

NORTH MAHARASHTRA UNIVERSITY, JALGAON



Faculty of Education

M. P. Ed.

(Two Year Degree Course)

Semester and Credit System

SYLLABUS

W.E.F. June 2015-16 (I and II Semester)

W.E.F. June 2016-17 (III and IV Semester)

2015-16

NORTH MAHARASHTRA UNIVERSITY, JALGAON

Faculty of Education

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

Two Year Degree Course

Revised from June 2015-16

Title:-

Title of the degree shall be master of Physical Education. (M.P.Ed)

- **Duration:** The M.P.Ed programme shall be of duration of two academic years including field attachment for a minimum of 6 weeks and research dissertation. Students shall be permitted to complete the programme requirements of the two-year programme within period of three years from the date of admission to the programme. The summer should be used for field attachment /practicum/other activities.

- **Eligibility for Admission:** - (as per NCTE norms & standard)

Candidate seeking admission to the two years M. P. Ed. (four semesters) degree course must have passed B.Sc. (Physical Education, Health Education & Sports)/ B.P.Ed, B.P.E, B.ED (Physical Education) with at least 50% marks in aggregate from the university or any other statutory university recognized by U.G.C. will be eligible for the admission.

1) Selection procedure –

Admission to the eligible candidates will be given as per the selection procedure laid down by the state government of Maharashtra from time to time.

2) Eligibility norms for appearing at bachelor of physical education –

Student teacher should have kept four semesters with at least 80% attendance at the periods in college for both the semester. He should have completed all the practical & other work expected in all part of the syllabus up to the satisfaction of the principal. He should have obtained such a certificate from the principal of the college. Unless & until he obtain such a certificate, he will not be allowed to appear for University examination

Medium –

The medium of instruction & Examination shall be Marathi, English.

- **Standard of Passing:** To pass the examination a candidate must obtain at least 50% marks in Internal and external examination of each course/head. **The candidate will have to pass minimum 5 papers in sem I and sem II for ATKT.** The marks will be converted in grades and credits and finally CGPA will be displayed on the marks statement. There will be no more difference for internal and external marks with valid difference of 20 % in each course.
- The system of evaluation will be as follows: Each assignment/ test will be evaluated in terms of marks. The marks for separate assignment and the final (semester end) examination will be added together and converted into a grade and later grade point average. Results will be declared for each semester and the final examination will give total marks, grades, grade point average.

Marks	Grade	Grade Point
90 to 100	O : Outstanding	05
80 to 90	A : Very Good	04
70 to 80	B : Good	03
60 to 70	C : Average	02
50 to 60	D : Satisfactory	01
00 to 49	F : Fail	00

The formula for conversion of Grade point average (GPA) into the final grade

04.50 - 05.00	- 0
03.50 - 04.49	- A
02.50 - 03.49	- B
01.50 - 02.49	- C
00.50 - 01.49	- D
00.00 - 00.49	- E

$$\text{GPA} = \frac{\text{Total Amt Of Grade Points Earned} \times \text{Credits hrs. for each course}}{\text{Total Credit Hours}}$$

- If a student misses an internal assessment examination he/she will be given second chance with permission of the teacher concerned.
- Students who have failed and who have been absent for the entire course may reappear at the semester-end exam. Their internal marks will not change S/he can also repeat during the 5th / the 6th semester whichever is applicable-
- The description for each of the grades will be as follows:

Grades Proposed Norms

O : Outstanding Excellent Analysts of the topic

Accurate knowledge of the primary material, wide range of reading, logical development of ideas, originality in approaching the subject, neat and systematic organization of content, elegant and lucid style.

A :Very Good Excellent Analysis of the topic

Accurate knowledge of the primary material, acquaintance with seminal publication, logical development of ideas, neat and systematic organization of content, effective and clear expression.

B :Good Good analysis and treatment of the topic

Basic knowledge of the primary material, logical development of ideas, neat and systematic organization of content, effective and clear expression.

C :Average Some important points covered basic knowledge of the primary material, logical development of ideas, neat and systematic organization of content, good language or expression.

D : Satisfactory Some points discussed basic knowledge of the primary material, some organization, acceptable language or expression.

E: Pass Any two of the above

F: Fail None of the above

- There will be an evaluation of each by the students at the end of every semester.

M.P.Ed 2 Years Course Structure

M.P.Ed Semester – I

Theory

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
Core Course						
MPCC-101	Sports Psychology	4	40	60	100	4
MPCC-102	Physiology of Exercise	4	40	60	100	4
MPCC-103	Sports Biomechanics and Kinesiology	4	40	60	100	4
Elective Course (Any One)						
MPEC-101	Sports Journalism and Mass Media	4	40	60	100	4
MPEC-102	Sports Technology					
Total		16	160	240	400	16

Practical

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
MPPC-101	Swimming/Gymnastics – (Any One) and Track and Field (Running Event)	4	100	00	100	4
MPPC-102	Laboratory Practical: (Each Two) Sports Psychology, Physiology of Exercise, Sports Biomechanics and Kinesiology	4	100	00	100	4
MPPC-103	Aerobics/Self Defense Techniques: Martial Arts/Taekwondo/Shooting/ Archery – (Any One) and Yoga	4	100	00	100	4
MPPC-104	Mass Demonstration Activities: (Any One) Lezim, Dumbbells, Tipri, Wands, Hoop, Mass P.T., Umbrella And Adventures Activities	4	100	00	100	4
Total		16	400	00	400	16

Theory – 400

Practical – 400

Total – 800

M.P.Ed Semester – II

Theory

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
Core Course						
MPCC-201	Information and Communication Technology (ICT) in Phy. Edu.	4	40	60	100	4
MPCC-202	Yogic Sciences	4	40	60	100	4
MPCC-203	Scientific Principles of Sports Training	4	40	60	100	4
Elective Course (Any One)						
MPEC-201	Theory of Sports and Games	4	40	60	100	4
MPEC-202	Sports Management and Curriculum Design in Physical Education					
Total		16	160	240	400	16

Practical

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
MPPC-201	Swimming/Gymnastics – (Any One) and Track and Field (Jumping Event)	4	00	100	100	4
MPPC-202	Game Specialization: (Any Four) Kabaddi, Kho-Kho, Badminton, Table Tennis, Tennis, Squash, Baseball, Volleyball, Basketball, Cricket, Handball, Hockey, Netball, Softball	4	00	100	100	4
Total		8	00	200	200	8

Teaching Practice

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
MPTC-201	5 Classroom Teaching Lesson Plan on Theory of Games & Sports (4 Internal + 1 External)	4	40	60	100	4
MPTC-202	5 Training Lesson Plan on Motor Abilities (4 Internal + 1 External)	4	40	60	100	4
Total		8	80	120	200	8

Theory – 400

Practical – 200

Teaching - 200

Total – 800

M.P.Ed Semester – III

Theory

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
Core Course						
MPCC-301	Athletic Care and Rehabilitation	4	40	60	100	4
MPCC-302	Sports Medicine	4	40	60	100	4
MPCC-303	Health Education and Sports Nutrition	4	40	60	100	4
Elective Course (Any One)						
MPEC-301	Sports Engineering	4	40	60	100	4
MPEC-302	Physical Fitness and Wellness					
Total		16	160	240	400	16

Practical

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
MPPC-301	Swimming/Gymnastics – (Any One) and Track and Field (Throwing Event)	4	100	00	100	4
MPPC-302	Internship for 8 Weeks	4	100	00	100	4
Total		8	200	00	200	8

Teaching Practice

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
MPTC-301	5 Sports Coaching Lesson Plans for (Any One) Track and Field/Swimming/Gymnastics	4	100	00	100	4
MPTC-302	5 Games Coaching Lesson Plans for (Any One) Kabaddi/Kho-Kho/Baseball/Cricket/ Football/Hockey/Softball/Squash/ Volleyball/Handball/Basketball/Tennis/ Netball/Badminton/Table Tennis	4	100	00	100	4
Total		8	200	00	200	8

