

**PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY,
SOLAPUR**



Name of the Course Syllabus:-
M.P.Ed. II SEM III & IV
(Master of Physical Education)

With effect from :-
June- 2024

80/20

1. Objectives

1. To develop highly profile scholars in the Field of Physical Education.
2. To make perfection in competencies and skills needed to become professionals in the areas of specialization.
3. To be aware of emerging issues such as health, fitness, wellness and technology.
4. To develop the students critical mind and ability to employ reasoning, rational thinking of the problems and issues relating the field.
5. To provide opportunity for entrepreneurship, self expression and provide information on continued professional growth.
6. To develop skill amongst the student required for physical fitness & wellness trainer & also for open gym instructor.

2. Eligibilities of Admission

The candidate should be an Indian National and should have passed Bachelor's Degree in Physical Education (B.P.Ed.) or equivalent with at least 50% of Marks (Minimum 45% marks in case of Backward Class Categories belonging only to Maharashtra State)

OR

The candidate should have passed Bachelor's Degree of Science (B.Sc.) in Health and Physical Education with at least 50% marks (Minimum 45% marks in case of Backward Class Categories belonging only to Maharashtra State) .

The candidate belonging to SC/ST, DT/VJ, NT (A), NT (B), NT(C), NT(D), OBC and SBC categories should produce "Caste Certificate" issued by the Competent Authority and the candidates belonging to ST category should submit "Tribe Validity Certificate" issued by the Scrutiny Committee of Tribal Department along with Caste certificate. Candidates belonging to DT/VJ, NT (A), NT (B), NT(C), NT(D), OBC and SBC should submit Valid Non Creamy Layer Certificate valid up to 31st March of every next academic year which he/she get admitted as applicable at the time of verification of Documents/Admission (As per CET Cell guideline). Candidates belonging to SC,DT-VJ, NT-1,2,3, OBC and SBC will have to produce Caste Validity certificate. Candidates belonging to Maharashtra State belonging to above categories having **Caste Certificate, Caste Validity and Non-Creamy Layer Certificate** as applicable should only apply under respective category, otherwise they should apply under Open-General Category.

Admission Procedure

Admission shall be charge only such fees as prescribed by the affiliating body / State Government concerned in accordance with provisions of National Council for Teacher Education (NCTE) (Guidelines for regulations of tuition fee and other fees chargeable by unaided teacher education institutions Regulations. 2002 as amended from time to time and shall not charge donations, capitation fee etc. from the students.

3. Duration of the Course:

The M.P.Ed. Programme shall be of a duration of two academic years, that is FOUR SEMESTER. However the students shall be permitted to complete the programme with the maximum period of three years. this period can be extended up to two more year . (i.e five years).

4. Working Days

1. There shall be at least 200 working days in each academic year / one hundred working days in each semester exclusive of period of examination and admission etc.
2. The institution shall work for a minimum of thirty six hours in a week (five of six days a week) during which physical presence in the institution of all the teachers and teacher educators is necessary to ensure their availability for advice guidance and consultation, as and when needed.

5. Credits

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

Provision of Bonus credits Maximum 06 Credits in each Semester

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 games)	1
4	Blood donation / Cleanliness drive / Community Services	2
5	Mountaineering- Basic Camp, Advance Camp / Adventure Activities	2
6	Organization /Officiating-state/National level in any two games	2
7	News Reposting / Article Writing / book writing/ progress report writing	1

Students can earn maximum 06 Bonus credits in each semester by his/her participation in the above mentioned activities duly certified by the Head of the institution / Department. This Bonus credit will be used only to compensate loss of credits in academic activities.

6. Internal Assessment:

Internal assessment marks shall be awarded on the basis of the following

a) Theory Break up of 20 Seasonal marks of theory papers shall be as follows

Attendance	05 Marks
One Seminar	05 Marks
Assignments	05 Marks
Test (Two)	05 Marks
Total	20 Marks

- b) **Specialization:** Seasonal marks of specialization are awarded on the basis of Regularity, imitative in learning, knowledge of rules, officiating and coaching, demonstration of skills and movements.
- c) **Dissertation:** A candidate shall choose area of research of his choice in consultation with the guide and submit the dissertation preferably, experimental / quasi experimental, further he can make use of the pedagogy to collect the data required. He should submit the dissertation to the Office, before one month prior to the fourth semester examination. There shall be an internal Viva-voce for twenty marks for each to be conducted by the departmental council with one external subject expert.
- d) **Pedagogy:** A candidate shall select the area of specialization of his choice keeping in mind the specialization opted in previous semester and shall select the school and preferably teacher training institutions B.P.Ed., to coach and train the skills. Further he has to submit the workbook along with the satisfactory report from the head of the Institution in Coaching; the duration of the pedagogy is as per the NCTE norms.

7. Attendance, Progress and conduct

Attendance shall be taken as a component of continuous assessment, even though the students should have **minimum 75% attendance** in each course. In addition to continuous evaluation component, the end semester examination, which will be **written type examination of at least 3 hours duration** and for **specialization examination duration is 1 hours** would also form an integral component of the evaluation. The ratio of marks to be allotted to continuous internal assessment and to end semester examination is **20:80**. The evaluation of practical work, whenever applicable, will also be based on continuous internal assessment and on an end-semester practical examination.

8. Appearance for the Examination:

Candidates on satisfactorily completing a semester shall apply for examination in all the courses of study papers prescribed for that semester.

9. Scheme of Examination:

There shall be a university examination at the end of each semester. the scheme of examination shall be as follows:

a. Theory: Each paper shall be valued by University appointed examiner.

b.Specialization: Evaluation in specialization shall be done by two examiners, one internal and one external as per the following scheme. The average of the two shall be credited.

i) Demonstration of skills/ techniques/ movements	25 marks
ii) Coaching ability	25 marks
iii) Specialization Record	15 marks
iv) Viva-Voce	15 marks
Total	80 marks

c.Dissertation: Evaluation of dissertation shall be done for 80 marks by University Examination.

