UNIVERSITY OF CALICUT
DEPARTMENT OF PHYSICAL EDUCATION
PhD Entrance Examination

Time: 2 Hours Maximum Marks : 100

1. Fill in the blanks Answer all the questions (10x2=20)

    1. The amount of air which enters the lungs during normal inhalation is called the…….
    2. …….is the main source of energy during the Aerobic activities
    3. ……is the combination of speed and strength
    4. Type II diabetes is otherwise known as ----------
    5. Copper 12 min run/walk test is used to assess……..
    6. Null Hypothesis means the opposite of the……
    7. The normal curve is …….shaped
    8. The …….is otherwise known as pure of fundamental research
    9. The boundaries set forth the study is called……
    10. ……..in research means an intellectual guess.

2. Write answers in one word (10x2=20)

    1. The degrees to which an assessment tool produces stable and consistent results is called as what?
    2. With what type of research the terminology secondary sources associated with?
    3. Name the research that helps to solve practical problem?
    4. Name the programe used to type, edit and print an electronic document?
    5. What is the simplest measures of dispersion?
    6. The number of recovery period in the double Periodization?
    7. The designated point of doing different activities in a training circuit is termed as?
    8. Name a component body composition?
    9. What is the condensed summary of the research work known as?
    10. The variable that remain constant throughout the research is called?

3. True/ False Answer all the questions (5x2=10)

1. More than on test constitute a test battlery True/False
2. Repeated group design are predominantly used in longitudinal studies True/False
3. The post exercise energy consumption about the basal oxygen consumption

   Is known as vital capacity True/False
4. The main and interactional effect of categorical variable on a continuous

   Dependent can be assessed by ANACOVA True/False
5. A good hypothesis in a research emerge from reasoning True/False

4. Write short notes on any six questions (6x5=30)

1. Explain the different input and output device of the computer
2. What are the factors to be considered in the planning a training programe
3. Explain the methods of assessment of strength and cardiovascular endurance
4. Write short note on t-ratio
5. Define sampling and list out its different types
6. Explain the factors to be considered in formation of the title of the study
7. Explain the process of collecting literature from various sources
8. Explain the various types of correlation
9. What is storage device, Explain the different types of storage device
10. Explain muscle contraction theory

5. Answer any one (1x20=20)

1. Explain the various areas of research in physical education and sports science
2. Explain the criteria of selecting a research problem and the components of a research proposal

UNIVERSITY OF CALICUT

Abstract

General and Academic IV - Faculty of Education - M.P.Ed. Programme - Modified Rules, Regulations, Scheme of Examinations and Syllabus with effect from 2020 admissions - Approved subject to ratification by the Academic Council - Orders issued.

G & A - IV - J

U.O.No. 20488/2022/Admn Dated, Calicut University.P.O, 29.10.2022

Read:-1. U.O.No. 16333/2021/Admn dated 12.11.2021
2. Item No. 2 & 3 in the minutes of the meeting of Board of Studies in Physical Education (PG) held on 26.05.2022
3. Item No. 1 (b) in the minutes of the meeting of Faculty of Education held on 07.07.2022
4. Minutes of the meeting of Board of Studies in Physical Education (PG) held on 31.07.2022

ORDER

1. Vide paper read (1) above, the Modified Rules, Regulations, Scheme of Examinations and Syllabus of M.P.Ed. Programme, incorporating Outcome Based Education (OBE), was implemented, with effect from 2020 admissions.
2. Vide paper read (2) above, Board of Studies in Physical Education (PG) has decided to modify the rules of Attendance and Re-admission/College Transfer, in the Regulations of M.P.Ed. Programme.
3. The decision of Board of Studies, have approved by Faculty of Education, vide paper read (3) above and then by the Vice-Chancellor, on 26.07.2022, subject to ratification by the Academic Council.
4. Vide paper read (4) above, Board of Studies in Physical Education (PG) has decided to modify the rules of Promotion and Pass, Grading and Scheme of Examinations, in the Regulations of M.P.Ed. Programme. The minutes of the meeting of Board of Studies, have forwarded by the Chairman, who is also the Dean, Faculty of Education,
5. The decision of Board of Studies, has been approved by the Vice-Chancellor, on 11.08.2022, subject to ratification by the Academic Council.
6. Hence the Modified Rules, Regulations, Scheme of Examinations and Syllabus of M.P.Ed. Programme, is implemented, with effect from 2020 admission, subject to ratification by the Academic Council.
7. Orders are issued accordingly. (Modified Rules, Regulations, Scheme of Examination & Syllabus of MPEd Programme appended)

Ajitha P.P

Joint Registrar

To

1. Principal of Affiliated Colleges offering M.P.Ed. Programme, 2. Director, Dept. of Physical Education

Copy to : PS to VC/PA to R/PA to CE/JCE VII/SF/DF/FC

Forwarded / By Order

Section Officer

RULES, REGULATIONS, SCHEME OF EXAMINATIONS AND SYLLABUS OF M.P.Ed. UNDER CHOICE BASED CREDIT AND SEMESTER SYSTEM AS PER NCTE GUIDELINES

INTRODUCTION

Master of Physical Education (M.P.Ed.) is a two year professional degree programme with an objective to prepare Physical Education teachers to impart physical education in educational institutions subject to fulfilling the criteria prescribed by the State and the Central Government. The course will also facilitate for employment as Sports Administrators, Sports science experts, Trainers/ Instructors/coaches in fitness centres, health club, sports clubs, sports academy etc

1. **Name of the Course :**The name of the course shall be Master of Physical Education **(M.P.Ed.)**
2. **Nature of the Course :**The course shall be full time residential and co-educational.
3. **Duration of the Course** The duration of the course shall be two academic years with four semester
4. **Eligibility for Admission**.

A candidate for admission to the two year Master of Physical Education (M.P.Ed.) degree course shall fulfill the following conditions.

(a) Should have passed the three year Bachelor Degree in Physical Education (B.P.E) up to 2009 admission/four year B.P.Ed (integrated)degree of any University recognized by the University of Calicut OR have passed a post graduate degree or diploma (B.P.Ed/B.P.E/D.P.Ed) in Physical Education of at least one year duration up to 2014 admission/a post graduate degree or diploma (B.P.Ed/B.P.E/D.P.Ed) in Physical Education of at least two year duration of an Indian or Foreign University or Board appointed by the Education Department of the State or Union Territory recognized by the Calicut University, with a minimum of 50% marks in aggregate.

(b) Should be below the age of 28 years as on 1st July of the concerned academic year, SC/ST candidates will be given relaxation for 3 years.

(c) Should be physically fit for daily heavy load of physical activities and should not have physical deformity or mental disability.

5. Selection Criteria

The candidate shall be selected for admission from the rank list prepared on the basis of the following criteria.

(a) Written test (Based on B.P. E/B.P.Ed Syllabus)	50 Marks
(b) Game Proficiency Test(Any one game)	25 Marks
(c) Physical Fitness test (AAHPERD)	15 Marks
(d) Sports Achievement	10 Marks
Total	**100 marks**

6. Medium of Instruction and Examination

The medium of instruction and examination of the course shall be English.

7. Programme in the Credit & Semester System

The following are the important aspects of the M.P.Ed. programme.

Semesters
Credit System
Continuous Internal Assessment
(CIA) End Semester Examination
(ESE) Grading

8. **Semesters:** An academic year is divided into two semesters. Each semester will consist of 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).

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

10. **Academic Week** is a unit of five working days in which distribution of work is organized from day one to day five, with seven contact hours which includes tutoring on each day.

11. **Choice based Credit Semester System** 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.

12. **Core Course** means a subject that is compulsory as specified for all students undergoing the M.P.Ed. programme.

13. **Elective Subject** means a subject which would enrich the M.P.Ed. programme where the students are allowed to choose from a category of subjects

14. **Core Practical** means a Game or Sports discipline that comes under the category of Games which are compulsory as specified for all students undergoing the M.P.Ed. degree programme.

15. **Internship** The M.P.Ed. programme shall provide for sustained field work for learners. The programme shall include teaching theory classes, basic skills in sports and games and indigenous activities giving exposure to students in all such activities. Internship/ teaching practice would include engagement with the community ,ie,. School/college/sports organization/sports academy/sports club.

A minimum of 30 lessons out of which 10 teaching, 10 coaching and 10 officiating in the school/college/institution/department shall be conducted.

The teacher education institution and the participating institution shall set up a mutually agreed mechanism for mentoring, supervising, tracking and assessing the student teacher.

16. **Course** : The term course is usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weightage. The courses should define learning objectives and learning outcomes. A course may be designed to comprise Lectures/ tutorials/laboratory work/field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study etc. or a combination of some of these.

The following are the various categories of courses suggested for the M.P.Ed. Programme.

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

17. **Credit** refers to a unit by which the programme is measured. It is a unit of academic input measured in terms of the weekly contact hours assigned to a course. 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 weightage 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 90 credits and for each semester 20 credits.

18. Provision of Bonus Credits Maximum 03 credits in each Semester

Sr. No	Special Credits for Extra Co-curricular Activities	Credits
1	Sports achievement at State level Competition (Medal Winner) Participation at National level Competitions Sports achievement at National level Competition (Medal Winner) Sports participation International level Competition	1 2 3 4
2	Medal winners in Inter University Participation (any one game) Inter University Participation (any one game) Sports achievement at Inter Collegiate level Competition (I & II positions only)	3 2 1
3	National Cadet Corps/ National Service Scheme	2
4	Blood donation / Community service through Govt. depts. only	2
5	News reposting/ article Writing/ books writing/ progress report Writing	1

Students can earn maximum 03 bonus credits in each semester by his/her participation on 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. Apart from the bonus credits, no separate Grace marks will be awarded for sports achievement.

19. Structure of the M.P.Ed. Programme

First Semester : Part A Theoretical Course		
Courses	Number of papers	Credits
Core Courses	3	3 x 4 = 12
Elective Course	1 (out of two)	1 x 3 = 3
Part B Practical Course	4	4 x 2 = 8
Part B1 Practical	1	1 x 2 = 2
Part C Internship	1	1 x 1 = 1
		Total Credits 26
Second Semester : Part A Theoretical Course		
Courses	Number of papers	Credits
Core Courses	3	3 x 4 = 12
Elective Course	1 (out of two)	1 x 3 = 3
Part B Practical Course	4	4 x 2 = 8
Part B1 Practical	1	1 x 2 = 2
Part C Internship	1	1 x 1 = 1
		Total Credits 26
Third Semester : Part A Theoretical Course		
Courses	Number of papers	Credits
Core Courses	3	3 x 4 = 12
Elective Course	1 (out of two)	1 x 3 = 3
Part B Practical Course	4	4 x 2 = 8
Part B1 Practical	1	1 x 2 = 2
Part C Internship	1	1 x 1 = 1
		Total Credits 26
Fourth Semester : Part A Theoretical Course		
Courses	Number of papers	Credits
Core Courses	3	3 x 4 = 12
Core Course-Dissertation	1	1 x 3 = 3
Part B Practical Course	4	4 x 2 = 8
Part B1 Practical	1	2 x 1 = 2
Part C Internship	1	1 x 1 = 1
		Total Credits 26

20. Pattern of Question Papers:

Question Papers shall have five questions corresponding to numbers of units of each theory Course that is three Essay types and two short note type (one three out of five questions and the second five out of eight questions)

M.P.Ed : Format of Question Paper

Question No. Description Marks	Question No. Description Marks	Question No. Description Marks
1	Essay Type questions 3 out of six questions	45 marks (15 marks each)
2	Short notes: any three out of five questions	15 marks (5 marks each)
3	Short notes: any five out of eight questions	10 marks (2 mark each)
Total Marks		**70 marks**

21. Attendance

Each Semester should have a minimum of 100 working days and each working day will have three theory hours and four practical hours. Candidate must secure at least 90% of attendance in the lecture delivered in each of the theory subjects in Part –A and in Practical of Part –B and C, so as to complete the prescribed course of laboratory works, tutorials, seminars, projects, assignments etc to appear for the university examinations. However, shortage of attendance to the extent of 15% may be condoned by the University on the recommendation of Head of the institution/Department, on grounds, on payment of fees, as prescribed by the University and be permitted only for a single time during the whole course of study. If the student secures less than 75% attendance, the said student may be permitted to seek readmission along with the next batches (if vacancy exists) but should complete the programme within five years of admission (stipulated in Regulation no. 23 – PROMOTION /PASS).