Theory – 400

Practical – 200

Teaching - 200

Total – 800

M.P.Ed Semester – IV

Theory

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
Core Course						
MPCC-401	Research Process in Physical Education and Sports Sciences	4	40	60	100	4
MPCC-402	Applied Statistics in Physical Education and Sports	4	40	60	100	4
MPCC-403	Test, Measurement and Evaluation in Physical Education	4	40	60	100	4
Elective Course (Any One)						
MPEC-401	Value and Environmental Education	4	40	60	100	4
MPEC-402	Educational Technology and Methods of Teaching in Phy. Edu.					
Total		16	160	240	400	16

Dissertation and Viva-Voce

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
D-401	Any Subject in the Field of Physical Education and Sports	8	100	100	200	8
Total		8	100	100	200	8

Teaching Practice

Course Code	Subject	Total Hours	Internal marks	External marks	Total marks	Credit
MPTC-401	5 Sports Officiating Lessons for (Any One) Track and Field/Swimming/Gymnastics (4 Internal + 1 External)	4	40	60	100	4
MPTC-402	5 Games Officiating Lessons for (Any One) Kabaddi/Kho-Kho/Baseball/Cricket/ Football/Hockey/Softball/Squash/ Volleyball/Handball/Basketball/Tennis/ Netball/Badminton/Table Tennis (4 Internal + 1 External)	4	40	60	100	4
Total		8	80	120	200	8

Theory – 400

Dissertation – 200

Teaching - 200

Total – 800

Provision of Bonus Credits in each Semester (Maximum 06 Credits)

Sr. No.	Special Credits for Extra Co-curricular Activities	Credits
01	Sports Achievement at State level competition(Medal Winner)	1
	Sports Achievement at National level competition(Medal Winner)	2
	Sports Participation at International level competition	4
02	Inter University Competition Participation (Any One Game)	2
03	Inter Collegiate Competition Participation (Minimum Two Games)	1
04	National Cadet Corps (NCC) / National Service Scheme (NSS)	2
05	Blood Donation / Cleanliness drive / Community services	2
06	Mountaineering – Basic / Advance camp, Adventure Activities	2
07	Organization / Officiating – State / National level in any two games	2
08	News Reporting / Article Writing / Book Writing / Progress report writing	1

Note: Student can earn maximum 06 bonus credits in each semester by his/her participation in the above mentioned activities duly certified by the Head of the Institution/Department. This bonus credits will be used only to compensate loss of credits in academic activities.

Scheme of Internal Theory Assessment:

One Test	10 Marks
One Tutorial	10 Marks
Seminar	10 Marks
Attendance	10 Marks
Total	40 Marks

PART A (THEORY COURSE)

M. P. Ed. Semester – I

MPCC 101

SPORTS PSYCHOLOGY

Unit – 1: Introduction

- Sports psychology - meaning, definition, history, need and importance.
- 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 – 2: Motivation

- Motivation - meaning, definition and types (Intrinsic, Extrinsic).
- Achievement motivation - meaning and measurement.
- Stress - meaning, definition, causes.
- Stress and sports performance.
- Anxiety - meaning, definition, nature, causes, measurement.
- Competitive anxiety and sports performance.
- Aggression - meaning, definition, measurement.
- Aggression and sports performance.
- Self-concept - meaning, definition, measurement.

Unit – 3: Goal Setting

- Goal setting in physical education and sports - meaning, definition, process.
- Relaxation - meaning, definition, types and methods of psychological relaxation.
- Various psychological tests - cattle's 16 PF, EPI, MMPI, CPI, AMI etc.

Unit – 4: Sports Sociology

- Meaning and definition, sports and socialization, 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 – 5: Group Cohesion

- Group - definition and meaning, group size, groups composition, group cohesion, group interaction and 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.

References:

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

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

Jay Coakley. (2001) Sports in Society – Issues and Controversies in International Education, Mc-Craw Seventh Ed.

John D Lauther (2000) Psychology of Coaching. Ner Jersy: Prenticce Hall Inc.

John D. Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.

Miroslaw Vauks & Bryant Cratty (1999). Psychology and the Superior Athlete. London: The Macmillan Co.

Kote, S. Chandrashekhar, (2006). *Principlesof education and psychology*. Chhaya Publication House, Aurangabad.

MPCC 102
PHYSIOLOGY OF EXERCISE

Unit – 1: Skeletal Muscles and Exercise

- Macro & micro structure of the skeletal muscle.
- Chemical composition.
- Sliding filament theory of muscular contraction.
- Types of muscle fiber and muscle tone.
- Chemistry of muscular contraction - heat production in the muscle, effect of exercises and training on the muscular system.

Unit – 2: 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 – 3: 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 – 4: 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 – 5: Climatic Conditions, Sports Performance and Ergogenic Aids

- Variation in temperature and humidity, Thermoregulation.
- Sports performance in hot climate, cool climate, high altitude.
- Influence on sports performance of - amphetamine, anabolic steroids, androstenedione, beta blocker, choline, creatine, human growth hormone.
- Narcotic stimulants - amphetamines, caffeine, ephedrine, sympathomimetic amines.
- Stimulants and sports performance.

References:

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

Beotra Alka, (2000) Drug Education Handbook on Drug Abuse in Sports: Sports Authority of India Delhi.

Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs.

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

Fox, E.L., and Mathews, D.K. (1981). The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing.

Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co.

Richard, W. Bowers. (1989). Sports Physiology. WMC: Brown Publishers.

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

Kote, Joshi, (2006). *Biomechanics, applied kinesiology and physiology of exercise*. Chhaya Publication House, Aurangabad.

MPCC 103
SPORTS BIOMECHANICS AND KINSESIOLGY

Unit – 1: Introduction

- Meaning, nature, role and scope of applied kinesiology and sports biomechanics.
- Meaning of axis and planes, statics, dynamics, kinematics, kinetics.
- Centre of gravity, line of gravity, plane of the body and axis of motion.
- Vectors and scalars.

Unit – 2: 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 – 3: 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 (action-reaction).
- Meaning and definition of force, sources of force, force components.
- Force applied at an angle - pressure, friction, buoyancy, spin, centripetal force, centrifugal force.

Unit – 4: 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 – 5: Movement Analysis

- Analysis of movement.
- Types of analysis - biomechanical, cinematographic.
- Biomechanical analysis of fundamental movement - running, throwing and jumping.
- Methods of analysis - qualitative, quantitative, predictive.

Reference:

- Deshpande S.H.(2002). Manav Kriya Vigyan – Kinesiology (Hindi Edition) Amravati :Hanuman Vyayam Prasarak Mandal.
- Hoffman S.J. Introduction to Kinesiology (Human Kinesiology publication In.2005.
- Steven Roy, & Richard Irvin. (1983). Sports Medicine. New Jersey: Prentice hall.
- Thomas. (2001). Manual of structural Kinesiology, New York: Me Graw Hill.
- Uppal A.K. Lawrence Mamta MP Kinesiology(Friends Publication India 2004)
- Uppal, A (2004), Kinesiology in Physical Education and Exercise Science, Delhi Friends publications.
- Williams M (1982) Biomechanics of Human Motion, Philadelphia; Saunders Co.
- Kote, Joshi, (2006). *Biomechanics, applied kinesiology and physiology of exercise*. Chhaya Publication House, Aurangabad.

MPEC 101 (ELECTIVE)
SPORTS JOURNALISM AND MASS MEDIA

Unit – 1: 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 – 2: Sports Bulletin

- Concept of sports bulletin - journalism and sports education.
- Structure of sports bulletin, compiling a bulletin, types of bulletin.
- Role of journalism in the field of physical education.
- Sports as an integral part of physical education.
- Sports organization and sports journalism.
- General news reporting and sports reporting.