Note : - Whenever assessment is made for two games / activity the 50% of the above marks shall be divided for the evaluation of the each game / activity.

Practicum / game specialization / game coaching / internship / Classroom teaching will be the internal evaluation, the Evaluation is purely based on the attendance, ability of the teacher and competency in handling the classes (Classroom and Field Coaching, Training). It will be evaluated by the Head master of the School, Subject Expert from the school, one faculty member from the university / Department / College. The evaluation will be done immediately after the class by the above said committee. The assessment will be done for 80 marks, in each semester as per the regulation.

For smooth conduct of University practical examination the college should appoint one organizer & two peons and they should be paid local conveyance allowance & Remuneration by the university.

For theory examination an overall chairman must be appointed. For practical examination an overall chairman and senior examiner must be appointed.

d. Medium of Examination:

The candidates are allowed to answer the question in English / Hindi / Marathi.

10. Course

The course content lecturer / Tutorials / Laboratory work / Field work/ Outreach Activities / Visits / Project Work/ Vocational Training / VIVA / Seminars / Term Papers /Assignments / Presentations / Self-Study etc. or a combination of some of these.

11. Course of Programme

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

A. Theory

- 1) Core Course
- 2) Elective Course

B. Practicum

- 1) Compulsory Course (Track and Field)
- 2) Elective Course
- 3) Teaching / Coaching Practices
- 4) Internship

Semesters:

An academic year is divided into two semesters. Each semester will consist of 17-20 weeks of academic work equivalent to 100 actual teaching days. The institution shall work for a minimum of 36 working hours in a week (Five or six days a week)

12. Fee

The institution shall charge only fee as prescribed by the affiliating body / State government concerned in accordance with provision of N.C.T.E. Guideline and as per University Guidance .

13. Duration of course:

The M.P.Ed. Programme shall be 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

14. Standard of passing

1. To pass in any one of the semester of M.P.Ed Examination a candidate shall have to obtain at least 50% of marks in each theory paper and 50% in practical (Internal as well as External).

i. To pass M.P.Ed in 2nd class: 50% and above but below 55% in aggregate.

ii. To pass Higher Second class: 55% and above but below 60% in aggregate.

iii. To pass First class: 60% and above but below 70% in aggregate.

iv. To pass Distinction: 70% and above in aggregate.

- I. **If the student fail or absent in semester I** - if the student is fail or absent in any theory paper or university practical exam He / She is allow to appear in semester – II University examination.
- II. **If the student who is fail or absent in semester I & II**, theory & practical will be allow to appear semester – III University examination, He/ She need not to appear for internal assessment (theory & practical) of semester I & II.(If He/ she passed internal theory and practical.)
- III. **If the student who is fail or absent in semester – II & III** he/ she will be given permission in semester – IV University examination. He / she should passed semester-I, II & III internal assessment & University examination.
- IV. **If the student who is fails or absent in semester I & II**, theory & practical will be given admission in semester III. He/she need not appear for internal assessment (theory & practical) of semester I & II.

- V. **If the student who is fail or absent in semester II & III**, in theory and practical, he, she is eligible to take admission to the semester IV and he/she can given examination in University theory and practical together of semester III and IV.

15. Lesson

A minimum of 32 lessons (Internal work) in the School / College/ institution / department shall be conducted.

M. P. Ed. I Semester:- I

Semester	Course Code	Title of the Practical	Internal Work & Marks	External Exam & Marks	Total Marks
I	MPPC 101	Track & Field (Runs :Sprint , Middle , Long distance/Relays/ Hurdle) (Performance in two Events)	20	80	100
I	MPPC 102	Game Specialization (Any one game mentioned below)	20 (4 Lesson)	80 (1 Lesson)	100
I	MPPC 103	Yoga (Performance in Asanas , Kriyas , Bandhas & Pranayama) /Aerobics /Taekwondo/Marshal Arts (Performance in any one of the above)	20	80	100
I	MPPC 104	Class room teaching lessons on Track & Field (any one event)	20 (4 Lesson)	80 (1 Lesson)	100

M. P. Ed. I Semester:- II

Semester	Course Code	Title of the Practical	Internal Work & Marks	External Exam & Marks	Total Marks
II	MPPC 201	Track & Field (Shot Put, Javelin Throw, Discus, Hammer Throw) / Swimming (Performance in any one Event)	20	80	100
II	MPPC 202	Game Specialization (Any one game mentioned below)	20	80	100
II	MPPC 203	Teaching Lesson on Track and Field Sem. I /Sem. II	20 (4 Lesson)	80 (1 Lesson)	100
II	MPPC 204	Teaching & Officiating Lesson on Specialization	20 (4 Lesson)	80 (1 Lesson)	100

M. P. Ed. II Semester:- III

Semester	Course Code	Title of the Practical	Internal Work & Marks	External Exam & Marks	Total Marks
III	MPPC 301	Skill Oriented Course- 1. Certificate course in Physical Fitness and Wellness Trainer – OR- 2. Certificate course in Open Gym Instructor	100	00	100
III	MPPC 302	Game Specialization (Any one game mentioned below)	20	80	100
III	MPPC 303	Coaching Lesson on Specialization Game	20 (4 Lesson)	80 (1 Lesson)	100
III	MPPC 304	Internship / Classroom Teaching on Specialization – Pedagogy	20 (4 Lesson)	80 (1 Lesson)	100

M. P. Ed. II Semester: - IV

Semester	Course Code	Title of the Practical	Internal Work & Marks	External Exam & Marks	Total Marks
IV	MPPC 401	Track & Field- (Triple Jump, High Jump, Pole vault, Long Jump) (Performance in two Events)	20	80	100
IV	MPPC 402	Game Specialization- (Any one game mentioned below)	20	80	100
IV	MPPC 403	Coaching Lessons of Track & Field-Sem.	20 (4 Lesson)	80 (1 Lesson)	100
IV	MPPC 404	Coaching Lessons of Game Specialization	20 (4 Lesson)	80 (1 Lesson)	100

