassing, Customization, Carrying out. Public Relations in Sports: Planning the Public Relation Program – Principles of Public Relation – Public Relations in School and Communities – Public Relation and the Media.

## **UNIT IV – Sports Facility Management and Sports Marketing**

Meaning of Facility management-Facility Planning-Facility System-facility Marketing-Facility preparations-Definition of Sports Marketing-Perspective in sports consumer behavior-role of Research in sports marketing-The sports product-Its Core and Extensions -Pricing strategies –Place/Product Distribution.

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## **UNIT V – Curriculum and Professionals Ethics**

Meaning and Definition of Curriculum. Principles of Curriculum Construction: Approaches to Curriculum, Curriculum Framework-Factors affecting curriculum: Sources of Curriculum materials –Integration of Physical Education with other Sports Sciences – Curriculum research, Objectives of Curriculum research – Importance of Curriculum research-Ethics In Sports-Sports as a Profession-Social and Ethical-Ethical Values-Corporate Social Responsibility.

## **Learning Outcome**

1. Know sports management and employ principles of strategic planning, and financial and human resource management.
2. Assess marketing needs and formulate short term and long term solutions.
3. Conceive, plan, execute, and evaluate a sports event.
4. Introduce the teaching and curriculum objectives and course module design
5. Analyse the planning strategies, teaching, learning and assessment
6. Develop strategies to promote quality learning, practice marking and consider methods of course and self-evaluation
7. Evaluating learning intentions and the process that is guided through explicit and manageable criteria

## **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.
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- S.A.Sherlekar,Ethics in Management,Himalaya Publishing House,2009
- Beeslory,Michel and Evens,Corporate Social Responsibility,Taylor and Francis,1978
- Subhabrata Bobby Banejee,CSR: the good ,the bad and the ugly,Edward Elgar Publishing,2007.
- Bernard J Mullin,StephenHardy,William A Sutton,Sports Marketing ,Human Kinetics.
- Judy Allen,Event Planning 2<sup>nd</sup>Edition,Wiley& Sons,Canada,2014

Gil Fried, Managing Sports Facilities, Human Kinetics.

NCERT (2000). National Curriculum Framework for School Education, New Delhi: NCERT.

NCERT (2005). National Curriculum Framework-2005, New Delhi: NCERT.

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

### **Learning Objectives**

1. Understand the need and importance Sports Training based on the Scientific Principle.
2. Fix and adopt the training load
3. Understand the concepts of different means and methods of various training.
4. Prepare the sports person for the competition
5. Basic Knowledge about and doping and its effects.

### **UNIT I – Introduction**

Sports training: Definition – Aim, Characteristics, Principles of Sports Training (General and Basic principles), over Load: Definition, Causes of over Load, Symptoms of Overload, Remedial Measures, internal and external load. Components of load - Intensity of loading, density of loading, duration, and extent of loading. Load and adaptation – Super Compensation – Altitude Training – Cross Training

### **UNIT II – Components of Physical Fitness**

Strength: Means and Methods to improve Strength: Weight Training, Isometric, Isotonic, Circuit Training, single and multi-joint exercises. Speed: Means and Methods to Develop Speed: Repetition Method, Downhill Run, Parachute Running, Wind Sprints. Endurance: Means and Methods to Improve Endurance: Continuous Method, Interval Method, Repetition Method, Cross Country, Fartlek Training.

### **UNIT III – Flexibility**

Flexibility: Methods to Improve the Flexibility- Stretch and Hold Method, Ballistic Method, Special Type Training: Plyometric Training. Training for Coordinative abilities: Methods to improve Coordinative abilities: Sensory Method, Variation in Movement Execution Method, Variation in External Condition Method, Combination of Movement Method, Types of Stretching Exercises.

### **UNIT IV – Training Plan**

Training Plan: Principles of Planning, Types of training plans (Macro, Meso and Meso-Cycle). Short Term Plan and Long Term Plans - Periodisation: Meaning, Single, Double and Multiple Periodisation, Preparatory Period, Competition Period and Transition Period.

## **UNIT V – Doping**

Definition of Doping – Side effects of drugs – Dietary supplements – IOC list of doping classes and methods. Blood Doping – The use of erythropoietin in blood boosting – Blood doping control – The testing programmes – Problems in drug detection – Blood testing in doping control – Problems with the supply of medicines Subject to IOC regulations: over the- counter drugs (OTC) – prescription only medicines (POMs) – Controlled drugs (CDs). Reporting test results – Education

### **Learning outcomes**

1. Applying scientific principles of training in regular training sessions
2. Applying different means and methods of training methods.
3. Preparing training schedule for various sports and games
4. Appraise types of periodization for performance development
5. Create various training facilities and plans for novice to advance performers

**Modes:**Lecture, Demonstration, Group Discussion, Project Method, Seminar, Dialogue and self-study.

### **References:**

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- Hardayal Singh (1991) Science of Sports Training, New Delhi, DVS Publications
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## **MPCC-302 SPORTS MEDICINE**

### **Learning Objectives**

1. The goal of a sports medicine is to help the student engage in exercise safely and effectively in order to achieve their training goals.
2. To provide knowledge about the causes of injuries.
3. To provide means or treatment for sports injuries and for rehabilitation of injuries.
4. To provide knowledge about the preventive measures of sports injuries.
5. To aware the student about the treatment procedure of different kinds of injury.

### **UNIT I - Introduction**

Meaning and Definition of Sports Medicine, Definition and Principles of Therapeutic Exercises. Injuries: Acute, Sub-acute, And Chronic. Advantages and Disadvantages of PRICE, PRINCE therapy. Preventive, Curative and Rehabilitation Aspects of Sports Injuries.

### **UNIT II - Basic Rehabilitation and Therapeutic Modalities**

Basic Rehabilitation: Bandages, Strapping and Tapping: Role of Sports Rehabilitation, Classification of Rehabilitation. Therapeutic Modalities –Cold Modalities (Cryotherapy)- Principles of Modalities –Ice Massag – Ice Packs – Ice Immersion and Cold Whirlpool –Cry Stretch –Chemical Packs –Ice Compression. Heat Modalities (Thermotherapy)- Effects of Heat Applications-Infrared Lamp-Moist Heat Packs –Paraffin Wax Bath- Contrast Bath - Sona Bath. Electrotherapy - Basic Principles of Electrotherapy (Therapeutic Effects)-Electrical Stimulator – Short Wave Diathermy-Microwave Diathermy –Ultrasound-Neuromuscular Electrical Stimulator –Interferential Current –Transcutaneous Nervous Stimulator (TENS) -Ultraviolet Therapy-Lasser.

### **UNIT III - Spine Injuries and Exercise**

Head, Neck and Spine Injuries: Causes, Presentational of Spinal Anomalies, Flexion, Compression, Hyperextension, Rotation Injuries. Spinal Range of Motion. Rehabilitation Exercises for Spinal Injuries- Head, Neck and Spine. Supporting and Aiding Techniques and Equipment for Head, Neck and Spine Injuries.

### **UNIT IV - Upper Extremity Injuries and Exercise**

Upper Limbs and Thorax Injuries - Shoulder: Sprain, Strain, Dislocation, and Strapping. Elbow: Sprain, Strain, Strapping. Wrist and Fingers: Sprain, Strain, Strapping. Thorax, Rib Fracture. Rehabilitation Exercise for Upper Extremity Injuries - Shoulder, Elbow, Wrist and Hands. Supporting and Aiding Techniques and Equipment for Upper and Thorax Injuries.

## **UNIT V - Lower Extremity Injuries and Exercise**

Lower Limb and Abdomen Injuries: Hip: Adductor Strain, Dislocation, Strapping. Knee: Sprain, Strain, Strapping. Ankle: Sprain, Strain, Strapping. Abdomen: Abdominal Wall, Contusion, Abdominal Muscle Strain. Rehabilitation Exercise for Lower Extremities-Hip, Knee, Ankle, Foot and Abdomen.

### **Learning Outcomes**

- At students will be successful in graduating and gaining employment in the field of athletic training.
- Identify, describe, and explain concepts associated with the domains of athletic training education.
- Communicate effectively in the oral and written form using evidence based practice principles.
- Learning treatment and rehabilitation programme by the students.
- Develop and defend clinical reasoning skills in the clinical education setting when interacting with injured athletes.

**Note:PRACTICALS: Lab. Practical and visit to Physiotherapy Centre to observe treatment procedure of sports injuries; data collection of sports injuries incidences, visit to TV Centre etc. Will be planned internally.**

### **REFERENCES:**

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2. G.Vinod Kumar (2015). Sports Medicine and Injuries Management. Kongunadu Publications India Ltd.
3. James, A.Gould& George J. Davies. (1985). Physical Physical Therapy. Toronto: C.V.Mosby Company.
4. Morris B. Million (1984). Sports Injuries and Athletic Problem. New Delhi: Surjeet Publication.
5. Pande (1998). Sports Medicine. New Delhi: KhelShitya Kendra.
6. Practical: Anthropometric Measurements.

## **MPCC-303 HEALTH EDUCATION AND SPORTS NUTRITION**

### **Learning Objectives**

1. Identify dietary carbohydrate and protein sources, Identify proper hydration principles and discuss the importance of hydration for physical performance
2. Demonstrate knowledge of a healthy diet for physical performance and demonstrate an ability to utilize this knowledge to complete a self-diet critique.
3. Demonstrate an understanding of health and to develop determination and values of desirable body weight

## **Unit - I Health Education**

Implication, General health care, Health Education. Concept, Dimensions, Spectrum and Health Determinants. Health instructions, Objectives and Principles of Health Education. Health Service and supervision.

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

Communicable and Non Communicable Diseases , Prevailing Metabolic Disorders in India, Food and food related disease, Environmental Health hazards, Role of health education in schools Health Services, Objective of school health service, Role of government in protection of health – Health Policies.

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

Meaning of Hygiene, Types of Hygiene and Sanitation, Personal and dental Hygiene, Effect of Alcohol on Health, Effect of Tobacco on Health, Life Style Management, Stress Management and its related disorder, Drugs -its uses and abuses.

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

Meaning and Definition of Sports Nutrition, Role of nutrition in sports, Basic Nutrition guidelines, Mechanism of Hydration in body, Metabolism of macro and micronutrients, Role of macro and micronutrients on sports performance.

## **Unit – V Nutrition for specific sports**

Physiological and Biochemical changes during specific sports, Associated Common nutritional problems ; Guidelines specific to nutrition in specific sports; Identifying individual energy and other macronutrient requirements; Nutrient timing; Dietary periodization; Supplement usage.

Specific Sports: Nutrition for popular team sports (Hockey, Football, Volleyball, Kabaddi and Cricket), Nutrition for Athletics, Racket Sports and Cyclic sports Athletics (Sprinters, middle and long distance, field events): Racket sports (Badminton, Tennis, Squash): Nutrition for Endurance Sports (Long distance Swimming, Cycling and Marathon): Nutrition for Weight-dependent and balance sports Strength and Combat sport (Wrestling, Weightlifting, Judo, Boxing, Taekwondo and Fencing): Nutrition for water sport and coordination sport



## **Learning outcomes**

1. Restate the role of nutrients and caloric requirements
2. Sketch the basic classification, functions and utilization of nutrients.
3. Point out diet for various competitions and nutrient supplements for performance.
4. Evaluate the factors affects health and solutions for wellness.
5. Design caloric requirements for various sports and age groups.

## **References:**

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2. Ghosh, B.N. "Treaties of Hygiene and Public Health".
3. Hanlon, John J. "Principles of Public Health Administration" 2003. Turner, C.E. "The School Health and Health Education".
4. 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.
5. Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and Robertson.
6. Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons.
7. SatyanarayanaVaddepalli, Sports Nutrition and Weight Management (2015) Sports Publication, New Delhi
8. Fink, H. H., &Mikesky, A. E. (2017). Practical applications in sports nutrition. Jones & Bartlett Learning.
9. Eberle, S. G. (2013). Endurance Sports Nutrition, 3E. Human Kinetics.
10. Ryan, M. (2012). Sports nutrition for endurance athletes. Velo Press.
11. Campbell, B. (Ed.). (2013). Sports nutrition: enhancing athletic performance. CRC 23 Press.

## **MPEC-304 SPORTS ENGINEERING (Elective)**

### **Learning Objectives**

1. To understand the procedure of selection and use of various sports engineering and technologies.
2. To learn the mechanics of engineering materials in sports field
3. Help to improve knowledge about building and maintain playing surface.

### **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 outer surrounding. 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.

