

YMCA COLLEGE OF PHYSICAL EDUCATION

(An Autonomous College Affiliated to the Tamil Nadu Physical Education & Sports University)

NANDANAM, CHENNAI - 600 035.

Accredited by NAAC with "A" Grade

SYLLABUS



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

(Two Year)

2015 - 2017

MASTER OF PHYSICAL EDUCATION (M.P.Ed.)
TWO YEARS
CREDIT SYSTEM

Preamble:

The Master of Physical Education (M.P.Ed.) two years (Four Semesters, 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 College of Physical Education.

The M.P.Ed.programme is designed to integrate the study of childhood, social context of Physical Education, subject knowledge, pedagogical knowledge, aim of Physical Education and communication skills. The programme comprise of compulsory and optional theory as well as practical courses and compulsory school internship in School/College/Sports Organizations/Sports Academy/Sports Club.

1.Intake, Eligibility and Admission Procedure:

The Intake, Eligibility and Admission Procedure is as per the NCTE and TNPESU norms and standards.

2. Duration:

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

3. The CS System:

All programmes shall run on Credit System (CS). 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. Course:

The term course usually referred to, as 'papers' is a component of a programme. All Courses 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 need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise Lectures/ Tutorials/Laboratory

5. 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.

6. Evaluation:

6.1 Written Examination (20 Marks):

Each student will be graded by the subject teacher(s). Three sessional tests will be conducted for each paper. Each test carries a maximum of 20 marks and the average of best two tests will be considered. However, in the case of students who miss the tests for any valid reason with prior permission from the subject teacher(s) and the Principal, they may be granted special permission to write the sessional test before the commencement of semester examinations.

6.2 Assignment (5 Marks):

The students will be given 5 marks for assignments. This may be in the form of Seminars, Projects, Written Materials, Records, etc., A student should submit a minimum of two assignments for each course.

6.3 Pre Semester (75 Marks):

The Pre Semester examinations will be held at the end of each semester before the final semester examinations, covering all portions and 75 marks are awarded for this examination. Each paper will be evaluated for 75 marks and this will be converted into 25 marks. All the examination will be conducted by the Controller of Examinations. The dated and test portions will be intimated in advance by staff concerned. There are no minimum marks for passing in both internal and external examinations. However, the minimum for passing in each paper is 50% combining internal and external marks. A student who fails in anyone or more papers in the semester examination, will be permitted to rewrite the paper or papers in the subsequent semester examinations.

First sessional test	=	20 Marks
Second sessional test	=	20 Marks
Third sessional test	=	20 Marks

Average of the best two tests	=	20 Marks
Assignment	=	5 Marks
Pre Semester converted to 25	=	25 Marks
Total	=	50/2
Internal	=	25 Marks

6.4 Theory:

- i. The Answer scripts are evaluated by both internal and external examiners (Double Valuation).
- ii. If there is 10% difference between two examiners, a third revaluation is conducted, which will be final.
- iii. Question papers for each examination will follow the regulation and syllabus in force at that time. The question paper pattern include both 5 marks and 10 marks.
 - a. Where 5 questions out of 7 questions should be answered in each part.
 - b. Part A - 5 Questions X 5 Marks = 25 Marks
 - c. Part B - 5 Questions X 10 Marks = 50 Marks

Total	=	75 Marks
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- iv. A student getting 'RA' Re-Appear in a subject must repeat the examination to obtain the degree. Such students are exempted from attendance.
- v. A student shall not be permitted to repeat any course only for the purpose of improving the grade.

6.5 Practical:

There are no minimum marks for passing in both internal and external examinations. However, the minimum for passing in each practical is 50% of total marks in the particular practical.

A student, who fails in any one or more practical in the semester examination, will be permitted to redo the practical(s) in the subsequent semester examinations.

Part – II Practical:

Practical will be evaluated internally.

Part – III Teaching/Coaching Lessons on specialization and Internship Training:

I Semester:

Teaching practice and Class room teaching will be evaluated Internally.

Specialization 2nd best and 1st best will be evaluated Internally.

II Semester:

Teaching practice and Class room teaching will be evaluated Internally.

Specialization 2nd best will be evaluated Externally.

Specialization 1st best will be evaluated Internally.

III Semester:

Coaching lesson and Officiating will be evaluated Internally.

Specialization 1st best will be evaluated Internally.

Internship Training

IV Semester:

Coaching lesson and Officiating will be evaluated Internally.

Specialization 1st best will be evaluated Externally.

6.6 Arrear Examinations:

Examination fees will be levied and collected normally according to the rules and regulations of the college. A special levy will be collected for supplementary paper.

6.7 Passing of Results:

Result will be approved by the Board of Examiners and will be submitted to the Academic Council of the college to recommend the eligible students for the award of the degree by Tamil Nadu Physical Education and Sports University.

7. Registration

7.1 Every student must register for the courses he/she intends to undergo in a semester. A registration form in triplicate can be obtained from the credit system office. A student should submit the duly filled in and signed registration form in triplicate with the subject teacher's and Principal's signature in the credit system office at the time of registration.

7.2 After admission to the programme, a code number will be assigned for each student, giving the year of admission and the student registration number.

7.3 The subject teacher shall advise the student about the academic programme and counsel him/her on the choice of courses (elective only) to be registered.

7.4 The college shall prescribe the maximum number of students in each course taking into account the physical facilities available. A course shall not be offered unless a minimum of 10 students register in either Core or Elective courses.

7.5 A course shall normally be taught by one staff.

8. Attendance:

8.1 A student must have 90% of attendance in theory and practical classes to write the semester examinations. A student with less than 90% of attendance will be given the grade 'RA'. (Re-Appeal due to lack of attendance)

8.2 A student having below 90% and above 50% attendance will not be allowed to write the exam in the semester. A student having below 50% attendance should repeat the course.

8.3 The student's attendance progress report would be displayed on the notice board every month.

9. Grading:

Once the marks of the CIA (Continues Internal Assessment) and SEA (Semester End Assessment) for each of the courses are available, both (CIA and SEA) will be added. The marks thus obtained for each of the courses will then be graded as per details provided in sub heading letter grades and grade point from the first semester onwards the average performance within any semester from the first semester is indicated by Semester Grade Point Average (SGPA) while continuous performance (including the performance of the previous semesters also) starting from the first semester is indicated by Cumulative Grade Point Average (CGPA). These two are calculated by the following formula:

$$\text{SGPA} = \frac{\sum_{i=1}^n C_i G_i}{\sum_{i=1}^n C_i}$$

$$\text{CGPA} = \frac{\sum_{j=1}^N \text{SGPA}_j}{N}$$

Where C_i is the Credit earned for the course in any semester; G_i is the Grade point obtained by the student for the course and n number of courses obtained in that semester; SGPA_j is SGPA of semester j and N number of semester. Thus CGPA is average of SGPA of all the semesters starting from the first semester to the current semester.