Unit – 3: 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 - equipments, editing and publishing.

Unit – 4: Report Writing on Sports

- Brief review of olympic games, asian games, common wealth games world cup, national games and indian traditional games.
- Preparing report of an annual sports meet for publication in newspaper.
- Organization of press meet/conference.

Unit – 5: Journalism

- Methods of editing a sports report.
- Evaluation of reported news.
- Interview with elite player and coach.
- Collection of album of newspaper cuttings of sports news.

Reference:

Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi : Surjeet Publications

Ahiya B.N. Chobra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication

Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication

Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press.

Kannan K (2009) Soft Skills, Madurai: Madurai: Yadava College Publication

Mohit Chakrabarti (2008): Value Education: Changing Perspective, New Delhi: Kanishka Publication,.

Padmanabhan. A & Perumal A (2009), Science and Art of Living, Madurai: Pakavathi Publication

Shiv Khera (2002), You Can Win, New Delhi: Macmillan India Limited.

Varma A.K. (1993) Journalism in India from Earliest Times to the Present Period. Sterling publication Pvt. Ltd.

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

MPEC 102 (ELECTIVE)
SPORTS TECHNOLOGY

Unit – 1: Sports Technology

- 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 – 2: Science of Sports Materials

- Adhesives - nano glue, nano moulding technology, nano turf.
- Footwear production.
- Factors and application in sports.
- Constraints foams - polyurethane, polystyrene, styrofoam, closed cell and open cell foams, neoprene, foam.
- Smart materials - shape memory alloy (SMA), thermo chromic film, high-density modeling foam.

Unit – 3: 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 equipments.
- Use of computer and software in match analysis and coaching.

Unit – 4: Modern equipment

- Playing equipments - balls (types, materials and advantages), bat/stick/ racquets (types, materials and advantages), clothing and shoes (types, materials and advantages).
- Measuring equipments - throwing and jumping events.

- Protective equipments - types, materials and advantages.
- Sports equipment with nano technology, advantages.

Unit – 5: 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.

Reference:

Charles J.A. Crane, F.A.A. and Furness, J.A.G. (1987) “Selection of Engineering Materials” UK: Butterworth Heiremann.

Finn, R.A. and Trojan P.K. (1999) “Engineering Materials and their Applications” UK: Jaico Publisher.

John Mongilo, (2001), “Nano Technology 101 “New York: Green wood publishing group.

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

Kozman, Cassidy and Jackson. Methods in Physical Education (W.B. Saunders Company, Philadelphia and London), 1952.

M. P. Ed. Semester – II

MPCC-201

INFORMATION & COMMUNICATION TECHNOLOGY (ICT) IN PHYSICAL EDUCATION

Unit – 1: 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 – 2: 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 – 3: MS Office Applications

- MS Word - main features & its uses in physical education.
- MS Excel - main features & its applications in physical education.
- MS Access - database, table, queries, forms & reports and its uses in physical education.
- MS Power Point - preparation of slides with multimedia effects.
- MS Publisher - newsletter & brochure.

Unit – 4: ICT Integration in Teaching Learning Process

- Approaches to integrating ICT in teaching learning process.
- Project based learning (PBL).
- Co-operative learning.
- Collaborative learning.
- ICT and constructivism - a pedagogical dimension.

Unit – 5: E-Learning & Web Based Learning

- E-learning.
- Web based learning.
- Visual classroom.

References:

B. Ram, New Age International Publication, Computer Fundamental, Third Edition-2006

Brain under IDG Book. India (p) Ltd Teach Yourself Office 2000, Fourth Edition-2001

Douglas E. Comer, The Internet Book, Purdue University, West Lafayette in 2005

Heidi Steel Low price Edition, Microsoft Office Word 2003- 2004

ITL Education Solution Ltd. Introduction to information Technology, Research and Development Wing-2006

Pradeep K. Sinha & Priti; Sinha, Foundations computing BPB Publications -2006.

Rebecca Bridges Altman Peach pit Press, Power point for window, 1999

Sanjay Saxena, Vikas Publication House, Pvt. Ltd. Microsoft Office for ever one, Second Edition-2006

MPCC 202
YOGIC SCIENCES

Unit – 1: Introduction

- Meaning and definition of yoga.
- Astanga yoga - yama, niyama, asana, pranayama, pratyahara, dharana, dhyana, Samadhi.
- Concept of yoga and awareness.
- Principles of breathing and relaxation.
- Yogic practices - sequence, counter pose, time, place, clothes, bathing, emptying the bowels, stomach, diet, no straining, age, contra-indication, inverted asana, sunbathing.

Unit – 2: 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 - meaning, types, benefits of clearing and balancing chakras.

Unit – 3: Kriyas

- Shat kriyas - meaning, techniques and benefits.
- Types of shat kriyas - neti, dhauti, kapalbhati, tratak, nauli, basti.
- Bandhas - meaning, techniques and benefits.
- Types of bandhas - jalandhara bandha, uddiyana bandha, mula bandha, maha bandha.

Unit – 4: Mudras

- Meaning, techniques and benefits.
- Types of mudras.
- Meditation - meaning, techniques and benefits.

- Types - passive, active, saguna meditation and nirguna meditation.

Unit – 5: 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, reproductive, endocrine, cardiovascular, muscular.

Reference:

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

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

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

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

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

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

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

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

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

MPCC 203
SCIENTIFIC PRINCIPLES OF SPORTS TRAINING

Unit – 1: Introduction

- Sports training - definition, aim, characteristics, functions.
- Training load, adaptation and recovery.
- Sports performance - model, process, structure.
- General principles of sports training.

Unit – 2: Sports Training Means and Methods

- Prime means- physical exercise, general exercise, specific exercise, competition
- Interest means- educational evaluation, practical/demonstration, explanation, verbal instruction, study observation work, lecture/discussion
- Personal and Physical Treatment means- nutrition, massage, hygienic measures, physical treatment, bio-chemical methods
- Psychological means- ideo-motor training, autogenic, psycho-tonic
- Bio-mechanical means- cinematography, measuring devices
- Natural means- light, air, water, altitude, weather condition
- Material means- audio-visual aids, training equipments and instruments
- Sports Training Methods: continuous method, interval method and repetition method

Unit – 3: Components of Training

- Strength.
- Speed.
- Endurance.
- Flexibility.
- Co-ordination.
- Technique.
- Tactics.

Unit – 4: Training Process

- Periodization - meaning, aim, single to multiple periodization, classification of periods.
- Planning - principles, types (strategic plan, tactical plan, long term plan, short term plan, ad-hoc plan).
- Planning cycles - micro cycle, meso cycle, macro cycle.
- Control of sports training - process, requirements, types, components, documents.

Unit – 5: New Horizons

- Competition - meaning, system, frequency, preparation.
- Motor development.
- Talent identification and development steps.
- Education and sports training.
- Whole concept of doping.

References:

Beotra Alka, (2000), Drug Education Handbook on Drug Abuse in Sports. Delhi: Sports Authority of India.

Bunn, J.N. (1998) Scientific Principles of Coaching, New Jersey Engle Wood Cliffs, Prentice Hall Inc.

Cart, E. Klafs & Daniel, D. Arnheim (1999) Modern Principles of Athletic Training St. Louis C. V. Mosphy Company

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Hardayal Singh (1991) Science of Sports Training, New Delhi, DVS Publications

Kote, Joshi, (2006). *Scientific principles of sports training*. Chhaya Publication House, Aurangabad.