### **Learning outcomes**

1. Plan, develop, communicate, implement, and evaluate technology-infused strategic plans.
2. Maintain and manage a variety of digital tools and resources for use in technology-rich sports environment
3. Design, develop, and implement technology-rich sports program that model of sports field and promote digital age best practices playing and assessment.
4. Find out how successful were the teachers' efforts in contributing to the realization of the fundamental objectives of sports.

### **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)

## **MPEC-305 PHYSICAL FITNESS AND WELLNESS (Elective)**

### **Learning Objectives**

1. Promote the knowledge of physical fitness and wellness
2. Create fitness awareness among youth, various health problems and its impacts
3. Able understand the importance of physical fitness and to create good health.

### **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.

Wellness-Meaning, definition and concept of wellness, Need and Importance of wellness, Factors affecting wellness, Environmental and Occupational health and wellness- wellness program me.

### **UNIT II – Nutrition**

Nutrients; Nutrition labeling 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 and Anaerobic Exercise**

Cardio respiratory Endurance Training: 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.

**Anaerobic Exercise** Resistance Training for Muscular Strength and Endurance principles of resistance training, proper body alignment, lifting techniques, 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 IV– 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.

#### **UNIT –V- Psychological Health & Wellness**

Psychological dimensions of Health, Stress management, Anger & its management, Yoga for stress management & Anger management. Physical activity for psychological Wellness Importance of Participation in regular Physical activity, Community recreation, Recreation for health & wellness, Leisure time Community health, Community health programme

#### **Learning Outcome**

1. Explain the history and philosophy of public physical fitness as well as its core values, concepts, and functions across the globe and in society.
2. Identify the methods, and tools of public health data collection, use, and analysis
3. Relate the underlying science of wellness and disease to opportunities for promoting and protecting health across the life course.
4. Identify the socio-economic, behavioural, biological, environmental, and other factors that impact physical fitness and contribute to health disparities.
5. Apply the principles of training and maintain a physical fitness.

#### **Reference:**

David K. Miller & T. Earl Allen, Fitness, A life time commitment, Surjeet Publication Delhi 1989. Difcore 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, KarynHartiger& 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

# **MPCC-401 INFORMATION & COMMUNICATION TECHNOLOGY (ICT) IN PHYSICAL EDUCATION**

## **Learning Objectives**

1. To know the necessity of information and communication technology in physical education
2. Helps to improves the computer assisted works in sports
3. Able use the applications of computer in sports

## **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 – MS Office Applications**

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

## **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

## **UNIT V – E-Learning & Web Based Learning**

E-Learning

Web Based Learning

Visual Classroom

### **Course Learning Outcome**

1. Understand concept of information and communication technology in physical education field
2. Analyse sporting data of various types via astute use of statistical packages.
3. Practice mathematics, statistics, information technology in sport technology related problems.
4. Offer Hands on Knowledge in information and communication Technology

### **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 andDevelopment 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, SecondEdition-2006

## **MPCC-402 SPORTS PSYCHOLOGY AND SPORTS SOCIOLOGY**

### **Learning Objectives:**

After studying this paper the student teachers will be able to:

1. Know the introduction to sports psychology.
2. Understand the personality traits.
3. Understand the anxiety, stress and aggression.
4. Know the psychological tests and its applications.

5. Know the introduction to Sports Sociology and its concepts.

### **UNIT I – Introduction**

Meaning, Definition, History, 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 Personality Traits. Effects of Personality on Sports Performance.

### **UNIT II – Motivation**

Meaning and Definition, Types of Motivation: Intrinsic, Extrinsic. Achievement Motivation: Meaning, Measuring of Achievement Motivation. Anxiety: Meaning and Definition, Nature, Causes, Method of Measuring Anxiety. Competitive Anxiety and Sports Performance. Stress: Meaning and Definition, Causes. Stress and Sports Performance. Aggression: Meaning and Definition, Method of Measurement. Aggression and Sports Performance. Self-Concept: Meaning and Definition, Method of Measurement.

### **UNIT III – Goal Setting**

Meaning and Definition, Process of Goal Setting in Physical Education and Sports. Relaxation: Meaning and Definition, types and methods of psychological relaxation. 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.

### **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.

### **PracticalList**

1. Group environment questionnaire – To assess team cohesion
2. Leadership Scale for Sports- To assess the coach leadership style
3. Basin Anticipation test- To assess and train the judgment of the players
4. Senso-motor co-ordination – VTS



5. Perception and Attention function battery- VTS

6. Mental health Screening- Assessment through observation, interviewing and questionnaires

### **References:**

Anastasi, A., & Urbina, S. (1997). Psychological Testing. USA: Prentice Hall. Postman, L.F. & Fagan, J. P. (1949). Experimental Psychology.

An introduction. New York: Harper and Brother Publishers.

Singh, A.K. (2004). Test measurements and methods in behavioral sciences. New Delhi: Bharati Bhavan Publishers and Distributors.

Woodworth, R.S., & Schlosberg. (1965). Experimental Psychology. New York: Methen and Co.Ltd.

### **Theory**

1. Counseling for Rehabilitation
2. Psychological Challenges that Injured Athletes Face
3. Counseling Strategies to Promote Rehabilitation

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

## **MPEC-404 VALUE AND ENVIRONMENTAL EDUCATION (Elective)**

### **Learning Objectives**

1. Promote the knowledge of value and environmental education.
2. Create health awareness among youth, various health problems and its impacts
3. Able understand the importance of environment and to create good environment

### **UNIT I – Introduction to Value Education.**

Values: Meaning, Definition, Concepts of Values. Value Education: Need, Importance and Objectives. Moral Values: Need and Theories of Values. Classification of Values: Basic Values of Religion, Classification of Values.

## **UNIT II – Value Systems**

Meaning and Definition, Personal and Communal Values, Consistency, Internally consistent, internally inconsistent, Judging Value System, Commitment, Commitment to values.

## **UNIT- III – Environmental Education**

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

## **UNIT - IV Rural Sanitation and Urban Health**

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

## **UNIT - V Natural Resources and related environmental issues:**

Water resources, food resources and Land resources, Definition, effects and control measures of: Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution Management of environment and Govt. policies, Role of pollution control board.

## **Learning Outcome**

1. Explain the role of values, concepts, and functions across the globe and in society.
2. Able to explain Value Education- Goal Setting- Self Efficacy and Self Esteem
- 3 Apply the principles of project implementation, including planning, assessment, and evaluation in organizational and community initiatives.

## **Reference:**

Miller T.G. Jr., Environmental Science (Wadsworth Publishing Co.)

Odum, E.P. Fundamentals of Ecology (U.S.A.: W.B. Saunders Co.) 1971.

Rao, M.N. &Datta, A.K. Waste Water Treatment (Oxford & IBH Publication Co. Pvt. Ltd.)  
1987

Townsend C. and others, Essentials of Ecology (Black well Science)

Heywood, V.H. and Watson V.M., Global biodiversity Assessment (U.K.: Cambridge University Press), 1995.

Jadhav, H. and Bhosale, V.M. Environmental Protection and Laws (Delhi: Himalaya Pub. House), 1995.

Mc Kinney, M.L. and Schoel, R.M. Environmental Science System and Solution (Web enhanced Ed.) 1996.  
Miller T.G. Jr., Environmental Science (Wadsworth Publishing Co.)

## **MPEC-405 EDUCATION TECHNOLOGY IN PHYSICAL EDUCATION AND SPORTS (Elective)**

### **Learning Objectives:**

- Introduce Education Technology and its various aspects to the learner
- Give an overview of approach systems in Physical Education and Communication
- Introduce various instructional designs and use of audio visual media
- Opening the learners mind towards new horizons in Educational technology

### **UNIT I – Nature and Scope**

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

### **UNIT II- Instructional Design**

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

### **UNIT III – Audio Visual Media in Physical Education**

Audio-visual media - meaning, importance and various forms Audio/Radio: Broadcast and audio recordings - strengths and Limitations, criteria for selection of instructional units, script writing, pre-production, post-production process and practices, Audio Conferencing and Interactive Radio Conference. Video/Educational Television: Telecast and Video recordings Strengths and limitations, Use of Television and CCTV in instruction and Training, Video Conferencing, SITE experiment, countrywide classroom project and Satellite based instructions. Use of animation films for the development of children's imagination.

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

Recent innovations in the area of ET interactive video - Hypertext, video-texts, optical fiber technology - laser disk, computer conferencing. etc. Recent trends of Research in Educational Technology and its future with reference to education. Online classrooms- Google Classroom, Zoom

### **Learning Outcome:**

- Comprehend various aspects of Education Technology
- Understanding of the Systems Approach and communication
- Able to design instructions and incorporate audio visual media in teaching
- Present new ideas in teaching learning

### **REFERENCE:**

Amita Bhardwaj, New Media of Educational Planning”.Sarup of Sons, New Delhi-2003

Bhatia and Bhatia. The Principles and Methods of Teaching (New Delhi:Doaba House), 1959.

Communication and Education, D. N. Dasgupta, Pointer Publishers

Education and Communication for development, O. P. Dahama, O. P. Bhatnagar, Oxford Page 68 of 71 IBH Publishing company, New Delhi

Essentials of Educational Technology, Madan Lal, Anmol Publications

K. Sampath, A. Pannirselvam and S. Santhanam. Introduction to Educational Technology (New Delhi: Sterling Publishers Pvt. Ltd.) : 1981.

Kochar, S.K. Methods and Techniques of Teaching (New Delhi, Jalandhar, Sterling Publishers Pvt. Ltd.), 1982

Kozman, Cassidy and kJackson. Methods in Physical Education (W.B. Saunders Company,Philadelphia and London),

**SEMESTER -I**  
**PRACTICAL COURSE**

**MPPC- 106 TRACK AND FIELD I: All RUNNING EVENTS AND RELAY**

- Fundamental skills –Short and Middle distance.
- Use of Starting blocks- stance on the blocks.
- Body position at the start- starting technique, change in body position during running, movements of the arms, stride length and frequency, position of torso while running and at finish.
- Advanced Skills Various techniques of sprint start: Bullet start, standing start,

**MPPC- 107 Laboratory Practical –I**

**Test and Measurement- Total - Any 8 laboratory tests** Practical classes to be designed based on the theory paper in the above subject

**MPPC- 108 YOGA/ AEROBICS**

Yoga, Asanas prescribed by Maharshi ‘Patanjali’, ShudhiKriyas, jalneti, sutraneti, dugdhaneti, kunjai, Nauli, Bhastika, shatkriya, Pranayams, Anulom-vilom, Kapalbhathi,

**Aerobics**

- Rhythmic Aerobics - dance
- Low impact aerobics
- High impact aerobics
- Aerobics kick boxing

**Moves**

- March single, basics, side to side alternate, turn s/a ,double side to side, step touch, grapevine, knee up, leg curl, kick front, toe touch, kick side, side lunge, over the top, back lunge, straddle, kick front, travel s 11. kick side, corner, heel to left, shape, 'e' shape, shape w, shape, repeater left mode.
- Warm up and cool down.
- Being successful in exercise and adaptation to aerobic workout

## **MPPC-109 - 119: GAME OF SPECIALIZATION - I**

**(As offered by the department from the year 2023 -24)**

### **General Course Content**

#### **Odd Semester**

#### **MPCC 109: Basketball**

**Credits: 4**

##### **Learning Objectives:**

- **Introduction to Fundamental Skills in Basketball**
- **Understand the basic of fitness and injury prevention in Basketball**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

##### **Learning Outcomes:**

- **Understand and execute basic Basketball Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Basketball**

#### **MPCC 110: Cricket**

**Credits: 4**

##### **Learning Objectives:**

- **Introduction to Fundamental Skills in Cricket**
- **Understand the basic of fitness and injury prevention in Cricket**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- Understand and execute basic Cricket Skills
- Device fitness plan and be able to respond to emergencies
- Understand the playfield dimensions and equipment
- Know the history and governing bodies in Cricket

**MPCC 111: Football****Credits: 4****Learning Objectives:**

- Introduction to Fundamental Skills in Football
- Understand the basic of fitness and injury prevention in Football
- Know about the Governing body, Playfield and Equipment

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- Understand and execute basic Football Skills
- Device fitness plan and be able to respond to emergencies
- Understand the playfield dimensions and equipment
- Know the history and governing bodies in Football

**MPCC 112: Handball****Credits: 4****Learning Objectives:**

- Introduction to Fundamental Skills in Handball
- Understand the basic of fitness and injury prevention in Handball
- Know about the Governing body, Playfield and Equipment

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- Understand and execute basic Handball Skills
- Device fitness plan and be able to respond to emergencies
- Understand the playfield dimensions and equipment
- Know the history and governing bodies in Handball

**MPCC 113: Hockey**

**Credits: 4**

**Learning Objectives:**

- Introduction to Fundamental Skills in Hockey
- Understand the basic of fitness and injury prevention in Hockey
- Know about the Governing body, Playfield and Equipment

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- Understand and execute basic Hockey Skills
- Device fitness plan and be able to respond to emergencies
- Understand the playfield dimensions and equipment
- Know the history and governing bodies in Hockey

**MPCC 114: Kabaddi**

**Credits: 4**

**Learning Objectives:**

- Introduction to Fundamental Skills in Kabaddi
- Understand the basic of fitness and injury prevention in Kabaddi
- Know about the Governing body, Playfield and Equipment



Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Kabaddi Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Kabaddi**

**MPCC 115: Kho-Kho**

**Credits: 4**

**Learning Objectives:**

- **Introduction to Fundamental Skills in Kho-Kho**
- **Understand the basic of fitness and injury prevention in Kho-Kho**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Kho-Kho Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Kho-Kho**

## **MPCC 116: Tennis**

**Credits: 4**

### **Learning Objectives:**

- **Introduction to Fundamental Skills in Tennis**
- **Understand the basic of fitness and injury prevention in Tennis**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

### **Learning Outcomes:**

- **Understand and execute basic Tennis Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Tennis**

## **MPCC 117: Volleyball**

**Credits: 4**

### **Learning Objectives:**

- **Introduction to Fundamental Skills in Volleyball**
- **Understand the basic of fitness and injury prevention in Volleyball**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

### **Learning Outcomes:**

- **Understand and execute basic Volleyball Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Volleyball**

## **MPCC 118: Badminton**

**Credits: 4**

### **Learning Objectives:**

Explain the fundamentals the games opted by the student. • Sketch the ground markings of specific games. • Demonstrate and describe the rules and regulations of specific games.