10. Classification of Final Results:

For the purpose of declaring a candidate to have qualified for the Degree of Bachelor 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. Letter Grades and Grade Points:

i. Two methods—relative grading or absolute grading— have been in vogue for awarding grades in a course. The relative grading is based on the distribution (usually normal distribution) of marks obtained by all the students in the course and the grades are awarded based on a cut-off mark or percentile. Under the absolute grading, the marks are converted to grades based on pre-determined class intervals. To implement the following grading system, the colleges and universities can use any one of the above methods.

ii. The grades for each course would be decided on the basis of the percentage marks obtained at the end-semester external and internal examinations as per following table:

Percentage	Grade point	Letter Grade	Description
90 – 100	9.0 – 10.0	O	Outstanding
80 – 89.99	8.0 – 8.99	D+	Excellent
75 – 79.99	7.5 – 7.99	D	Distinction
70 – 74.99	7.0 – 7.49	A+	Very Good
60 – 69.99	6.0 – 6.99	A	Good
50 – 59.99	5.0 – 5.99	B	Average
00 – 49.99	0.0	RA	Re-Appear
Absent			

MPED SYLLABUS 2015 – 2016

	CORE COURSE	ELECTIVE COURSE	PRACTICAL
SEM I	MCC 101 Yogic Sciences MCC102 Research Process in Physical Education and Sports Sciences MCC 103 Physiology of Exercise	MEC 104 Environmental Studies MEC 105 Sports Management	MPC 106Track and Field (Throws) and Aerobics MPC 107Yoga and Exercise Physiology Lab MPC 108Specialization 2 nd Best MPC 109Specialization 1 st Best MPC 110Teaching Practice and Class Room Teaching
SEM II	MCC 201 Sports Psychology MCC 202 Applied Statistics in Physical Education MCC 203 Test, Measurement and Evaluation in Physical Education	MEC 204 Value Education MEC 205 Sports Nutrition and Health Promotion	MPC 206Track and Field (Sprint, Relay, Hurdle) and Gymnastics MPC 207 Indigenous Activities and Sports Psychology Lab MPC 208Specialization 2 nd Best MPC 209Specialization 1 st Best MPC 210Teaching Practice and Class Room Teaching
SEM III	MCC 301 Scientific Principles of Sports Training MCC 302 Curriculum Design in Physical Education MCC 303 Sports Biomechanics and Applied Kinesiology	MEC 304 ICT in Physical Education MEC 305 Sports Sociology	MPC 306 Track and Field (Jumps) and Swimming MPC 307 Martial Arts and Biomechanics and Kinesiology Lab MPC 308Coaching Lessonand Officiating MPC 309Specialization 1 st Best MPC 310Internship
SEM IV	MCC 401 Prevention and Management of Sports Trauma MCC 402 Rules of Sports and Games MCC 403 Dissertation	MEC 404 Sports Technology MEC 405Sports Engineering	MPC 406 Track and Field (Middle and Long Distance) and Training Methods MPC 407 Mass Drill and Sports Injury and Rehabilitation Lab MPC 408Coaching Lessonand Officiating MPC 409Specialization 1 st Best

SEMESTER	MORNING PRACTICALS	EVENING PRACTICAL
I Semester	<ol style="list-style-type: none"> 1. Track and Field (Throws) 2. Yoga 3. Aerobics 4. Teaching Practice 5. Exercise Physiology Lab 	<ol style="list-style-type: none"> 1. Specialization 2nd Best (Basketball, Cricket, Football, Handball, Hockey, Track and Field, Volleyball) 2. Specialization 1st Best (Basketball, Cricket, Football, Handball, Hockey, Track and Field, Volleyball)
II Semester	<ol style="list-style-type: none"> 1. Track and Field (Sprint, Relay, Hurdle) 2. Gymnastics 3. Indigenous Activities 4. Teaching Practice 5. Biomechanics and Kinesiology Lab 	<ol style="list-style-type: none"> 1. Specialization 2nd Best (Basketball, Cricket, Football, Handball, Hockey, Track and Field, Volleyball) 2. Specialization 1st Best (Basketball, Cricket, Football, Handball, Hockey, Track and Field, Volleyball)
III Semester	<ol style="list-style-type: none"> 1. Track and Field (Jumps) 2. Swimming 3. Martial Arts 4. Coaching Lesson and Officiating 5. Sports Psychology Lab 	<ol style="list-style-type: none"> 1. Specialization 1st Best (Basketball, Cricket, Football, Handball, Hockey, Track and Field, Volleyball)
IV Semester	<ol style="list-style-type: none"> 1. Track and Field (Middle and Long Distance) 2. Mass Drill 3. Training Methods 4. Coaching Lesson and Officiating 5. Sports Injury and Rehabilitation Lab 	<ol style="list-style-type: none"> 1. Specialization 1st Best (Basketball, Cricket, Football, Handball, Hockey, Track and Field, Volleyball)

SEMESTER I

Course	Title of the paper	L	T	P	Total Credits	Internal	External	Total
MCC 101	Yogic Sciences	4	0	0	4	25	75	100
MCC102	Research Process in Physical Education and Sports Sciences	4	0	0	4	25	75	100
MCC 103	Physiology of Exercise	4	0	0	4	25	75	100
MEC 104	Environmental Studies	1	0	0	1	25	75	100
MEC 105	Sports Management							
MPC 106	Track and Field (Throws) and Yoga	0	2	2	3	(Each Activity 50 Marks)		100
MPC 107	Aerobics and Exercise Physiology Lab	0	2	2	3	(Each Activity 50 Marks)		100
MPC 108	Specialization 2 nd Best	0	2	2	3	-	-	100
MPC 109	Specialization 1 st Best	0	2	2	3	-	-	100
MPC 110	Teaching Practice and Class Room Teaching		1	1	2	-	-	100

I Semester Total Credit = 27

SEMESTER II

Course	Title of the paper	L	T	P	Total Credits	Internal	External	Total
MCC 201	Sports Psychology	4	0	0	4	25	75	100
MCC 202	Applied Statistics in Physical Education	4	0	0	4	25	75	100
MCC 203	Test, Measurement and Evaluation in Physical Education	4	0	0	4	25	75	100
MEC 204	Value Education	1	0	0	1	25	75	100
MEC 205	Sports Nutrition and Health Promotion							
MPC 206	Track and Field (Sprint, Relay, Hurdle) and Gymnastics	0	2	2	3	(Each Activity 50 Marks)		100
MPC 207	Indigenous Activities and Sports Psychology Lab	0	2	2	3	(Each Activity 50 Marks)		100
MPC 208	Specialization 2 nd Best (External)	0	2	2	3	Average		100
MPC 209	Specialization 1 st Best	0	2	2	3	-	-	100
MPC 210	Teaching Practice and Class Room Teaching		1	1	2	-	-	100

II Semester Total Credit = 27

SEMESTER III

Course	Title of the paper	L	T	P	Total Credits	Internal	External	Total
MCC 301	Scientific Principles of Sports Training	4	0	0	4	25	75	100
MCC 302	Curriculum Design in Physical Education	4	0	0	4	25	75	100
MCC 303	Sports Biomechanics and Applied Kinesiology	4	0	0	4	25	75	100
MEC 304	ICT in Physical Education	1	0	0	1	25	75	100
MEC 305	Sports Sociology							
MPC 306	Track and Field (Jumps) and Swimming	0	2	2	3	(Each Activity 50 Marks)		100
MPC 307	Martial Arts and Biomechanics and Kinesiology Lab	0	2	2	3	(Each Activity 50 Marks)		100
MPC 308	Coaching Lesson and Officiating	0	2	2	3	-	-	100
MPC 309	Specialization 1 st Best	0	4	4	6	-	-	100
MPC 310	Internship		1	6	4	-	-	100

III Semester Total Credit = 32

SEMESTER IV

Course	Title of the paper	L	T	P	Total Credits	Internal	External	Total
MCC 401	Prevention and Management of Sports Trauma	4	0	0	4	25	75	100
MCC 402	Rules of Sports and Games	4	0	0	4	25	75	100
MCC 403	Dissertation	4	0	0	4	25	75	100
MEC 404	Sports Technology	1	0	0	1	25	75	100
MEC 405	Sports Engineering							
MPC 406	Track and Field (Middle and Long Distance) and Training Methods	0	2	2	3	(Each Activity 50 Marks)		100
MPC 407	Mass Drill and Sports Injury and Rehabilitation Lab	0	2	2	3	(Each Activity 50 Marks)		100
MPC 408	Coaching Lesson and Officiating	0	1	1	2	-	-	100
MPC 409	Specialization 1 st Best (External)	0	4	4	6	Average		100

IV Semester Total Credit = 27

TOTAL CREDITS IN MPED TWO YEARS COURSE

Semester	Credits in Theory Part I	Credits in Practical		Total
		Part II (Games and Other Activity)	Part III (Teaching/Coaching/ Internship)	
I	13	6	8	27
II	13	6	8	27
III	13	6	13	32
IV	13	6	8	27
TOTAL	52	24	37	113