Note: Every Semester one game should be selected as specialization and it should not be repeated in other Semester.(i.e. Four games should be selected as Specialization)

List of Specialization Game:-

Kabaddi	Kho-Kho	Volleyball	Handball	Softball	Baseball	Hockey	Football
Table Tennis	Lawn Tennis	Badminton	Basketball	Cricket	Wrestling	Netball	Squash

NOTE:-External Exam -Each lesson carry 80 Marks & Duration of Lesson is 40 minutes

CONDUCT OF PRACTICAL EXAMINATION

Examiners should be paid local conveyance allowance, remuneration and T.A D.A by the University

Note: The candidate are allowed to answer the question in English / Hindi /Marathi

16. Grievance Redressed Committee:

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

17. Revision of Syllabus

1. Syllabus of every course should be revised according to the NCTE.
2. Revised syllabus of each semester should be implemented in a sequential way.
3. In courses, where units / topics related to governmental provisions, regulations or laws, that change to accommodate the latest developments, Changes or corrections are to be made consequentially as recommended by the Academic Council.
4. All formalities for revisions in the syllabus should be completed before the end of the semester for implementation of the revised syllabus in the next academic year.
5. During every revision, up to twenty percent of the syllabus of each course should be changed so as to ensure the appearance of the student who have studied the old (unrevised) syllabus without any difficulties in the examinations of revised syllabus.
6. In case, the syllabus of any course is carried forward without any revision, it shall also be counted as revised in the revised syllabus.

Master of Physical Education Degree Programme - 2020-21

M. P. Ed. I SEMESTER - I							
Theory 400							
Paper Code	Papers	Instruction hrs/week	Duration of Exam (Hrs)	CA-IA	UA-Theory/ Practical	Total Marks	Credits
MPCC 101	Research Process in Physical Education & Sports Sciences	3 hrs	3 hrs	20	80	100	4
MPCC 102	Sports Bio-mechanics and Kinesiology	3 hrs	3 hrs	20	80	100	4
MPCC 103	Yogic Sciences	3 hrs	3 hrs	20	80	100	4
MPEC 104	1) Test, Measurement and Evaluation in Physical Education -	3 hrs	3 hrs	20	80	100	4
MPEC 104	OR- 2) Sports Technology						
Practicum 400							
MPPC 101	Track & Field - I (Runs :Sprint , Middle , Long distance/Relays/ Hurdle) (Performance in two Events)	6 hrs	3 hrs	20	80	100	4
MPPC 102	Game Specialization-I Individual Skills, Game situation, Officiating, Lead up games (Any one game mentioned below)	6 hrs	3 hrs	20	80	100	4
MPPC 103	Yoga (Performance in Asanas , Kriyas , Bandhas & Pranayama) /Aerobics /Taekwondo/Marshal Arts (Performance in any one of the above)	6 hrs	3 hrs	20	80	100	4
MPPC 104	Class room teaching lessons on Track & Field (any one event)	6 hrs	3 hrs	20	80	100	4
Total		36 hrs	24 hrs	160	640	800	32

M. P. Ed. I SEMESTER - II

Theory 400

Paper Code	Papers	Instruction hrs/week	Duration of Exam (Hrs)	CA-IA	UA-Theory/ Practical	Total Marks	Credits
MPCC 201	Applied statistics in Physical Education and Sports	3 hrs	3 hrs	20	80	100	4
MPCC 202	Physiology of Exercises	3 hrs	3 hrs	20	80	100	4
MPCC 203	Athlete care and rehabilitation	3 hrs	3 hrs	20	80	100	4
MPEC 204	1) Sports Journalism and Mass Media	3 hrs	3 hrs	20	80	100	4
MPEC 204	OR 2) Sports Management and Curriculum design in Physical Education						

Practicum 400

MPPC 201	Track & Field-II (Shot Put, Javelin Throw, Discus, Hammer Throw) / Swimming (Performance in any one Event)	6 hrs	3 hrs	20	80	100	4
MPPC 202	Game Specialization-II Individual Skills, Game situation, Officiating, Lead up games (Any one game mentioned below)	6 hrs	3 hrs	20	80	100	4
MPPC 203	Teaching Lesson on Track and Field SemI /Sem II	6 hrs	3 hrs	20	80	100	4
MPPC 204	Teaching & Officiating Lesson on Specialization-II	6 hrs	3 hrs	20	80	100	4
Total		36 hrs	24 hrs	160	640	800	32

M. P. Ed. II SEMESTER - III

Theory 400

Paper Code	Papers	Instruction hrs/week	Duration of Exam (Hrs)	CA-IA	UA Theory/ Practical	Total Marks	Credits
MPCC 301	Scientific Principles of Sports Training	3 hrs	3 hrs	20	80	100	4
MPCC 302	Sports Medicine	3 hrs	3 hrs	20	80	100	4
MPCC 303	Health Education and Sports Nutrition	3 hrs	3 hrs	20	80	100	4
MPEC 304	1) Sports Engineering	3 hrs	3 hrs	20	80	100	4
MPEC 304	OR 2) Fitness and Wellness	3 hrs	3 hrs	20	80	100	4
Practicum 400							
MPPC 301	Skill Oriented Course- 1. Certificate course in Physical Fitness and Wellness Trainer – OR- 2. Certificate course in Open Gym Instructor	6 hrs	3 hrs	100	00	100	4
MPPC 302	Game Specialization-III Individual Skills, Game situation, Officiating, Lead up games (Any one game mentioned below)	6 hrs	3 hrs	20	80	100	4
MPPC 303 PL	Coaching Lesson on Specialization Game -III	6 hrs	3 hrs	20	80	100	4
MPPC 304 CT	Internship / Classroom Teaching on Specialization – Pedagogy	6 hrs	3 hrs	20	80	100	4
Total		36 hrs	24 hrs	160	640	800	32