UNIT-1: Learning the Fundamental Skills, Lead Up Games, Warm-up and Warm down, Technical Training.

UNIT-2: General Conditioning & Fitness, Safety, Injury Prevention and Emergency Response.

UNIT-3: Layout of Playfield with all Measurements, Equipment and its Specifications.

UNIT-4: Team system and tactical training

- Offensive system of play
- Defensive system of play

UNIT-5: International, National and State Level Organizations and Trophies.

### **Learning Outcomes:**

- Understand and execute basic Badminton Skills
- Device fitness plan and be able to respond to emergencies
- Understand the playfield dimensions and equipment
- Know the history and governing bodies in Badminton

## **MPCC 119: Softball**

**Credits: 4**

### **Learning Objectives:**

- Introduction to Fundamental Skills in Softball
- Understand the basic of fitness and injury prevention in Softball
- Know about the Governing body, Playfield and Equipment

1. FundamentalSkills-LeadUpGames–Warm-upandWarmdown-TechnicalTraining
2. General Conditioning & Fitness, Safety, Injury Prevention and Emergency Response
3. Layout of Play field withal Measurements, Equipment and its specifications
4. International, National and State Level Organizations and Trophies.

**Learning Outcomes:**

- Understand and execute basic Softball Skills
- Device fitness plan and be able to respond to emergencies
- Understand the playfield dimensions and equipment
- Know the history and governing bodies in Softball

**MPPC-209 - 219: GAME OF SPECIALIZATION - II**

(As offered by the department from the year 2023 -24)

**General Course Content**

**Even Semester**

**MPCC 209: Basketball**

**Credits: 4**

**Learning Objectives:**

- Introduction to coaching and coaching principles
- Introduction advance skills in Basketball
- Learn about officiating and scoring
- Organizing tournaments

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- Able to Prepare and coach and collect Basketball
- Teach advanced skills in Basketball
- Able to officiate and score during matched
- Organize Basketball tournaments for schools and colleges.

## **MPCC 210: Cricket**

**Credits: 4**

### **Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Cricket**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

### **Learning Outcomes:**

- **Able to Prepare and coach and collect Cricket**
- **Teach advanced skills in Cricket**
- **Able to officiate and score during matched**
- **Organize Cricket tournaments for schools and colleges.**

## **MPCC 211: Football**

**Credits: 4**

### **Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Football**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Football**
- **Teach advanced skills in Football**
- **Able to officiate and score during matched**
- **Organize Football tournaments for schools and colleges.**

**MPCC 212: Handball****Credits: 4****Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Handball**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Handball**
- **Teach advanced skills in Handball**
- **Able to officiate and score during matched**
- **Organize Handball tournaments for schools and colleges.**

**MPCC 213: Hockey****Credits: 4****Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Hockey**
- **Learn about officiating and scoring**

- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Hockey**
- **Teach advanced skills in Hockey**
- **Able to officiate and score during matched**
- **Organize Hockey tournaments for schools and colleges.**

**MPCC 214: Kabaddi**

**Credits: 4**

**Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Kabaddi**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Kabaddi**
- **Teach advanced skills in Kabaddi**
- **Able to officiate and score during matched**
- **Organize Kabaddi tournaments for schools and colleges.**

**MPCC 215: Kho-Kho****Credits: 4****Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Kho-Kho**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Kho-Kho**
- **Teach advanced skills in Kho-Kho**
- **Able to officiate and score during matched**
- **Organize Kho-Kho tournaments for schools and colleges.**

**MPCC 216: Tennis****Credits: 4****Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Tennis**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.



**Learning Outcomes:**

- **Able to Prepare and coach and collect Tennis**
- **Teach advanced skills in Tennis**
- **Able to officiate and score during matched**
- **Organize Tennis tournaments for schools and colleges.**

**MPCC 217: Volleyball****Credits: 4****Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Volleyball**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Volleyball**
- **Teach advanced skills in Volleyball**
- **Able to officiate and score during matched**
- **Organize Volleyball tournaments for schools and colleges.**

## **MPCC 218: Badminton**

**Credits: 4**

### **Learning Objectives:**

The students of M.P. Ed – need to develop proficiency in teaching, coaching and officiating lessons as per selected game of specialization. In view of this, the students shall be provided with experience in teaching, advance training and coaching and advance mechanism of officiating in their selected game. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class time they are going to handle at school and college level. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson to be covered progressively.

UNIT-1: Basic Coaching Principles, Talent Identification, Combining General and Specific Conditioning

UNIT-2: Advanced Skills, Lead Up Games, Tactics and Strategies, Selection of Players and Teams

UNIT-3: Officiating and Scoring – Online & Offline.

UNIT-4: Designing Coaching programs with and without coaching aids.

UNIT-5: Planning, Organization and Management of Tournaments.

### **Learning Outcomes:**

- **Able to Prepare and coach and collect Badminton**
- **Teach advanced skills in Badminton**
- **Able to officiate and score during matched**
- **Organize Badminton tournaments for schools and colleges.**

## **MPCC 219: Softball**

**Credits: 4**

### **Learning Objectives:**

- **Introduction to Fundamental Skills in Softball**
- **Understand the basic of fitness and injury prevention in Softball**
- **Know about the Governing body, Playfield and Equipment**

Unit I - Advanced Skills- Lead Up Games – Tactics and Strategies,

Unit II - Officiating and Scoring –Online & Offline

Unit III - Talent identification, Selection of Players and teams

Unit IV - Designing Coaching programs with and without coaching aids

Unit V - Planning, Organization and Management of Tournaments

**Learning Outcomes:**

- Able to Prepare and coach and collect Volleyball
- Teach advanced skills in Volleyball
- Able to officiate and score during matched
- Organize Volleyball tournaments for schools and colleges.
- 

**MPPC-309 - 319: GAME OF SPECIALIZATION - I**

(As offered by the department from the year 2023 -24)

**General Course Content****Odd Semester****MPCC 309: Basketball****Credits: 4****Learning Objectives:**

1. Introduction to Fundamental Skills in Basketball
2. Understand the basic of fitness and injury prevention in Basketball
3. Know about the Governing body, Playfield and Equipment

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- Understand and execute basic Basketball Skills
- Device fitness plan and be able to respond to emergencies
- Understand the playfield dimensions and equipment
- Know the history and governing bodies in Basketball

**MPCC 310: Cricket****Credits: 4****Learning Objectives:**

- Introduction to Fundamental Skills in Cricket
- Understand the basic of fitness and injury prevention in Cricket
- Know about the Governing body, Playfield and Equipment

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Cricket Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Cricket**

**MPCC 311: Football****Credits: 4****Learning Objectives:**

- **Introduction to Fundamental Skills in Football**
- **Understand the basic of fitness and injury prevention in Football**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Football Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Football**

**MPCC 312: Handball****Credits: 4**

- **Learning Objectives:**
- **Introduction to Fundamental Skills in Handball**
- **Understand the basic of fitness and injury prevention in Handball**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Handball Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Handball**

**MPCC 313: Hockey****Credits: 4****Learning Objectives:**

- **Introduction to Fundamental Skills in Hockey**
- **Understand the basic of fitness and injury prevention in Hockey**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Hockey Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Hockey**

**MPCC 314: Kabaddi****Credits: 4****Learning Objectives:**

- **Introduction to Fundamental Skills in Kabaddi**
- **Understand the basic of fitness and injury prevention in Kabaddi**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Kabaddi Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Kabaddi**

**MPCC 315: Kho-Kho**

**Credits: 4**

**Learning Objectives:**

- **Introduction to Fundamental Skills in Kho-Kho**
- **Understand the basic of fitness and injury prevention in Kho-Kho**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Kho-Kho Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Kho-Kho**

**MPCC 316: Tennis**

**Credits: 4**

**Learning Objectives:**

- **Introduction to Fundamental Skills in Tennis**
- **Understand the basic of fitness and injury prevention in Tennis**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Tennis Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Tennis**

**MPCC 317: Volleyball**

**Credits: 4**

**Learning Objectives:**

- **Introduction to Fundamental Skills in Volleyball**
- **Understand the basic of fitness and injury prevention in Volleyball**
- **Know about the Governing body, Playfield and Equipment**

Fundamental Skills – Lead Up Games – Warm-up and Warm down – Technical Training, General conditioning & Fitness, Safety, Injury Prevention and Emergency Response, layout of Playfield with all Measurements, Equipment and its specification, International, National and State Level Organization and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Volleyball Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Volleyball**

**MPCC 318: Badminton**

**Credits: 4**

**Learning Objectives:**

Explain the fundamentals the games opted by the student. • Sketch the ground markings of specific games. • Demonstrate and describe the rules and regulations of specific games.

UNIT-1: Learning the Fundamental Skills, Lead Up Games, Warm-up and Warm down, Technical Training.

UNIT-2: General Conditioning & Fitness, Safety, Injury Prevention and Emergency Response.

UNIT-3: Layout of Playfield with all Measurements, Equipment and its Specifications.

UNIT-4: Team system and tactical training

- Offensive system of play
- Defensive system of play

UNIT-5: International, National and State Level Organizations and Trophies.

**Learning Outcomes:**

- **Understand and execute basic Badminton Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Badminton**

**MPCC 319: Softball**

**Credits: 4**

**Learning Objectives:**

**Introduction to Fundamental Skills in Softball**

**Understand the basic of fitness and injury prevention in Softball**

**Know about the Governing body, Playfield and Equipment**

Unit I - Fundamental Skills- Lead Up Games – Warm-up and Warm down - Technical Training

Unit II - General Conditioning & Fitness, Safety, Injury Prevention and Emergency Response

Unit III - Layout of Playfield with all Measurements, Equipment and its specifications

Unit IV - International, National and State Level Organizations and Trophies.

Unit V - Basic coaching principles, combining General and Specific Conditioning

**Learning Outcomes:**

- **Understand and execute basic Softball Skills**
- **Device fitness plan and be able to respond to emergencies**
- **Understand the playfield dimensions and equipment**
- **Know the history and governing bodies in Softball**



## **MPPC-409 - 419: GAME OF SPECIALIZATION - II**

**(As offered by the department from the year 2023 -24)**

### **General Course Content**

#### **Even Semester**

#### **MPCC 409: Basketball**

**Credits: 4**

##### **Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Basketball**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

##### **Learning Outcomes:**

- **Able to Prepare and coach and collect Basketball**
- **Teach advanced skills in Basketball**
- **Able to officiate and score during matched**
- **Organize Basketball tournaments for schools and colleges.**

#### **MPCC 410: Cricket**

**Credits: 4**

##### **Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Cricket**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific

Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Cricket**
- **Teach advanced skills in Cricket**
- **Able to officiate and score during matched**
- **Organize Cricket tournaments for schools and colleges.**

**MPCC 411: Football**

**Credits: 4**

**Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Football**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Football**
- **Teach advanced skills in Football**
- **Able to officiate and score during matched**
- **Organize Football tournaments for schools and colleges.**

## **MPCC 412: Handball**

**Credits: 4**

### **Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Handball**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

### **Learning Outcomes:**

- **Able to Prepare and coach and collect Handball**
- **Teach advanced skills in Handball**
- **Able to officiate and score during matched**
- **Organize Handball tournaments for schools and colleges.**

## **MPCC 413: Hockey**

**Credits: 4**

### **Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Hockey**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- Able to Prepare and coach and collect Hockey
- Teach advanced skills in Hockey
- Able to officiate and score during matched
- Organize Hockey tournaments for schools and colleges.