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MPEC 201 (ELECTIVE)
THEORY OF SPORTS AND GAMES

UNIT – 1: Introduction

General Introduction of specialized games and sports–

- Athletics
- Swimming
- Gymnastics
- Badminton
- Basketball
- Cricket
- Football
- Hockey
- Handball
- Kabaddi
- Kho-Kho
- Tennis
- Volleyball
- Yoga
- Baseball
- Softball
- Squash
- Netball
- Table tennis

Each game or sports to be dealt under the following heads

- History and development.
- Ground preparation, dimensions and marking.
- Standard equipment and their specifications.
- Ethics of sports and sportsmanship.

References:

- Bunn, J. W. (1968). *The art of officiating sports*. Englewood cliffs N.J. Prentice Hall.
- Bunn, J. W. (1972). *Scientific principles of coaching*. Englewood cliffs N. J. Prentice Hall.
- Dyson, G. H. (1963). *The mechanics of athletics*. London: University of London Press Ltd.
- Lawther, J.D. (1965). *Psychology of coaching*. New York: Pre. Hall.
- Singer, R. N. (1972). *Coaching, athletic & psychology*. New York: M.C. Graw Hill.
- Kote, (2006). *Milestones in the marathon history of sports*. Chhaya Publication House, Aurangabad.

MPEC 202 (ELECTIVE)

SPORTS MANAGEMENT AND CURRICULUM DESIGN IN PHYSICAL EDUCATION

Unit – 1: Introduction to Sports Management

- Definition, importance of sports management.
- Basic principles and procedures of sports management.
- Functions of sports management.
- Personal management - objectives, personal policies, role of personal manager in an organization, personnel recruitment and selection.

Unit – 2: Program Management

- Importance of program development and the role of management, factors influencing program development.
- Steps in program development.
- Competitive sports programs.
- Management guidelines for school, colleges sports programs.
- Management problems in instructional program, community based physical education and sports program.

Unit – 3: Equipments and Public Relation

- Purchase and care of equipment.
- Guidelines for selection of equipments and supplies.
- Equipment room, equipment and supply manager.
- Guidelines for checking, storing, issuing, care and maintenance of supplies and equipments.
- Public relations in sports - planning the public relation program, principles of public relation, public relations in school and communities, public relation and the media.

Unit – 4: Curriculum

- Meaning and definition of curriculum.
- Principles of curriculum construction.
- Theories of curriculum development.
- Conservative (preservation of culture) - relevance, flexibility, quality, contextually and plurality.
- Approaches to curriculum - subject centered, learner centered and community centered.
- Curriculum framework.

Unit – 5: Curriculum Sources

- Factors that affecting curriculum - sources of curriculum materials, text books, journals, dictionaries, encyclopedias, magazines and internet.
- Integration of physical education with other sports sciences.
- Curriculum research - objectives, importance, evaluation of curriculum, methods of evaluation.

Reference:

Arora, G.L. (1984): Reflections on Curriculum, New Delhi: NCERT.

Carl, E, Willgoose. (1982). Curriculum in Physical Education, London: Prentice Hall.

Chelladurai, P. (1999). Human Resources Management in Sports and Recreation. Human Kinetics.

John, E, Nixon & Ann, E, Jewett. (1964). Physical Education Curriculum, New York: The Ronald Press Company.

McKernan, James (2007) Curriculum and Imagination: Process, Theory, Pedagogy and Action Research,. U.K. Routledge

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

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

Williams, J.F. (2003). Principles of Physical Education. Meerut: College Book House.

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M. P. Ed. Semester – III

MPCC 301

ATHLETIC CARE AND REHABILITATION

Unit – 1: 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 and body parts.

Unit – 2: 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 – 3: Rehabilitation Exercises

- Passive, active, assisted, resisted exercise for rehabilitation.
- Stretching.
- PNF techniques and principles.

Unit – 4: 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, pinching, rolling, friction, percussion, vibration, raking, petrissage, centering, pressure therapy.

Unit – 5: 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 applying various therapies - cold and heat, infrared rays, ultrasonic therapy, short wave diathermy therapy etc.
- Principles and techniques of strapping and bandages.

References:

Doherty. J. Meno. Wetb, Moder D (2000) Track & Field, Englewood Cliffs, Prentice Hal Inc.

Lace, M. V. (1951) Massage and Medical Gymnastics, London: J & A Churchill Ltd.

Mc Ooyand Young (1954) Tests and Measurement, New York: Appleton Century.

Naro, C. L. (1967) Manual of Massage and, Movement, London: Febra and Febra Ltd.

Rathbome, J.I. (1965) Corrective Physical education, London: W.B. Saunders & Co.

Stafford and Kelly, (1968) Preventive and Corrective Physical Education, New York.

MPCC 302
SPORTS MEDICINE

Unit – 1: Introduction

- Meaning, definition and importance of sports medicine.
- Definition and principles of therapeutic exercises, co-ordination exercise, balance training exercise, strengthening exercise, mobilization exercise, gait training, gym ball exercise.
- Injuries - acute, sub-acute, chronic.
- Advantages and disadvantages of RICE, PRICE, PRINCE therapy, Aquatic therapy.

Unit – 2: Basic Rehabilitation

- Basic rehabilitation - definition, principles, precautions, contraindications.
- Proprioceptive neuromuscular facilitation - definition, hold, relax, repeated contractions.
- Isotonic, isokinetic, isometric stretching.
- Stretching - definition, types, advantages, dangers, manual muscle grading.

Unit – 3: Spine Injuries and Exercise

- Head, neck and spine injuries - causes.
- Presentational of spinal anomalies.
- Flexion, compression, hyperextension, rotation injuries.
- Spinal range of motion.
- Free hand exercises, stretching and strengthening exercise for head, neck, spine.
- Supporting and aiding techniques and equipment for head, neck and spine injuries.

Unit – 4: Upper Extremity Injuries and Exercise

- Shoulder - sprain, strain, dislocation, strapping.
- Elbow - sprain, strain, strapping.
- Wrist and fingers - sprain, strain, strapping.
- Thorax and rib fracture.

- Breathing exercises, relaxation techniques, free hand exercise.
- Stretching and strengthening exercise for shoulder, elbow, wrist and hand.
- Supporting and aiding techniques and equipment for upper limb and thorax injuries.

Unit – 5: Lower Extremity and Abdomen Injuries and Exercise

- Hip - adductor strain, dislocation, strapping.
- Knee - sprain, strain, strapping.
- Ankle - sprain, strain, strapping.
- Abdomen - abdominal wall, contusion, abdominal muscle strain.
- Free exercises, stretching and strengthening exercise for hip, knee, ankle and foot.
- Supporting and aiding techniques and equipment for lower limb and abdomen injuries.

References:

Christopher M. Norris. (1993). Sports Injuries Diagnosis and Management for Physiotherapists. East Kilbride: Thomson Litho Ltd.

James, A. Gould & George J. Davies. (1985). Physical Physical Therapy. Toronto: C.V. Mosby Company.

Morris B. Million (1984) Sports Injuries and Athletic Problem. New Delhi: Surjeet Publication.

Pande. (1998). Sports Medicine. New delhi: Khel Shitya Kendra

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

Practical: Anthropometric Measurements,

MPCC 303

HEALTH EDUCATION AND SPORTS NURTITION

Unit – 1: Health Education

- Concept, dimensions, spectrum and determinants of health.
- Definition of health, health education, health instruction, health supervision.
- Aim, objective and principles of health education.
- Health service and guidance instruction in personal hygiene.

Unit – 2: Health Problems in India

- Communicable and non-communicable diseases.
- Obesity, malnutrition, adulteration in food, environmental sanitation, explosive population.
- Personal and environmental hygiene for schools.
- Objective of school health service, role of health education in schools.
- Health services - care of skin, nails, eye health service, nutritional service, health appraisal, health record, healthful school environment, first-aid and emergency care etc.