Total credits in all the four semester = 27+27+32+27
Total = 113 Credits

TOTAL MARKS IN MPED TWO YEARS COURSE

Semester	Marks in Theory Part I	Marks in Practical		Total
		Part II (Games and Other Activity)	Part III (Teaching/Coaching/ Internship)	
I	400	200	300	900
II	400	200	300	900
III	400	200	300	900
IV	400	200	200	800
TOTAL	1600	800	1100	3500

Provision of Bonus Credits Maximum 06 Credits in each Semester
Sr. No. Special Credits for Extra Co-curricular Activities Credit

Sr.No	Special Credits for Extra Co-Curricular Activities	Credit
1	Sports Achievement at State level Competition (Medal Winner)	1
	Sports Achievement National level Competition (Medal Winner)	2
	Sports participation International level Competition	4
2	Inter Uni. Participation (Any one game)	2
3	Inter College Participation (min. two game)	1
4	National Cadet Corps / National Service Scheme	2
5	Blood donation / Cleanliness drive / Community services	2
6	Mountaineering – Basic Camp, Advance Camp / Adventure Activities	2
7	Organization / Officiating – State / National level in any two game	2
8	News Reporting / Article Writing / book writing / progress report writing	1
9	Research Project	4
10	Intramural per Semester	1

SEMESTER I

MC 101 Yogic Sciences

Unit I – Introduction

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

Unit II – Kriyas

Shat Kriyas- Meaning, Techniques and Benefits of Neti – Dharti – Kapalapathi- Trataka – Nauli – Basti, Bandhas: Meaning, Techniques and Benefits of JalendraBandha, Jihva Bandha, UddiyanaBandha, MulaBandha.

Unit III – 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 IV – 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. Note: Laboratory Practicals be designed and arranged internally.

Unit V – Yoga for Skill Development

Yoga for skill development – yoga for performance enhancement of sports person – yoga for management of selected sports injuries – yoga for leadership – yoga for fitness and hygiene.

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.
- Karbelkar N.V. (1993) PatanjaliYogasutraBhashya (Marathi Edition) Amravati: Hanuman VyayamPrasarakMandal
- Kenghe.C.T. (1976). Yoga as Depth-Psychology and para-Psychology (Vol-I): Historical Background, Varanasi: BharataManishai.
- Kuvalyananada Swami and S.L. Vinekar, (1963), Yogic Therapy – Basic Principles and Methods. New Delhi: Govt. of India, Central Health Education and Bureau.
- Moorthy A.M. and Alagesan. S. (2004) Yoga Therapy. Coimbatore: Teachers Publication House.
- Swami Kuvalayanda, (1998), Asanas. Lonavata: Kaivalyadhama.
- Swami SatyananadaSarasvati. (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.

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

MCC102 Research Process in Physical Education and Sports Sciences

UNIT I – Introduction

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

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

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

REFERENCE :

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

Clarke David. H and 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 and Jack K Nelson (2000) Research Methods in Physical Activities; Illinois; Human Kinetics;

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

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

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

Subramanian, R, Thirumalai Kumar S and 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

MCC 103 Physiology of Exercise

UNIT I – Skeletal Muscles and Exercise

Macro and 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: Caffeine, Ephedrine, Stimulants and sports performance.

REFERENCES:

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

Unit-I-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 and prohibition of plastic bag / cover, Role of school in environmental conservation and sustainable development, Pollution free ecosystem.

Unit-II 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, Soil erosion, Noise Pollution, Thermal Pollution – Ozone depletion and protection, Management of environment and Govt. policies, Role of pollution control board.

Unit- III – India and Environmental Issues and Policies

Environmental Problems in India – Environmental Policies in India- Developmental problems of India – Environmental movements in India – Chipko Movement, Narmadha Valley movement, Green Peace movement.

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 and Festivals, Mass Education.

Unit - V Sustainable Development

Definition and dimensions – depletion of natural resources – symptoms of non-sustainability conditions for achieving the goals of sustainable development.

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. and Datta, A.K. Waste Water Treatment (Oxford and 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.)
Aery N.C. Pankaj Puhohit, B.L. Jagetiya Environmental Studies, Best sellers, India Books
RA, Raju Technology of Water Management Best sellers, India books

UNIT I – Introduction to Sports Management

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

UNIT II – Program Management

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

UNIT III – Equipments 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. 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 Leadership and Supervision

Behavioural process of leading-Leadership-Trait Approach-Behavioural approach-Situation factors or sports marketing- Strategies-Marketing Plan
Supervision in Physical Education-Meaning of supervision-Need of supervision-Guided principle of supervision-qualification of a supervisor

UNIT V Functions of Supervision

Functions of supervision-Human relationship-techniques of supervision-visitation conference-workshop-bulletin-surveys-Meeting- Demonstration-Evaluation-Services of Supervision

REFERENCES:

- Bonnie, L. (1991). The Management of Sports. St. Louis: Mosby Publishing Company, Park House.
- Bucher A. Charles, (1993) Management of Physical Education and Sports (10th ed.,) St. Louis: Mobsy Publishing Company.
- Charles, A, Bucher and March, L, Krotee. (1993). Management of Physical Education and Sports. St. Louis: Mosby Publishing Company.
- Chelladurai, P. (1999). Human Resources Management in Sports and Recreation. Human Kinetics.
- Williams, J.F. (2003). Principles of Physical Education. Meerut: College Book House.
- Yadvinder Singh. Sports Management, New Delhi: Lakshay Publication.

SEMESTER II

MCC 201 Sports Psychology

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 and Emotions

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. Emotional intelligence – Mental toughness – Psychological Skill Training (PST) – Psycho Regulatory Training (PRT) for performance enhancement and relaxation.

UNIT IV – 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.

UNIT V – 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.

REFERENCES:

- Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.
- Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Test, New Delhi: National Council of Educational Research and Training Publication.
- Jain. (2002), Sports Sociology, Heal SahetyKendre Publishers.
- Jay Coakley. (2001) Sports in Society – Issues and Controversies in International Education, Mc-Craw Seventh Ed.
- John D Lauther (2000) Psychology of Coaching. NerJersy: Prenticce Hall Inc.
- John D. Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.
- MiroslawVauksand Bryant Cratty (1999). Psychology and the Superior Athlete. London:

The Macmillan Co.

Richard, J. Crisp. (2000). Essential Social Psychology. Sage Publications.

Robert N. Singer (2001). Motor Learning and Human Performance. New York: The Macmillan Co.

Robert N. Singer. (1989) The Psychology Domain Movement Behaviour. Philadelphia: Lea and Febiger.

Thelma Horn. (2002). Advances in Sports Psychology. Human Kinetic.

Whiting, K, Karman., Hendry L.B and Jones M.G. (1999) Personality and Performance in Physical Education and Sports. London: Hendry Kimpton Publishers.

MCC 202 Applied Statistics in Physical Education

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.

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.

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

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

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

Sivaramakrishnan. S. (2006) Statistics for Physical Education, Delhi; Friends Publication

Thirumalaisamy (1998), Statistics in Physical Education, Karaikudi, Senthilkumar Publications.

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)

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 Spots 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: Dyer Tennis Test.

REFERENCES :

- Authors Guide (2013) ACSM's Health Related Physical Fitness Assessment Manual, USA: ACSM Publications
- Collins, R.D., and 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
- Krishnamurthy (2007) Evaluation in Physical Education and Sports, New Delhi; Ajay Verma Publication
- 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

Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in Physical
Education and Sports. New Delhi; Friends Publications

MEC 204 Value Education

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 Importance of value education

Psychological parameters of value education, social aims of values, aesthetic awareness paradigm of values, source of value fundamental duties.

UNIT – IV Classification of values

Basic values of religion-classification of values-Education committees on value education-Realms of values-citizen values and fundamental duties

UNIT – V Value education in global perspective

National integration and value education-population education and values-four pillars of education-Indian and western views- guidance programme in value education-teaching strategies-moral instruction in schools, tools, techniques for measurement- value education in present scenario.

REFERENCES:

Venkataiah N. Value Education, APH Publishing corporation, New Delhi

Dhananjay Joshi, Value Education in Global Perspective, Lotus Press, New Delhi

MohitChakrabarti, Value Education, Changing Perspective, Kanishka Pub, Delhi.