**MPCC 414: Kabaddi****Credits: 4****Learning Objectives:**

- Introduction to coaching and coaching principles
- Introduction advance skills in Kabaddi
- Learn about officiating and scoring
- Organizing tournaments

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- Able to Prepare and coach and collect Kabaddi
- Teach advanced skills in Kabaddi
- Able to officiate and score during matched
- Organize Kabaddi tournaments for schools and colleges.

**MPCC 415: Kho-Kho****Credits: 4****Learning Objectives:**

- Introduction to coaching and coaching principles
- Introduction advance skills in Kho-Kho
- Learn about officiating and scoring
- Organizing tournaments

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Kho-Kho**
- **Teach advanced skills in Kho-Kho**
- **Able to officiate and score during matched**
- **Organize Kho-Kho tournaments for schools and colleges.**

**MPCC 416: Tennis**

**Credits: 4**

**Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Tennis**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Tennis**
- **Teach advanced skills in Tennis**
- **Able to officiate and score during matched**
- **Organize Tennis tournaments for schools and colleges.**

- **MPCC 417: Volleyball**

**Credits: 4**

**Learning Objectives:**

- **Introduction to coaching and coaching principles**
- **Introduction advance skills in Volleyball**
- **Learn about officiating and scoring**
- **Organizing tournaments**

Basic coaching principles, talent identification, combining General and Specific Conditioning, Advanced Skills – Lead up Games – Tactics and Strategies, Selection of Players and teams, Officiating and Scoring – Online & Offline, Basic coaching principles, talent identification, combining General and Specific Conditioning, Designing Coaching programs with and without coaching aids, Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Volleyball**
- **Teach advanced skills in Volleyball**
- **Able to officiate and score during matched**
- **Organize Volleyball tournaments for schools and colleges.**

**MPCC 418: Badminton**

**Credits: 4**

**Learning Objectives:**

The students of M.P.Ed – need to develop proficiency in teaching, coaching and officiating lessons as per selected game of specialization. In view of this, the students shall be provided with experience in teaching, advance training and coaching and advance mechanism of officiating in their selected game. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class time they are going to handle at school and college level. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson to be covered progressively.

UNIT-1: Basic Coaching Principles, Talent Identification, Combining General and Specific Conditioning

UNIT-2: Advanced Skills, Lead Up Games, Tactics and Strategies, Selection of Players and Teams

UNIT-3: Officiating and Scoring –Online & Offline.

UNIT-4: Designing Coaching programs with and without coaching aids.

UNIT-5: Planning, Organization and Management of Tournaments.

**Learning Outcomes:**

- **Able to Prepare and coach and collect Badminton**
- **Teach advanced skills in Badminton**
- **Able to officiate and score during matched**
- **Organize Badminton tournaments for schools and colleges.**

## **MPCC 419: Softball**

**Credits: 4**

### **Learning Objectives:**

- **Introduction to Fundamental Skills in Softball**
- **Understand the basic of fitness and injury prevention in Softball**
- **Know about the Governing body, Playfield and Equipment**
- Unit I - Advanced Skills- Lead Up Games – Tactics and Strategies,
- Unit II - Officiating and Scoring –Online & Offline
- Unit III - Talent identification, Selection of Players and teams
- Unit IV - Designing Coaching programs with and without coaching aids
- Unit V - Planning, Organization and Management of Tournaments

### **Learning Outcomes:**

- **Able to Prepare and coach and collect Softball**
- **Teach advanced skills in Volleyball**
- **Able to officiate and score during matched**
- **Organize Softball tournaments for schools and colleges.**

## **SEMESTER- II**

### **PRACTICAL COURSE**

#### **MPPC- 206- TRACK AND FIELD II: JUMPING EVENTS & HURDLES**

Fundamental Techniques: Broad Jump, Triple Jump, High Jump and Pole Vault and Hurdles Advanced techniques in Jumps and Drills, Laying out of Jumping Sectors

#### **MPPC-207 LABORATORY PRACTICAL- II**

**Sports Biomechanics & Kinesiology** (Practical classes to be designed based on the theory paper in the above subject)

#### **MPPC-208- TEACHING LESSONS OF INDIGENIOUS ACTIVITIES AND SPORTS**

The students of M.P.Ed – II Semester need to develop proficiency in taking teaching classes in indigenous activities and sports under school situation. In view of this, the students shall be provided with such teaching experience. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class they are going to handle at school and college level.

The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

#### **MPPC-209-219 TEACHING, COACHING AND OFFICIATING IN GAME SPECIALIZATION-I**

The students of M.P.Ed – need to develop proficiency in teaching, coaching and officiating lessons as per selected game of specialization. In view of this, the students shall be provided with experience in teaching, advance training and coaching and advance mechanism of officiating in their selected game. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class time they are going to handle at school and college level.

The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson to be covered progressively.

1. Basic coaching principles, talent identification, combining General and Specific Conditioning
2. Advanced Skills- Lead Up Games – Tactics and Strategies, Selection of Players and teams
3. Officiating and Scoring –Online & Offline
4. Basic coaching principles, talent identification, combining General and Specific Conditioning
5. Designing Coaching programs with and without coaching aids
6. Planning, Organization and Management of Tournament



**SEMESTER - III**  
**PRACTICAL COURSE**

**MPPC- 306 TRACK AND FIELD -III**

**Throwing events and Gymnastics**

Throwing Events

- Fundamental Techniques- Shot Put, Discus, Javelin and Hammer
- Advanced techniques in throws and their drills. Laying out of the throwing sectors.
- Fundamental Techniques- Gymnastics - training and drills in Gymnastics.

**MPPC-307 LABORATORY PRACTICAL - III**

**Sports Medicine and Physiotherapy** (Practical classes to be designed based on the theory paper in the above subject)

**MPPC-308: INTERNSHIP**

The students of M.P. Ed – III Semester need to develop proficiency in taking coaching lesson in selected game discipline. In view of this, the students shall be attached to the nearby schools for internship/coaching practice in any of the games offered by this department.

**MPPC-309 -319 GAME OF SPECIALIZATION - II**

(As offered by the department)

**The Candidate has choice to select any one of the following games as the Specialization – II (Second best) in Third Semester.**

1. Fundamental Skills- Lead Up Games – Warm-up and Warm down - Technical Training
2. General Conditioning & Fitness, Safety, Injury Prevention and Emergency Response
3. Layout of Playfield with all Measurements, Equipment and its specifications
4. International, National and State Level Organizations and Trophies.

**SEMESTER - IV**  
**PRACTICAL COURSE**

**MPPC- 406 TRACK AND FIELD – IV COMBINED EVENTS**

- Pentathlon- Order of events, Heptathlon - Order of events, Decathlon - Order of events
- Training for combined events.

**MPPC-407 LABORATORY PRACTICAL - IV**

**Exercise Physiology & Sports Psychology (5 tests each)** (Practical classes to be designed based on the theory paper in the above subject).

**MPPC-408 OFFICIATING LESSONS OF TRACK AND FIELD**

The students of M.P. Ed – IV Semester need to develop proficiency in taking officiating lesson in Track & Field. In view of this, the students shall be provided with advance mechanism of officiating in Track & Field. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class time they are going to handle at school and college level.

**MPPC-409-419            TEACHING, COACHING AND OFFICIATING IN GAME SPECIALIZATION-II**

The students of M.P. Ed – need to develop proficiency in teaching, coaching and officiating lessons as per selected game of specialization. In view of this, the students shall be provided with experience in teaching, advance training and coaching and advance mechanism of officiating in their selected game. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class time they are going to handle at school and college level.

. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson to be covered progressively.

**Note: Where ever details of any activities are not mentioned, it is expected to elaborate**

**Skills by the competent bodies of local Universities/ Autonomous Colleges.**

1. Basic coaching principles, talent identification, combining General and Specific Conditioning
2. Advanced Skills- Lead Up Games – Tactics and Strategies, Selection of Players and teams
3. Officiating and Scoring –Online & Offline.
4. Basic coaching principles, talent identification, combining General and Specific Conditioning
5. Designing Coaching programs with and without coaching aids.

Planning, Organization and Management of Tournaments



**PONDICHERRY UNIVERSITY  
PONDICHERRY**

**SOFTCORE COURSES**

**(As offered by the department from the year (2023 -24))**

**SCHEME OF EXAMINATION & SYLLABUS**

**UNDER**

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS**

## MPED 411 – SCIENTIFIC PRINCIPLES AND METHODS OF SPORTS TRAINING

- UNIT I      **Introduction:** Meaning and importance of training. Bio Motor Ability / Components of Physical Fitness, Aim and Objectives of Sports Training Physical fitness components. Basic and General Principles of sports training, FITT Principles of Training. Various Methods of Sports training - Plyometric training, circuit training, weight training, interval training, Continuous training, Fartlek training, resistance training, Altitude Training, Cross Training and Detraining.
- UNIT II      **Strength:** Types of Strength, Strength development training – General exercises, special exercises, competition specific exercises. Training for the development of maximum strength. Elastic Strength, Strength Endurance. Absolute and relative strength, static muscular activity dynamic muscular activity Unit Construction for strength development. Factors affecting strength Performance
- Speed:** Definition, factors influencing speed, Training for speed development (Reaction Time, Acceleration Ability, Assisted and Resisted Sprints) Unit construction, Speed barrier, Speed endurance. Anaerobic training and energy path ways.
- UNIT III      **Endurance:** Types of Endurance – Types of Endurance Training – Duration, Repetition, Competition and Testing. Short term, Medium Term and Long Term Endurance Training. Factors to be considered for Endurance Training. Aerobic Training energy path ways.
- UNIT IV      **Mobility and Flexibility:** Theory and practice of mobility and Flexibility development, variations of mobility and Flexibility -active, passive and kinetic mobility and Flexibility - Factors influencing mobility and Flexibility, role of mobility and Flexibility, mobility and Flexibility training.

**UNIT V**      **Periodization:** Meaning, Single, Double and Multiple Periodization. Different seasons – preparatory, pre competition. Competition and Transitional Period, Super compensation. The training units, the micro cycle, meso cycle and macro cycle. Meaning of the terms Unit, repetition, set, Session, Schedule, warming up (General and specific) – Limbering /Warm down.

Training Vs straining, factors reducing performance, Causes and Symptoms of over load, Means of recovery Diet, Sleep, Rest, and Competition.

#### REFERENCES:

1. Frank W.Dick, Sports Training Principles, London, Lepus Book Co.,1980.
2. Tudor O. Bompa, Periodization: Theory and methodology of Training, Human Kinetics., 1999.
3. Hardayal Singh, Science of Sports Training, D.V.S Publication, New Delhi. 1995
4. Amheim, Daniel D. (1985) Modern Principles of Athletic Training Teron to, Time Mirror.
5. Jensen, C.R. Fisher, A.G. Scientific Basis of Athletic Conditioning, Lea and Febiger, Philadephia 1972.
6. Matveyew L.P. Fundamentals of Sports Training, (Translation from Russian) Mir Publishers, Moscow 1981.
7. Willmore J.H. Athletic Training & Physical Fitness, Allynand Bacon Inc. Sydney 1977.
8. Hardayal Singh, Science of Sports Training, D.V.S Publication, New Delhi. 1995
9. Dietrich Harre, Principles of Sports Training, Berlin Sportverlag, 1982.

## **MPED 432 – EXERCISE AND DISEASES MANAGEMENT (SOFT CORE)**

### **UNIT – I**

Meaning and Prevalence of Non Communicable Diseases, Benefits of Exercise and Physical Activity

Heart Diseases: Definition of Coronary artery disease, Valvular Disease – Background – Management – Exercise Issues – Exercise Prescription for Heart Diseases – Weight Training guidelines for Heart Diseases.

Chronic Lung disease and Asthma: Definition. Background – Management – Exercise Prescription for chronic lung Diseases and Asthma – Weight Training guidelines for Lung Diseases.

### **UNIT – II**

Meaning and Definition of Blood Pressure – Background Hypertension and Cardiovascular Diseases – Hypertensive Renal Diseases – Coronary Artery Disease – Classification of Hypertension – Complications of Hypertension – Evaluation of Hypertension – Management and Exercise Guidelines of High Blood Pressure.

### **UNIT – III**

Meaning and Definition of Diabetic: Classification of Diabetic – Diagnosis – Symptoms – Complications of Diabetic – Exercise issues for Type 1 and 2 - Glucose Monitoring and Exercise. Meaning and Definition of Obesity – Improved Food Guide Pyramid – Management – Exercise Issues – Exercise Prescription for Obesity.