Unit – 3: Hygiene and Health

- Hygiene - meaning and type.
- Dental hygiene.
- Effect of alcohol on health, effect of Tobacco on health.
- Life style management, management of hypertension, management of obesity, management of stress.

Unit – 4: Introduction to Sports Nutrition

- Meaning and definition of sports nutrition.
- Role of nutrition in sports.
- Basic nutrition guidelines.
- Nutrients - ingestion to energy metabolism and role (carbohydrate, protein and fat).

Unit – 5: Nutrition and Weight Management

- Concept of BMI (body mass index).
- Concept of WHR (waist hip ratio).
- Obesity and its hazard.
- Dieting versus exercise for weight control.
- Maintaining a healthy lifestyle.
- Weight management program for sporty child.
- Role of diet and exercise in weight management.
- Diet plan and exercise schedule for weight gain and loss.

References:

Bucher, Charles A. "Administration of Health and Physical Education Programme".

Delbert, Oberteuffer, et. al." The School Health Education".

Ghosh, B.N. "Treaties of Hygiene and Public Health".

Hanlon, John J. "Principles of Public Health Administration" 2003.

Turner, C.E. "The School Health and Health Education".

Moss and et. At. "Health Education" (National Education Association of U.T.A.)

Nemir A. "The School Health Education" (Harber and Brothers, New York).

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Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and Robertson.

Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons.

MPEC 301 (ELECTIVE)
SPORTS ENGINEERING

Unit – 1: 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 – 2: Mechanics of engineering materials

- Concepts of internal force, axial force, shear force, bending movement.
- 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 – 3: Sports Dynamics

- Introduction to kinetics, kinematics.
- Kinematics to particles - rectilinear and curvilinear motion co-ordinate system.
- Kinetics of particles - newton's laws of motion, work, energy, impulse and momentum.

Unit – 4: Building and Maintenance

- Sports Infrastructure - gymnasium, pavilion, swimming pool, indoor stadium, outdoor 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 – 5: Facility life cycle costing

- Basics of theoretical analysis of cost, total life cost concepts, maintenance costs, energy cost, capital cost and taxation.

Reference

Franz K. F. et. al., Editor, Routledge Handbook of Sports Technology and Engineering (Routledge, 2013)

Steve Hake, Editor, The Engineering of Sport (CRC Press, 1996)

Franz K. F. et. al., Editor The Impact of Technology on Sports II (CRC Press, 2007)

Helge N., Sports Aerodynamics (Springer Science & Business Media, 2009)

Youlin Hong, Editor Routledge Handbook of Ergonomics in Sport and Exercise (Routledge, 2013)

Jenkins M., Editor Materials in Sports Equipment, Volume I (Elsevier, 2003)

Colin White, Projectile Dynamics in Sport: Principles and Applications

Eric C. et al., Editor Sports Facility Operations Management (Routledge, 2010)

MPEC 302 (ELECTIVE)

PHYSICAL FITNESS AND WELLNESS

Unit – 1: Introduction

- Meaning and definition of physical fitness.
- Physical Fitness - concepts and techniques.
- Principles of physical fitness, physiological principles involved in human movement.
- Components of physical fitness.
- Leisure time physical activity and identify opportunities in the community to participate in this activity.
- Current trends in fitness and conditioning, components of total health fitness and the relationship between physical activity and lifelong wellness.

Unit – 2: Nutrition

- Nutrients and nutrition labeling information.
- Food choices and 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 – 3: Aerobic Exercise

- Cardio respiratory Endurance Training.
- Proper movement forms, i.e., correct stride, arm movements, body alignment.
- Proper warm-up, cool down, and stretching.
- Monitoring heart rates during activity.
- Assessment of cardio respiratory fitness and set goals to maintain or improve fitness levels by cardio respiratory activities including i.e., power walking, pacer test, interval training, incline running, distance running, aerobics and circuits etc.

Unit – 4: Anaerobic Exercise

- Resistance training for muscular strength and endurance.
- Principles of resistance training.
- Safety techniques (spotting, proper body alignment, lifting techniques, awareness and proper breathing techniques).
- Weight training principles and concepts.
- Basic resistance exercises (including free hand exercise, free weight exercise, weight machines, exercise bands and tubing, medicine balls).
- Advanced techniques of weight training.

Unit V – Flexibility Exercise

- Flexibility training.
- Relaxation techniques and core training.
- Safety techniques (stretching protocol, breathing and relaxation techniques).
- Types of flexibility exercises (i.e., dynamic, static).
- Develop basic competency in relaxation and breathing techniques.
- Pilates and yoga.

Reference:

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

Dificore Judy, the complete guide to the postnatal fitness, A & C Black Publishers Ltd. 35 Bedford row, London 1998

Dr. A.K. Uppal, Physical Fitness, Friends Publications (India), 1992. Warner W.K. Oeger & Sharon A. Hoeger, Fitness and Wellness, Morton Publishing Company, 1990.

Elizabeth & Ken day, Sports fitness for women, B.T. Batsford Ltd, London, 1986.

Emily R. Foster, Karyn Hartiger & Katherine A. Smith, Fitness Fun, Human Kinetics Publishers 2002.

Lawrence, Debbie, Exercise to Music. A & C Black Publishers Ltd. 37, Sohe Square, London 1999

Robert Malt. 90 day fitness plan, D.K. publishing, Inc. 95, Madison Avenue, New York 2001

M. P. Ed. Semester – IV

MPCC 401

RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES

Unit – 1: Introduction

- Meaning, importance and definition of research.
- Need, scope and limitations of research in physical education.
- Classification/types of research (fundamental, applied, action).
- Qualities of a good researcher.

Unit – 2: Methods of Research

- Historical method.
- Experimental method.
- Survey method.
- Case study.
- Philosophical method.
- Genealogical/ethnographical method.

Unit – 3: Experimental Research

- Experimental research - meaning, nature and importance.
- Experimental design – pre-experimental design, true experimental design, quasi experimental design, factorial design.
- Campbell and Stanley's symbol system.

Unit – 4: Nature of Research

- Research problem - definition, criteria, location.
- Assumption and hypothesis.
- Review of related literature.

- Methodology - sample and population (meaning, definition, types), variables, tools and means, procedure, data collection, statistical method.
- Results and discussion.
- Summary, conclusion, recommendation and suggestion.

Unit – 5: Research Proposal and Report

- Chapterization of thesis/dissertation.
- Front materials.
- Body of thesis.
- Back materials.
- Method of writing research proposal, thesis/dissertation.
- Method of writing abstract and full paper for presenting in a conference and to publish in journals.

Reference:

Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc

Clarke David. H & Clarke H, Harrison (1984) Research processes in Physical Education, New Jersey; Prentice Hall Inc.

Craig Williams and Chris Wragg (2006) Data Analysis and Research for Sport and Exercise Science, London; Routledge Press

Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illinois; Human Kinetics;

Kamlesh, M. L. (1999) Research Methodology in Physical Education and Sports, New Delhi

Moses, A. K. (1995) Thesis Writing Format, Chennai; Poompugar Pathippagam

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

Subramanian, R, Thirumalai Kumar S & Arumugam C (2010) Research Methods in Health, Physical Education and Sports, New Delhi; Friends Publication

Kote, Joshi (2006). *Research methodology and statistical methods in physical education*. Chhaya Publication House, Aurangabad.

MPCC 402

APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS

Unit – 1: Introduction

- Meaning, definition, function, need and importance of statistics.
- Meaning of the terms - population, sample, sampling error and data.
- Types of data - parametric and non-parametric.
- Types of analysis - descriptive and inferential.
- Types of scales.