MEC 205 Sports Nutrition and Health Promotion

Unit I – Introduction

Meaning, definition of nutrition, Nutrients – sports nutrition – diet – athletes' diet

Unit II – Sports Nutrition

Athletic food pyramid – Diet chart for specific sports and specific diseases -Nutrition labelling information, Food Choices, Food Guide Pyramid, Influences on food choices-social, economic, cultural, food sources, Comparison of food values.

Unit III – Weight Management

Weight Management-proper practices to maintain, lose and gain. Eating Disorders, Proper hydration, the effects of performance enhancement drugs - Lipoproteins, cholesterol, phospholipids and triglycerides,

Unit IV – Injury prevention

Treatment of hyper cholesteremia with exercise, cigarette smoking and exercise, Hypertension and exercise, exercise in the prevention of heart diseases, diabetes mellitus and exercise.

Risk factors of coronary heart disease – carbohydrate loading, fluid replacement before, during and after exercise for injury prevention – electrolytes and its need in athletic performance.

Unit V –Health Promotion

Nutrition for the promotion of health – Physical exercise for the health promotion

Reference:

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

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

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

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

Emily R. Foster, KarynHartigerand Katherine A. Smith, Fitness Fun, Human Kinetics Publishers 2002.

Lawrence, Debbie, Exercise to Music. A and 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

SEMESTER III

MCC 301 Scientific Principles of Sports Training

UNIT I – Introduction

Sports training: Definition – Aim, Characteristics, Principles of Sports Training, Over Load: Definition, Causes of Over Load, Symptoms of Overload, Remedial Measures – Super Compensation – Altitude Training – Cross Training

UNIT II – Strength, Speed and Endurance

Strength: Methods to improve Strength: Weight Training, Isometric, Isotonic, Circuit Training, Speed: Methods to Develop Speed: Repetition Method, Downhill Run, Parachute Running, Wind Sprints, Endurance, Methods to Improve Endurance: Continuous Method, Interval Method, Repetition Method, Cross Country, Fartlek Training

UNIT III – Flexibility and Coordinative ability

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: Micro cycle - Macro Cycle, 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 – Genetic doping and Technological 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 : other-counter drugs (OTC) – prescription only medicines (POMs) – Controlled drugs (CDs). Reporting test results – Education

REFERENCES :

- BeotraAlka, (2000), Drug Education Handbook on Drug Abuse in Sports. Delhi: Sports Authority of India.
- Bunn, J.N. (1998) Scientific Principles of Coaching, New Jersey Engle Wood Cliffs, Prentice Hall Inc.
- Cart, E. Klafs and Daniel, D. Arnheim (1999) Modern Principles of Athletic Training St. Louis C. V. Mosby Company
- Daniel, D. Arnheim (1991) Principles of Athletic Training, St. Luis, Mosby Year Book
- David R. Mottram (1996) Drugs in Sport, School of Pharmacy, Liverpool: John Moore University
- Gary, T. Moran (1997) – Cross Training for Sports, Canada : Human Kinetics
- Hardayal Singh (1991) Science of Sports Training, New Delhi, DVS Publications
- Jensen, C.R. and Fisher A.G. (2000) Scientific Basic of Athletic Conditioning, Philadelphia
- Ronald, P. Pfeiffer (1998) Concepts of Athletics Training 2nd Edition, London: Jones and Bartlett Publications
- YograjThani (2003), Sports Training, Delhi : Sports Publications.

UNIT – I Introduction to Curriculum

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

UNIT – II Basic Principles of curriculum development, Sources of Curriculum

Major steps in curriculum development, formulation, aims and objectives-selecting curriculum content-criteria for curriculum content-satisfaction and integration of content – preparation of instructional materials-evaluation of curriculum

Introduction – Materials for curriculum activities – experience – teaching method- curriculum design-curriculum content- sources of curriculum materials- text books-Journals-Dictionaries, Encyclopedias, Magazines

UNIT – III Integration of Physical Education with other faculties

Physical education and other faculties-integration of Physical Education with philosophy, psychology, sociology, history, physical chemistry, statistics, anatomy and physiology, sports medicine, physiotherapy and anthropology.

UNIT IV – Curriculum Research, Appraisal or evaluation

Definition of research-curriculum research-objectives of curriculum research-curriculum and basic research curriculum-objectives of curriculum applied research-curriculum and action research-Historical study and curriculum experimental research – Importance of curriculum research

UNIT V – Curriculum Sources

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

Reference:

- Aggarwal, J.C (1990). Curriculum Reform in India – World overviews, Doaba World Education Series – 3 Delhi: Doaba House, Book seller and Publisher.
- Arora, G.L. (1984): Reflections on Curriculum, New Delhi: NCERT.
- Carl, E, Willgoose. (1982. Curriculum in Physical Education, London: Prentice Hall.
- John, E, Nixon and Ann, E, Jewett. (1964). Physical Education Curriculum, New York: The Ronald Press Company.
- McKernan, James (2007) Curriculum and Imagination: Process, Theory, Pedagogy and Action Research,. U.K. Routledge
- NCERT (2000). National Curriculum Framework for School Education, New Delhi: NCERT.
- NCERT (2000). National Curriculum Framework for School Education, New Delhi: NCERT.
- Carlson P . Roles of Supervision and Curriculum design in Physical Education Prentice Hall
- Cowell CC and Haxieton HW, The curriculum in Health and Physical Education Prentice Hall
- Thomas JP, Organization of Physical Education Gnanodaya Press, Madras

Farys CF and Ray O, Administration of Phy.,Edn., Duncan, Prentice Hall
Joseph PM, Organization and Administration of Physical Education TIPE Kandivili, Bombay
Humphrey JH, Elementary School Physical Education Harper and Brothers, New York
NCERT (2005). National Curriculum Framework, New Delhi: NCERT.
NCERT (2005). National Curriculum Framework-2005, New Delhi: NCERT.

MCC 303 Sports Biomechanics and Applied Kinesiology

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 Sports and Games analysis.

REFERENCE:

- Deshpande S.H.(2002). ManavKriyaVigyan – Kinesiology, Amravati :HanumanVyayamPrasarakMandal.
Hoffman S.J. Introduction to Kinesiology (Human Kinesiology publication In.2005.
Steven Roy,and 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.

MEC 304 Information Communication Technology in Physical Education

Unit I – Communication and Classroom Interaction

Concept, Elements, Process and Types of Communication

Communication Barriers and Facilitators of communication

Communicative skills of English - Listening, Speaking, Reading and Writing

Concept and 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 and Applications of Computers Hardware of Computer: Input,

Output and Storage Devices Software of Computer: Concept and Types

Computer Memory: Concept and Types

Viruses and its Management

Concept, Types and Functions of Computer Networks Internet and its Applications

Web Browsers and Search Engines Legal and Ethical Issues

Unit III – MS Office Applications

MS Word: Main Features and its Uses in Physical Education

MS Excel: Main Features and its Applications in Physical Education

MS Access: Creating a Database, Creating a Table, Queries, Forms and

Reports on Tables and its Uses in Physical Education

MS Power Point: Preparation of Slides with Multimedia Effects

MS Publisher: Newsletter and 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

ICT and Constructivism: A Pedagogical Dimension

Unit V – E-Learning and 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 and 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

MEC 305 Sports Sociology

Unit I Introduction to sports sociology

Meaning and definition of sports sociology-sport as a social phenomena-sociology of sports-separate discipline, sports and socialization of the individual

Unit II Sports and culture

Sports and culture-basic concepts of culture-elements of culture-functions of culture-Relationship of sports with other elements of culture-social planning and physical culture- work, free time and physical culture- physical culture as a requirement of social development-Development of socialistic production and physical culture

Unit III Social institutions, sports, politics and religion

Relationship of sports with other social institutions- emergence and growth of commercial sports- effects of commercialization on sports, status and incomes of athletes/sports persons in commercial sports

Sports and solidarity- political consequences of international sports event- reasons for combining sports and religion – similarities and differences between sports and religion

Unit IV Social mobility and sports

Sports and social stratification-mobility opportunities – sports participation and general career success – athletic retirement and social mobility.