- PL– Particular Lesson Plan CT – Classroom Teaching

M. P. Ed. II SEMESTER - IV							
Theory 400							
Paper Code	Papers	Instruction hrs/week	Duration of Exam (Hrs)	CA-IA	UA-Theory / Practical	Total Marks	Credits
MPCC 401	Information and Communication Technology in Physical Education (ICT)	3 hrs	3 hrs	20	80	100	4
MPCC 402	Sports psychology and Sports Sociology	3 hrs	3 hrs	20	80	100	4
MPCC 403	Dissertation	3 hrs	3 hrs	20	80	100	4
MPEC 404	1) Value and environmental Education OR	3 hrs	3 hrs	20	80	100	4
MPEC 404	2) Educational Technology in Physical Education						
Practicum 400							
MPPC 401	Track & Field-IV (Triple Jump, High Jump, Pole vault, Long Jump) (Performance in two Events)	6 hrs	3 hrs	20	80	100	4
MPPC 402	Game Specialization :IV Individual Skills, Game situation, Officiating, Lead up games (any one)	6 hrs	3 hrs	20	80	100	4
MPPC 403 PL	Coaching lessons of Track and Field Sem.III/Sem IV	6 hrs	3 hrs	20	80	100	4
MPPC 404 PL	Coaching lessons of Game Specialization IV	6 hrs	3 hrs	20	80	100	4
Total		36 hrs	24 hrs	160	640	800	32
Grand Total		144 hrs	96 hrs	640	2560	3200	128

PL- Particular Lesson Plan

List of Specialization Game:-

Kabaddi	Kho-Kho	Volleyball	Handball	Softball	Baseball	Hockey	Football
Table Tennis	Lawn Tennis	Badminton	Basketball	Cricket	Wrestling	Netball	Squash

Note:1) Sports and Educational tour should be organized by the college in any one semesterto visit the sports centre in India.

2) Adventure activities or mass demonstrati15 should be organized by the college in any onesemester.

Structure of Question Paper
M.P.Ed. Part I and II
Effect from June 2020

Total Marks:- 80

Question No. 1		Choose the correct alternative.	10
	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
Question No.2		Answer the following question.	
	A		10
	B		10
Question No.3		Answer the following question. (any one)	15
	1		
	2		
Question No.4		Answer the following question. (any one)	15
	1		
	2		
Question No.5		Write short notes. (any four)	20
	1		
	2		
	3		
	4		
	5		

M. P. Ed. I Semester I

Theory Courses

MPCC-101

RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES

Credits – Theory - 4

Total Theory Lectures - 60

Unit I - Introduction

Meaning and Definition of Research - Need, Nature and Scope of research in physical Education. Classification of research, Areas of research, Criteria for selection of a problem, Qualities of good researcher.

Unit II – Review of related Literature

Review of related Literature, Need and importance of reviewing the related literature, Library technique, Methods of reading abstracting the Materials.

Unit III – Methods of Research and Tools of research

Descriptive Methods of Research; Survey Study, Case Study, Introduction of Historical Research, Steps in Historical Research, Source of Historical Research: Primary Data and Secondary Data, Historical Criticism: Internal criticism and external Criticism. 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 and Factorial Design. Tools of Research - Questionnaire, interview, observation attitude scales etc.

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, Judgment sampling, Quota Sampling.

Unit V – Research Proposal and Report Writing

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

REFERENCE :

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

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

Craig Williams and Chris Wragg (2006) Data Analysis and Research for sport and Exercise Science, London Routledge press

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

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

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

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

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

Moprt A. M. (2010) Research Processes in Physical Education , New Delhi; Friends Publication

**M. P. Ed. I Semester I
Theory Courses**

MPCC-102

SPORTS BIOMECHANICS AND KINESIOLOGY

Credits – Theory - 4

Total Theory Lectures - 60

UNIT I – Introduction to Kinesiology and Biomechanics

Meaning and definition of Kinesiology and Biomechanics, nature, scope and brief history of Kinesiology and Biomechanics, Aims and objectives of Kinesiology and Biomechanics, Importance of Kinesiology and Biomechanics in the field of physical Education and sports.

UNIT II - Joints and Muscle Action

Structural classification of joints, Fundamental movements around joints, 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 Action Reaction, Meaning and definition of force- Sources of force -Force components .Force applied at an angle -pressure -friction -Buoyancy, Spin - Centripetal force - Centrifugal force.

UNIT IV - Projectile and Lever

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

UNIT V – Movement Analysis

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

Practical's Lab: Practical's and visit to physiotherapy centre to observe treatment procedure of sports injuries, data collection of sports injury incidences, visit to TV centre etc. should be planned internally.

REFERENCE:

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

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

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

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

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

Uppal, A.K (2004), Kinesiology in Physical Education and Exercise Science, Delhi Friends publications. Williams M (1982) Biomechanics of Human Motion, Philadelphia; Saunders Co.

M. P. Ed. I Semester I
Theory Courses
MPCC-103 Yogic Sciences

Credits – Theory - 4

Total Theory Lectures - 60

Unit I - Introduction

- a) Concept, Need and Importance of yoga.
- b) Meaning and Definition of Yoga.
- c) Aims and Objectives of yoga.
- d) School of Yoga.

Unit II – Aasanas and Pranayam

- a) Aasanas and Pranayam - Meaning and Definition.
- b) Asanas - Types- Techniques and Benefits.
- c) Pranayama: Types- Techniques and benefits.
- d) Surya Namaskar: Methods and Benefits

Unit III – Shudhi Kriyas, Bandha and Mudras

- a) Shat Kriyas - Techniques and Benefits
- b) Bandhas - Types, Techniques and Benefits
- c) Mudras - Types, Techniques and Benefits
- d) Stress and Meditation

Unit IV – Yoga and Physical Education

- a) Role of Yoga in Psychological Preparation of athlete.
- b) Role of Asana and Pranayam on various systems of body.
- c) Role of Yoga in Physical Education.
- d) Difference between yogic exercise and physical exercise.