22. Internal assessments

Internal assessments for 30 marks in each of the theory papers in Part A shall be on the basis of the internal examination, assignments, seminars (paper presentation), attendance and evaluation conducted by the concerned teacher. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade point. Evaluation for each course shall be done by a continuous internal assessment (CIA) by the concerned course teacher as well as by end semester examination and will be consolidated at the end of course. The components for continuous internal assessment are :

Based on Class tests	10 marks
Assignments / Lab Tests	10 marks
Seminar / Project	10 marks
Total	**30 marks**

Besides, the students should attend a leadership training camp, complete the prescribed laboratory work, practical, project work etc. if any.

23. Promotion and pass

Candidates who secure a minimum of 40% marks in the external examination and 50% marks including the internal assessment in each of the theory papers separately and thesis shall be declared to have passed the Part A of the M.P.Ed. examination. No separate minimum is required in internal assessments in Part A.

Candidates must secure at least 50% marks separately in internal and external examination, for a pass in Part B and Part C of the M.P.Ed. examination.

A candidate who fails in any paper in the Part A shall be eligible to appear that paper along with the subsequent main examination. Failed candidates will be declared to have passed the paper if they secure 40% marks in the external examinations.

Candidates who secure a total of 50% marks or more but below 60% of the aggregate total may be classified as passed the M.P.Ed. programme in II class. Candidates who secure a total of 60% marks or more of the aggregate total may be classified as passed the M.P.Ed. programme in I class. If a candidate secures 75% or more than 75% marks, may be classified as passed with distinction, provided should not have attended any supplementary examination during the M.P.Ed. programme. If so, have to be classified as First class only.

Candidates registered for the first semester M.P.Ed. examination shall have to complete the course within five years from the date of registration.

24. College Transfer / Readmission – College transfer be permitted only during the second year to the existing vacancies (no mutual transfers be permitted) . This process may be done by the university by inviting applications giving opportunity to all the students and preference should be given to those students who are ranked higher in the rank list duly prepared at the time of admission. Readmission be given with the next batches (if vacancy exists) but should complete the programme within five years of admission (stipulated in Regulation no. 23 – PROMOTION /PASS).

25. Programme outcomes of the M.P.Ed. Programme

1. PO –1**CRITICAL THINKING**– Take Informed Actions after identifying the Assumptions that frame one's Thinking and Actions, Checking out the Degree to which these Assumptions are Accurate and Valid, and Looking at one's Ideas and Decisions (Intellectual, Organizational and Personal)from Different Perspectives.

2. PO –2 **COMMUNICATION**.- Listen, Read, Comprehend, Speak and Write Clearly and Effectively in Person and Through Electronic Media and in English / Regional Language / Language Of The Discipline and Exhibit Sound Domain Knowledge Including Academic Concepts and Terminologies

3. PO –3 **SELF –DIRECTED &LIFE –LONG LEARNING** – Engage in Independent and Lifelong Learning in the Broadest Context of Socio – Technological Changes.

4. PO–4 **ETHICS** – Understand Different Value Systems including one's own, as also the Moral Dimensions of one's actions and accept Responsibility for the same.

26. **The specific outcomes of the M.P.Ed. Programme**

(1) Development of the competency to demonstrate practically on the field the various

technical skills, perform drills, perform the playing ability on the field in a team situation of major games for teaching as well as for coaching.

(2) Ability to acquire and apply the knowledge related teaching, coaching, officiating and conduct of tournaments related to major sports / games.

(3) Capacity to communicate effectively to the colleagues, students, team members of various teams and to parents keeping in mind the social, moral and ethical norms and mores prevailing in the society.

(4) Acquisition of technical competencies in specialized areas of atleast a couple of sports disciplines to teach as well as to impart coaching to advanced level teams/ players.

(5) Ability to identify the various problems faced by students /trainees/ sports persons and find teaching / coaching solutions based on a systematic approach.

(6) Ability to conduct research in chosen fields of specialization / interest and thereafter to prepare the modalities to implement it in actual teaching and game situations.

(7) Understanding of the importance of sustainable and cost effectiveness in design and development of sports goods / sports infrastructure etc.

(8) Understanding and commitment to preferred and ethical responsibilities so as to be impartial irrespective of caste, religion, creed, language or provincialism.

(9) Ability to work effectively as an individual or as a member / leader in a team which may or may not include teachers / students, sports enthusiasts / non teaching staff/ sports lovers etc.

(10) Ability to be a highly skilled teacher with good technical knowledge, management, teaching, coaching, leadership, entrepreneurial and decision making skills.

(11) Awareness of the social, moral, cultural, global and environmental responsibilities as a teacher.

(12) Capability and enthusiasm for self improvement through continuous professional development and lifelong learning.

(13) Developing special capabilities and knowledge to treat students equally including those with disabilities or other special needs.

Proposed Division of Core Courses Based on PSO'S

1. **Theoretical foundations** - Ancient and Modern Theories And Concepts of Physical Education

2. **Methodological foundations**– Teaching Methods, Coaching Methods, Research Methods and Statistical and Computer Applications in Physical Education, Sports and Games.

3. **Contemporary**– Changing Trends and Applications in the Field of Sports and Physical Education

4. **Psychomotor**– Scientific Knowledge of Fundamental Human Movement Pattern.

27. Grading

As per Calicut University / NCTE grading system

SEMESTER –I						
Part A :Theoretical Course						
Course Code	**Title of the Papers**	**Total Hours/Week**	**Credit**	**Internal Marks**	**External Marks**	**Total Marks**
Core Course						
MPCC- 101	Research Process in Physical Education & Sports Sciences	4	4	30	70	100

MPCC- 102	Applied Statistics in Physical Education and Sports	4	4	30	70	100
MPCC- 103	Tests, Measurement and Evaluation in Physical Education	4	4	30	70	100
Elective Course (any one)						
MPEC- 101	Gender, Disability & inclusive Sports Education	3	3	30	70	100
MPEC- 102	Sports and Education Technology					
Part–B Practical Course						
MPPC- 101	Track and Field 1. Track Events	4	2	50	-	50
MPPC- 102	1. Game /Sport Specialization Any one i.e. Football/Cricket/ Basketball/ Volleyball/Taekwondo/ Judo/ Track & Field/Badminton/Kho-Kho & Kabaddi Hockey/ Handball. (Should continue in all 4 semesters)	4	2	50	-	50
MPPC- 103	2.Racket game (Shuttle Badminton/ Table Tennis/Tennis) Any one.	4	2	50	-	50
MPPC- 104	3. Yoga	4	2	50	-	50
MPPC- 105	1. Teaching/Coaching class (Track events).	4	2	75	75	150
Part-C Internship						
MPIC-101	Internship (Class room teaching- theory from PART-A. total 10 lessons)	2	1	50	-	50
Total		37	26	445	355	800

SEMESTER –II						
Part A: Theoretical Course						
Course Code	**Title of the Papers**	**Total Hours/ Week**	**Credit**	**Internal Marks**	**External Marks**	**Total Marks**
Core Course						
MPCC-201	Sports and Exercise Physiology	4	4	30	70	100
MPCC-202	Scientific Principles of Sports Training	4	4	30	70	100
MPCC-203	Sports Medicine	4	4	30	70	100
Elective Course (Anyone)						
MPEC- 201	Sports Journalism and Mass Communication	3	3	30	70	100
MPEC- 202	Value and Environmental Education					
Part–B Practical Course						
MPPC-201	Track and Field (Field events)	4	2	50	-	50
MPPC-202	1. Game /sport Specialization Any one i.e. Football/Cricket/ Basketball/ Volleyball/Taekwondo/ Judo/ Track & Field/Badminton/ Kho-Kho & Kabaddi/ Hockey / Handball. (Continued from 1st semester)	4	2	50	-	50
MPPC- 203	2.Indigenous game (Kabaddi and Kho-Kho)	4	2	50	-	50
MPPC-204	3. Teaching Practice of the selected Racket game / (5 internal lessons)	4	2	50	-	50
MPPC-205	1.Teaching/Coaching Practice(Field Events of Track and Field)	4	2	75	75	150
Part-C Internship						
MPIC-201	Internship (coaching lessons of 10 lessons)	2	1	50	-	50
Total		37	26	445	355	800

SEMESTER –III						
Part A: Theoretical Course						
Course Code	**Title of the Papers**	**Total Hours/ Week**	**Credit**	**Internal Marks**	**External Marks**	**Total Marks**
Core Course						
MPCC-301	Yogic Sciences	4	4	30	70	100
MPCC-302	Sports Psychology	4	4	30	70	100
MPCC-303	Kinesiology and Sports Biomechanics	4	4	30	70	100
Elective Course (Anyone)						
MPEC- 301	Sports Engineering	3	3	30	70	100
MPEC- 302	Health Education					
Part–B Practical Course						
MPPC-301	Gymnastics / Swimming (Any One)	4	2	50	-	50
MPPC-302	1. Game /Sport Specialization (Individual skills, game situation, officiating, lead-up games) Any one i.e. Football/Cricket/ Basketball/ Volleyball/Taekwondo / Judo/ Track & Field/Badminton /Kho-Kho & Kabaddi / Hockey / Handball. (Should continue in all 4 semesters)	4	2	50	-	50
MPPC-303	2.Team Game (Football/Cricket/ Basketball/Volleyball/Hockey/ Handball.)(any one)	4	2	50	-	50
MPPC-304	3. Teaching/Coaching Lessons of Gymnastics/ Swimming – (5 Lessons)	4	2	50	-	50
MPPC-305	Coaching Lessons of Game /Sport Specialization - 5 Lessons (4 Internal & 1 External)	4	2	75	75	150
Part-C Internship						
MPIC- 301	Internship (10 Officiating classes)	2	1	50	-	50
Total		37	26	445	355	800