Unit V Women in sports society

Women in sports-participation patterns among women-Gender inequation issues – women sports in future.

REFERENCES:

Ball and Loy, Sports and social order, Wesley publishing company

Craty BJ, Social Dimensions of physical activity, Prentice Hall, Inc

Edwards (1986). Sociology of sports, Illinois Dorsey Press

Jay J, Waldy (1986). Sport in society issues and controversies, St. Louis Mosby College Publishing, Co.

Lay Mepherston and Kenyson, Sports and Social System, Addison Wesley publishing company

Panna VR (1980). Sports in socialist countries, Allied publishers private ltd, bombay

SEMESTER IV

MCC401 Prevention and Management of Sports Trauma

Unit I – Introduction

Meaning, definition and importance of Sports Medicine, Definition and Principles of therapeutic exercises. Coordination exercise, Balance training exercise, Strengthening exercise, Mobilization exercise, Gait training, Gym ball exercise Injuries: acute, sub-acute, chronic. Advantages and Disadvantages of PRICE and SAID principle. 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, Spine Injuries and Corrective Exercise

Normal curve of the spine and its utility, Deviations in posture: Kyphosis, lordosis, flat back, Scoliosis, round shoulders, Knock Knee, Bow leg, Flat foot. Management including exercises. Head, Neck and Spine injuries: 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 III – Rehabilitation Exercises Basic Rehabilitation

Basic Rehabilitation: Strapping/Tapping: Definition, Principles Precautions
Contraindications. Proprioceptive neuromuscular facilitation: Definition hold, relax, repeated contractions. Show reversal technique exercises. Isotonic, Isokinetic, isometric stretching. Definition. Types of stretching, Advantages, dangers of stretching, Manual muscle grading. 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.

Upper Limb and Thorax Injuries: Shoulder: Sprain, Strain, Dislocation, and Strapping.

Elbow: Sprain, Strain, Strapping. Wrist and Fingers: Sprain Strain, Strapping.

Breathing exercises, Relaxation techniques – Fracture at cranium, shoulder, hip knee, ankle

Lower Limb and Abdomen Injuries: Hip: Adductor strain, Dislocation, Strapping. Knee:

Sprain, Strain, 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.

REFERENCES:

- Doherty. J. Meno. Wetb, Moder D (2000) Track and Field, Englewood Cliffs, Prentice Hal Inc.
- Lace, M. V. (1951) Massage and Medical Gymnastics, London: J and A Churchill Ltd.
- MCOoyand Young (1954) Tests and Measurement, New York: Appleton Century.
- Naro, C. L. (1967) Manual of Massage and, Movement, London: Febra and Febra Ltd.
- Rathbome, J.I. (1965) Corrective Physical education, London: W.B. Saunders and Co.
- Stafford and Kelly, (1968) Preventive and Corrective Physical Education, New York.
- Christopher M. Norris. (1993). Sports Injures Diagnosis and Management for Physiotherapists. East Kilbride: Thomson Litho Ltd.
- James, A. Gould and 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: KhelShitya Kendra
- The Encyclopedia of Sports Medicine. (1998). The Olympic Book of Sports Medicine, Australia: Tittel Blackwell Scientific publications.
- Practical: Anthropometric Measurements,

MCC 402 Rules of Sports and Games(Basketball, Cricket, Football, Handball, Hockey, Track and Field, Volleyball)**Unit – I Philosophy of officiating**

- Qualification and Qualities of an official
- Philosophy of Officiating
- General principles of officiating

Unit – II Mechanism of officiating

- Pre, during and post Duties of official
- Mechanism of officiating
- Official Signals and powers
- System of officiating
- Position of officiating

Unit – III Dimensions of play field / event

- Lay out of Standard track / non standard track / Marking of all the athletic events
- Lay out of the playfield and marking
- Specifications of all the equipment used in the event / game

Unit – IV Rules and their Interpretations

- Rules of the above mentioned sport / games
- Interpretations and implications of law

UNIT V Skills / Techniques, errors and corrections and Lead up games,

- Skills, techniques, tactics, strategies
- Lead up games to develop the skill/technique
- Error and corrections of skill / technique
- Drills

REFERENCES:

Buck rules book for sports and games, published by NCY's India, New Delhi

IAAF, Competition rules book,
FIBA, Official Basketball rules book,
ICC, One day Cricket rules,
FIFA, Laws of the game,
IHF, Rules of the game,
FIH, Rules of Hockey,
FIVB, Official Volleyball rules,

MCC 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 C.R.C. (College Research Committee).
2. A candidate selecting dissertation must submit his/her dissertation on the last day of the IVth Semester Examination.
3. The candidate has to face the Viva-Voce conducted by CRC.

MEC 404 Sports Technology

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, closed cell 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 equipments. Use of computer and software in Match Analysis and Coaching.

Unit IV – 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 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.

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

sports goods manufacturers.

REFERENCE:

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.

MEC 405 Sports Engineering

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

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 and 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)

Semester I

MPC 106 Throw Events, Aerobics

Throw Events

Specific Warm ups

Basic Skills and techniques of the Throwing events

Rules and officiating of various events

Organizing and marking for various events

Active practice with drills

Aerobics

Rhythmic Aerobics - dance

Low impact aerobics - High impact aerobics - Aerobics kick boxing

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 reft, shape, 'e'shape, shapew, shape, repeater left modeWarm up and cool down - Being successful in exercise and adaptation to aerobic workout.

MPC 107 Yoga, Exercise Physiology Lab

Yoga

Yoga, Asanas prescribed by Maharshi 'Patanjali', ShudhiKriyas, jalneti, sutraneti,dugdhaneti, kunjaj, Nauli, Bhastika, shatkriya, Pranayams, Anulom-vilom, Kapalbhathi,

Exercise Physiology Lab

The students should learn the basic theoretical concepts and measurement techniques in the following:

1. Measurement of body composition.
2. Blood pressure and heart rate, ECG Measurements.
3. Field and lab test to determine anaerobic power and aerobic capacity.
4. Anthropometric measurement.
5. Theoretical concepts of Biochemical measurements (Glucose, lactic acid and fat Profiles)
6. Body fat analyser
7. Lung capacity measurement

MPC 108 Specialization 1st Best / MPC 109 Specialization 2nd Best

Track and Field

Javelin

Introduction

Safety Suggestion

Technique

- a) Run-up
- b) Cross steps, cross over or impulse step
- c) Throwing position
- d) The Throw
- e) Reverse

Teaching steps

Step 1 : Lead ups.

Step 2 : A side throw with a ball in javelin technique

Step 3 : A standing throw with a javelin

Step 4 : A javelin throw using a run- up

Common errors and corrections.

Training schedule

Shot Put

Introduction

Safety suggestion

Technique (a) Glide or O'Brien Technique (b) Rotary Technique.

Teaching Steps

Step 1 : Lead - ups

Step 2 : Shot put from standing position

Step 3 : Shot put using the glide technique

Step 4 : Shot put using rotary technique

m Common errors and connections

Training schedule

Hammer Throw

Introduction

Safety suggestion

Technique

- a) Initial stance
- b) Preliminary swings
- c) The turns
- d) The Delivery (Release)
- e) The Reverse

Teaching steps

Step 1 : Lead-ups

Step 2: Hammer throw

Step 3 : Hammer turns

Step 4: Combining hammer swings, turns and Delivery (Release)

Common errors and corrections

Training schedule

Discus Throw

Introduction

Safety suggestion

Technique

Grip and wind up

Rotation.

Throw and reverse

Teaching steps

Step 1: Lead-ups

Step 2: Standing throw using a discus substitute

Step 3: Rotational throw using discus substitute

Step 4: Standing throw with the discus

Step 5: Rotational throw with the discus.