Unit V – Yoga and Diet

- a) Concept of diet
- b) Principal of diet
- c) Importance of diet in daily life
- d) Role of diet for yoga

Note: Laboratory Practical's in Physiology be designed and arranged internally

REFERENCE :

- George Feuerstein,(1975). Text Book of Yoga. London: Motilal Bansaridass Publishers (P) Ltd.
- Gore, (1990), Anatomy and Physiology of Yogic Practices. Lonavata: Kanchan Prkashan.
- Helen Purperhart (2004), The Yoga Adventure for Children. Netherlands: A Hunter House book.
- Iyengar,B.K.S.(2000), Light on Yoga. New Delhi: Harper Collins Publishers.
- Karbelkar N.V. (1993). Patanjali Yogasutra Bhashya (Marathi Edition) Amravati: Hanuman Vyayam Prasarak Mandal.
- Kenghe. C.T (1976). Yoga As Depth - Psychology and para - Psychology (Vol-I):Historical Background, Varanasi: Bharata Manishai.
- kuvalyanada Swami & S.L. Vinekar, (1963), Yogic Therapy - Basic Principles and Methods. New Delhi: Govt. of India, Central Health Education and Bureau.
- Moorthy A.M & Alagesan. S (2004) Yoga Therapy. Coimbatore: Teachers Publication House
- Swami Kuvalayanada, (1998) Asanas. Lonavala: Kaivalyadhama
- Swami Satyananada Sarasvati, (1989) Asana Pranayama Mudra Bandha. Munger: Bihar School of Yoga.
- Swami Satyananada Saraswati. (1984),Kundalini and Tantra, Bihar: Yoga Publicatios Trust.
- Swami Sivananda, (1971) The science of Pranayama. Chennai: A Divine Life Society Publication.
- Thirumalai Kumar. S and Indira. S (2001) Yoga in Your Life, Chennai: The Parkar Publication
- Tiwari O.P. (1998), Asanas - Why and How. Lonavala: Kaivalyadham.

M. P. Ed. I Semester I

Theory Courses

MPCC-104

TEST, MESURMENT AND EVALUATION IN PHYSICAL EDUCATION (Elective)

Credits – Theory - 4

Total Theory Lectures - 60

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 Consideration.

Unit II – Motor Fitness Test

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 Webar Minimum Fitness Test and different types of test i.e. knowledge test, medical test.

Unit III – Physical Fitness Tests

Physical fitness Test : AAHPERD Health Related Fitness Battery (revised in 1984), 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 Measurement: 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. Tests to predict Vo₂ max test.

Unit V – Skill Tests

Specific Sports Skill Test - Badminton: Miller Wall Volley Test. Basketball: Johnson Basketball Test, Harrison Basketball Test. Cricket: Sutcliff Cricket test. Hockey: Friendel Field 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.

Note: Practical's of indoors and out – door tests be designed and arranged internally.

REFERENCE :

Authors Guide (2013) ACSM's Health Related Physical Fitness Assessment Manual, USA: ACSM Publications

Collins, R.D., & Hodges P.B. (2001) A Comprehensive Guide to Sports Skills Tests and Measurement (2nd edition) Lanham: Scarecrow Press

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

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

Jeson, 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 Sports and Exercise: 3rd Edition. Champaign IL: Human Kinetics

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

Bhatt Altaf Hussain, (2010) Test and measurement in physical Education, New Delhi: Sports publication

M. P. Ed. I Semester I
Theory Courses
MPCC-104
SPORTS TECHNOLOGY (Elective)

Credits – Theory - 4

Total Theory Lectures - 60

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 gule, nano moulding 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 modeling 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. 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 laboratory/ workshop and visit sports technology factory/ sports good 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 Publisher Pvt. Ltd.) 1982

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

**M. P. Ed. I Semester II
Theory Courses
MPCC-201
APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS**

Credits – Theory - 4

Total Theory Lectures - 60

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 & Jack K Nelson (2000) Research Methods in Physical Activities; Illinois's; Human Kinetics;

Kamlesh, M. L. (1999) Research 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.

M. P. Ed. I Semester II
Theory Courses
MPCC-202
PHYSIOLOGY OF EXERCISE

Credits – Theory - 4
Unit I – Introduction

Total Theory Lectures - 60

Meaning of Physiology, Need and importance of Physiology of Exercise

Unit II – Skeletal Muscles and Exercise

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

Unit III – Cardiovascular System, Respiratory 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 Cardiovascular system, Blood pressure. Mechanics of Breathing - Respiratory Muscles, Minute Ventilation - Ventilation at Rest and During Exercise. Diffusion 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 and circulatory system, second wind and EPOC.

Unit IV – Metabolism and Energy Transfer

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

Unit V – Climatic Condition and sports performance and ergogenic aids

Variation in Temperature and Humidity - Thermoregulation - Sports performance in hot climate, Cool Climate, high altitude. Influence of: Amphetamines, Anabolic steroids Androstenedione, Beta Blocker, Choline, Creatine, Human growth hormone on sports performance. Narcotic, Stimulants: Amphetamines, Caffeine, Ephedrine, Sympathomimetic amines. Stimulants and sports performance. Doping definition, types of doping, demerits of doping, process of control of doping, stages of doping test(sportsman related), International Olympic committee Anti doping Rules and Regulations.

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

REFERENCE :

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

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

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

David, L Costill. (2004) Physiology of Sports and Exercise. Human Kinetics Fox, E.L., And Mathews, D.K (1981). The physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing

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

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

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

Shaver, L (1981). Essentials of Exercise Physiology. New Delhi: subjet Publication

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

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

**M. P. Ed. I Semester II
Theory Courses
MPCC-203
ATHLETIC CARE AND REHABILITATION**

Credits – Theory - 4

Total Theory Lectures – 60

Unit I - Corrective Physical Education

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

Unit II - Posture

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

Unit III - Rehabilitation Exercises '

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

Unit IV - Massage

Brief history of massage - Massage as an aid for relaxation - Points to be considered in giving massage - Physiological, Chemical, Psychological effects of massage - Indication / Contra indication of Massage - Classification of the manipulation used massage and their specific uses in the human body - Stroking manipulation: Effleurage - Pressure manipulation: Petrissage Kneading (Finger, Kneading, Circular) ironing Skin Rolling -Percussion manipulation: Tapotement, Hacking, Clapping, Beating, 'Pounding, Slapping, Cupping, Poking, Shaking Manipulation, Deep massage.