SEMESTER –IV						
Part A: Theoretical Course						
Course Code	**Title of the Papers**	**Total Hours**	**Credit**	**Internal Marks**	**External Marks**	**Total Marks**
Core Course						
MPCC- 401	Sports Management	4	4	30	70	100
MPCC- 402	Physical Fitness and Wellness	4	4	30	70	100
MPCC- 403	Athletic care and Rehabilitation	4	4	30	70	100
Core Course						
MPCC- 404	Dissertation	3	3	30	70	100
Part–B Practical Course						
MPPC- 401	Gymnastics/ Swimming (any one) Practical -Skills.	4	2	50	-	50
MPPC- 402	1.Game / Sport Specialization- (Continued from 1st Semester) Practical and Theory classes about rules, techniques & tactics.	4	2	50	-	50
MPPC- 403	2. Team game(Football/Cricket /Basketball/Volleyball/ Hockey/ Handball.)	4	2	50	-	50
MPPC- 404	3.Playing ability in the game /Sport specialization match practice.	4	2	50	-	50
MPPC- 405	Officiating / interpretation of rules of Game Specialization and practical skill proficiency in the game.	4	2	75	75	150
Part-C Internship						
MPIC- 401	Class room teaching /internship (history of the games/rules and its interpretations/tactics/major tournaments/ etc)	2	1	50	-	50
Total		37	26	445	355	800
		148	104	1780	1420	3200

27.Scheme of Examination

SEMESTER –I				
Course Code	**Title of the Papers**	**Internal Marks**	**External Marks**	**Total Marks**
MPCC- 101	Research Process in Physical Education & Sports Sciences	30	70	100
MPCC- 102	Applied Statistics in Physical Education and Sports	30	70	100
MPCC- 103	Tests, Measurement and Evaluation in Physical Education	30	70	100
MPEC- 101	Gender, Disability & inclusive Sports Education			
MPEC- 102	Sports and Education Technology	30	70	100
MPPC- 101	Track and Field 1. Track Events	50	-	50
MPPC- 102	1.Games Specialization (Individual skills, game situation, officiating, lead-up games) . Any one ie,. Football Cricket/ Basketball/Volleyball/ Taekwondo/ Judo/ Track & Field/ Badminton/Kho-Kho & Kabaddi/ Hockey/Handball (For all 4 semesters	50	-	50
MPPC- 103	2.Racket game (Shuttle Badminton/ Table Tennis/Tennis)Any one game.	50	-	50
MPPC- 104	3. Yoga	50	-	50
MPPC- 105	1.Teaching/coaching class(Track events).	75	75	150
MPIC-101	Internship (Class room teaching- theory from PART-A. total 10 lessons)	50	-	50
Total		445	355	800

SEMESTER –II				
Course Code	**Title of the Papers**	**Internal Marks**	**External Marks**	**Total Marks**
MPCC-201	Sports and Exercise Physiology	30	70	100
MPCC-202	Scientific Principles of Sports Training	30	70	100
MPCC-203	Sports Medicine	30	70	100
MPEC- 201	Sports Journalism and Mass Communication	30	70	100
MPEC- 202	Value and Environmental Education			
MPPC-201	Track and Field (Field events)	50	-	50
MPPC-202	1..Games Specialization (Any one)Football/Cricket/ basketball/ Volleyball/Taekwondo/ Judo/ Track & Field/Badminton/Kho-Kho & Kabaddi/Hockey/ Handball	50	-	50
MPPC-203	2.Indigenous games (Kabaddi & Kho-Kho)	50	-	50
MPPC-204	Teaching Practice of Racket game (5 internal lessons)	50	-	50
MPPC-205	1.Teaching/Coaching practice (Field Events of Track and Field)	75	75	150
MPIC-201	Internship (coaching lessons of 10 lessons)	50	-	50
Total		445	355	800

SEMESTER –III				
Course Code	**Title of the Papers**	**Internal Marks**	**External Marks**	**Total Marks**

MPCC-301	Yogic Sciences.	30	70	100
MPCC-302	Sports Psychology	30	70	100
MPCC-303	Kinesiology and Sports Biomechanics	30	70	100
MPEC- 301	Sports Engineering	30	70	100
MPEC- 302	Health Education			
MPPC-301	Gymnastics / Swimming (Any One)	50	-	50
MPPC-302	1. Game / Sport Specialization (Any one) Football/Cricket / Basketball/ Volleyball/ Taekwondo/ Judo/ Track & field/Badminton/Kho-Kho & Kabaddi/Hockey/ Handball	50	-	50
MPPC-303	2.Team Game(Football/ Volleyball / Cricket / Hockey / Handball & Basketball) (any one)	50	-	50
MPPC-304	3. Teaching/Coaching Lessons of Gymnastics/ Swimming – (5 Lessons)	50	-	50
MPPC-305	Coaching Lessons of Game /Sport Specialization - 5 Lessons (4 Internal & 1External)	75	75	150
MPIC- 301	Internship (10 Officiating)	50	-	50
Total		445	355	800

SEMESTER –IV				
Course Code	**Title of the Papers**	**Internal Marks**	**External Marks**	**Total Marks**
MPCC- 401	Sports Management	30	70	100
MPCC- 402	Physical fitness and Wellness	30	70	100
MPCC- 403	Athletic care and Rehabilitation	30	70	100
MPCC- 404	Dissertation	30	70	100
MPPC- 401	Gymnastics/ Swimming (any one) Practical -Skills.	50	-	50
MPPC- 402	1.Game / Sport Specialization- Practical skills.	50	-	50
MPPC- 403	2.Playing ability in the game /match practice	50	-	50
MPPC- 404	3. Team game (Football/ Volleyball /Cricket/Hockey/Handball/ Basketball)	50	-	50
MPPC- 405	Officiating / Interpretation of rules of Game / Sport Specialization- 5 Lessons (4 Internal & 1 External)	75	75	100
MPIC- 401	Class room teaching /internship (history of the games / rules and its interpretations / tactics / major tournaments etc)	50	-	50
Total		445	355	800

SEMESTER I -- THEORY COURSE

CORE COURSE MPCC 101:**Research Process in Physical Education & Sports Sciences**

Course Learning Outcomes

CO 1 Analyze critically the research methods used in Physical
Education. CO 2 Understand the need of Research in Physical Education.
CO 3 Understand the experimental designs in Physical Education and sports.
CO 4 Understand the importance of inter disciplinary research in Physical Education.
CO 5 Understand the types of Sampling used in Research in Physical Education.
CO 6 Understand the tools and techniques used for data collection for Research in Physical Education.
CO7 Understand the importance of Descriptive research and inter disciplinary research in Physical Education.
CO8 Understand the characterization of the thesis and the mechanics of writing research report and abstracts and papers.

COURSE CONTENT

UNIT- I – Research Process in Physical Education: An Overview

Research -Meaning and Definition, Need, Nature and Scope of research in Physical Education. Classification of Research, Ethical Issues in Research.
Research Problem, Location of Research Problem, and Criteria for selection of a problem, Qualities of a good researcher.
Library and literature search (Literature review, Source of literature, writing the literature review).
Hypothesis- Definition and meaning of hypothesis, Formulating research hypothesis, Types of hypothesis

UNIT- II – Sampling and Tools of Research

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.
Tools and techniques of data collection, Observation. Recording, Check list, rating scale, score card, Interview, questionnaire, Attitude scale, Socio-economic technique, Photography.

UNIT- III – Research Design- Descriptive Research and Historical Research

Descriptive Methods of Research; Survey Study, Case study, Philosophic research and Meta-Analysis 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- IV–Research Design- 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 -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.

REFERENCES

(1) Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc.
(2) Clarke David. H & Clarke H, Harrison (1984) Research processes in Physical Education, New Jersey; Prentice Hall Inc.
(3) Craig Williams and Chris Wragg (2006) Data Analysis and Research for Sport and Exercise Science, London Routledge Press.
(4) Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics.
(5) Kamlesh, M. L. (1999) Research Methodology in Physical Education and Sports, New Delhi.
(6) Moses, A. K. (1995) Thesis Writing Format, Chennai.
(7) Poompugar Pathippaga Rothstain, A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall.
(8) Subramanian, R, Thirumalai Kumar S & Arumugam C (2010) Research Methods in Health, Physical Education and Sports, New Delhi; Friends Publication.
(9) Moorthy A. M. Research Processes in Physical Education (2010); Friend Publication, New Delhi.

SEMESTER I – THEORY COURSE

CORE COURSE MPCC 102: **Applied Statistics in Physical Education & Sports**

Course Learning Outcomes

CO 1 Understand the need, importance & uses of Statistics in Physical Education.
CO 2 Analyze critically the need and uses of parametric and non-parametric statistics. CO 3 Understand the importance of data and the various types of data.
CO 4 Understand the types of measuring scales used in Research in Physical Education.
CO 5 Understand about the measures of Central Tendency and the measures of dispersion, its calculations, advantages and uses.
CO 6 Understand the types of scoring scales used in Research in Physical Education, its calculations and uses.
CO 7 Understand the notion of hypothesis, its formation and its testing.
CO 8 Understand the notion of Normal curve, its principles, its properties and divergence.
CO 9 Analyze critically the use of Inferential and comparative statistics and its uses.

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COURSE CONTENT

UNIT -I – Introduction to Statistics

Meaning and Definition of Statistics. Function, need and importance of Statistics. Types of Statistics.

Data, types of data, Measuring scales (Nominal, Ordinal, Interval, Ratio), Variables.

Meaning of the terms, Population, Sample, Parametric and non-parametric statistics.

UNIT- II– Numeric summery measures

Measures of Central Tendency- Meaning, uses and purpose, Calculation and advantages– Mean, Median and Mode.

Measures of Dispersion- Meaning, uses and purpose, Calculation and advantages of Range, Quartile Deviation, Mean Deviation and Standard Deviation.

Scales- Meaning, preparation, uses and purpose.

Unit- III- Presentation of the data and Testing Hypothesis

Meaning, Purpose, Calculation and advantages of scoring scales; Sigma scale, Z Scale, Hull scale. Graphical Representation in Statistics; Line diagram, Bar diagram, Histogram, Pie -graph, Frequency Polygon, Ogive Curve.

Level of Significance, Type 1 and Type 2 Error, One Tail and Two Tail Test, Degree of freedom, Formation of Hypothesis, Testing of Hypothesis

UNIT -IV – Probability Distributions and Graphs

Normal Curve. - Principles of normal curve – Properties of normal curve. Divergence from normality – Skewness and Kurtosis. Meaning of probability.

Meaning, uses and construction of frequency table. Probable Error. Percentile rank.

UNIT- V – Inferential and Comparative Statistics

Meaning of correlation – Co-efficient of correlation – calculation of co-efficient of correlation by product moment method and rank difference method.

Tests of significance; Independent “t” test, Dependent “t” test, chi – square test, Concept of ANOVA and ANCOVA.

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

REFERENCES

(1) Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc.
(2) Clark D.H. (1999) Research Problem in Physical Education 2nd edition, Eaglewood Cliffs, Prentice Hall, Inc.
(3) Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics.
(4) 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.
(5) Sivaramakrishnan. S. (2006) Statistics for Physical Education, Delhi; Friends Publication.
(6) Thirumalaisamy (1998), Statistics in Physical Education, Karaikudi.