### **UNIT – IV**

Meaning and Definition for Arthritis – Background – Management – Exercise Issues.

Meaning and Definition of AIDS and Cancer – Exercise Prescription for AIDS and Cancer. Exercise Recommendations for Physically Inactive Individuals – Training Guidelines for Physically inactive individuals.

### **UNIT – V**

Need and Importance of Exercise for older population. Background – Exercise Issues – Weight Training Guidelines for older population

Pregnancy: Background – Exercise Issues – Weight Training Guidelines for Pregnancy.

### **REFERENCE BOOKS:**

1. Brain C. Leutholtz and Ignacio Ripoll, “Exercise and Disease Management”, New York: CRC Press, 1999.
2. Jackson Gardon, “Fitness and Exercise”. London: Salamander Books Limited, 1985.
3. Guyton, “Test Book of Medical Physiology”. W.B Saunders Company.
4. Larry G Shaver, “Essentials of Exercise Physiology”: Delhi: Surjeet Publications 1982.

## **DPESSC432 – HYPOKINETIC DISEASES AND PHYSICAL ACTIVITY (SOFT CORE)**

### **UNIT – I**

Meaning and prevalence of Hypokinetic Diseases, Various Methods of Physical activity and its benefits.  
Heart Diseases: Definition of Coronary artery disease, Valvular Disease – Background – Management – Exercise Issues – Exercise Prescription for Heart Diseases – Weight Training guidelines for Heart Diseases.

Chronic Lung disease and Asthma: Definition. Background – Management – Exercise Prescription for chronic lung Diseases and Asthma – Weight Training guidelines for Lung Diseases.

### **UNIT – II**

Meaning and Definition of Blood Pressure – Background Hypertension and Cardiovascular Diseases – Hypertensive Renal Diseases – Coronary Artery Disease – Classification of Hypertension – Complications of Hypertension – Evaluation of Hypertension – Management and Exercise Guidelines of High Blood Pressure.

### **UNIT – III**

Meaning and Definition of Diabetic: Classification of Diabetic – Diagnosis – Symptoms – Complications of Diabetic – Exercise issues for Type 1 and 2 - Glucose Monitoring and Exercise. Meaning and Definition of Obesity – Improved Food Guide Pyramid – Management – Exercise Issues – Exercise Prescription for Obesity.

### **UNIT – IV**

Meaning and Definition for Arthritis – Background – Management – Exercise Issues.

Meaning and Definition of AIDS and Cancer – Exercise Prescription for AIDS and Cancer. Exercise Recommendations for Physically Inactive Individuals – Training Guidelines for Physically inactive individuals.

### **UNIT – V**

Need and Importance of Exercise for older population. Background – Exercise Issues – Weight Training Guidelines for older population.

Own Body Weight Exercises, Theraband Exercises, Mobility and Flexibility Exercise, Aerobic Exercises, workplace Exercises.

## **REFERENCES:**

5. Brain C. Leutholtz and Ignacio Ripoll, “Exercise and Disease Management”, New York: CRC Press, 1999.
6. Jackson Gardon, “Fitness and Exercise”. London: Salamander Books Limited, 1985.
7. Guyton, “Text Book of Medical Physiology”. W.B Saunders Company.
8. Larry G Shaver, “Essentials of Exercise Physiology”: Delhi: Surjeet Publications 1982.

## **DPES 409 ALTERNATIVE MEDICINES MEASURES AND CARE FOR HEALTHY LIFE**

### **UNIT I**

Concept of yoga therapy- Meaning & Definition- Principles of Yoga therapy-Methods of Yoga therapy-Yogic practices for life style diseases.

### **UNIT II**

Concept of Ayurveda:-Five elements of Doshas, Gunas, Seven Dhatus-Nadis and Chakras- feature and Approaches of Ayurveda-Ayurvedic Diet, Panchakarmas -Ayurvedic treatment for life style diseases.

### **UNIT III**

Concepts of Naturopathy: - Principles of Naturopathy – Methods of Naturopathy Diet, Juice diet, Fasting, Exercise, Enema, Massage, Color therapy, Clay therapy, Hydro therapy, Treatment of Naturopathy for life style disease.

### **UNIT IV**

Concepts of Siddha Medicine:- Principles of Siddha Medicine, Five elements theory, Three Biological Humors, Seven Physical Constituents – Importance of Herbal Medicine Varmam and Thokkam,Treatment of Siddha Medicine for life style disease.

### **UNIT V**

Concepts of Sports Medicine:-Introduction- What is Sports Medicine, Meaning of Sports Medicine, Definition of Sports Medicine, Need and Importance of Sports Medicine, Diagnosis and Treatment for Sports Injuries- Preventive, Curative and Rehabilitation Aspects of Sports Medicine.

### **References: -**

1. Dr. R. Nagarathna, Dr. H.R Nagendra Dr. S. Narendran, Yoga for Common Ailments and IAYT for Different Diseases SVYP 2002.
2. Nagarathna.R, Nagendra H.R, Integrated Approach of Yoga Therapy for Positive Health: SVYP, Bangalore 2001.
3. Fundamental principles of Ayurveda Vasant Lal.
4. Textbook of Ayurveda, volume two A Complete Guide to Clinical Assessment Vasant Lal- Jan 31, 2007.
5. Clinical Sports Medicine: Medical Management and Rehabilitation 512 pages, Sep 27, 2006.
6. Kandasamy,Pillai N.History of Sidhha Medicine .Madras 1979.
7. Jerome sarris,Clinical Naturopathy an Evidence based gide to practice.2010.



**Course code: DPES 412**

**Course Title: Yoga for Physical and Mental Wellness**

**Course Teacher: K. Tiroumourougane**

**Unit I: Introduction**

Meaning and Definition of Yoga- Ashtanga Yoga- Yama, Niyama, Asana, Pranayama, Prathyahara, Dharana, Dhyana, Samadhi- Concept of Yogic Practice- Principles of Breathing- Awareness- Relaxation-Clothes, Time, Place and Age- Contra indications- Meaning of Fitness - Wellness

**Unit II: Asana, Pranayama and Surya Namaskar**

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

**Unit III: Kriyas and Bandhas**

Shat Kriyas- Meaning, Techniques and Benefits – Mudras – Meaning, Techniques and Benefits – Meditation: Meaning, Techniques and Benefits – Passive and active, Saguna Meditation and Nirguna Meditation.

**Unit IV:**

Mental Wellbeing - Anxiety, Depression, Concentration, Self Actualization - Stress – Diabetes- Hypertension- Physical Wellbeing- Relaxation-Yoga Competitions

**Unit V:**

Yoga and Alternative Medicine – Yoga Traditions- Wellness Management

**Reference:**

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

Swami Niranjanananda Saraswati (1998), Prana Pranayama Prana Vidya, Munger:Bihar School of Yoga.

Stress and its Management by Yoga (2000), K.N. Udupa,Delhi: Motilal Banarsidass Publishers Pvt. Ltd.

Yoga Asanas, Pranayama, Mudras, Kriyas (2012), Chennai: Vivekananda Kendra Prakashan Trust.



Edit with WPS Office

## **AEROBICS FOR FITNESS MANAGEMENT**

**Course code: 137**

**Credits: 3**

### **UNIT – I: Body’s Energy system**

Introduction of aerobic exercise - anaerobic exercises -Photogenic system, Aerobic and anaerobic production.

### **UNIT-II: Warm-Up First Aid and Diet for Aerobics**

Warm up, Stretching Exercises and Body relaxation

First aid and Safety for Aerobics - ABCXH of first aid - Recovery position -CPR- Diet Prescription – Nutrition Components and Sources of Nutrition.

### **UNIT-III: Foundations of Aerobic Fitness**

Fitness Aerobics: Meaning and Concept of Fitness & Aerobic - Components of Physical fitness - Components of aerobic exercise programme (Frequency, Intensity, and Time).

### **UNIT – IV: Practical -1 - Choreography**

Warming up -Marching –start palm action and varied arm action.

Part 1-Introduction to Shapers - Basic, Single step, ‘V’, A shape, Diamond - Jazz square.

Part- 2 -Grape point, Step touch, touch out, with moves.

Part -3 Power (Jump, squats and lounging).

Part – 4 -Rhythm

### **UNIT-V: Practical -2**

Music: Composition, selection of a suitable music; Types of music to be played; Preparation of own piece of music.

Formation of choreography and implementation of teaching practical of aerobic exercises.

### **Reference:**

Bruce Abernethy et. al., “**Biophysical Foundations of human Movements**”, second edition.

Susan Luscombe et.al. “**Family Health & First Aid**” (2003).

Pamela B. Carter, “**Guide to Physical Fitness and Exercise**” (2006).

## **FIRST AID MANAGEMENT**

**Course code: DPES 138**

**Credit -3**

### **UNIT I**

First Aid: Importance, precautions, responsibility, Assessment procedures: Visual/Physical observation.

### **UNIT II**

Management of Bleeding (Internal/External), Fractures, Sprains and Dislocations, Head, Neck and Back Injuries, Shock and Trauma, Burns.

### **UNIT III**

Management of Electric Shock, Heat & Cold Emergencies (Exhaustion, Heat, stroke, Hypothermia), Poisoning, Bites & Stings,

### **UNIT IV**

Management of Heart Attack, Cardiac & Respiratory Arrest, Choking, Loss of Consciousness, Eye, Ear, Nose and Throat Emergencies, Cardio Pulmonary Resuscitation.

### **UNIT V**

First Aid Equipment handling, Fire Fighting Equipment.

### **Reference:**

Harries.M,"ABC of Sports Medicine (2nd Edition)," BMJ

Hutson.M A, "Sports Injuries Recognition and Management," Oxford

Louise Burke, "Practical Sports Nutrition."

Ross E Andersen, "Obesity: Etiology Assessment Treatment and Prevention."

Thakur KC, "A Latest Book on Doping in Sports."

## **ADAPTED PHYSICAL EDUCATION**

**Course code: DPES 140**

**Credits: 3**

**Objective:** • Explain the various aspects of Adapted Physical Education and develop understanding on different types of disability. • Articulate special adapted programs for various categories of physical disability. • Explain the use of various aquatic activity Programme for disabled. • Classify different rehabilitation programs.

### **UNIT – I: Role of Adapted Physical Education**

- Meaning & definitions, Aims and objectives, Need and Importance of Adapted Physical Education. (Online)
- Role of physical education in adapted physical education. (Online)
- Specific learning disabilities: Common types of learning disabilities their causes, treatment and intervention.
- Recreational Sports Opportunities, Competition Opportunities - Special Olympics, Paralympics and Deaf Olympics. Inclusive Education: Meaning, Definition, Aim and Objectives.

### **UNIT-II: Understanding and Managing the Disability**

- Physical education programme for disabled of: - Elementary School, Middle School and High School. (Online)
- Class organization strategies: identifying the cause, embrace special needs, setting high expectations and goals. (Online)
- Managing individual programmes and Special adapted programme for various types and categories of physical disability.
- Classification of Disability: Visual, auditory, Neuro Muscular, Mental and Emotional Specific Guidelines for: Visual Impairment, Hearing Impairment, intellectually challenged, Orthopedically Handicapped – Parent Teacher Association – Parents Advisory Committee, Unified Sports.

### **UNIT-III: Value of Disability Events**

- History of Paralympics, Special Olympics and their events.
- Aquatic activity programme for disabled.
- Importance of Young Athletic Programme (YAP). (Online)
- Orientation of Types of Equipment- Minimum equipment, Additional Equipment, Evaluation of Equipment.

#### **UNIT – IV: Concept of Rehabilitation and Adapted Games**

- Meaning, Aims & objectives and Functions of rehabilitation. (Online)
- Classification of rehabilitation- Occupational rehabilitation, Psychological rehabilitation.
- Provisions of special rights and privilege for disabled through legislations. (Online)
- Various Adapted Games for different disabilities.

#### **Reference:**

1. Auxter, H. (2001). Adapted Physical Education and Reactions. Morbey- St: Louis Mirrauri.
2. Auxter, D., &Pyfer, J. (1989). Principles and Methods of Adapted Physical Education and Recreation. Times Mirror Magazine. • Clarke, H. H., & Clarke, D. H. (1978). Developmental and Adapted Physical Education.
3. Kasser, Susan (2013). Inclusive Physical Activity (2nd Edition). Knowledge Warehouse Khel.
4. Kumar, P., Singh, R. M., &Ratnakar, A. (2018). “Role of physical education research activities and their impact in modern day life”. Asian Journal of Multidimensional Research, 7(2), 420-425.
5. Sahitya Kendra (2017). A Text Book of Adapted Physical Education & Sports.
6. Sharma, S.R (2019). Adapted Physical Education, Friends Publication.
7. Thind, M. N. (2010), Special Olympics Bharat Trainer Manuel. Special Olympics Bharat.
8. Winnick, J., &Porretta, D. L. (2016). Adapted Physical Education and Sport (Ed. 15). Human Kinetics.