Unit V - Sports Injuries Care, Treatment and Support

Sports injuries: causes prevention and treatment, General and specific sports injuries – their causes prevention and treatment related to games - basketball, volleyball, handball, football, softball, lawn tennis etc. Prevention and Treatment of foot, knee, shoulder, Elbow, Head, Muscle etc injuries.

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

REFERENCES:

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

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

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

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

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

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

**M. P. Ed. I Semester II
Theory Courses
MPEC-204
SPORTS JOURNALISM AND MASS MEDIA (Elective)**

Credits – Theory - 4

Total Theory Lectures - 60

UNIT I – Introduction

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

UNIT II – Sports Bulletin

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

UNIT III – Mass Media

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

UNIT IV – Report Writing on Sports

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

UNIT V – Journalism

Sports organization and Sports Journalism - General news reporting and sports reporting. Methods of editing a Sports report. Evaluation of Reported News. Interview with and elite Player and Coach. Practical assignments to observe the matches and prepare report and news of the same; visit to News Paper office and TV Centre to know various departments and their working. Collection of Album of newspaper cuttings of sports news.

REFERENCE:

- Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi : Surjeet Publications
- Ahiya B.N. Chobra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication
- Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication
- Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press.
- Kannan K (2009) Soft Skills, Madurai: Madurai: Yadava College Publication
- Mohit Chakrabarti (2008): Value Education: Changing Perspective, New Delhi: Kanishka Publication.
- Padmanabhan. A & Perumal A (2009), Science and Art of Living, Madurai: Pakavathi Publication
- Shiv Khera (2002), You Can Win, New Delhi: Macmillan India Limited.
- Varma A.K. (1993) Journalism in India from Earliest Times to the Present Period. Sterling publication Pvt. Ltd.
- Venkataiah. N (2009) Value Education,- New Delhi: APH Publishing Corporation. 43

M. P. Ed. I Semester II
Theory Courses
MPEC-204
SPORTS MANAGEMENT AND CURRICULUM DESIGN IN PHYSICAL EDUCATION
(Elective)

Credits – Theory - 4

Total Theory Lectures - 60

UNIT I - Sports Management

- a) Definition, Importance of Sports Management
- b) Basic Principles and Procedures of Sports Management
- c) Functions of Sports Management
- d) Personal Management: Definition and Objectives

UNIT II - Program Management

- a) Definition and Importance of Programme management
- b) Role of Programme management
- c) Factors influencing programme management
- d) Steps in programme management

UNIT III - Equipments

- a) Equipment -Need, Types and Purchase
- b) Care and Maintenance of Equipment
- c) Facilities and Equipments in physical education programme - play ground, gymnasium, swimming pool, stadium etc.
- d) Equipment Room Concept and Importance

UNIT IV – Public Relations

- a) Public Relations - Definition and Need
- b) Principles Public Relations in physical Education
- c) Public Relations in School and Communities
- d) Public Relations in Media and Agencies

UNIT V - Curriculum

- a) Curriculum - Definition, Factors affecting, principles of curriculum construction
- b) Theories and Approaches of curriculum development
- c) Sources of Curriculum materials in physical education
- d) Curriculum research - Objectives and Importance

UNIT VI - Recreation

- a) Meaning and Definition of Recreation, Need and importance of recreation in physical education and sports, Types of Recreation

Reference:

Aggarwal, J.C (1990). Curriculum Reform in India - World overviews, Doaba World Education Series - 3 Delhi: Doaba House, Book seller and Publisher.

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

Bonnie, L. (1991). The Management of Sports. St. Louis: Mosby Publishing Company, Park House.

Bucher A. Charles, (1993), Management of Physical Education and Sports (10th ed.,) St. Louis: Mobsy Publishing Company.

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

Chakraborty & Samiran. (1998). Sports Management. New Delhi: Sports Publication.

Charles, A, Bucher & March, L, Krotee. (1993). Management of Physical Education and Sports. St. Louis: Mosby Publishing Company.

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

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

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

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

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

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

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

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

Yadvnider Singh. Sports Management, New Delhi: Lakshay Publication.

M. P. Ed. II Semester III
Theory Courses
MPCC-301
SCIENTIFIC PRINCIPLES OF SPORTS TRAINING

Credits – Theory - 4

Total Theory Lectures - 60

UNIT I – Introduction of Sports Training

Definition and meaning of Training, Need and Importance of Sports Training, Principles of Sports Training.

UNIT II – Training Load and Recovery

Principle of Training Load, Major components of Training Load i.e. intensity, density, volume and frequency, over load- symptoms, and causes, meaning of recovery, importance of recovery.

UNIT III- Components of Physical Fitness

Strength- Definition, major form of strength, type of strength, factor determining strength, strength training- means and method.

Speed - Definition, major form of Speed, Speed training- means and method.

Endurance – Definition, Importance of endurance, method for the development of endurance.

Flexibility - Definition, Importance of flexibility, types of flexibility, method to develop flexibility.

Coordinative abilities - Definition, Importance of coordinative abilities, method of training for the development of coordinative abilities.

UNIT IV - Training Plan

Training Plan: 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. Factor involved in training and competition psychological, physiological and sociological.

UNIT V – New Horizons

Competition: Competition system, Frequency, Preparation of Competitions, Competitions in Basic and Advanced Training Stages.

Motor Development, Talent Identification and Development: Concept, Steps for talent identification and its promotion. Education and Sports Training.