SEMESTER I – THEORY COURSE

CORE COURSE: MPCC 103 -Tests, Measurement and Evaluation in Physical Education

Course Learning Outcomes:

CO 1 Understand the meaning and basic concepts of tests, measurement and evaluation in the field of Physical Education and sports.
CO 2 Create new tests for measurement and evaluation based on the criterion measures of the construction of a new test.
CO 3 Analyse student's knowledge of a given discipline and plan the programme accordingly.
CO 4 Create evaluation programmes based on appropriate assessment and evaluation tools to address skill development in varied situations.
CO 5 Execute appropriate evaluation procedure to grade and motivate the participants for a better performance.
CO 6 Understand measurement and evaluation techniques to collect data for research programmes as well as biomechanical experimentations.

CO 7 Understand new measurement tools and test corresponding to sedentary and active people

COURSE CONTENT

UNIT I – Introduction

Meaning and Definition of Test, Measurement and Evaluation. Need and Importance of Measurement and Evaluation. Principles of Measurement and Evaluation.

Taxonomy of educational objectives

Domains of behavior – cognitive domain, the affective domain, psycho motor domain writing behavioral objectives

Test Evaluation: Criteria of Test Selection-Scientific Authenticity, (Reliability, Validity, Objectivity, norms, Administrative, Feasibility, and Educational application.

Classification of tests-Standardized and teacher made tests, objectives and subjective tests. advantages and disadvantages of subjective and objective evaluation.

Unit – II: Construction of tests

Knowledge tests (written tests).
Determining the purpose of the test.

Planning the test – test blue print, objectives, content. Construction of test items- Types of Cognitive test items - Objective- true-false, Matching items, Completion items, identification, multiple choice

Types of Cognitive test items – subjective-Short essay and essay items- writing essay items.

Evaluation of knowledge test- Reliability- Kuder-Richardson method, Split- Halves method. Validity-Item analysis- Index of Discrimination; item difficulty; individual item difficulty.

Construction of Physical performance tests (fitness & skills tests)- steps in test construction and evaluation.

Psychomotor skill tests- Simulated condition items; Game performance Items

Rating Scales- Constructing rating scale Grading in Physical Education- philosophy, purpose, measurable factors, criteria & methods of grading, systems of grading.

Unit-III: Measurement of Organic Functions:

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.

Cardiovascular respiratory function- Cooper's 12 minutes continuous Run/Walk test, Tuttle pulse ratio test. Hyman's cardiopulmonary Index (CPI), Harvard step test and its modifications

Motor fitness: Oregon Motor fitness test, J.C.R. Test, AAHPERD Youth Fitness test, Indiana Motor fitness test, National Physical Fitness Programme test, Canadian Motor fitness test.

Tests of General motor ability :

Mc.Cloys general motor ability test, Iowa Brace test, Methony Johnson test

Test for Strength And Skill Strength : Roger's Physical fitness index and suggested changes in the PEI test.

Kraus - Weber Minimum Muscular Test, Hyman's cardiopulmonary Index (CPI), Harvard step test and its modifications

Unit-IV: Assessment of skills and Anthropometry

Skill Test:

Volleyball - Brady test, Russel and Lang's test; Basketball - Johnson test, Knox test

Soccer - Mc Donald test, Johnson test; Field Hockey – Harban Singh field hockey test

Badminton - Broer Miller test; Tennis - Dyer Tennis test.

Measures of Posture - Anthropometry,

Measurement of posture and body mechanics- IOWA Posture test (Cureton's)

Anthropometric Measurements: Method of Measuring Height: Standing Height, Sitting Height. Method of measuring Circumference: Arm, Waist, Hip, Thigh. Method of Measuring Skinfolds:

Triceps, Sub- scapular, Suprailiac.

Unit-V: Measurement of Social and Psychological Factors

Social factors - Social efficiency scale - Mc.Cloys Behavior rating scale, Cowell social Behaviour trend index, Social Distance Scale, Mental Health analysis, Wasoburn's social adjustment inventory.
Socio Metric Technique - Introduction
Measurement of attitude and Leadership
Psychological factors -
Anxiety Scale - Silberberg's Competitive State - Anxiety Scales.
Other sports specific scales/Questionnaire - Motivation, Achievement Motivation, Leadership etc.

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

PRACTICUM: Tests of Unit III & IV should be conducted practically also.

ASSESSMENT RUBRIC: Classroom Test, Project Work, Assignments, Presentations

REFERENCES

(1) Bangsbo, J. (1994). Fitness training in football: A scientific approach. Bagsvaerd, Denmark: HoStorm.
(2) Barron, H. M., & Mchee, R. (1997). A practical approach to measurement in Physical Education, Philadelphia: Lea and Febiger.
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(4) Kansal, D.K. (1996). Test and measurement in sports and Physical Education. New Delhi, D.V.S. Publications..
(5) Mathews, D.K., (1973). Measurement in Physical Education, Philadelphia W.B. Sounders Company.
(6) Pheasant, S. (1996). Body space: anthropometry, ergonomics and design of work, Taylor & Francis, New York.
(7) Phillips, D. A. & Hornak, J. E. (1979). Measurement and evaluation in Physical Education. New York, John Willey and Sons.
(8) Sodhi, H.S., & Sidhu, L.S. (1984). Physique and selection of sports- a Kinanthropometric study, Patiala,: Punjab Publishing House.

SEMESTER I THEORY COURSE ELECTIVE

ELECTIVE COURSE MPEC-101 - Gender, Disability & Inclusive Sport

Education UNIT - I: Understanding & Construction of Gender

Defining Gender and features of gender inequality, Gender inequality in Education in India, Gender based violence as a development and rights challenge. Historical roots of gender construction in India – patriarchy and its socio- cultural origins. Impact of gender as a social construct. Gender roles and the female stereotype in India. The Global Gender Equality Agenda.

UNIT - II: Gender and Schooling

Gender issues in access to Education & Physical Education, Quality of work and equal opportunity. Gender in Physical Education classroom and peer interactions, Gender issues in participation in sports.

UNIT - III: Gender and Constitution of India

Constitutional provisions for Education of women in India, UEE and programmes for Education of women in India, Gender and policy perspective, Class and Inequality.

UNIT IV: Disability & Inclusive Education

Definition, concept and importance of inclusive Education. Historical perspectives on Education of children with diverse needs. Difference between special Education, integrated Education and inclusive Education. Advantages of inclusive sports Education for all children. Educational approaches and measures for meeting the diverse needs.

UNIT V: Scope of Gender Studies in Sports

Sports and Gender, Gender Equity and Women in Sports, Building inclusive learning friendly sports facilities, overcoming barriers for inclusion, Creating and sustaining inclusive practices. Role of teachers, parents and other community members for supporting inclusion of children with diverse needs for participation in sports.

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/ Viva Voce/ Seminars/ Term Papers/ Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test, Project Work, Assignments and Presentations

REFERENCES

(1) Chanana,Karuna (ed) Socialisation, Education and Women, Orient Longman, New Delhi,1988. Mandell, Nancy (ed), Feminist Issues: Race, Class and Sexuality, Prentice Hall,Ontario,1995.
(2) Nambissan, Geeta B, Gender and Education: The Social Context of schooling Girl Children in India, 1995.
(3) Erik Olin Wright, “From Paradigm Battles to Pragmatist Realism: towards an integrated class analysis”, New Left Review (forthcoming).

(4) Daryl Glaser, “Class as a Normative Category: Egalitarian Reasons to Take It Seriously (With a South African Case Study).
(5) Daryl Glaser, 'Should An Egalitarian Support Black Economic Empowerment?, Politikon, vol. 34, no. 2, 105-123, 2007.
(6) John Roemer paper: “Should Marxist’s care about exploitation” in Analytical Marxism and Philosophy & public affairs 1985.
(7) Michael Marmot, Richard Wilkinson, Social Determinants of Health: The Solid Facts.
(8) Mel Kohn, Class and Conformity, excerpts.
(9) Mel Kohn and Carmi Schooler, Work and Personality, excerpts.
(10) Gomberg, How to make opportunity equal (Blackwell, 2007).
(11) Ainscow, M., Booth. T (2003): The Index for Inclusion: Developing Learning and Participation in Schools. Bristol: Center for Studies in Inclusive Education.
(12) Ahuja. A, Jangira, N.K. (2002): Effective Teacher Training; Cooperative Learning Based Approach: National Publishing house 23 Daryaganj, New Delhi 110002.
(13) Jangira N.K. and Mani, M.N.G. (1990): Integrated Education for Visually Handicapped, Gurgaon, Old Subjimandi, Academic Press.
(14) Jha. M.(2002) Inclusive Education for All: Schools Without Walls, Heinemann Educational publishers, Multivista Global Ltd, Chennai, 600042, India.
(15) Sharma, P.L. (1990) Teachers handbook on IED-Helping children with special needs N. C. E R T Publication.
(16) Sharma P.L (2003) Planning Inclusive Education in Small Schools, R .I. E. Mysore.

SEMESTER I THEORY COURSE ELECTIVE

ELECTIVE COURSE MPEC-102 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, 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 Equipment: Balls: Types, Materials and Advantages, Bat/Stick/ Racquets: Types, Materials and Advantages. Clothing and shoes: Types, Materials and Advantages. Measuring equipment: Throwing and Jumping Events. Protective equipment: Types, Materials and Advantages. Sports equipment with nano technology, Advantages.

UNIT- V – Training Gadgets

Basketball: Ball Feeder, Mechanism and Advantages. Cricket: Bowling Machine, Mechanism and Advantages, Tennis: Serving Machine, Mechanism and Advantages, Volleyball: Serving Machine Mechanism and Advantages. Lightting 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.

REFERENCES

(1) Charles J.A. Crane, F.A.A. and Furness, J.A.G. (1987) "Selection of Engineering Materials" UK: Butterworth Heiremann.
(2) Finn, R.A. and Trojan P.K. (1999) "Engineering Materials and their Applications" UK: Jaico Publisher.
(3) John Mongilo, (2001), "Nano Technology 101 "New York: Green wood publishing group. Walia, J.S. Principles and Methods of Education (Paul Publishers, Jullandhar), 1999.
(4) Kochar, S.K. Methods and Techniques of Teaching (New Delhi, Jullandhar, Sterling Publishers Pvt. Ltd.),1982
(5) Kozman, Cassidy and Jackson. Methods in Physical Education (W.B. Saunders Company, Philadelphia and London), 1952.

SEMESTER –II --THEORY COURSE

CORE COURSE: MPCC-201: Sports and Exercise Physiology

Course Learning Outcomes

CO 1 Understand the Role of Exercise Physiology in the field of Physical Education and Sports.
CO 2 Understand the Macro & Micro Structure of the Skeletal Muscle.
CO 3 Understand the Sliding Filament theory of Muscular Contraction.