Common errors and corrections

Training schedule

Basketball

I. Origin and Development of the Game

2. Federations, Associations, Councils in India and World

3. Types of courts/ fields and types of surfaces.

4. Plan of laying court/ field with all measurements and marking.

5. Players / Athletes equipment

6. Skills and teaching procedures.

a) Players stance and ball handling

b) Passing and receiving technique.

- Types of passes

- Types of receiving

c) Dribbling

- how to start a dribble stop a dribble

- high dribble reverse dribble

d) Shooting

- Lay up shot

- One hand set shot

- Jump Shot

- Hook shot

- Free throw

Cricket

1. Origin and Development of the Game

2. Federations, Associations, Councils in India and World.

3. Types of courts/ fields and types of surfaces.

4. Plan of playing court/ field with all measurements and markings.

5. Players / Athletes equipment

6. Skills and teaching procedures.

A) Batting skills

- Grip

- Stance

- Swing of the bat

- Follow through

B) Defensive Skills

- Front foot defense

- Back foot defense

C) Offensive skills

- Straight bat stroke on off side

- Cross bat stroke on off side

Front foot - off drive

on drive

Cover drive

Square drive

leg glance.

pull and front foot hook

front foot square hook.

- Back foot straight bat stroke

- Back foot - off drive

on drive

cover drive

leg glance square cut

pull shot

hook shot

- Running between the wicket

Football

1. Origin and Development of the Game

2. Federations, Associations, Councils in India and World.

3. Types of courts/ fields and types of surfaces.

4. Plan of playing court/ field with all measurements and markings.

5. Players / Athletes equipment

6. Skills and teaching procedures.

a) Kicking

1. Kicking with inside of the foot (Push Pass)

2. Kicking with the full instep.

3. Kicking with inside of instep (High Drive and Chipping)

4. Kicking with the outside of the foot

5. Kicking with Toe and Heel

6. Volley Kicks

b) Ball reception (Trapping)

1. Trapping the ball with inside of the foot

2. Trapping the ball with instep of the foot

3. Trapping the ball with outside of the foot

4. Trapping the ball with chest

5. Trapping the ball with thigh

6. Trapping the ball with sole of the foot

c) Dribbling

i) Dribbling with all parts of foot

ii) Straight and ZigZag Dribble

d) Feinting

i) Feinting without ball

ii) Feinting with ball

Handball

I. Origin and Development of the Game

2. Federations, Associations, Councils in India and World
 3. Types of courts/ fields and types of surfaces.
 4. Plan of laying court/ field with all measurements and marking.
 5. Players / Athletes equipment
 6. Skills and teaching procedures.
 - a) Players stance and Ball handling
 - b) Passing and Catching
- Types of pass : (i) Wrist pass (ii) Body cross pass (iii) Back pass
- c) Dribbling: (i) High dribble (ii) Low dribble
 - d) Shooting : (i) Foot step (ii) Release

Hockey

1. Origin and Development of the Game
2. Federations, Associations, Councils in India and World.
3. Types of courts/ fields and types of surfaces.
4. Plan of playing court/ field with all measurements and markings.
5. Players / Athletes equipment
6. Skills and teaching procedures.

A) Hitting

Straight foot hit

Reverse hit

Wrong foot hit

Wrist hit

Turn around hit

B) Stopping

C) Dribbling

Forehand dribble

Indian dribble

D) Passing

Parallel

Triangle

Through

Diagonal

Square

Cross

Reverse

Volleyball

1. Origin and Development of the Game.
2. Federations, Associations, Councils in India and World.
3. Types of courts/ fields and types of surfaces.
4. Plan of playing court/ field with all measurements and markings.
5. Players / Athletes equipment.
6. Skills and teaching procedures.

A) Service

under arm service

Tennis service

High spin service

Top spin service
Round arm service
Jump service
Floating service
American floating service ~
Lateral floating service
B) Passing
Volley pass
dig pass
C) Setting
Back set
High set
Jump set
set with rolling.
Imitation of attack but set

MPC 110 Teaching Practice, Class Room Teaching

General out-line of the contents of teaching of theory of games and sports

Introduction of the game/sport and historical development with special reference to India, Orientation of the students to the play area and equipment used in the game/sport, Important tournaments held at National and International levels, Distinguished sports awards and personalities related to the Game/sport. Warming-up- General free hand exercises, specific work out using equipment. Fundamental skills, Lead up activities, General rules and their interpretations, Duties of officials, officiating in class competitions and Intramurals, Marking of the play area.

Teaching lessons of indigenous activities and sports

The students of M.P.Ed I year need to develop proficiency in taking teaching classes in indigenous activities and sport under school situation. In view of this, the students shall be provided with 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.

Class room teaching

(Lessons on theory of different sports & games)

The students of M.P.Ed I year need to develop proficiency in taking teaching lessons as per selected games and sport or specialization. In view of this, the students shall be provided with selected or specialized sport or game 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 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 teaching lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

Semester II

MPC 206 Sprint, Relay and Hurdle Events, Gymnastics

Sprint, Relay and Hurdle Events Specific Warm ups

- Fundamental skills – sprint, hurdle
- 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.

Fundamentals of Baton exchange in relay

Rules and officiating of various events

Organizing and marking for various events

Active practice with drills

Gymnastics

Balance beam:

Movements on the balance beam - training on the balance beam - balance beam skills - mounts and dismount - walking the beam - hops, leaps and jumps - turns and pirouettes from a stand - hold position (poses)

o Parallel Bar:

o Mount from one bar

o Straddle walking on parallel bars.

o Single and double step walk

o Perfect swing

o Shoulder stand on one bar and roll forward.

o Roll side

o Shoulder stand

o Front on back vault to the side(dismount)

o Horizontal /Single Bar:

o Grip

o Swings

o Fundamental Elements

o Dismount

o Uneven Parallal Bar:

o Grip

o Swings

o Fundamental Elements

o Dismount

twisting tumbling - doubles tumbling

Rules and Regulations

officiating

MPC 207 Indigenous Activities, Sports Psychology Lab

Indigenous Activities

Exercise with apparatus

Exercise without apparatus

Exercise on the apparatus

Yogic system

Combat activity

Indigenous Games

Sports Psychology Lab

The students should learn the basic theoretical concepts and assessment technique. Psychological Assessment and testing.

1. Assessing intelligence
2. Testing for special aptitude
3. Personality assessment
4. Behavioural assessment

MPC 208 Specialization 1st Best / MPC 209 Specialization 2nd Best

Track and Field

Sprint

Introduction

Safety Suggestion

Teaching steps

- a) Leads -ups
- b) Sprinting technique
- c) Sprint starts

Common errors and corrections

Training schedule

Sprint Relays

Introduction

Safety suggestion

Technique.

1. The upsweep technique
2. The Down sweep technique
3. Push forward pass

Teaching steps

Step 1: Lead - ups

Step 2: Drills for elementary and advanced baton exchanges

Common errors and corrections

Training schedule

100m. Hurdles (Women)

Introduction

Safety suggestion

Technique

Teaching steps

Step 1 : Lead - ups

Step 2: Introduction to hurdling technique

Step 3: Sprint start and Approach to the 1st hurdle

Common errors and corrections

Training schedule

110.m. Hurdles (Men)

Introduction

Safety suggestion

Technique.

Teaching steps

Step 1 : Lead - ups

Step 2 : Introduction to hurdling technique

Step 3 : Sprint start and Approach to the 1st hurdle

Common errors and corrections

Training schedule

400m. Hurdle (Men & Women)

Introduction

Safety suggestion

Technique

Teaching steps

Step 1: Lead - ups

Step 2: Development of sprint endurance

Step 3: Hurdling with a right and left leg lead

Step 4: Establishing a stride pattern for the approach to the first Hurdle
(and to subsequent hurdles)

Common errors and corrections

Training schedule

Fundamentals of Jump Events and middle, long distance

Basketball

I. Skills and Teaching Procedures.

a. Rebound

Offensive rebound

Defensive rebound

b. Individual defence

Guarding the man with the ball

Guarding the man without the ball

c. Pivoting

Sliding

Weave Play

Overload.