## **Physical Activity and Human Body Function**

**Course Code: 141**

**Credits: 3**

### **Learning Objectives**

The Learning Objectives of this course are as follows:

- To provide students with an overview of how the human body is benefited by physical activity.
- To encourage students to participate in physical activities.
- Imparting knowledge on basic understanding of physiology of the body and creating a healthier future.
- To prepare students to undertake more advanced courses in the field of health and fitness.

### **Learning Outcomes**

Upon completion of this course the students:

- Will get a general overview of the effect of physical activity on the human body.
- Will be encouraged through critical learning to be more mindful about their health.
- Will be prepared to undertake more advanced courses in the field of health and fitness.

### **Unit – I: Physical Activity and Exercises**

Definition and Objectives of Physical Activities, Definition and Objectives of Exercises, Types of Physical Activities, Types of Exercises, age based exercises, competition and recreational activities.

### **Unit – II: Muscular System**

Structure of the Skeletal Muscle, Sliding Filament Theory, Types of Muscle Fibre, Effect of Physical Activity and Exercises on the muscular system.

### **Unit – III: Cardiovascular System**

Structure of the Heart, Cardiac Cycle, Stroke Volume and Cardiac Output, Heart Rate (resting heart rate, maximum heart rate) and Factors Affecting Heart Rate, Cardiac Hypertrophy, Effect of Physical Activity and Exercises on the Cardiovascular system.

### **Unit – IV: Respiratory System**

Structure of the Respiratory system, Respiratory Muscles, Mechanics of Breathing, Lung Volumes and Minute Ventilation (at rest and during physical activity). Diffusion of Gases (in the lungs and tissues), Effect of Physical Activity and Exercises on the Respiratory System.

### **UNIT V: Energy Sources and Energy Transfer**

Metabolism, ATP-CP or Phosphate System, Anaerobic Metabolism, Aerobic Metabolism, Aerobic and Anaerobic Systems during Rest and Physical Activity.

### **Essential/recommended readings**

Robert M. Sapolsky, (2017). Behave: The Biology of Humans at Our Best and Worst. Penguin Press.

William D. McArdle, (2010). Frank I.Katch. Essentials of Exercise Physiology. LWW

W. Larry Kenney, (2015). Physiology of Sport and Exercise. Human Kinetics, Inc.

Parker Janet, (2007). The Human Body Atlas. OM Book Service.

Claude Bouchard, Steven N. Blair, William L. Haskell. (2012). Physical Activity and Health. Human Kinetics Publishers.

David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics.

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

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, Pondicherry University, from time to time.**

## **HEALTHY LIFESTYLE, FITNESS AND NUTRITION**

**Course Code: DPES 433**

**Credit: 3**

### **Learning Objectives:**

- **Introduction to different aspects of health**
- **Understand fitness and its uses**
- **Introduction aspects of weight management and nutrition to learners**

### **UNIT – I HEALTH EDUCATION**

Definition of Health, Health Education, Dimensions and Determinants of Health, Health Supervision, Aim, objective and Principles of Health Education, Health Services – car of skin, Nails, Eye health service, first respond information.

### **UNIT – II HEALTH PROBLEMS IN INDIA**

Communicable and Non Communicable Diseases, Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosives, Population, Personal and Environmental Hygiene, Presentation and risk reduction of Diseases Stress management, relaxation techniques – life style for positive health.

### **UNIT – III FITNESS**

Meaning and Definition of Physical Fitness, principles of Physical fitness, Components of Physical Fitness Leisure time physical activity and opportunities in the community based activities. Current trends in fitness and conditioning, relationship between physical activity and lifelong wellness.

### **UNIT – IV WEIGHT MANAGEMENT**

Concept of BMI (Body mass index), Obesity and its hazards, Dieting versus exercise for weight management, Maintaining a Healthy Lifestyle, Role of diet and exercise in weight management.

### **UNIT- V NUTRITION**

Meaning and Definition of Nutrition, food Choices, Food Pyramid, Eating Disorders, proper hydration Basic Nutrition guidelines, Role of carbohydrates, Fat and protein during exercise.



## **Learning Outcomes**

- Have clear idea about health and health care
- Understand Health with reference to India
- Understand fitness and weight management
- Understand the importance of nutrition

## **References**

Bucher, Charles A. “Administration of Health and Physical Education Programme, 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 Etc. At. “Health Education” (national Education Association of U.T.A.) Nemir A. ‘The School Health Education (Harber and Brothers, New York)

**ADD ON COURSE**

**(As offered by the department from the year 2023 -24)**

**PONDICHERRY UNIVERSITY  
PONDICHERRY**



**SCHEME OF EXAMINATION & SYLLABUS**

**Of**

**POST GRADUATE DIPLOMA IN YOGA**

**UNDER**

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS**

Name of the Department: **Department of Physical Education and Sports.**

Name of the Subject Discipline: **Yoga**

Programme of Level: **Add on course- POST GRADUATE DIPLOMA IN YOGA(PGDY)**

Duration for the course: **ONE Year**

**TITLE: POST GRADUATE DIPLOMA IN YOGA**

**Course code: PGDY- 101CREDIT: 3**

<b>Semester</b>	<b>Paper</b>	<b>Subject Title</b>	<b>Internal</b>	<b>External</b>	<b>TOTAL</b>
<b>I</b>	<b>I</b>	<b>Historical and Scientific Basis of Yogic Practices</b>			
	<b>II</b>	<b>Principles and Methods of Yogic Practices</b>			
	<b>III</b>	<b>Yogic Lifestyle and Teaching Practice</b>			
	<b>IV</b>	<b>Yoga Practical and Practice Teaching</b>			
<b>II</b>	<b>V</b>	<b>Yoga Therapy</b>			
	<b>VI</b>	<b>Applied Yoga for Health and Fitness</b>			
	<b>VII</b>	<b>Yoga Classical Texts and Literature</b>			
	<b>VIII</b>	<b>Yoga Practical and Practice Teaching</b>			

## **M.Sc. YOGA THEORY PAPER**

### **SEMESTER I**

#### **PAPER 1: HISTORICAL AND SCIENTIFIC BASIS OF YOGIC PRACTICES**

**Course Code: PGDY-101**

**Credits: 3**

#### **OBJECTIVES:**

- Science of logic, utility of Maya, Logical quest for God, phases of creation,
- Practice of Meditation and Samadhi for Renunciation. Eliminate physical and mental pains and receive liberation
- Explain the divine nature of soul, Maya and creation. Knowledge of Gurushisya Parampara.
- Explains Vedas are eternal and divine. Different schools of Yoga and their contributions.

#### **Unit 1**

Meaning of Yoga, Nature and Scope of Yoga- A brief History of Yoga – Yoga Education in the Guru Kula and contrasted to modern developments and Trends.

#### **Unit 2**

Concept of Human body as an integrated whole- Cells, tissues, organs and systems of human body – Introduction to Support Systems, Maintenance Systems, Control Systems, Defense Systems and concept of Homeostasis

#### **Unit 3**

Functional anatomy of Heart – Gross Anatomy of Respiratory passages, Lungs and Alveoli – Process of Respiration- Mechanics of breathing and gas exchange in alveoli.

#### **Unit 4**

Concept of Yoga and Diet- Yoga for Fostering Positive Mental Health: Principles of yogic diet - The yogic concept of diet – Classification of foods: Tamasic food – Rajasic food – Sattvic food – Diet and its importance in cure of certain disorders – Importance of fasting in the diet – Natural nutrition – Importance of fiber in diet – Importance of fruits in the diet – Importance of vegetables in diet – yoga and vegetarianism

#### **Unit 5**

Yoga and Consciousness – Contributions of various Research Institutions. Yoga and Value education: Meaning of values – Types of values - Co-operation – Responsibility – Happiness and peace – Respect, Tolerance, Social adjustment and spirituality. Developments of these values through yoga

#### Reference Books:

1. Anatomy and Physiology for Nurses, Evelyn C. Pearce, Jaypee Brothers, New Delhi, 1997
2. Anatomy and Physiology of Yogic practices , M.M. Gore, Lonavla
3. Yoga for Promotion of Positive Health, Dr. R Nagarathna, Dr. H R Nagendra, Published by SVYP, Bangalore, 2004
4. Coulter.HDavid(2001)AnatomyandHathaYoga,USA:BodyandBreathInc.
5. KirkMartin(2006)Hatha YohaIllustratedChampaign:Humenskinetics.
6. Satyananda Sararwati Swami (2007) Meditations from thitantras.Murgar:Yoga PublicationsTrust.
7. Hausthul Desikachar (2016)The Yogapradipika,Chennai:MadiaGaruda.
8. Elangovan.R(2016)FundaentalsofYoga,Chennai:Ashwin Publications.

### PAPER 2: PRINCIPLES AND METHODS OF YOGIC PRACTICES

**Course Code: PGDY- 102**

**Credits: 3**

#### OBJECTIVE:

- To learn about preparatory practices.
- To learn about different kinds of Asanas and Pranayama
- To learn about Kriya, Mudra, Bandha and Meditation

#### Unit 1

Yogic Practices: Asana, Pranayama, Kriya, Bandha, Mudra, Dhyana. Impact of Yogic practices on the Anatomy and Physiology of different systems of the human body

#### Unit 2

Four Major Paths of Yoga: Raja, Bakhti, Jnana and Karma Yoga – Hatha Yoga: Concepts and methods

#### Unit 3

Principles of Yoga and Yogic practices for healthy living - Yoga in Ayurveda

#### Unit 4

Foundations of Yoga and Yoga Traditions – Yoga in Pre-Vedic Period and Vedic Period – Concepts of Nadi and Prana – Effects of Kundalini Shakti

#### Unit 5

General Introduction to Non-Vedic Schools of Indian Philosophy: Jainism, Buddhism, Concepts and practices of Yoga in other Religions.

#### Reference Books:

1. Yoga: Asana, Pranayama, Mudra, Kriya, Vivekananda Kendra Prakashan.
2. Spiritual Heritage of India, Swami Prabhavananda, Sre Ramkrishna Math, Madras, 2004
3. The Serpent Power, Arthur Avalan, SivalikPrakashan, New Delhi, 2009
4. IyengerB.K.S (2008)LightonPranayama, New Delhi, Haper Collins Publishers India.
5. ChandrasekaranK.(1999)SoundHealthThroughYoga, Sedapatti: Premalyan
6. Publications.
7. Vishnu Devananda Swami (1972) The Complete Illustrated book of yoga, New York:
8. Pocket Book.

### **PAPER 3: YOGIC LIFESTYLE AND TEACHING PRACTICE**

**Course Code: PGDY- 103**

**Credits: 3**

#### **OBJECTIVE:**

- Tounderstandtheyogicconceptofhealthand factorsaffecting health inalldimension.
- Yogicrulesforhealthyliving.
- ToknowaboutLesson Planning: Model Lesson Plan and its elements.

- Unit 1** Definition and Importance of Health According to WHO – Dimensions of Health: Physical, Mental, Social and Spiritual – Concept of Body – Health and Disease in Yoga –Yogic Concept of Health and Disease – Holistic health care through Yoga – Concept of Pancha – Koshas and Shat chakra and their role in Health and Healing
- Unit 2** Traditional methods of Yoga instruction in contrast to modern methods of classroom teaching in Yoga
- Unit 3** Lesson Planning: Model Lesson Plan and its elements – Yogic curriculum and the order of teaching Yogic Practices.
- Unit 4** Basics of Yoga Class Management – Practice of Yoga at different levels (beginners, advanced, school children, youth, women, and special attention group) – Techniques of Individualized and group teaching
- Unit 5** Lesson Planning in Yoga – Essentials of Good Lesson Plan – concepts, needs, planning of teaching Yoga (Shatkriya, Asana, Mudra, pranayama & Meditation) – Models of Lesson Plan – Action Research Of Yoga : Meaning, Roles, Steps in Action Research in Yoga Teaching- Lesson Plan and its Practical applications

**Reference Books:**

1. Teaching Methods for Yoga, Dr. M.L. Gharote and S.K. Ganguly, Kaivalyadhama, Lonavla
2. Yoga Education for Children, Swami SatyanandaSaraswati, Bihar School of Yoga, Munger, 1990.
3. Yoga CharyaSundram(2004) diet and Digestion Coimbatore: The Yoga Publishing House.
4. Syd Hoare(1986)Keepfit ,Hodder and Stoughton:TeachYourselfBooks.
5. SwamiSivananda(2011)HealthandDiet,ShivanandaNagar:TheDivineLifeSociety.
6. Elangovan(2018)Yoga Psychology,Chennai:Ashwin Publications.