CO 4 Understand the different types of Muscle fibre, Muscle Tone,
CO 5 Understand the chemistry of Muscular Contraction – Heat Production in the Muscle
CO 6 Understand the Sliding Filament theory of Muscular Contraction.
CO 7 Understand the effect of exercise and training on the muscular system.
CO 8 Understand the effect of exercise and training on the cardiovascular system.
CO 9 Understand the effect of exercise and training on the Respiratory system.
CO 10 Understand about metabolism and Energy transfer.
CO 11 Understand about climatic conditions and sports performances
CO 12 Understand the physiological adaptations to different environments
CO 13 Understand and evaluate the physical performance of sports persons
CO 14 Understand the energy sources during exercise and rest
CO 15 Understand broadly the role of exercise physiology in preventing sports injuries.
CO16 Under how to measure Resting heart rate, BP, Vital Capacity, Peak Flow Rate, Respiratory Rate. CO17 Assessment of Body Composition by Skinfold caliper method

COURSE CONTENT

UNIT - I – Introduction

Definition of Physiology and Exercise physiology and Role of Exercise Physiology in the field of Physical Education and Sports.

Skeletal Muscles and Exercise

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

UNIT - II – Cardiovascular System and Exercise

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

UNIT - III – Respiratory System and Exercise

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

UNIT - IV – Metabolism and Energy Transfer

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

UNIT - V – Climatic conditions and sports performance and Ergogenic aids

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

PHYSIOLOGICAL ASSESSMENT (PRACTICUM)

- Measurement of resting heart rate, immediately before and after activity and during activity.
- Measurement of Blood Pressure by Sphygmomanometer
- Measurement of Vital Capacity, and Peak Flow Rate.
- Assessment of Respiratory Rate.
- Assessment of Body Composition by Skinfold Caliper method

REFERENCES :

(1) Amrit Kumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: Poompugar Pathipagam.
(2) Beotra Alka, (2000) Drug Education Handbook on Drug Abuse in Sports: Sports Authority of India Delhi.
(3) Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs.
(4) David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics.
(5) Fox, E.L., and Mathews, D.K. (1981). The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing.
(6) Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co. Richard, W. Bowers. (1989). Sports Physiology. WMC: Brown Publishers.
(7) Sandhya Tiwari. (1999). Exercise Physiology. Sports Publishers.
(8) Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Surjeet Publications.
(9) Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication.
(10) William, D. Mc Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company.

SEMESTER –II - THEORY COURSE

CORE COURSE: **MPCC 202: Scientific Principles of Sports**

Training Course Learning Outcomes

CO 1 Understand the need and importance Sports Training based on the Scientific Principle
CO 2 Understand the Training Load and Adaptation and also the symptoms and causes of Overload
CO3 Able to interact professionally and educate clients, patients, peers, colleagues and medical/athletic personnel

CO 4 Demonstrate latest training strategies during training session.
CO 5 Understand Technical and tactical preparation.
CO 6 Understand and execute periodical Training plan during coaching session.

COURSE CONTENT

UNIT – I – Introduction

Definition, aims and characteristics of sports training, Principles of Sports training specificity, overload, and reversibility. Massed and distributed practice.

UNIT – II – Training load and adaptation

Loading – definition, internal and external load, Components of load - Intensity of loading density of loading, duration and extent of loading, Load and adaptation, Super compensation. Progressive and fluctuation method of load, Over load – Symptoms, causes and remedies

UNIT – III – Motor Fitness Variable

Physical Fitness Components – Definitions, importance, classification and determining factors of Speed, Maximum Strength, Explosive Strength, Strength Endurance, Speed Endurance, Basic Endurance, Flexibility and Coordinative abilities. Fitness and training, Basic types of training-resistance training, circuit training, interval training, fartlek training, pressure training, Plyometrics, Means and methods of developing the above variable.

UNIT- IV Technical and Tactical Training

Definitions of techniques and tactics, Aims of technical training, Classification of technique, Training tactics, Principles of tactical preparation

UNIT – V- Planning

Principles of planning, Types of training plans (Macro, Meso, Micro cycles), Periodization (Single, Double, Multiple and Triple), Training session – structure, Competition, training and competition, principles of competition frequency, competition preparation.

REFERENCES

(1) Hardayal, Singh, Science of sports training, New Delhi : D. V. S Publications, 1994.
(2) Dick, Frank, Science of sports training, London : Henry kimpton publisher ltd., 1980.
(3) Fox, Edward, Richar, Boners and meriefoss. The physiological basis for exercise and sport, U.S.A : WCB, Brown and benchmark Publisher, 1993.
(4) Uppal, A. K. Principles of sports Training Friends, Publications : Delhi, 2001.
(5) Bompa, Tudor, Periodization of strength, Veritas Publication, Canada : 1996.
(6) Paish, Wilf, Complete Manual of sports science, London : A and C Black Publisher Ltd., 1998.
(7) Bompa, Tudor, O. Periodization: Theory and Method logy of Training Champaign Human Kinetics Inc., 1990.

SEMESTER –II - THEORY COURSE

CORE COURSE: MPCC 203-Sports Medicine

Course Learning Outcomes:

CO 1 Develop a coherent body of knowledge about the sports injuries and how they are handled during activities.
CO 2 Describe critically the use of banned and allowed substances in sports to enhance performances.
CO 3 Explain Patho-physiology of injury, severity of injury and application of medicine model to provide appropriate treatment modalities.
CO 4 Identify evidence- based methods of injury prevention and apply appropriate risk management strategies to prevent physical activity related conditions.
CO 5 Explain and compare modalities used in the diagnosis, treatment and rehabilitation of sports related injuries.
CO 6 Analysis exercise physiology and prescription principles in the treatment and rehabilitation of sports related injuries.
CO 7 Apply underlying principles and concept of sports sciences.
CO 8 Contextualise discipline knowledge to performances in sports and /or health, disease and ageing.
CO 9 Handle and perform Therapeutic modalities: First Aid procedure, Physiotherapy and massage during training sessions and related similar conditions.

COURSE CONTENT

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, PRICE therapy, Aquatic therapy.

UNIT II – 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.

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.

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

REFERENCES:

(1) Christopher M.Norris.(1993).Sports Injures Diagnosis and Management for hysiotherapists. East Kilbride: Thomson Litho Ltd.
(2) James, A. Gould & George J. Davies. (1985). Physical Physical Therapy. Toronto: C.V. Mosby Company.
(3) Morris B. Million (1984) Sports Injuries and Athletic Problem. New Delhi: Surjeet Publication.
(4) Pande. (1998). Sports Medicine. New Delhi: Khel Sahathya Kendra
(5) The Encyclopedia of Sports Medicine. (1998).
(6) The Olympic Book of Sports Medicine, Australia: Tittel Blackwell Scientific publications.

PRACTICUM : Anthropometric measurements

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SEMESTER –II - THEORY COURSE ELECTIVE

ELECTIVE COURSE MPEC-201 --Sports Journalism And Mass Communication 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.

PRACTICUM - 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.

REFERENCES

(1) Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi : Surjeet Publications.
(2) Ahiya B.N. Chopra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication.
(3) Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication.
(4) Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press.
(5) Kannan K (2009) Soft Skills, Madurai: Madurai: Yadava College Publication.
(6) Mohit Chakrabarti (2008): Value Education: Changing Perspective, New Delhi: Kanishka Publication.
(7) Padmanabhan. A & Perumal A (2009), Science and Art of Living, Madurai: Pakavathi Publication.
(8) Shiv Khera (2002), You Can Win, New Delhi: Macmillan India Limited.

(9) Varma A.K. (1993) Journalism in India from Earliest Times to the Present Period. Sterling publication Pvt. Ltd.
(10) Venkataiah. N (2009) Value Education,- New Delhi: APH Publishing Corporation.

SEMESTER – II - THEORY COURSE -- ELECTIVE

ELECTIVE COURSE MPEC-202 -- Value and Environmental 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 Value of Religion Classification of Values.

UNIT- II – Value Systems

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

UNIT- III – Environmental Education

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

UNIT - IV Rural Sanitation and Urban Health

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

UNIT - V Natural Resources and related environmental issues

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

REFERENCES

(1) Miller T.G. Jr., Environmental Science (Wadsworth Publishing Co.) Odum, E.P. Fundamentals of

Ecology (U.S.A.: W.B. Saunders Co.)1971.
(2) Rao, M.N. & Datta, A.K. Waste Water Treatment (Oxford & IBH Publication Co. Pvt. Ltd.) 1987
(3) Townsend C. and others, Essentials of Ecology (Black well Science)
(4) Heywood, V.H. and Watson V.M., Global biodiversity Assessment (U.K:Cambridge University Press), 1995.
(5) Jadhav, H. and Bhosale, V.M. Environmental Protection and Laws (Delhi:Himalaya Pub.House), 1995.
(6) Mc Kinney, M.L. and Schoel, R.M. Environmental Science System and Solution (Web enhanced Ed.)1996.
(7) Miller T.G. Jr., Environmental Science (Wadsworth Publishing Co.).

SEMESTER-III – THEORY COURSE

CORE COURSE: MPPC 301: Yogic Sciences

Course Learning Outcomes

CO 1 Understand the aims, objectives, misconceptions and types of Yoga
CO 2 Understand classical and theoretical foundations of Yogic Sciences.
CO 3 Understand the various traditional yoga texts.
CO 4 Understand about Suryanamaskar, its positions and breathing pattern.
CO 5 Understand about the various asanas and how it can be practiced.
CO 6 Understand about the various Kriyas and how it can be practiced.
CO 7 Understand about the various types of meditation and how it can be practiced.
CO 8 Apply yoga as a therapeutic modality through the integration of diverse approaches to this field.
CO 9 Understands the interconnections between the body, the breath, the mind, and the emotions in the context of maintaining resilience and well-being
CO 10 Critical thinking skills and science-based literacy to advance the evolution of Yoga Therapy as an integrative health practice
CO 11 Able to communicate effectively, to establish healthy therapeutic and professional relationships,
CO 12 Understands philosophy of the yoga tradition, with diverse yogic perspectives on the Structure, states, functions, and conditions of the body and the mind in balance.

COURSE CONTENT

UNIT -I Introduction to Yogic Science

Yoga Etymology, Definitions, Aims, Objectives and Misconceptions, Yoga Its Origin, History and Development, Brief Introduction to Samkya and Yoga Darshana, Yoga Anatomy - Nadi, Chakra, Septadatus, Panchaprana and Panchakosha, Streams of Yoga -Bakthi Yoga , Jnana Yoga, Raja Yoga and Karma Yoga.

UNIT -II Introduction To Traditional Yoga Texts

Pantajali Yoga Sutra Bahiranya Yoga and Antaranga Yoga, Concept of Sthitapranjana, Bhakti, Karma & Jnana in Bagvat Geetha, Introduction to Hatha Yoga Texts - Hatha Pradipika and Gheranda Samhitha, Relationship between Hatha Yoga and Raja Yoga, Asanas, Pranayama and Mudra in Traditional Yogic Texts

UNIT -III Yoga Practices

Sukshma Vyayama and Sthula Vyayama - Exercises before Yoga Practices, Suryanamaskara -History , 12 Positions, Prayer, Breathing Pattern, Yogasanas - Asanas in Traditional Texts .Hathapradeepika and Gheranda Samhitha, Satkriya- Douti, Basti, Neti, Teataka, Nouli, Kapalabati -Techniques and Benefits, Pranayama- Evolution of Pranayama, Astakumbaka in Hathapradeepika, Meditation- Types , Principle and Techniques.