2. Drills and lead up games

3. Rules and interpretations

4. Duties of captains, manager and coach

5. Mechanism of officiating.

6. Terminology used in game/sport

7. Important Tournaments.

(a)India (b) Asia (c) World

8. Result and Records of Important Tournaments

9. Eminent Personalities.

Cricket

1. Skills and Teaching Procedures .

A) Bowling

pace bowling.

a) Fast bowling

b) Medium fast

c) Out - swinger

d) In-swinger

- e) Leg cutter
- f) Off- cutter
- g) Yorker
- h) Beamer
- i) Shooter.
- spin bowling
- a) Offspin
- b) Leg spin
- c) Top spin
- d) Chinaman
- e) Googly
- B) Fielding position
- a) Mid off
- b) Mid on
- c) Slips
- d) Gully
- e) Point
- f) Square leg
- g) Fine leg - Deep fine leg
- h) Mid Point
- i) Silly point
- j) Silly mid off
- C) Wicket keeping Skills
- D) Types of Fielding
- Orthodox
- Long Barrier
- Attacking field
- 2. Drills and; lead up games
- 3. Rules and interpretations
- 4. Duties of captains, manager and coach
- 5. Mechanism of officiating
- 6. Terminology used in game/sport
- 7. Important Tournaments.
- (a) India (b) Asia (c) World
- 8. Results and Records of Important Tournaments.
- 9. Eminent Personalities.

Football

- 1. Skills & Teaching procedures
- a) Heading
- i) Heading in standing position
- Forward.
- To the side
- Backward
- ii) Heading while running
- iii) Heading while jumping
- iv) Diving heading

- b) Throw in
 - i) From a standing position
 - ii) After an approach run
- c) Tackling
 - i) Front Block tackling
 - ii) Block tackling from side (sliding tackle)
- d) Goal keeping technique
 - i) Movements without the ball
 - ii) Techniques of catching the low ball
 - iii) Techniques of catching medium and high ball
 - iv) Punching the ball
 - v) Deflecting the ball
 - vi) Attacking techniques
- 2. Drills and lead up games
- 3. Rules and interpretations
- 4. Duties of captains, manager and coach
- 5. Mechanism of officiating
- 6. Terminology used in game/sport
- 7. Important Tournaments.
 - (a) India (b) Asia (c) World
- 8. Results and Records of Important Tournaments.
- 9. Eminent Personalities.

Handball

- 1. Skills and Teaching Procedure
 - a) Shooting
 - (i) Jump shot long
 - (ii) Jump shot high
 - (iii) Straight Shot with blocking step
 - (iv) Straight Shot without blocking step
 - (v) Hip shot
 - (vi) Lob
 - b) Throw-in
 - (i) Throw-in from a standing position
 - (ii) Throw-off from a standing position
 - c) Penalty shot
 - d) Pivot
 - e) Goal keeping
- 2. Drills and lead up games
- 3. Rules and Interpretations
- 4. Duties of Captains, Manager and Coach
- 5. Mechanism of Officiating
- 6. Terminology used in Hand ball
- 7. Tournaments
- 8. Results and Records of important tournaments
- 9. Eminent Personalities

Hockey

1. Skills and Teaching Procedures

a) Flicking

Straight flick

Wrong foot flick

Reverse flick

b) Scooping

Straight scoop

Reverse scoop

Shovel scoop

Overhead scoop

c) Tackling

Lunge tackle

Jab tackle

d) Dodging

2. Drills and lead up games

3. Rules and interpretations

4. Duties of captains, manager and coach

5. Mechanism of officiating

6. Terminology used in game/sport

7. Important Tournaments.

(a) India (b) Asia (c) World

8. Results and Records of Important Tournaments.

9. Eminent Personalities.

Volleyball

I. Skills and Teaching Procedures

a) Blocking

Single block - Triple block - Commit block - aggressive block

Double block- Man to man' block- Zonal block- Soft block

b) Spiking

Straight smash

Cross court spike

Down-the line attack -

c) Receiving

Five man receive

Four man receive

2. Drills and lead up games

3. Rules and interpretations

4. Duties of captains, manager and coach

5. Mechanism of officiating

6. Terminology used in game/sport

7. Important Tournaments.

(a) India (b)Asia(c) World

8. Results and Records of important Tournaments.

9. Eminent Personalities.

**MPC 210 Teaching Practice, Class Room Teaching
Teaching lessons of indigenous activities and sports**

The students of M.P.Ed I year need to develop proficiency in taking teaching classes in indigenous activities and sport under school situation. In view of this, the students shall be provided with 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.

Class room teaching

(Lessons on theory of different sports & games)

The students of M.P.Ed I year need to develop proficiency in taking teaching lessons as per selected games and sport or specialization. In view of this, the students shall be provided with selected or specialized sport or game 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 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 teaching lessons, the duration should slowly increase and all the parts of the lesson covered progressively

Semester III

MPC 306 Jump Events, Swimming

Jump Events

Specific warm ups

Basic Skills and techniques of the Jumping events

Rules and officiating of various events

Organizing and marking for various events

Active practice with drills

Swimming

Fundamental swimming skills

Back paddle - Dog paddle -

Crawl - Front crawl - back crawl

Body position - leg action - arm action - propulsive phase - recovery phase - breathing pattern

Sculling

Breast stroke - butterfly stroke

Backstroke turn - pivot position - push off - approach to the turn

Drills for the various strokes - breathing drills - kicking drills - arm action drills

Rules and regulations

officiating

MPC 307 Martial Arts, Biomechanics and Kinesiology Lab

Martial Arts

Karate:

- 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). And advance skills
- Rules and their interpretations and duties of officials.

Biomechanics and Kinesiology Lab

The students should learn the basic theoretical concepts and measurement technique in the following .

1. Analysis of movement, analysis of ankle of joint and joint mobility during locomotor skills and analysis of range of movement.
2. Cinematographic analysis
3. Visual and instrument analysis of fundamental motor skill (walking, running, throwing, catching, pushing, lifting, hitting, striking, kicking, jumping)
4. Analysis of skills and techniques in Basketball, Cricket, football, hockey, volleyball, athletics, swimming and gymnastics

MPC 308 Coaching Lesson and Officiating
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Coaching Lessons of Track and Field / BB / CR / FB / HB / HO / VB

The students of M.P.Ed II year need to develop proficiency in taking coaching lesson on above mentioned selected discipline. In view of this, the students shall be provided with advance training and coaching in selected discipline. 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 coaching lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

Officiating Lessons of Track and Field / BB / CR / FB / HB / HO / VB

The students of M.P.Ed II year need to develop proficiency in taking officiating lesson on selected above discipline. In view of this, the students shall be provided with advance mechanism of officiating in selected discipline. 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 officiating lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

MPC 309 Specialization 1st Best

Track and Field

Broad Jump

Introduction

Safety Suggestion

Teaching steps

a) Lead ups

b) Elementary long jump and run-up

c) Technique I) The hang technique

II) The Hitch - Kick technique

Common errors and corrections

Training schedule

High- Jump

Introduction

Safety suggestion

Technique

Fosbury Flop

Straddle

Teaching steps

Step 1: Lead - ups

Step 2: Flop High Jump using a short (3 stride) Run- Up

Step 3: Flop High Jump using an extended (curved) run - up

Teaching steps for straddle

Common errors and corrections

Training schedule.

Pole-vault

Introduction

Safety suggestion

Technique

a) Grip, carry and run-up

b) The pole plant

c) The take-off

d) The rock back phase

e) Action over the bar and bar clearance

Teaching steps

Step 1: Lead-ups

Step 2: Swing and Half rotation on the pole

Step 3: Intermediate pole vault skills

Common errors and suggestions

Training Schedule

Triple Jump

Introduction

Safety suggestions

Technique

a) The Hop

b) The Step

c) The Jump

Teaching steps

a) Lead ups

b) The Tripple Jump.