REFERENCES :

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

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

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

Daniel, D. Arnheim (1991) Principles of Athletic Training, St. Luis, Mosby Year Book

David R. Mottram (1996) Drugs in Sport, School of Pharmacy, Liverpool: John Moore University

Gary, T. Moran (1997) - Cross Training for Sports, Canada : Human Kinetics

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

Jensen, C.R. & Fisher A.G. (2000) Scientific Basic of Athletic Conditioning, Philadelphia

Ronald, P. Pfeiffer (1998) Concepts of Athletics Training 2nd Edition, London: Jones and Bartlett Publications

Yograj Thani (2003), Sports Training, Delhi : Sports Publications

M. P. Ed. II Semester III
Theory Courses
MPCC-302
SPORTS MEDICINE

Credits – Theory - 4

Total Theory Lectures - 60

UNIT I – Introduction- sports medicine

Meaning, scope, concept, content and history of sports medicine, Need of sports medicine in physical education and sports(physical education teacher, coach and players), Elements of good food, Athletics diet for different games and sports(caloric needs), Causes if injuries in sports, prevention of sports injuries, treatment of sprain, strain, confusion, laceration, abrasion, fracture, dislocation and internal injuries, strapping and supports.

UNIT II – Various Exercises

Definition and principles of therapeutic exercises, coordination exercise, balance training exercise, strengthening exercises, mobilization exercises, Gait training, Gymball exercise, Injuries- acute, sub-acute, chronic, advantages and disadvantages of price, price therapy, Aquatic therapy.

UNIT III - Spine Injuries and Exercise

Head, Neck and Spine injuries: Causes, Presentational of Spinal anomalies, Flexion, Compression, Hyperextension, Rotation injuries. Spinal range of motion. Free hand exercises, stretching and strengthening exercise for head neck, spine. Supporting and aiding techniques and equipment for Head, Neck and Spine injuries.

UNIT IV - Upper Extremity Injuries and Exercise

Upper Limb and Thorax Injuries: Shoulder: Sprain, Strain, Dislocation, and Strapping. Elbow: Sprain, Strain, Strapping. Wrist and Fingers: Sprain Strain, Strapping. Thorax, Rib fracture. Breathing exercises, Relaxation techniques, Free hand exercise, Stretching and strengthening exercise for shoulder, Elbow, Wrist and Hand. Supporting and aiding techniques and equipment for Upper Limb and Thorax Injuries.

UNIT V - Lower Extremity Injuries and Exercise

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. Supporting and aiding techniques and equipment for Lower limb and Abdomen injures.

REFERENCES:

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

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

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

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

The Encyclopedia of Sports Medicine. (1998). The Olympic Book of Sports Medicine,

Australia: Tittel Blackwell Scientific publications.

Practical: Anthropometric Measurements,

M. P. Ed. II Semester III
Theory Courses
MPCC-303
HEALTH EDUCATION AND SPORTS NURTITION

Credits – Theory - 4

Total Theory Lectures - 60

Unit -1 Health Education

- a) Health - Concept, Dimensions, Determinants
- b) Health Education - Aim, objectives and Principles
- c) Health Instruction, Health Supervision
- d) Role of Health Education in personal hygiene'

Unit - II Health Problems in India

- a) Communicable and Non Communicable Diseases
- b) Health Science - Concept and objectives
- c) Health Science in Physical Education
- d) Role of health education in schools
- e) Health and Environment - Meaning and definition of pollution, types of Pollution and Prevention of Control of them, Public Health Importance ,Housing Standards and Housing and Health, Refuse - Sources and methods of Disposal.
- f) **Health Agencies: WHO, Red Cross, UNICEF & UNESCO.**

Unit- III - Hygiene and Health

- a) Hygiene Meaning and Type
- b) Effect of Alcohol and Tobacco on Health
- c) Life Style Management - Concept and Aspect
- d) Stress Management - Concept and Aspect

Unit- IV- Sports Nutrition

- a) Sports Nutrition - Meaning and Definition
- b) Role of nutrition in sports
- c) Guidance for Basic Nutrition
- d) Role of carbohydrates in Nutrition

Unit - V- Nutrition and Weight Management

- a) BMI (Body mass index) - Meaning, Concept and aspect
- b) Obesity and its hazard
- c) Weight management program in Physical Education
- d) Role of diet and exercise in weight management
- e) Health planning and Management : Meaning and objectives of Health Planning, National Health Policy, Health Planning in India, Health System at the National Level, State , District Level, Integrated Rural Development Programme.

References: •

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

M. P. Ed. II Semester III
Theory Courses
MPEC-304
SPORTS ENGINEERING (Elective)

Credits – Theory - 4

Total Theory Lectures - 60

Unit -1 Introduction to sports engineering and Technology

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

Unit - 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 & 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)

M. P. Ed. II Semester III
Theory Courses
MPEC-304
PHYSICAL FITNESS AND WELLNESS (Elective)

Credits – Theory - 4

Total Theory Lectures - 60

Unit I - Introduction

Meaning and Definition" of Physical Fitness, Physical Fitness Concepts and Techniques, Principles of physical fitness, Physiological principles involved in human movement. Components of Physical Fitness.

Leisure time physical activity and identify opportunities in the community to participate in this activity. Current trends in fitness and conditioning, components of total health fitness and the relationship between physical activity and lifelong wellness.

Unit II- Nutrition and Balanced Diet

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

Concept of balanced diet, various nutrients required for human body - protein, vitamin, carbohydrates, minerals, water, fats etc. relationship between diet and competition,

Unit III - Aerobic Exercise

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

Unit IV - Anaerobic Exercise

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

Unit V - Flexibility Exercise

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

Reference:

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

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

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

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

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

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

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

**M. P. Ed. II Semester III
Practical Course
MPPC-301**

Title of the Course

1- Certificate course in Physical Fitness and Wellness Trainer.

Course Content:

Module 01: Fundamentals of Psychological testing

- Meaning and concept of physical fitness
- Meaning and concept of wellness.
- Components of physical fitness.
- Dimensions of wellness.

Module 02:

- Different Exercises for physical fitness.
- Specific exercise for development of physical fitness components.
- Concept Balance diet.
- Nutrition.

Module 03:

- Concept of weight training.
- Yogic exercises for physical fitness and wellness.
- Team building activities.
- Activities for stress management.