UNIT - IV Health and Yoga Therapy

Concept of Well being according to Patanjali Yoga, Yoga and Mind, Sadhaka and Badhaka, Principle to be followed by Yoga Practitioners, Effect of Yoga on Muscular, Respiratory, Digestive and Circular Systems, Yoga as Therapy -Yogic practices for B.P., Diabetics & Arthritis , and Relaxation Techniques -Yoga Nidra, Antar Mouna, DRT, IRT.

UNIT V Yoga And Sports

Yoga Supplementary, Compensation and regeneration Exercise, Role of Yoga in Psychological preparation of Athlete, Mental Wellbeing, Governing Bodies of Yoga in India, International Day of Yoga, Common Yoga Protocol suggest by AYUSH, Yoga Institutions in India, Scope of Yoga in Academic Arena.

PRACTICUM : Laboratory Practical be designed and arranged internally.

REFERENCES

(1) George Feuerstein, (1975). Text Book of Yoga. London: Motilal Bansaridass Publishers (P) Ltd.
(2) Gore, (1990), Anatomy and Physiology of Yogac Practices. Lonavata: Kanchan Prkashan.
(3) Helen Purperhart (2004), The Yoga Adventure for Children. Netherlands: A Hunter House book.
(4) Iyengar, B.K.S. (2000), Light on Yoga. New Delhi: Harper Collins Publishers.
(5) KarbelkarN.V.(1993) PatanjalYogasutraBhashya (Marathi Edition) Amravati: Hanuman Vyayam Prasarak Mandal
(6) Kenghe. C.T. (1976). Yoga as Depth-Psychology and para-Psychology (Vol-I): Historical Background, Varanasi: Bharata Manishai.
(7) Kuvalyananada Swami & S.L. Vinekar, (1963), Yogic Therapy – Basic Principles and Methods. New Delhi: Govt. of India, Central Health Education and Bureau.

(8) Moorthy A.M. & Alagesan. S. (2004) Yoga Therapy. Coimbatore: Teachers Publication House.
(9) Swami Kuvalayanda, (1998), Asanas. Lonavala: Kaivalyadhama.
(10) Swami Satyananada Sarasvati. (1989), Asana Pranayama Mudra Bandha. Munger: Bihar School of Yoga.
(11) Swami Satyananda Saraswathi. (1984), Kundalini and Tantra, Bihar: Yoga Publications Trust.
(12) Swami Sivananda, (1971), The Science of Pranayama. Chennai: A Divine Life Society Publication.
(13) Thirumalai Kumar. S and Indira. S (2011) Yoga in Your Life, Chennai: The Parkar Publication.
(14) Tiwari O.P. (1998), Asanas-Why and How. Lonavala: Kaivalyadham.

SEMESTER III – THEORY COURSE

CORE COURSE: MPPC 302 : Sports Psychology

Course Learning Outcomes:

CO 1 Understand the history (abroad and India), need and importance of Sports Psychology.
CO 2 Able to analyze and understand the personality of individuals through the personality measures
CO 3 Understand the perceptive and cognitive process of Physical Education and sports performance.
CO 4 Understand the Motor learning stages of skill acquisition
CO 5 Analyze the performance standard and suggest motivational modalities for the enhancement of performance
CO 6 To develop active and passive mental plans to overcome the psychological barriers of the participants during competitive periods.
CO 7 Understand about Anxiety, Stress, Aggression and Self concept and its relation to Sports performances.
CO 8 Understand about the various psychological assessment, goal setting and psychological skill training
related to sports performances at elite level.
CO 9 Understand about the Socio –Psychological aspects of Sports and how it effects performances in sports / games.

COURSE CONTENT

Unit I-Foundations of Sport Psychology

Introduction to Sport and Exercise Psychology - Definitions, Meaning, nature, need and importance of sports psychology, Interdisciplinary approach of Sport Psychology with other Sport Sciences. History and development of sports psychology (abroad and India), Role of Sport Psychologist.

Personality and Sport - Definitions and Meaning of Personality, Personality theories (Psychoanalysis, Trait and Social Learning), structure of personality, Measurement of personality, Personality and performance in sports.

UNIT II - Cognitive Process, Motor Development And Skill Acquisition

Cognitive Process in Physical activities -Meaning of cognition, Characteristics of cognitive process in Physical activities, Role of sensation and perception in physical activity

Motor Development and Skill Acquisition - Meaning and classification of Motor Skills and Sport Skills, Developmental Consideration in skill Acquisition, Motor control and neuromuscular processes.

UNIT III –Psychological Factors in Athletic Performance

Motivation in Sport - Motivation- Meaning and Definition, Types of Motivation: Intrinsic, Extrinsic. Achievement Motivation: Meaning, Measuring of Achievement Motivation.

Emotions and Athletic Performance - Anxiety: Meaning and Definition, Nature, Causes, Method of Measuring Anxiety. Competitive Anxiety and Sports Performance, Stress: Meaning and Definition, Causes. Stress and Sports Performance. Arousal and activation in Sports performance. Role of activation in competitions, Exercise and psychological well-being, Aggression: Meaning and Definition, Method of Measurement. Aggression and Sports Performance, Self-Concept: Meaning and Definition, Method of Measurement.

UNIT IV - Enhancing Athletic Performance

Psychological Assessment, Goal Setting and Psychological Skill Training.

(a) Psychological Assessment - Types of Psychological Test: Instrument based tests: Pass-along test – Tachistoscope – Reaction timer – Finger dexterity board – Depth perception box – Kinesthesiometer board. Questionnaire: Sports Achievement Motivation, Sports Competition Anxiety.

(b) Goal Setting - Meaning and Definition, Process of Goal Setting in Physical Education and Sports.

(c) Psychological skills training for athletes for performance enhancement, Relaxation Techniques (PMR, Bio-feedback, Hypnosis etc.), Imagery VMBR, Mental Practice/ Rehearsal Activation Techniques, Performance Profiling.

UNIT V- Socio Psychological aspect of Sport

Group Dynamics- Structure of the Group, Group/Team Cohesion, Measuring Cohesion, Development of Team Cohesion. Leadership in Sport- Theories, Types, Coach-Athlete Relationship, Sport audience/Spectators and their effect on the performance of the sportsmen, Social Facilitation, National Integration through Sports. Women in Sports: Sports Women in our Society, Participation pattern among Women, Gender inequalities in Sports.

REFERENCES

(1) Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT)

Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.
(2) Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Test, New Delhi: National Council of Educational Research and Training Publication.
(3) Jain. (2002), Sports Sociology, Heal Sahety Kendre Publishers.
(4) Jay Coakley. (2001) Sports in Society – Issues and Controversies in International Education, Mc-Craw Seventh Ed.
(5) John D Lauther (2000) Psychology of Coaching. New Jersy: Prentice Hall Inc.
(6) John D. Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.
(7) Miroslaw Vauks & Bryant Cratty(1999). Psychology and the Superior Athlete. London: The Macmillan Co.
(8) Richard, J. Crisp. (2000). Essential Social Psychology. Sage Publications.
(9) Robert N. Singer (2001). Motor Learning and Human Performance. New York: The Macmillan Co.
(10) Robert N. Singer. (1989) The Psychology Domain Movement Behavior. Philadelphia: Lea and Febiger.
(11) Thelma Horn. (2002). Advances in Sports Psychology. Human Kinetic.
(12) Whiting, K, Karman.,. Hendry L.B & Jones M.G. (1999) Personality and Performance in Physical Education and Sports. London: Hendry Kimpton Publishers.

SEMESTER – III – THEORY COURSE

CORE COURSE: MPPC 303 -Kinesiology and Sports Biomechanics

Course Learning Outcomes:

CO 1 Understand human movement using appropriate terms and concepts.
CO 2 Understand the various muscle actions related to important joints.
CO 3 Understand about Kinematics and Kinetics and how it effects the performances in Sports / games.
CO 4 Understand about Fluid mechanics and how it effects the performances in aquatic sports.
CO 5 Biomechanical analysis of various fundamental locomotor skills of daily life and those related to various sports / games.
CO 6 Apply biomechanical principles to human locomotion, activities of daily living and dynamic sporting skills.
CO 7 Analyse and interpret correctness of movements of the human body during sport and exercise activities.
CO 8 Apply biomechanics to establish the equipment requirements in high performance sport, rehabilitation and sport technology applications.
CO 9 Use the knowledge of Biomechanics to prevent sports related injuries and also to enhance performance in exercise and sports activities.

CO 10 Comprehend and apply advanced theory based understanding of bio engineering fundamentals and
specialist bodies of knowledge to enhance the performance in sports.
CO 11 Disseminate the findings of biomechanical experiments ethically, clearly and succinctly.

COURSE CONTENT

UNIT - I Introduction

Meaning, nature, role and scope of applied kinesiology and sports Biomechanics, Basic dimensions and units of measurement used in mechanics, fundamental and derived units, Meaning of axis and planes, Vectors and scalars, elementary trigonometric concepts, Vector component, Biomechanics in Physical Education, Sports and Research Fundamental Skills-Basic and sports. Movement Analysis- Kinesiological Analysis, Mechanical Analysis and Bio- Mechanical Analysis.

UNIT – II - Muscle action

Origin, insertion and actions of muscles (shoulder, elbow, hip, knee, ankle joints)

UNIT – III - Kinematics

Forms of motion -Linear, Angular and General Motion: Distance and Displacement (Linear and Angular), Speed and Velocity (Linear and Angular), Acceleration (Linear and Angular), Equations of motion, Acceleration due to gravity, Relationship of Linear to Angular Kinematics, Projectile motion.

UNIT – III - Kinetics

Newton Laws of motion, Force : Meaning, units of force, classifying forces ,effects of force/Sources of Force, Components and Resultant, Momentum and Impulse, Weight, Friction, Pressure, Work, Power and Energy, Spin, Impact and Elasticity.

UNIT – IV –

Eccentric force, Moment of Inertia, Centre of gravity. Line of gravity, Equilibrium, Stability (Static and Dynamic), Levers, Angular momentum, Newton’s laws of angular motion, Centrifugal and Centripetal Forces.

UNIT – V- Fluid Mechanics

Air Resistance and Water Resistance, Density, Specific weight, Viscosity, Flotation, Buoyancy, Lift and drag components.

UNIT – VI -Analysis of Fundamental skills

Walking, Running, Jumping, Throwing, Lifting, Pulling, Pushing, Catching, and Climbing.
Analysis of Sports Skills of the following:-

Athletics – Fosbury flop, hitch- kick, disco put,
hurdling Gymnastics- front roll, cartwheel
Swimming- freestyle, Butterfly
Football- Kicking, heading, Throwing
Hockey- hitting, dribbling
Basketball- set shot, lay up shot, passing
Volleyball- passing, serving, spiking
Cricket- forward drive, bowling

UNIT – VII - Methods and techniques of biomechanical analysis

Introduction to various video analysis software, popular features of video analysis soft ware, video analysis and performance, analysis of basic movements, analysis of major sports skills.