Unit – 2: Descriptive Statistics

- Measures of central tendency (mean, median and mode) - meaning, purpose, calculation and advantages.
- Measures of spread/dispersion (range, variance and standard deviation) - meaning, purpose, calculation and advantages.
- Measures of relative positions (z score, t score and college board score) - meaning, purpose, calculation and advantages.

Unit – 3: Probability Distributions and Graphs

- Normal curve.
- Meaning of probability, principles of normal curve, and properties of normal curve.
- Divergence from normality - skewness and kurtosis.
- Percentile rank.
- Standard error.

Unit – 4: Inferential and Comparative Statistics

- Parametric tests.
- Non parametric tests.
- Level of confidence and degree of freedom.

Unit – 5: Computer Data Analysis

- The computer.
- Data organization.
- MS Excel.
- SPSS (statistical package for social sciences)

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, Englewood Cliffs, Prentice Hall, Inc.

Jerry R Thomas & Jack K Nelson (2000) *Research Methods in Physical Activities*; Illinois; Human Kinetics;

Kamlesh, M. L. (1999) *Research Methodology in Physical Education and Sports*, New Delhi

Rothstein 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.

Kote, Joshi (2006). *Research methodology and statistical methods in physical education*. Chhaya Publication House, Aurangabad.

MPCC 403

TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Unit – 1: Introduction

- Meaning and definition of test, measurement and evaluation.
- Need and importance of test, measurement and evaluation.
- Classification of test - statistical test (type-1), physical test (type-2), psychomotor test (type-3) and written test (type-4).
- Criteria of good test - feasibility, validity, reliability, objectivity, applicability.
- Norms and standards.

Unit – 2: Motor Fitness Tests

- Meaning and definition of motor fitness.
- Tests 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, barrow motor ability test, newton motor ability test, kraus weber minimum muscular fitness test.

UNIT – 3: 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, cooper test (12 minutes run and walk), multi-stage fitness test (beep test).

Unit – 4: Anthropometric and Wellness Tests

- Anthropometric tests - general body measurements (weight and height), skeletal diameters (shoulder, abdominal, hip, elbow, knee, ankle etc.), circumferences (chest, upper arm, fore arm, thigh, calf etc.), skinfold measurement (biceps, triceps, fore arm, subscapular, suprailiac, thigh, calf etc.).

- Wellness tests - estimating age (skeletal, dental, secondary sex character), growth and development (BMI, WHR, BBI, BSA etc.), nutritional tests (direct and indirect), health tests (body temperature, pulse rate, BP, body fat/LBM, blood test).

Unit – 5: Skill Tests

- Specific sports skill test - Badminton (miller wall volley test), Basketball (johnson basketball test, harrison basketball ability test), Cricket (sutcliff cricket 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 (dye tennis test).

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 (2nd edition) Lanham: Scarecrow Press

Cureton T.K. (1947) Physical Fitness Appraisal and Guidance, St. Louis: The C. Mosby Company

Getchell B (1979) Physical Fitness A Way of Life, 2nd Edition New York, John Wiley and Sons, Inc

Jenson, Clayne R and Cynt ha, C. Hirst (1980) Measurement in Physical Education and Athletics, New York, Macmillan Publishing Co. Inc

Kansal D.K. (1996), "Test and Measurement in Sports and Physical Education, New Delhi: DVS Publications

Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, 3rd Edition, Dallas TX: The Cooper Institute for Aerobics Research

Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3rd Edition. Champaign IL: Human Kinetics

Kote, Saber (2006). *Test measurement and evaluation*. Chhaya Publication House, Aurangabad.

MPEC 401 (ELECTIVE)
VALUE AND ENVIRONMENTAL EDUCATION

Unit – 1: Introduction to Value Education

- Values - meaning, definition, concepts.
- Value education - need, importance and objectives.
- Moral values - need and theories.
- Classification of values - basic values of religion, classification of values.

Unit – 2: Value Systems

- Personal and communal values, consistency, internally consistent, internally inconsistent, judging value system, commitment, commitment to values.

Unit – 3: 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 – 4: 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 and services on urban slum area.
- Sanitation at fairs & festivals, mass education.

Unit – 5: 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.

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 402 (ELECTIVE)
EDUCATIONAL TECHNOLOGY AND METHODS OF TEACHING IN
PHYSICAL EDUCATION

Unit – 1: Introduction

- Teaching - meaning and definitions.
- Teaching and coaching differences.
- Educational process
- Presentation - meaning, nature, importance
- Presentation techniques - orientation, direction, exploration, observation, evaluation.
- Preparation of presentation - personal preparation, class planning, class formation, technical preparation, philosophical preparation (psychological principles, sociological principles, biological principles).
- Steps of effective teaching.

Unit – 2: Methods and Approaches

- Methods and approaches.
- Teaching methods - demonstration method, oral teaching method, whole method, part method, whole-part-whole method, orientation method, imitation method, dramatization method, observation method, project method, discussion method, natural method, set drill method, command method, progressive method, group directed practice method, individual practice method.
- Approaches - quantitative, qualitative, mix (quantitative + qualitative), formal, informal.

Unit – 3: Teaching Experiences in Physical Education

- Teaching experience.
- Characteristics of teaching experiences in physical education.
- Types of teaching experiences.
- Teaching - learning relation.
- Teaching aids - audio, visual, audio-visual, activity oriented.

Unit – 4: Teaching Planning in Physical Education

- Planning - meaning, definitions, need, importance, characteristics.
- Types of planning - strategic planning, tactical planning, long term planning, short term planning, ad-hoc planning, olympic planning.
- Planning cycles - micro cycle, meso cycle, macro cycle.
- Micro teaching plan - meaning, process.
- Integration plan - meaning, process.
- Lesson plan - meaning, preparation, benefits.
- Types of lesson - general lesson, special lesson, training lesson, coaching lesson.

Reference:

- Bhardwaj, A. (2003). *New media of educational planning*. New Delhi: Sarup of Sons.
- Bhatia, & Bhatia, (1959). *The principles and methods of teaching*. New Delhi: Doaba House.
- Kochar, S.K. (1982). *Methods and techniques of teaching*. New Delhi: Sterling Publishers Pvt. Ltd.
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PART – B (PRACTICAL COURSES)

M. P. Ed. Semester – I

MPPC 101 (Any One)

Gymnastics

Floor Exercise

- Forward Roll, Backward Roll, Cart Wheel, Scales, Split, Bridge, Holds, Jumps.

Table Vault

- Approach Run, Take off from the spring board, Through Vault, Straddle Vault.

Swimming

Fundamental Skills

- Entry into the pool.
- Developing water balance and confidence
- Water fear removing drills.
- Floating-Mushroom and Jelly fish etc.
- Gliding with and without kickboard.
- Introduction of various strokes
- Body Position, Leg, Kick, Arm pull, Breathing and Co ordination.
- Start and turns of the concerned strokes.
- Introduction of Various Strokes.
- Water Treading and Simple Jumping.
- Starts and turns of concerned strokes.
- Rules of Competitive swimming-officials and their duties, pool specifications, seeding heats and finals, Rules of the races.

Track and Field (Compulsory)

Running Events (Sprints and Relays)

- Starting techniques: Standing start, Crouch start and its variations, Proper use of blocks.
- Finishing Techniques: Run, Through, Forward lunging, Shoulder Shrug
- Ground Marking, Rules and Officiating

Relays: Fundamental Skills

- Various patterns of Baton Exchange
- Understanding of Relay Zones
- Ground Marking
- Interpretation of Rules and Officiating.

MPPC 102 (Each Two)

Laboratory Practical

- Sports Psychology, Physiology of Exercise, Sports Biomechanics and Kinesiology

MPPC 103 (Any one)

Aerobics

Introduction of Aerobics

- Postures – Warm up and cool down
- Sports Aerobics
- Dance Aerobics
- Low impact aerobics
- High impact aerobics
- Aqua Aerobics
- THR (target heart rate) Zone – Being successful in exercise and adaptation to aerobic workout.