Module 04:

- Qualities of fitness and wellness trainer.
- Duties and responsibilities of trainer.
- Visits to various fitness centers, clubs etc.
- Report writing.

M. P. Ed. II Semester III
Practical Course
MPPC-301
Title of the Course
2 - Certificate Course in open Gym Instructor

Course Content:

Module 01: Introduction, difference and importance.

- Introduction of gym.
- Introduction of open gym.
- Difference between gym and open gym.
- Importance of open gym.

Module 02: Basics, benefits and safety measures.

- Basic exercises of open gym.
- Benefits of open gym exercises.
- Benefits of open gym for social health.
- Safety measures in open gym.

Module 03:

- Essential equipments for open gym.
- Basic and advance exercises for open gym.
- Scheduling.
- Designing training program.

Module 04:

- Qualities of open gym instructor.
- Duties and responsibilities of open gym instructor.
- Visits to various clubs, fitness centers.
- Report writing.

M. P. Ed. II Semester IV
Theory Courses
MPCC-401
INFORMATION & COMMUNICATION TECHNOLOGY (ICT) IN
PHYSICAL EDUCATION

Credits – Theory - 4

Total Theory Lectures - 60

Unit I - Communication & Classroom Interaction

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

Unit II - Fundamentals of Computers

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

Unit III - MS Office Applications

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

Unit IV - ICT Integration in Teaching Learning Process

Approaches to Integrating ICT in Teaching Learning Process
Project Based Learning (PBL)
Co-Operative Learning
Collaborative Learning
ICT and Constructivism: A Pedagogical Dimension
Use of ICT in Educational management: office, personal,
E-mail: concept, advantage and disadvantage, use in educational research

Unit V - E-Learning, Web Based Learning & Social Networking

E-Learning Web Based Learning Visual Classroom, You Tube etc.

REFERENCES:

B. Ram, New Age International Publication, Computer Fundamental, Third Edition-2006 Brain under IDG Book. India (p) Ltd Teach Yourself Office 2000, Fourth Edition-2001 Douglas E. Comer, The Internet Book, Purdue University, West Lafayette in 2005 Heidi Steel Low price Edition, Microsoft Office Word 2003- 2004

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

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

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

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

M. P. Ed. II Semester IV
Theory Courses
MPCC-402
SPORTS PSYCHOLOGY AND SOCIOLOGY

Credits – Theory - 4

Total Theory Lectures - 60

UNIT I - Introduction

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

UNIT II - Motivation

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

UNIT III – Individual Differences

Meaning,
factor affecting Individual difference,
Individual difference and sports.

Athlete and Individual Differences.

UNIT IV - Sports Sociology

Meaning and Definition - Sports and Socialization of Individual Sports as Social Institution. National Integration through Sports. Fans and Spectators: Meaning and definition, Advantages and disadvantages on Sports Performance. Leadership: Meaning, Definition', types. Leadership and Sports Performance, sports and social media, role of sports in society.

UNIT V - Group Cohesion

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

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

REFERENCES:

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

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

Jain. (2002), Sports Sociology, Heal Sahety Kendre Publishers.

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

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

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

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

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

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

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

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

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

Singh Yadvinder,(2005), Sociology in Sports, New Delhi: Sports publication.

**M. P. Ed. II Semester IV
Theory Courses
MPCC-403**

DISSERTATION

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

**M. P. Ed. II
Semester IV
Theory Courses
MPEC-404
VALUE AND ENVIRONMENTAL EDUCATION**

Credits – Theory - 4

Total Theory Lectures -

60UNIT I – Concept of Values

Concepts of Values, importance of Values, sources of Values, types of Values

UNIT II – Nature of Value Education and Environmental Education

Concept of Value education, Need of Value education, process of Value education, Role of teacher in value education. Meaning, concept, objectives and importance of environmental education, Historical background of environmental education, Role of teachers in environmental education, Role of schools in environmental conservation and sustainable development.

Unit- III – Value conflicts

Concept of Value conflicts, ways to overcome Value conflicts, Recommendations of different educational commissions regarding value education, Role of parents in value education.

Unit - IV Environmental problems and their impact on human life

Problems related to pollution and its effects on human health, central measures of- 1.Air pollution, 2.Water pollution, 3. Soil pollution,

Problems related to pollution- 1. Noise pollution, 2. Nuclear hazards 3. Solid waste pollution
4. Radio active

Development of awareness about environmental problems among- 1. School pupils at higher secondary stage, 2. Local community.

Remedial measures of Environmental problems. **Role of school in environmental conservation and sustainable development, Pollution free eco-system.**

Unit - V Environmental Management

Environmental movements and projects- chipko, Apiko, Ganga action plan, Tiger project, Waste management- Domestic and Industrial reuse and recycling, Law of conservation of plants and animals, Environmental ethics- issues and possible solutions.

REFERENCE:

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

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

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

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

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

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

Me 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.)

M. P. Ed. II Semester IV
Theory Courses
MPEC-404
EDUCATION TECHNOLOGY IN PHYSICAL EDUCATION AND SPORTS

Credits – Theory - 4

Total Theory Lectures - 60

Unit I - Nature and Scope

Educational Technology - concept, Nature and Scope. Forms of educational technology: teaching technology, instructional technology, and behavior technology; Transactional usage of educational technology: integrated, complementary, supplementary stand-alone (independent); programmed learning stage; media application stage and computer application stage.

Unit II - Systems Approach to Physical Education and Communication

Systems Approach to Education and its Components: Goal Setting, Task Analysis, Coniert Analysis, Context Analysis and Evaluation Strategies; Instructional Strategies and Media for Instruction. Effectiveness of Communication in instructional system; Communication -Modes, Barriers and Process of Communication.

Unit III- Instructional Design

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

Unit IV - Audio Visual Media in Physical Education

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

Unit V - New Horizons of Educational Technology

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

REFERENCE:

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

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

Education and Communication for development, O. P. Dahama, O. P. Bhatnagar, Oxford
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Essentials of Educational Technology, Madan Lal, Anmol Publications

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

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

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