PRACTICUM • Analysis of movement: • video analysis, Mechanical analysis of fundamental movements and sports skill

REFERENCES

(1) Deshpande S.H.(2002). Manav Kriya Vigyan – Kinesiology (Hindi Edition) Amravati :Hanuman Vyayam Prasarak Mandal.
(2) Hoffman S.J. Introduction to Kinesiology (Human Kinesiology publication In.2005. Steven Roy, & Richard Irvin. (1983). Sports Medicine. New Jersery: Prentice hall.
(3) Thomas. (2001). Manual of structural Kinesiology, New York: Me Graw Hill.
(4) Uppal A.K. Lawrence Mamta MP Kinesiology(Friends Publication India 2004).
(5) Uppal, A (2004), Kinesiology in Physical Education and Exercise Science, Delhi Friends publications.
(6) Williams M (1982) Biomechanics of Human Motion, Philadelphia; Saunders Co.

SEMESTER III- THEORY COURSE - ELECTIVE

ELECTIVE COURSE MPEC-301 - 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, refurnish, 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.

REFERENCES

(1) Franz K. F. et. al., Editor**,** Routledge Handbook of Sports Technology and Engineering (Routledge, 2013).
(2) Steve Hake, Editor, The Engineering of Sport (CRC Press,1996).
(3) Franz K. F. et. al., Editor The Impact of Technology on Sports II (CRC Press, 2007).
(4) Helge N., Sports Aerodynamics (Springer Science & Business Media, 2009).
(5) Youlin Hong, Editor Routledge Handbook of Ergonomics in Sport and Exercise (Routledge, 2013).
(6) Jenkins M., Editor Materials in Sports Equipment, Volume I , (Elsevier, 2003).
(7) Colin White, Projectile Dynamics in Sport: Principles and Applications.
(8) Eric C. et al., Editor Sports Facility Operations Management (Routledge,2010)

SEMESTER III- THEORY COURSE - ELECTIVE

ELECTIVE COURSE MPEC-302 -Health Education

UNIT - I - Health Education

Concept, Dimensions, Spectrum and Determinants of Health, Definition of Health, Health Education, Health Instruction, Health Supervision Aim, objective and Principles of Health Education, Health Service and guidance instruction in personal hygiene.

UNIT - II Health Problems in India

Communicable and Non Communicable Diseases, Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive, Population, Personal and Environmental Hygiene for schools, Objective of school health service, Role of Health Education in schools, Health Services - Care of skin, Nails, Eye health service, Nutritional service, Health appraisal, Health record, Healthful school environment, first- aid and emergency care etc.

UNIT- III – Hygiene and Health

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

UNIT – IV- Introduction to Sports Nutrition

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

UNIT – V Nutrition and Weight Management

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

REFERENCES

(1) Bucher, Charles A. "Administration of Health and Physical Education Programme". Delbert, Oberteuffer, et. al." The School Health Education".
(2) Ghosh, B.N. "Treaties of Hygiene and Public Health".
(3) Hanlon, John J. "Principles of Public Health Administration" 2003.
(4) Turner, C.E. "The School Health and Health Education".
(5) Moss and et. al. "Health Education" (National Education Association of U.T.A.)
(6) Nemir A. 'The School Health Education" (Harber and Brothers, NewYork).
(7) Nutrition Encyclopedia, edited by Delores C.S. James, The Gale Group, Inc.
(8) Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature

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

SEMESTER IV – THEORY COURSE

CORE COURSE: MPPC 401: Sports Management

Course Learning Outcomes

CO 1 Understand the basic principles, procedure, and functions of Sports management.
CO 2 Understand personal management, objectives, policies and role of personal manager in an organization.
CO 3 Understand the basic management guidelines for schools and college sports programs.
CO 4 Critically analyse the guidelines for the selection of equipment,
CO 5 Understand the guidelines for checking, storing issuing, care and maintaince of supplies and equipment.
CO 6 Understand Public relation and its principles in Sports.
CO 7 Understand PR in schools, and communities and its relation to media.
CO 8 Understand the meaning, principles, types and theories of curriculam construction.
CO 9 Understand the various sources of curriculam materials.
CO 10 Understand the objectives and importance of curriculam research.

COURSE CONTENT

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 – Curriculum

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

UNIT V – Curriculum Sources

Factors that affecting curriculum: Sources of Curriculum materials –textbooks – Journals – Dictionaries, Encyclopedias, 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.

REFERENCES

(1) Aggarwal, J.C (1990). Curriculum Reform in India – World overviews, Doaba World Education Series – 3 Delhi: Doaba House, Book seller and Publisher.
(2) Arora, G.L. (1984): Reflections on Curriculum, New Delhi: NCERT.
(3) Bonnie, L. (1991). The Management of Sports. St. Louis: Mosby Publishing Company, Park House.
(4) Bucher A. Charles, (1993) Management of Physical Education and Sports (10th ed.,) St.Louis: Mobsy Publishing Company.
(5) Carl, E, Willgoose. (1982. Curriculum in Physical Education, London: Prentice Hall.
(6) Chakraborthy Samiran. (1998). Sports Management. New Delhi: Sports Publication.
(7) Charles, A, Bucher & March, L, Krotee. (1993). Management of Physical Education and sports. St. Louis: Mosby Publishing Company.
(8) Chelladurai, P. (1999). Human Resources Management in Sports and Recreation. Human Kinetics.
(9) John, E, Nixon &Ann, E, Jewett. (1964). Physical Education Curriculum, New York: The Ronald Press Company.
(10) McKernan, James (2007) Curriculum and Imagination: Process, Theory, Pedagogy and Action Research,. U.K. Routledge.
(11) NCERT (2000). National Curriculum Framework for School Education, New Delhi: NCERT.
(12) NCERT (2005). National Curriculum Framework, New Delhi:
(13) Williams, J.F. (2003). Principles of Physical Education. Meerut: College Book House.
(14) Yadvinider Singh. Sports Management, New Delhi: Lakshay Publication.

SEMESTER –IV – THEORY COURSE

CORE COURSE: MPPC 402: Physical Fitness and

Wellness Course Learning Outcomes

CO 1 Understand the conceptual and diagnostic aspects of health, fitness and wellness.
CO 2 Understand cardio respiratory fitness, its assessment and exercise prescription for its development.
CO 3 Understand various types of exercise prescription involving duration, intensity and frequency.
CO 4 Understand body composition, its assessment and exercise prescription for weight loss and obesity.
CO 5 Understand the basics of weight management programs.
CO 6 Understand Flexibility, Muscular strength and endurance, its assessment and exercise prescription for its development.
CO 7 Biological considerations in training.
CO 8 Understand exercise prescription for various clients such as for those having Hypokinetic diseases, Pregnant women, children and for the geriatric population.
Co 9 Understand how to manage Health and Fitness Centre.
CO 8 Understand the various modalities related to the care and treatment of sports injuries.

COURSE CONTENT

UNIT- I -Introduction

Introduction to health: Modern concept of health, meaning and definition of health, difference between HRPF and PRPF, Assessing the components of fitness, goals and objectives, Goal setting, Exercise prescription, Basic principles for exercise programme design, Principles of training, Means for developing fitness, Fitness for different age groups, fitness for disabled, ACSM Guidelines

UNIT- II - Cardio respiratory fitness. Assessment and exercise prescription

Assessment of Cardio respiratory fitness. Graded exercise testing (GXT). Exercise prescription for cardio-respiratory fitness, Type (mode), frequency and time (Duration), Intensity, Volume.(FITT Principle), Exercise prescription by heart rate, Exercise prescription by perceived exertion, Exercise prescription by workload.

UNIT- III - Body composition. Assessment and exercise prescription

Assessment of Body composition by various methods, Exercise prescription for weight loss and weight management, principles and programmes, Obesity, Overweight, Underweight- Definition and trends, Obesity- types and causes, Weight management principles and practice, well balanced nutrition, Designing weight management programmes, preliminary steps- Designing weight loss programmes- Designing weight gain programmes, Designing programmes to improve body composition.

UNIT- IV - Flexibility, Muscular Strength and endurance. Assessment and exercise prescription.

Strength and muscular endurance assessment, One RM, Designing of strength development programme, Basic flexibility, assessment of flexibility, Designing low-back care exercise programme.

UNIT- V - Exercise prescription for different categories.

Exercise prescription for clients with diabetes mellitus type I & II, Exercise prescription for clients with obstructive pulmonary disease, hypertension, Exercise programmes for pregnant women, children and geriatrics.

UNIT – VI - Health and fitness centre management

Management of health and fitness centre- management theories applicable to health and fitness centre - modern trends and responsibilities of manager, Organizational structure of health and fitness facilities, Principles and guidelines for facility planning, special infrastructure for health and fitness facilities, Health and fitness marketing management, Care and safety of health and fitness equipments.

REFERENCES

(1) Vivan H. Heyward: Advance Fitness Assessment and Exercise Prescription., Human Kinetics, Champaign, USA.
(2) David P. Swain, Brain C. Leutholtz: Exercise Prescription: A Case study Approach to the ACSM Guidelines., Human Kinetics, Champaign, USA.
(3) John C. Grififfin: Client Centered Exercise Prescription., Human Kinetics, Champaign, USA.
(4) Franklin, BA, ed 2000. ACSM's Guidelines for Exercise Testing and Prescription., Human Kinetics, Champaign, USA.
(5) Baechle, TR and RW Earle, ed 2000. Essentials of Strength Training and Conditioning., Human Kinetics, Champaign, USA.

SEMESTER IV – THEORY COURSE

CORE COURSE: MPPC 403: Athletic Care and

Rehabilitation Course Learning Outcomes

CO 1 Understand corrective Physical Education and its objectives.
CO 2 Understand about posture and causes of bad posture.
CO 3 Understand deviation of the posture in relation to the spine, the various treatment modalities and exercises.

CO 4 Understand the various rehabilitative exercises, techniques and principles of rehabilitation.
CO 5 Understand the history, Physiological, chemical and psychological effects of massage.
CO 6 Understand the various classifications of massage and their specific uses on the human body.
CO 7 Understand the principles pertaining to the prevention of sports injuries.

COURSE CONTENT

UNIT- I – Corrective Physical Education

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

UNIT- II – Posture

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

UNIT- III – Rehabilitation Exercises

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

UNIT- IV – Massage

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

UNIT -V – Sports Injuries Care, Treatment and Support

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

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

(1) Dohenty. J. Meno.Wetb, Moder D (2000) Track & Field, Englewood Cliffs, Prentice Hal Inc.
(2) Lace,M.V.(1951)Massage and Medical Gymnastics, London: J&A Churchill Ltd.
(3) Mc Ooyand Young (1954) Tests and Measurement, New York: Appleton Century.
(4) Naro, C. L. (1967) Manual of Massage and, Movement, London: Febraand Febra Ltd.
(5) Rathbome, J.l. (1965) Corrective Physical education, London: W.B.
(6) Saunders & Co. Stafford and Kelly, (1968) Preventive and Corrective Physical Education, New York.