**YOGASANA PRACTICAL SYLLABUS****YOGA PRACTICAL AND PRACTICE TEACHING****Course Code: PGDY- 104****Credits: 3****OBJECTIVES:**

- To learn about preparatory practices.
- To learn about different kinds of Asanas and Pranayama
- To learn about Kriya, Mudra, Bandha and Meditation

Suryanamaskar

**Asanas: Standing:**

Trikonasana,

Tadasana, Vrksasana, PadaHastasana

**Sitting Postures:**

Hastottanasana,

Simhasana, AkarnaDhanurasana, Ardhamatsyendrasana, Shashankasana,

Bhadrasana, Vajrasana/Virasana, ArdhaUstrasana

**Prone Lying Postures:**

Makarasana, Bhujangasana, Salabhasana

**Supine Lying Postures:**

Viparitarani, Sarvangasana,

**Bandha**

UddiyanaBandha

**Kriya:**

Kapalabhati

Agnisara

**Pranayama:**

Nadisodhana/Anuloma Viloma Pranayama, Bhastrika: Pranayama

**Dhyana**

**Semester II**

**Theory**

**PAPER 5: YOGA THERAPY**

**Course Code PGDY- 201**

**Credits: 3**

**OBJECTIVES:**

- Explains innovation in yogic techniques, and explains the Indian system of medicine and different therapies.
- Know the application of therapy for physical and psychological problems.

**Unit – I**

Definitions – Concepts – Aims and Objectives – Need and Scope of Yoga and Ayurveda – Differences between Yoga Therapy and Exercise Therapy. Yogic diet (Sattvik, Rajasic and Tamasic). Physiology of Mudras, Kriyas, Nadis, Bandhas, and Chakras.

**Unit – II**



Pancha kosha - (Annamaya kosha, Pranamaya kosha, Manomaya kosha, Vijnanamaya kosha, Anandamaya kosha) – Three dhosa - ([Vata](#), [Pitta](#), and [Kapha](#)) - Role of yogic exercises on yoga therapy - Asanas, Pranayama, Meditation, Mudras, Bandhas, Kriyas and Chakras

### **Unit – III**

Chronic complaints amenable to yoga therapy: Acidosis – Anemia – Asthma – Arthritis- Amnesia – Diabetes – Duodenal Ulcer – Coronary Heart Disease – Hyper Tension – Hernia – Menstrual Disorder - Amenorrhoea – Obesity – Paralysis – Piles – Tonsillitis – Back pain.

### **Unit – IV**

Psychotherapy and counselling – Behavioral and Cognitive therapies – Autogenic training – Progressive Muscle Relaxation technique – Music therapy – Colour therapy – Odour Therapy- Crystal therapy – Hydrotherapy

### **Unit- V**

Stress coping yoga: Description of yoga and its efficacy as a stress reliever – Massage: A relaxing method to relieve stress and pain – Health and stress relieving benefits of massage – Exercise: Stress relieving benefits of vigorous exercise. Yoga nidra – Benefits of yoga nidra for stress management.

### **Reference Books:**

1. Principles and Methods of Yoga Therapy – Dr. AnandaBalayogiBhavanani, Puducherry-13.
2. Yogic Therapy: Basic Principles &Methods -Swami Kuvalayananda and Dr. S.L. Vinekar.
3. Integrated Approach to Yoga Therapy, Dr. H.R. Nagendra, VK Yogas
4. Translated by TKV Desikachar(1998). Nathamuni's Yoga Rahasya. Chennai: KYM publications
5. Translated by TKV Desikachar (1987). Patanjali's Yoga Sutra.Chennai: KYM publications
6. Desikachar TKV with KausthubDesikachar and Frans Moors (2001). The Viniyoga of Yoga. Chennai: KYM Publications.
7. GopiWarrier and DeepikaGunawant, (2000). The complete illustrated guide to Ayurveda. Element Books Ltd.
8. Desikachar TKV (2000). The Heart of Yoga. USA: Inner Traditions

## **PAPER 6 APPLIED YOGA FOR HEALTH AND FITNESS**

**Course Code: PGDY- 202**

**Credits: 3**

### **OBJECTIVE:**

- To understand the yogic concept of health and factors affecting health in all dimension.
- Yogic rules for healthy living.
- To know about communicable disease and yogic principles for healthy living.

### **Unit 1**

Major Component limbs of Applied Yoga – Scope and limitations of applied Yoga – Integration:  
The purpose of Yoga

### **Unit 2**

Role of the Pancha Yama and Pancha Niyama in dealing with social problems

### **Unit 3**

Yoga for Personality Development – Physical level: Shat Kriyas (Detoxifying) , Asanas (Strength), Mudras (Steadiness), Pranayama (lightness), Dhyana (Perception)- Mental Level: Personal discipline, Social Discipline (Yama, Niyama), Cultivation of four-fold attitudes – Practice of Dharana, Dhyana- Emotion level: Ishwara Pranidhana (Surrendering to the supreme); Spiritual level: Practice of Higher states of Meditation (Superconsciousness states) – Ashta Siddhis

### **Unit 4**

Yoga for Children with Special Needs - Yoga for Learning Disabilities – Determining tailor-made instructional approach to meet the cognitive, emotional, and physical needs of Child - Practices which help in strength, endurance, speed, agility, flexibility, mental and self-confidence – emotional behavior disorder – Integrated system of yoga practices to increase cognitive and motor skills in children with learning and developmental disabilities.

### **Unit 5**

Yoga and Sports - Ideal performance and Peak Performance for Sports Persons – Enhancing Physical Capacities: Kriyas, Asanas- Vital Level: Pranayama (Lung Capacity), Emotional Capacity: Emotional balance through emotional culture (surrender to the Divine)

## Reference Books:

1. Applied Yoga – Dr. M.L Gharote, Kaivalyadhama, Lonavla.
2. Yoga & Sports – Swami Gitananda & Meenakshi Devi, Ananda Ashram, Puducherry.
3. Growing with Yoga, Jayadev H.J ,The Yoga Institute, Santacruz, Mumbai, 2004
4. Yoga Therapy for Every Special Child, Singing Dragon London and Philadelphia, 2010
5. Yoga Charya Sundram(2004) Diet and Digestion Coimbatore: The Yoga Publishing House.
6. SydHoare (1986) Keepfit, Hodderand Stoughton: TeachYourself Books.
7. SwamiSivananda (2011) Healthand Diet, Shivananda Nagar: The Divine Life Society.
8. Arvindjanar (2004) Yoga Diet, Bangalore: SaiTowers.
9. Elangovan (2018) Yoga Psychology, Chennai: Ashwin Publications.

## PAPER 7: YOGA CLASSICAL TEXTS AND LITERATURE

**Course Code: PGDY- 203**

**Credits: 3**

### **OBJECTIVES:**

- Concept of different texts and literature on yoga and related streams.
- This chapter is a summary of several books like Bhagavad-Gita. Many subjects are explained, such as karma yoga, jnanayoga, Sankhya yoga, buddhi yoga and the Atma, which is the soul and the Supersoul.

### **Unit 1**

A brief introduction to the vast literature on Yoga Patanjali Yoga Sutras – Ashtanga Yoga

### **Unit 2**

Bhagavad Gita as a Yogic Text – Definitions of Yoga from the Gita

### **Unit 3**

Hatha Yoga Pradipika – Gheranda Samhita -

### **Unit 4**

Tirumanthiram of Tirumoolar – Tirukkural of Thiruvalluvar

### **Unit 5**

Comparison of Various Techniques in Hatha Yoga Pradipika and Gheranda Samhita.

**Reference Books:**

1. The Science of Yoga – I.K. Taimni,
2. Tirumoolar Tirumanthiram – Dr. Natarajan, Ramakrishna Math, Myla Pore, Madras -600 004.
3. HathaPradipika – Kaivalyadhama publication.
4. Gherand Samhita - Kaivalyadhama publication.
5. Tirukkural (any publication)

**Paper 8: YOGA PRACTICE AND PRACTICE TEACHING****Course Code: PGDY – 204****Credits: 3****.Asanas: Standing:**

ArdhaCakrasana, Trikonasana.

**Sitting Postures:**

Kukkutasana, Matsyasana,

Ustrasana, Sasankasana, UttanaMandukasana, Marichyasana/Vakrasana

**Prone Lying Posture:**

Makarasana, Dhanurasana,

**Supine Lying Postures:**

Setubandhasana, Uttanapadasana, ArdhaHalasana, Pavanamuktasana, Savasana, Halasana, Shirshasana.

Mayurasana, Bakasana, Hamsasana

**Yoga Nidra****Pranayama:**

Sitali Pranayama, Bhramari Pranayama.

**ADD ON COURSE**

**(As offered by the department from the year 2023 -24)**

**PONDICHERRY UNIVERSITY  
PONDICHERRY**



**RULES, REGULATIONS & SYLLABUS**

**POST GRADUATE DIPLOMA IN HEALTH FITNESS AND LIFE  
STYLE MANAGEMENT**

**UNDER**

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS**

**PONDICHERRY UNIVERSITY  
DPEARTMENT OF PHYSICAL EDUCATION AND SPORTS  
P.G. DIPLOMA IN HEALTH FITNESS AND LIFE STYLE MANGEMNT**

**REGULATION, SCHEME OF EXAMINATION AND SYLLABUS**

**EFFECTIVE FROM (2023-2024)**

**ONWARDS**

*“Physical Education and Sports as an essential dimension of education and culture must develop the abilities, will power and self-discipline of every human being as a fully integrated member of society”.*

## **REGULATIONS**

### **Eligibility for Admission:**

Bachelor's degree in any discipline with a minimum of 45% of marks

### **Duration of the Course:**

The course shall be of on year duration spread over semesters. The maximum duration to complete the course shall be two years.

### **Eligibility for admission to Examination:**

A candidate must have 70% of attendance of the total number of working days in theory and practical classes separately to write the semester examinations.

To pass in both theory and practical a candidate must secure at least b40% of marks in each paper.

**Medium of Course:** The medium of instruction shall be English

**Evaluation:** Single evaluation, Programme committee may decide the examiner's list

**DPEARTMENT OF PHYSICAL EDUCATION AND SPORTS**  
**P.G. DIPLOMA IN HEALTH FITNESS AND LIFE STYLE MANGEMNT**

(Effective from the academic year 2023-24)

**LIST OF COURSE OFFERED**

**FIRST SEMESTER:**

<b>Code PGD HFLSM</b>	<b>Course/Paper</b>	<b>Credit</b>	<b>Tot. Hours Per Semester</b>	<b>Internal Marks</b>	<b>External Marks</b>	<b>Total Marks</b>
<b>101</b>	<b>Basic Concept of Fitness</b>	<b>03</b>	<b>48</b>	<b>40</b>	<b>60</b>	<b>100</b>
<b>102</b>	<b>Fitness Wellness Management</b>	<b>03</b>	<b>48</b>	<b>40</b>	<b>60</b>	<b>100</b>
<b>103</b>	<b>Fitness Equipment Management</b>	<b>02</b>	<b>32</b>	<b>40</b>	<b>60</b>	<b>100</b>
<b>104</b>	<b>Exercise Testing and Prescription (Practical)</b>	<b>02</b>	<b>32</b>	<b>40</b>	<b>60</b>	<b>100</b>

**SECOND SEMESTER:**

<b>Code PGD HFLSM</b>	<b>Course/Paper</b>	<b>Credit</b>	<b>Tot. Hours Per Semester</b>	<b>Internal Marks</b>	<b>External Marks</b>	<b>Total Marks</b>
<b>105</b>	<b>Concept and Values of Yoga</b>	<b>03</b>	<b>48</b>	<b>40</b>	<b>60</b>	<b>100</b>
<b>106</b>	<b>Health Promotion and Nutritional Care</b>	<b>03</b>	<b>48</b>	<b>40</b>	<b>60</b>	<b>100</b>
<b>107</b>	<b>Life Style Disorder Management</b>	<b>02</b>	<b>32</b>	<b>40</b>	<b>60</b>	<b>100</b>
<b>108</b>	<b>Aerobic Exercise, Floor exercise Yogasana (Practical)</b>	<b>02</b>	<b>32</b>	<b>40</b>	<b>60</b>	<b>100</b>



## **I SEMESTER**

### **Theory**

#### **PGD HFLSM: 101 – Basic Concept of Fitness**

**Unit – I:** Fitness – Components of Health related Fitness – Motor skill related Fitness –Cardiovascular Endurance – Muscular Strength and Endurance – Flexibility – Body composition motor fitness components – Reaction Time – Speed - Power – Balance - Agility – Coordination.