Self Defense Techniques: Martial Arts

Fundamental Skills

- Player Stances – walking, hand positions, front-leaning, side-fighting.
- Hand Techniques - Punches (form of a punch, straight punch, and reverse punch), Blocks (eight basic).
- Leg Techniques - Snap kicks, stretching straight leg, thrust kicks, sidekicks, round house.
- Forms - The first cause Katas.
- Self Defense - against punches, grabs and strikes, against basic weapons (knife, club sticks).
- Sparring - One step for middle punch, high punch and groin punch. (Defended by appropriate block from eight basic blocks).
- Rules and their interpretations and duties of officials.

Self Defense Techniques: Taekwondo

Fundamental Skills

- Player Stances – walking, extending walking, L stance, cat stance.
- Fundamental Skills – Sitting stance punch, single punch, double punch, triple punch.
- Punching Skill from sparring position – front-fist punch, rear fist punch, double punch, and four combination punch.
- Foot Techniques (Balgisul) – standing kick (soseochagi), Front kick (AP chagi), Arc kick (BandalChagi), Side kick, (YeopChagi), Turning kick (DollyoChagi), Back kick (Twit Chagi), Reverse turning kick (BandaedollyoChagi), Jump kick (TwimyoChagi),
- Poomsae (Forms) – Jang, Yi Jang, Sam Jang, Sa Jang, O Jang, Yook Jang, Chil Jang, Pal Jang (Fundamental Movement – eye control, concentration of spirit, speed control, strength control, flexibility, balance, variety in techniques)
- Sparring (Kyorugi) – One Step Sparring (hand techniques, foot techniques, self defense techniques, combination kicks), Free Sparring.
- Board Breaking (Kyokpa) – eye control, balance, power control, speed, point of attack.
- Rules and their interpretations and duties of officials.

Self Defense Techniques: Shooting

Fundamental Skills

- Player Stances
- Fundamental Skills
- Rules and their interpretations and duties of officials

Self Defense Techniques: Archery

Fundamental Skills

- Player Stances
- Fundamental Skills
- Rules and their interpretations and duties of officials

Yoga (Compulsory)

- Surya Namaskara,
- Pranayams
- Corrective Asanas
- Kriyas
- Asanas
 - Sitting
 - Standing
 - Laying Prone Position,
 - Laying Spine Position

MPCC 104 (Any One)

Mass Demonstration Activities

Lezim

- **Ghati Lezuim –**
- Khade hath: Don aavaj, Char aavaj, Aath aavaj, Aage pav patak, Single pavitra, Double pavitra, Single kadam tal, Double kadam tal, Ghoda chal, Khada adhanga, Zuk kar adhanga.

- Baithe hath: Char aavaj, Aath aavaj, Aage pichhe – Upar niche, Dahine Baye hat ki harkat.

Dumbells

- Upar niche stroke, Aage pichhe stroke, Kamar zuk stroke, Aage Adganga, Baju Adganga, Peth guthan stroke.

Tipri

- Exercise with verbal command, drum, whistle and music – Two count, Four count, Eight count and Sixteen count.
- Standing Exercise
- Jumping Exercise
- Moving Exercise
- Combination of above all

Wands

- Exercise with verbal command, drum, whistle and music – Two count, Four count, Eight count and Sixteen count.
- Standing Exercise
- Jumping Exercise
- Moving Exercise
- Combination of above all

Hoop

- Exercise with verbal command, drum, whistle and music – Two count, Four count, Eight count and Sixteen count.
- Standing Exercise
- Jumping Exercise
- Moving Exercise
- Combination of above all

Mass P.T. Exercises

- Eight count and Sixteen count exercises

Umbrella

- Exercise with verbal command, drum, whistle and music – Two count, Four count, Eight count and Sixteen count.
- Standing Exercise
- Jumping Exercise
- Moving Exercise
- Combination of above all

Adventure Activities (Compulsory)

- Trekking, Wall climbing, River crossing, Mountaineering, etc

M. P. Ed. Semester – II

MPPC 201 (Any One)

Swimming

Introduction of water polo game

- Fundamental skills
- Swim with the ball
- Passing
- Catching
- Shooting
- Goal keeping
- Rules of the games and responsibility of officials

Introduction of diving sports.

- Basic Diving Skills from spring boards
- Basic Diving Skills from platform

Gymnastics

Horizontal /Single Bar (Boys):

- Grip
- Swings
- Fundamental Elements
- Dismount

Uneven Parallel Bar (Girls):

- Grip
- Swings
- Fundamental Elements
- Dismount

Track and Field (Compulsory)

Jumping Events (Long Jump and High Jump)

- Starting techniques
- Finishing Techniques
- Ground Marking, Rules and Officiating

MPPC 202 (Any Four)

Games Specialization

Kabaddi

Fundamental Skills

- Skills in Raiding-Touching with hand, various kicks, crossing of baulk line, Crossing of Bonus line, luring the opponent to catch, Pursuing.
- Skills of Holding the Raider-Variations formations, Catching from particular position, Different catches, Luring the raider to take particular position so as to facilitate catching, catching formations and techniques.
- Additional skills in raiding-Bringing the antis in to particular position, Escaping from various holds, Techniques of escaping from chain formation, Combined formations in offence and defense.
- Ground Marking, Rules and Officiating

Kho – Kho

Fundamental Skills

- General skills of the game-Running, chasing, Dodging, Faking etc.
- Skills in chasing-Correct Kho, Moving on the lanes, Pursuing the runner, Tapping the inactive runner, Tapping the runner on heels, Tapping on the pole, Diving, Judgement in giving Kho, Rectification of Foul.
- Skills in Running-Zig zag running, Single and double chain, Ring play, Rolling in the sides, Dodging while facing and on the back, fakes on the pole, fake legs, body arm etc,

Combination of different skills.

- Ground Marking
- Rules and their interpretations and duties of officials.

Badminton

Fundamental Skills

- Racket parts, Racket grips, Shuttle Grips.
- The basic stances.
- The basic strokes-Serves, Forehand-overhead and underarm, Backhand-overhead and underarm
- Drills and lead up games
- Types of games-Singles, doubles, including mixed doubles.
- Rules and their interpretations and duties of officials.

Table Tennis

Fundamental Skills

- The Grip-The Tennis Grip, Pen Holder Grip.
- Service-Forehand, Backhand, Side Spin, High Toss.
- Strokes-Push, Chop, Drive, Half Volley, Smash, Drop-shot, Balloon, Flick Shot, Loop Drive.
- Stance and Ready position and foot work.
- Rules and their interpretations and duties of officials.

Tennis

Fundamental Skills

- Grips- Eastern Forehand grip and Backhand grip, Western grip, Continental grip, Chopper grip.
- Stance and Footwork.
- Basic Ground strokes-Forehand drive, Backhand drive.
- Basic service.

- Basic Volley.
- Over-head Volley.
- Chop
- Tactics – Defensive, attacking in game
- Rules and their interpretations and duties of officials.

Squash

Fundamental Skills

- Service- Under hand and Over hand
- Service Reception
- Shot- Down the line, Cross Court
- Drop
- Half Volley
- Tactics – Defensive, attacking in game
- Rules and their interpretations and duties of officials.

Base Ball

Fundamental Skills

- Player Stances – walking, extending walking, L stance, cat stance.
- Grip – standard grip, choke grip,
- Batting – swing and bunt.
- Pitching –
- Baseball : slider, fast pitch, curve ball, drop ball, rise ball, change up, knuckle ball, screw ball,
- Softball: windmill, sling shot,
- starting position: wind up, set.
- Fielding –
- Catching: basics to catch fly hits, rolling hits,
- Throwing: over arm, side arm.
- Base running –

- Base running: single, double, triple, home run,
- Sliding: bent leg slide, hook slide, head first slide.
- Rules and their interpretations and duties of officials.