Common errors and corrections Training schedule

Basketball

1. Different training methods

2. Training schedule offseason in season

3. Tactics Offensive tactics

a) Give and go

b) Screening

c) Splitting the post

d) Out numbering situation

Defensive tactics

a) Switching

b) Sandwich

Cricket

2. Training schedule offseason in season

3. Tactics

Batting tactics

Bowling tactics

Fielding tactics

Tactics for limited over matches

Tactics for test matches

Football

1. Different training methods

2. Training schedule Off season in season

3. Tactics

i) Team Tactics

a) In attack Defending play of attackers Changing position Wing Play Play in Centre of attack Counter attack

b) In defence Defending the goal Winning the ball Off side tactics Team work with goal keeper

ii) Individual tactics

a) In attack Getting free

Dribbling

Passing

Shooting

b) In defence Marking and tackling

Handball

1. Different training methods

2. Training schedule

(i) Off season

(ii) In season

3. Tactics

(a) Offensive tactics

(i) Passing (ii) Screening (iii) Out numbering situation

(b) Defensive tactics

(i) Blocking (ii) Man change

Hockey

1. Different training methods

2. Training schedule offseason in season

3. Team Tactics Defensive tactics Individual defensive tactics Team defensive tactics Offensive tactics Individual offensive tactics Team offensive tactics Man to man defence.

Volleyball

1. Different training methods

2. Training schedule

offseason

in season

3. Team Tactics

Offensive team tactics

Triple play - Three point attack - Double play - left and right flang attacks - crisscross Offence -second line attack - moving attack-rapid smashing tactics - system of offence

The six spikes system - 4-2 system - The 3-3 system- The 2-4 system selling the dummy - general observation.

MPC 310 Internship

The MPEd.,programme shall provide for sustained field work with learners and the institution, thereby creating congenial atmosphere. The programme shall include teaching basic skills in sports and games and indigenous activities giving exposure to students in all such activities. Internship would include engagement with the community, ie., school/ college/ sports organization/ sports academy/ sports club and should have the following components teaching, coaching and officiating.

Semester IV

MPC 406 Middle and Long distance events, Training Methods

Middle and Long distance events

Specific warm ups

Basic Skills and techniques of the Middle and Long distance events

Rules and officiating (measuring, timing) of various events

Organizing and marking for various events

Training Methods

Understanding sports training principles

Periodization of training

Training load and recovery

Training intensity – volume – frequency

Different type of physical activity – duration -

Training for motor components

Training for health related physical fitness components

Training for skill related physical fitness components

MPC 407 Mass Drill, Sports Injury and Rehabilitation Lab

Mass Demonstration Activities- lezium, dumb-bell, umbrella, wands, hoops,

Freearms drill, folk dances, etc.(Students are expected to learn and organize mass drill in school situation)

- Apparatus/ Light apparatus Grip
- Attention with apparatus/ Light apparatus
- Stand – at – ease with apparatus/ light apparatus
- 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

Sports Injury and Rehabilitation Lab

The students would have the hands on experience of Sports First Aid by covering the Sports competition,

Intramural, Inter Physical Education competitions and other competitions.

1. Assessment of Injured Athlete
2. Management of Injuries (closed)
3. Management of Open wounds
4. Rehabilitation of Injuries
5. Return of the athlete to Sport with proper testing and assessment.

MPC 408 Coaching Lesson and Officiating

Coaching Lessons of Track and Field / BB / CR / FB / HB / HO / VB

The students of M.P.Ed II year need to develop proficiency in taking coaching lesson on above mentioned selected discipline. In view of this, the students shall be provided with advance training and coaching in selected discipline. 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 coaching lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

Officiating Lessons of Track and Field / BB / CR / FB / HB / HO / VB

The students of M.P.Ed II year need to develop proficiency in taking officiating lesson on selected above discipline. In view of this, the students shall be provided with advance mechanism of officiating in selected discipline. 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 officiating lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

MPC 409 Specialization 1st Best

Track and Field

Middle Distance (800 mts, 1500 mts)

Introduction

Safety Suggestion

Technique

a) Body position

b) Stride length

c) Knee lift

d) Pace / tempo

e) Arm action

Teaching steps

Step 1 : Lead ups

Step 2 : Endurance training

Common errors and corrections

Training schedule

Long Distance

Introduction

Safety suggestion

Technique

Teaching steps

Step 1 : Lead-ups .

Step 2: Endurance training

Step 3: Power & Resistance training

Step 4: Mixing Aerobic and Anaerobic training

Common errors and corrections

Training schedule

20 KM Walking

Introduction

Fundamental mechanics of walking

Technique

a) leg movements

b) trunk carriage

c) arm action

d) hip action

Common errors and corrections

Training schedule

Steeple chase

Introduction

Safety suggestion

Technique

Teaching steps

Step 1: Lead-ups

Step 2: Development of Aerobic and Anaerobic endurance

Step 3: Steeple chase hurdle and water - jump clearance

Common errors and corrections

Training schedule

Marathon

Introduction

Technique

1. Body position

2. Stride length

3. tempo

4. arm action

Teaching steps

Common errors and corrections

Training schedule

CrossCountry

Introduction

Technique

1. Body position

2. Stride length

3. tempo

4. arm action

Teaching steps

Common errors and corrections

Training schedule

Decathlon

Introduction

Technique

Teaching methodology

Common errors and corrections

Training schedule

Heptathlon:

Introduction

Technique

Teaching methodology

Common errors and corrections

Training schedule

Basketball

1. Team tactics

Offensive

a) Fast break

b) Offensive against man to man defense

Strategy

Set Play

Evaluation of players

Selection of team

Mechanism of officiating

Cricket

1. Strategy

2. Set Play

Defensive and offensive field setting

Fielding setting for pace bowling

Fielding setting for in swing

Fielding setting for out swing

Fielding setting for spin bowling F

Fielding setting for off spin

Fielding setting for leg spin

3. Evaluation of players

4. Selection of team

5. Mechanism of officiating

Football

1. Strategy

2. Set plays

Attack

i. Corner kick

a) Long and short distance kick

b) Towards the goal or away (spinning)

ii. Free kicks (Direct & Indirect kicks)

a) Changing the point of attack

b) Lofting the ball over the Wall

c) Banana kick (swinging)

d) Direct shot

iii. Penalty kick

iv. Throw-in

a) Long distance throw

b) Short distance throw

v. Defensive behaviour at

a) Corner kick

b) Free kick

c) Penalty kick

d) Throw- in

3. Evaluation of players

4. Selection of team

5. Mechanism of officiating

Handball

1. Team tactics

Offensive & Defensive

(a) Fast Break (b) Defensive man to man

(c) Offensive man to man (d) Individual tactics

(e) Group tactics (f) Combined defensive

2. Strategy

(a) Players position - 6.0, 5-1,4-2, 3-2-1

(b) Combined defence - 5 - 0+ 1, 4 - 0+ 2

3. System of play
4. Evaluation of Players
5. Selection of Team
6. Mechanism of officiating

Hockey

1. Strategy

Players position

System of play (5-3-2-1, 4-4-2-1, 3-5-2-1, 3-4-3-1, 4-3-2-1-1)

2. Set Plays

A) Penalty corner

1) Attacking penalty corner

2) Single battery

3) Double battery

B) Long corner

1) Corner from right

2) Corner from left

C) Defending long corner

D) Penalty stroke

E) Free hit

1) in offence

2) in defence

3. Evaluation of players

4. Selection of team

5. Mechanism of officiating

Volleyball

1. Defensive team tactics

Defence formation - defending service - Double triangle formation - circle formation - spokes formation.

The W-M formation - Defending spikes - formation without block - scattered formation - semicircular formation - formation with one man block - 1-1-4 formation - 1-2-1-2 formation with 3 man block - 3-3 formation - 3-1-2 formation.

2. System of defence

Inter change system - Over load system - Rebound system - flying block system - Counter defence

system - self defence system - General observation.

3. Strategy

4. Set plays

5. Evaluation of players

6. Selection of team

7. Mechanism of officiating

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY

RESEARCH REPORT
NO. 1000

THEORY OF POLYMERIZATION

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CHICAGO, ILLINOIS
1950