**Unit – II:** Muscle Physiology – Muscle Micro and Macro Structure – Sliding Filament Theory – Types of muscle action – Neuro – muscular adaptations of exercise

**Unit III:** Bio –energetic – Metabolism – Adenosine Triphosphate – Phosphagen system – Glycolysis – Oxidative system – Substrate depletion and repletion – Limiting factors

**Unit IV:** Exercise Techniques – Warm – up – Stretching – Development of strength – Speed and Endurance – Load – Volume – Frequency – Training

**Unit V:** Health education – Cardiovascular Risk Reduction – Abuse of Medicine control of Smoking – Cancer prevention

#### **Reference:**

1. Werner W.K. Hoeger and Sharon A. Hoeger (1990) Fitness and Wellness Morton Publishing Company, Canada
2. Allsen, P.E.J.M. Harrison and B. Vance, Fitness for Life: An Individualized Approach, Dubuque, IA: Wm.C. Brown, 1989.
3. Hawley, E.T. and Franks B.D. (1977), Health Fitness Instructor's Handbook, Third Ed. Human Kinetics, Champaign Illinois.

## **PGD HFSLM: 102- Fitness and Wellness Management**

**Unit – I:** Definition and Meaning of Physical Fitness – Physical Fitness – Performance related Physical Fitness – Definition and components of wellness Relationship between fitness health and wellness.

**Unit – II:** Factors influencing Fitness – Age, Sex, Climate, Diet, Exercise- Health benefits of Physical Activity – Assessment of cardio – respiratory fitness, Muscular fitness.

**Unit III:** Prescription of aerobic exercise Modes of aerobic exercise – implementing an aerobic fitness Programme – (walk – jog – run) aerobic dancing, rope jumping, treadmill running, jogging in stair climbing, stationary bicycling.

**Unit IV:** Prescription of Flexibility – Principles of mobility Exercise – Types of mobility and methods of training – Flexibility exercise for the low back pain round shoulders, joggers, runners and muscles of upper and lower extremities.

**Unit V:** Resistance Training – Meaning – Types of resistance training Benefits of resistance training – Terminology used in resistance training – Principles of exercise prescription progression – Warm – up – cool –down – Exercise Programme for resistance training.

### **Reference:**

1. Franks Don B. Et.al (1999), The Health Fitness Handbook, Human Kinetics.
2. Lindsey Ruth, Corbin B. Charles (2007), Fitness for Life, Human Kinetics.
3. Pollock, Michael, et. Al (1998), Health and Fitness Through Physical Activity, New York: McGraw Hill Book Company.
4. Williams H. Melvin (19995), Life time and Wellness, Brown Publications, Dubugue.
5. Siedntop Daryl, 1994 “Introduction to Physical Education Fitness and Sport”, Mayfield Publishing Company, Mountain view, California.
6. Batman P. nad \Van Capella M. (1995) The exercise Guide to Resistance Training FITAU Publications, Australiya.

## **PGD HF LSM: 103: Fitness Equipment Management**

**Unit – I:** Fitness Centre, Size, Measurements and Other facilities, Exercise equipments – Usefulness passive exercise machines – vibrating belts, vibrating pads, rollers, electrical stimulators, sauna bath and steam bath

**Unit – II:** Weight Training equipments – Weight Plates – barbells – dumbbells- exercises bikes, rowing machines, skipping rope elastic Strap, Advantage of free weights – Advantage of machine systems, - Weight lifting barbells and weights Power lifting equipments – abdominal board – Push – ups – steppers – wall pulley – plat form specification, weight belts

**Unit – III:** Multigym: Weight Machine – Bench press – shoulder press, seated bench press – Lateral pull down, leg press – leg extension heel raise – low pulley – peck duck, Lateral raise – Leg extension leg curl – Hip abductor – Roman Bench – Preacher curl Half squat – Smith Machine – Wrist Curl abdominal conditioner – Specification and purpose of each machine/equipments

**Unit – IV:** Treadmill – Stair Climbers – Wave Rovers – Bike – Magnetic recumbent – Upright and Spin – Cross Trainer – Elliptical bicycle

**Unit – V:** Criteria to be followed while selecting the equipments – Facts about quacks – Facts about passive exercise and passive devices – Weight belts – Body Wrapping – Elastic tights - Vibrating Tables and Pillows

### **Reference**

1. Hawley, E.T. and Franks B.D. (1977) Health Fitness Instructor's Handbook, Third Ed. Human Kinetics, Champaign Illinois.

2. Lindate J. (19995) Aquatic Fitness Professional Manual, Aquatic Exercise Association, Florida.
3. Pyke F.S. (1991) Better Coaching – Advanced Coach’s Manual, Australian Coaching Council.
4. Manual, Stex Fitness Equipments
5. Lindale J. (1995) Aquatic Fitness Professional Manual, Aquatic Exercise AssoMode  
Operation – Benefits, Way of handling – Stationary Bicycle – Mode of Operation – Way of  
Handling – Follow the procedure according to the Age, Sex, Weight, Condition of Trainer  
and Benefits.

#### **PGD HFLSM: 104: EXERCISE TESTING AND PRESCRIPTION (PRACTICAL)**

Treadmill

Stationary Bicycle

Stepper

Rowing Machine

Exercise Cycle

Dumbles

Multi Gym Exercise

Twister

Weight Belt

Vibrating belts and pillows

## **II SEMESTER**

### **Theory:**

#### **PGD HFLSM: 105 – Concepts and Values of Yoga:**

**Unit – I:** Introduction to Yoga – Definition of Yoga – Aims and objectives of Yoga – Ideal practical of Yoga.

**Unit – II:** Limbs of Yoga – Misconceptions of Yoga – Difference between Yogic Exercises and Physical Exercises.

**Unit – III:** Types of Yoga – Karma Yoga – Bhakti Yoga – Janana Yoga – Raja Yoga Hatha Yoga.

**Unit – IV:** Yogic Exercise – Asanas –Kriyas – Pranayama-Bandhas –Mudras- Meditation – Suriya Namaskar.

**Unit – V:** Role of Yoga in preventing Diseases – Yogic Concepts of Human body – Role of Asana – Pranayama and Meditation in various disease like Diabetics, Hyper tension –coronary Heart Diseases, Asthma, Arthritics, Obesity, Back Pain and Stress Management.

## **PGD HFSLM: 106 – Health Promotion and Nutritional Care**

**Unit – I:** - Definition of Physical activity, exercise and physical fitness – Historical Review of Exercise and Fitness – Further Challenges – Strategies for increasing physical fitness in India - The Wellness revolution all over the world.

**Unit - II:** The acute and chronic effects of Physical activity, Effect of exercise on heart rate, stroke volume, and cardiac output – Major Cardio respiratory changes during exercise, training and at rest.

**Unit – III:** Physical Activity and Ageing, Strategies and trends in postponing Ageing – Health habits and ageing, physical activity and life expectancy.

**Unit IV:** Assessment of Nutritional status – Principles of Menu planning – Nutritional deficiencies – Nutritional need for various ages – Recommended dietary allowance for athletes and normal human beings.

**Unit V:** Food toxins – Food contamination – Pesticides – safe food handling parasitic infestation – Vegetarian diet – advantages of vegetarian diet and non-vegetarian – Weight management – ideal body weight.

**Reference:**

1. Robert E.C. Wildman, Barry S. Miller, (2004), "Sports and Fitness Nutrition", Thomson.
2. Heather Hedrick fink, Lisa A. Burgoon, Alan E. Mikesky, (2006)," Practical application in sports nutrition", Joges and Bartlett.
3. Mcardle D. Wiolliam (2005), "Exercise Physiology Energy Nutrition and Human Performace", (2<sup>nd</sup> Ed.) Philadelphia: Lea and Febiger.
4. Janice Thompson, Melinda Manore, (2005)" Nutrition: An applied approach", Pearson.
5. William D. Mcardle, Frank I. Katch, Victor L. Katch, (2000), "Essentials of exercise Physiology", Lippincott Williams and Wilkins.
6. William E. Garrett J. R., Donald T. Kirendall, (2000), "Exercise and Sports Science", Lippincott Williams and Wilkins.
7. Greg Maclatchie, Mark harries, Clyde Williams, Jhon King, (2003)," ABC of sports medicines", BMJ books.

**PGD HFSLM: 108 – PRACTICAL****Unit – I:** Calisthenics**Unit – II:** Free Hand Exercise**Unit – III:** Stretching Exercise**Unit – IV:** Aerobic Exercises**Unit – V:** Yogasanas

**DPES: VALUE ADDED COURSE FOR UG**  
**HEALTH & WELLNESS, YOGA EDUCATION, SPORTS AND FITNESS**

**(As offered by the department from the year (2024 -25))**

**PONDICHERRY UNIVERSITY**  
**PONDICHERRY**



**RULES, REGULATIONS & SYLLABUS**

**UNDER**

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS**



**PONDICHERRY UNIVERSITY**  
**DPES: VALUE ADDED COURSE FOR UG**

**HEALTH & WELLNESS, YOGA EDUCATION, SPORTS AND FITNESS**

**Learning Objectives:**

- Describing Health & Wellness programs and services offered, how to access them, and their value to their well-being.
- Learn that principles of nutrition are all important parts of overall wellness.
- To learn the basic concept of wellbeing.
- Demonstrate how to get healthy and stay healthy using multiple strategies.
- Identify healthy behaviors and practices that help to avoid and reduce health risks.
- Yoga education to practice mental hygiene.
- Yoga education to integrate moral values
- Yoga education to possess emotional stability.
- Learn the physical fitness management.
- 

**UNIT-I HEALTH & WELLNESS**

Define and differentiate health and wellness - Components of health wellness and their relationship between physical activity - demographic, societal issues and factors affecting health and wellness.

Diet and nutrition for health & wellness - Essential components of balanced diet for healthy living with specific reference to the role of carbohydrates, proteins, fats, vitamins & minerals  
- malnutrition, under nutrition and over nutrition.

**UNIT-II MANAGEMENT OF HEALTH AND WELLNESS**

Meaning & importance of various dimensions of wellness. Relationship of physical fitness in achieving wellness. Drugs, doping and wellness. Role of diet and exercise in health management.

**UNIT-III YOGA EDUCATION**

Meaning and definition of yoga and its aims and objectives - Basic principles of yoga and its importance in our daily life - Yoga for mental attitude - Mind, body, breath and emotional level for higher plan of living.

**UNIT-IV YOGA PRACTICES**

Types and limbs of yoga - Yoga postures – Asana - Breathing Practices – Pranayama - Relaxation- Meditation - Mudra.

**UNIT-V FITNESS ACTIVITIES**

Types of fitness activities - Outdoor activities – Basic movement patterns. Indoor activity – Aerobics/Dance Fitness, Resistance Training for fitness.

## Reference:

1. Physical Activity and Health by Claude Bouchard, Steven N. Blair, William L. Haskell.
2. Mental Health Workbook by Emily Attached & Marzia Fernandez, 2021.
2. Mental Health Workbook for Women: Exercises to Transform Negative Thoughts and Improve WellBeing by Nashay Lorick, 2022
3. Lifestyle Diseases: Lifestyle Disease Management, by C. Nyambichu & Jeff Lumiri, 2018
4. Physical Activity and Mental Health by Angela Clow & Sarah Edmunds, 2013.
5. The Fitness Mindset by Brian Keane
6. Health Promotion: Mobilizing Strengths to Enhance Health, Wellness, and Well-being [1 ed.] F.A. Davis Company.
7. Yoga RX: A Step-by-Step Program to Promote Health, Wellness, and Healing for Common Ailments, Broadway.
8. Advanced Hatha Yoga: Classic Methods of Physical Education and Concentration [1 ed.], Inner Traditions.
9. Yoga and Physical Education, National Council of Educational Research and Training (NCERT), India.
10. Wealth First: Winning at Weight Loss and Wellness.
11. Administration of Health and Physical Education Programme. Bucher, Charles A.
12. Treaties of Hygiene and Public Health, Ghosh, B.N.
13. Principles of Public Health Administration 2003, Hanlon, John J.
14. The School Health and Health Education, Turner, C.E.
15. Health Education (National Education Association of U.T.A.), Moss et. al.
16. The School Health Education (Harber and Brothers, New York), Nemir A.
17. Nutrition Encyclopedia, edited by Delores C.S. James, The Gale Group, Inc.
18. The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and Robertson, Boyd-Eaton S. et al (1989)
19. Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons, Terras S. (1994).

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