Volleyball

Fundamental Skills

- Players Stance-Receiving the ball and passing to the team mates,
- The Volley (Over head pass),
- The Dig (Under hand pass).
- Service-Under Arm Service, Side Arm Service, Tennis Service, Round Arm Service.
- Rules and their interpretations and duties of officials.

Basket ball

Fundamental Skills

- Player stance and ball handling
- Passing-Two Hand chest pass, Two hand Bounce Pass, One Hand Base ball pass, Side Arm Pass, Over Head pass, Hook Pass.
- Receiving-Two Hand receiving, One hand receiving, Receiving in stationary position, Receiving while jumping, Receiving while running.
- Dribbling-How to start dribble, How to drop dribble, High dribble, Low dribble, Reverse dribble, Rolling dribble.
- Shooting-Layup shot and its variations, one hand set shot, One hand jump shot, Hook shot, Free throw.
- Rebounding-Defensive rebound, Offensive rebound, Knock out, Rebound Organization.
- Individual Defensive-Guarding the man with the ball and without the ball.
- Pivoting.
- Rules and their interpretations and duties of the officials.

Cricket

Fundamental Skills

- Batting-Forward and backward defensive stroke
- Bowling-Simple bowling techniques
- Fielding-Defensive and offensive fielding
- Catching-High catching and Slip catching
- Stopping and throwing techniques
- Wicket keeping techniques

Hand Ball

Fundamental Skills

- Catching
- Throwing
- Ball Control
- Dribbling-High and Low
- Goal Throws- Jump Shot, Centre Shot, Dive Shot, Reverse Shot
- Attack and Counter Attack,
- Simple Counter Attack, Counter Attack from two wings and centre, Blocking, Goal keeping, Defense.
- Rules and their interpretations and duties of officials.

Hockey

Fundamental Skills

- Player stance & Grip
- Rolling the ball
- Dribbling
- Push
- Stopping
- Hit
- Flick

- Scoop
- Passing – Forward pass, square pass, triangular pass, diagonal pass, return pass,
- Reverse hit
- Dodging
- Goal keeping – Hand defence, foot defence
- Positional play in attack and defense.
- Rules and their interpretations and duties of officials.
- Rules and their interpretations and duties of officials.
- Ground Marking.

Netball

Fundamental Skills

- Catching: one handed, two handed, with feet grounded, in flight.
- Throwing (different passes and their uses): one handed passes (shoulder, high shoulder, underarm, bounce, lob); two handed passes (push, overhead, bounce).
- Footwork: landing on one foot; landing on two feet; pivot; running pass.
- Shooting: one hand; two hands; forward step shot; backward step shot.
- Techniques of getting free: dodge and sprint; sudden sprint; sprint and stop; sprinting with change of speed.
- Defending: marking the player; marking the ball; blocking; inside the circle; outside the circle (that is, defending the circle edge against the pass in).
- Intercepting: pass; shot.
- The toss-up.
- Role of individual players
- Rules and their interpretations and duties of officials.

Softball

Fundamental Skills

- Catching: one handed, two handed, with feet grounded, in flight.
- Throwing (different passes and their uses): one handed passes (shoulder, high shoulder,

underarm, bounce, lob); two handed passes (push, overhead, bounce).

- Footwork: landing on one foot; landing on two feet; pivot; running pass.
- Shooting: one hand; two hands; forward step shot; backward step shot.
- Techniques of getting free: dodge and sprint; sudden sprint; sprint and stop; sprinting with change of speed.
- Defending: marking the player; marking the ball; blocking; inside the circle; outside the circle (that is, defending the circle edge against the pass in).
- Intercepting: pass; shot.
- The toss-up.
- Role of individual players
- Rules and their interpretations and duties of officials.

M. P. Ed. Semester – III

MPPC 301 (Any One)

Swimming

Introduction and practice of other events

Various stroke positions

Gymnastics

Parallel Bar (Boys):

- Mount from one bar
- Straddle walking on parallel bars.
- Single and double step walk
- Perfect swing
- Shoulder stand on one bar and roll forward.
- Roll side
- Shoulder stand
- Front or back vault to the side(dismount)

Balancing Beam (Girls):

- Mount
- Walking
- Cycling
- Jumps
- Pivots
- Dismount

Track and Field (Compulsory)

Throwing Events (Shot Put/Discus Throw and Javelin)

- Starting techniques
- Finishing Techniques
- Ground Marking, Rules and Officiating

MPPC 302

- Internship for 8 Weeks at any School, Gymnasium, Sports Club or Physical Education related agencies.
- 8 week Internship program should be conducted as per following:
 1. During the internship, a student shall work as a regular staff of a School, Gymnasium, Sports Club or Physical Education related agencies.
 2. Participate in all activities.
 3. Internship program, there shall be space for extended discussions and presentations on different aspects of work.
 4. Teacher student interaction shall necessary in the mode of report, discussions, feedback etc.
 5. Prepare and submit a report on internship program.
 6. Interactive meetings with Head Master, Staff and Parent.

M. P. Ed. Semester – IV

D 401

- Dissertation and Viva-voce on any subject in the field of physical education and sports
- Format of the dissertation:

Page No. 1

“Title of the Dissertation”

A Dissertation Submitted To
College Name,
Affiliated to North Maharashtra University, Jalgaon.

For the Completion of
MASTER OF PHYSICAL EDUCATION

BY
Research Student’s Name

Under the Guidance of
Guide Name
Designation,
Working Place

Month, Year

Page No. 2

CERTIFICATE

This is to certify that the work embodied in this dissertation entitled, **“Title of the Dissertation”**, has been carried out by **(Research Student’s Name)**. The work included in this dissertation is original, unless stated otherwise and has not been submitted for other degree of North Maharashtra University or any other University. References made to the work of others have been cited in the text.

Guide Name
Designation,
Working Place

Place:

Date:

Page No. 3

DECLARATION

I hereby declare that the present work completed in the form of dissertation entitled, “**Title of the Dissertation**”, is an original work and has not been submitted, or published in any form for the fulfillment of any other degree or any other similar to this or any other University.

Research Student’s Name,
Class,
College Name

Place:

Date:

Page No. 4

ACKNOWLEDGEMENT

I express my deep sense of gratitude to my respected teacher and research guide and helping people.

Research Student’s Name,
Class,
College Name

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BIBLIOGRAPHY

APPENDICISES

ENGLISH FONT – TIMES NEW ROMEN

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PART C (TEACHING COURSE)

M. P. Ed. Semester – II

MPTC 201

Teaching practices

- 5 classroom teaching lesson plans on theory of different sports & games.

MPTC 202

Teaching practices

- 5 outdoor training lesson plans on motor abilities – Strength, Speed, Endurance, Flexibility, Co-ordination.

M. P. Ed. Semester – III

MPTC 301

Teaching practices

- 5 sports coaching lesson plans for any one – Track and Field/Swimming/Gymnastics

MPTC 302

Teaching practices

- 5 games coaching lesson plans for any one – Kabaddi/Kho-Kho/Baseball/Cricket/
Football/Hockey/Softball/Squash/Volleyball/Handball/Basketball/Tennis/Netball/
Badminton/Table Tennis

M. P. Ed. Semester – IV

MPTC 401

Teaching practices

- 5 sports officiating lesson for any one – Track and Field/Swimming/Gymnastics

MPTC 402

Teaching practices

- 5 games officiating lesson for any one – Kabaddi/Kho-Kho/Baseball/Cricket/
Football/Hockey/Softball/Squash/Volleyball/Handball/Basketball/Tennis/Netball/
Badminton/Table Tennis