SEMESTER IV - MPEC-401 - DISSERTATION

CORE COURSE: MPEC 401 Dissertation

Course Learning Outcomes

CO 1 Identify key research questions within the realm of Physical education and sports and to carry out independent research work.
CO 2 Identify suitable research methods
CO 3 Identify, summarize and critically evaluate relevant literature and write a literature review of the relevant field.
CO 4 To apply the appropriate tools for the collection of data and collection of data
CO 5 Apply the statistical research training acquired in the taught element of the programme by designing an appropriate research strategy and research methodology to carry out research
CO 5 Demonstrate appropriate referencing and develop skills in academic writing
CO 6 Show evidence of clarity of argument, understanding of the chosen topic area, and presentation of technical information.
CO 7 Analyse and synthesize research findings

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 / Institution on the recommendation of D.R.C. (Departmental Research Committee)before the end of the II second semester.
2. A candidate selecting dissertation must submit his/her dissertation not less than one week before the beginning of the IV Semester Examination or by the date proposed by the authority.
3. The candidate has to face the Viva-Voce conducted by the university.

SEMESTER I - PART –B PRACTICUM COURSES

CORE COURSE MPPC 101 & MPPC 105 : Track and Field (Track events)

Course Learning Outcomes

CO 1 Understand the history & development of track & field.
CO 2 Able to design track & field layout.
CO 3 Understand the rules and officiating in track & field.
CO 4 Understand different training plans.
CO 5 Understand the advanced techniques of sprint events.
CO 6 Understand the advanced techniques of skills in crouch starts.
CO 7 Understand the advanced techniques of baton exchanges.
CO 8 Understand the advanced techniques of sprint finishing.
CO 9 Understand the advanced techniques of Long distance running.
CO 10 Understand the advanced techniques of race walking.
CO 11 Understand the advanced techniques of low and High Hurdling.
CO 12 Ability to handle teaching and coaching classes.

COURSE CONTENT

a. Fundamental skills –Short and Middle distance.
b. Use of Starting blocks- stance on the blocks.
c. 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.
d. Advanced Skills of various techniques of sprint start: Bullet start, Standing start.
e. Teaching / coaching – Track events of Track and Field.

NB The students have to complete minimum five internal teaching / coaching lessons before appearing externally.

MPPC- 102 GAME SPECIALIZATION (Football, Volleyball, Basketball, Cricket, Hockey, Judo, Taekwondo, Badminton, Track & Field, Kho-Kho/ Kabaddi & Handball)

1.

ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 FOOTBALL (Specialization)

Course Learning outcomes

CO 1 Understand the history & development of game of football in India and in the world.
CO 2 Able to design a football field.
CO 3 Understand the rules and officiating in Football.
CO 4 Understand different training plans.
CO 5 Understand the advanced techniques of Goal Keeping.
CO 6 Understand the advanced techniques of various skills in Football.
CO 7 Understand the various drills for perfecting skills.
CO 8 Understand the various drills of perfecting the offensive and defensive strategies of play. CO 9 Able to explain the relationship and difference between technical and tactical skills
CO 10 Able to prepare effective season plans and individual practice plans.
CO 11 Apply and teach the basic and intermediate offensive, defensive technical and tactical skills needed for a team's success.

CO 12 Develop a player-cantered coaching philosophy.
CO 13 Create standards-based teaching and coaching lesson plans for technical and tactical football skills.
CO 14 Understand the traditional and modern game approaches to football practice
CO 15 Reflect on values that inspire high standards of professional and ethical behaviour in the pursuit of excellence.

COURSE CONTENT

FOOTBALL

UNIT - I

a. Introduction of the game. History and development of the game with special reference to India**.**

b. Organization set up of the game in the world and in India.

c. Important competitions held at National and International level.

d. Distinguished players of the game both international &national .

UNIT - II

a. General and specialized techniques: Drills and head-up activities.

UNIT - III - Fundamental factors of soccer strategy.

a. System of play: Definition, development of system of play form Heroic Age of Soccer to present day of total football.

b. Tactics: Definition, classification, General tactics, applied tactics. Tactics of attack and defense.

UNIT - IV - Game analysis

a. Analysis of the individual game

b. Analysis of the collective work.

UNIT- V

a. Rules and their interpretations.

b. Duties of officials, Officiating and officials signals.

c. Planning the Layout, construction and marking &Maintenance of play field.

REFERENCES

(1) C. Sanadi, Arpad, Budapast, Medicine, Konyuklads, 1978. The Football Associations Reference Chart and Players Guide to the Laws of Association Football – London Pan Books (Ltd. Ed.).
(2) Hugher, Charles – The Football Association Coaching Book of Soccer. Tactics and Skills London British Broadcasting Corporation and Mac Donald Queen Anne Press 1987.

(3) Mc. Gellingan, Tames. P. – Complete Book of Drills for winning Soccer, New York Parket 1980.
(4) Morris. Dermond. The Soccer Tribe London Jonathan Cape 1981.
(5) Wack Allen. The F.A. Guide to Training and Coaching London, William H. Einemann Ltd. 1981.
(6) The Guinness Book of Soccer. Facts and Feasts Great Britain Guinness Superlatives Ltd. (Latest Edition).

ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 VOLLEYBALL (Specialization)

Course Learning Outcomes:

CO 1 Understand the history of game Volleyball and its organizational set up in the world, Asia and Indian Scenario.
CO 2 Understand and interpret the rules and regulation and also the preparation and maintenance of Volleyball court.
CO 3 Perform as a referee to manage and control competitions situations of high standards.
CO 4 Understand the advanced techniques of Setting the ball in Volleyball.
CO 5 Understand the advanced techniques of ball receiving skills. CO
6 Understand the advanced techniques of service in Volleyball. CO 7
Understand the advanced techniques of various Defensive skills. CO 8
Understand the advanced techniques of various Offensive skills. CO 9
Understand the various drills for perfecting skills.
CO 10 Understand the various drills of perfecting the offensive and defensive strategies of play.
CO 11 Demonstrate and mimic technical and tactical skills with high caliber of precision and accuracy during coaching sessions.
CO 12 Analyze game situations and adopt accurate tactics for the attainment of top form of the team and individual games.

COURSE CONTENT

VOLLEYBALL

UNIT - I

a. History of Volleyball, the development of game in the world, volleyball in Asia, Volleyball in India.
b. Organizational set up FIVB, AVC and VFI.
c. Recipients of Arjuna Award and Dronacharya Award.

UNIT- II

a. Warming up, importance of warming up, principles of warming up, methods of warming up: General, specific and competition warming up, warm down.
b. Court making: Construction and maintenance of volleyball court. Essential and additional equipments in volleyball.
c. Rules of Volleyball and their interpretation.
d. Duties of officials, Beach volleyball.

UNIT - III

a. Teaching and training of the techniques with analysis.
b. Volleyball pass (over head pass).
c. Under hand pass (Dig pass).
d. Underhand service.
e. Tennis service.
f. Upper hand back pass,
g. Floating service.
h. Pass in Jump.
i. Straight Smash.
j. Smash with body turn.
k. Wrist outward smash.
l. Wrist inward smash.
m. Hesitation and smash.
n. Zig-zag smash.
o. Back-court attack.
p. Rising ball attack.
q. Jump service.
r. One man pass with back rolling.
s. Volley pass with back rolling,
t. Forward dive and pass.
u. Single block,
v. Group block.
w. Set up training and setter and attack on direct pass from back court.

UNIT - IV

a. Organization of competitions: Types of competitions and organization of competitions.
b. Systems of conducting the competition and world. Asia, Commonwealth, Regional and national levels.
c. Methods of drawing, fixtures, to divide positions at the end of competitions.
d. Philosophy of officiating – mechanics of officiating, steps to improve officiating.
e. Pre-requisite characteristics of a volleyball player.

UNIT - V

a. Tactics: Tactical training, individual tactics in service reception, set up, attack block and defense.
b. Group tactics: 1) Service reception: 6 men reception, 5 men reception. 4 men reception, 3 men reception, 2 men reception.
c. Attacking combinations: attack by 2,3 front row players and back row players and methods of teaching attacking combinations.
d. Defense: Methods of teaching the defense system. Free ball defense (defense with no block) 2-1-3 forward angle defense. 2-1-3 backward angle defense. 2-0-4 defense

system. 1-2-3 defense system 2-2-2 defense system 1-1-4 defense system 3-0-3 defense system. 3-1-2 defense system covering of the attack and methods of teaching.

UNIT- VI

a. Test and measurements: Specific test for volleyball (endurance, speed, flexibility, explosive straights of arms and legs, jumping ability and speed endurance.)
b. Tests for skills: Service-dig pass, volley pass. Set up test, attack test, defense test.
c. Selection of players and team composition: Talent selection, selection of a team, selection of team captain selection of starting six for immediate participation in competitions, team composition, scouting preparation of scout report, procedures, areas scouted using of scout report in individual player coaching and team coaching.

UNIT - VII

a. Psychological characteristics of a volleyball player: Psychological qualities required to specific position, methods of developing psychological qualities.
b. Grading the team before, during and after the match, tactics of substitution and time out, rhythm of the game, switching of players, direct preparation of a team for a decisive competition.

UNIT - VIII

a. Complex training, functional training, pressure training, concentration training. Will training, situational training, small court games.

REFERENCES

(1) Cox, Richard. H. "Teaching Volleyball" New Delhi subject publications.
(2) Viera, Barbara Laun "Teaching Volleyball Steps to Success" Champaign, illionis, Leisure Press 1989.
(3) Nicholas Keith, "Modern Volleyball for teacher coach and player" London lepus Books 1978.
(4) Cozansky, Sue – "Championship/Volleyball Techniques and Drills", New York, parker publishing Co. Inc. 1983.
(5) Nicholas Keith – "Volleyball the skills of the Games", Great Britain. The Gowood Press 1986.

ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 –BASKETBALL (Specialization)

Course Learning Outcomes:

CO 1 Understand the history of game Basketball in the world, and Indian scenario and the organizational set up of FIBA and BFI.
CO 2 Understand and interpret the rules and regulation and also the preparation and maintenance of Basketball indoor/outdoor courts.
CO 3 Perform as a referee to manage and control competitions situations of high standards.
CO 4 Understand the advanced techniques of Dribbling skills.
CO 5 Understand the advanced techniques of Passing skills.

CO 6 Understand the advanced techniques of Throwing skills.
CO 7 Understand the advanced techniques of Shooting skills.
CO 8 Understand the advanced techniques of various Defensive skills.
CO 9 Understand the advanced techniques of various Offensive skills.
CO 10 Understand the various drills for perfecting skills.
CO 11 Understand the various drills of perfecting the offensive and defensive strategies of play.
CO 12 Demonstrate and mimic technical and tactical skills with high caliber of precision and accuracy during Coaching sessions.
CO 13 Analyse game situations and adopt accurate tactics for the attainment of top form and preventing Injuries of the team.
CO 14 Understand and use relevant training procedure to establish psychology stability and elite physical Standards which ultimately leads to high performance standard of the participant.
CO 15 Plan and execute micro, meso and macro cycles of training and coaching plans to school and college level participants.

COURSE CONTENT

BASKETBALL

UNIT - I

a. Historical development of game in India. Asia and world
b. Organizational setup and structure of FIBA and BFI Competitions at National and International level and at various levels.
c. Distinguished personalities, Arjuna Awardees in Basketball.

UNIT - II

a. Rules and officiating the Game – duties of officials
b. Coach, captain, game observation
c. Individual and group scouting and statistical analysis of players and matches
d. Objective and subjective tests.
e. Warming up and Stretching
f. Diet and Mental attitude

UNIT - III

a. The Court-Dimensions and Markings
b. Equipments and its measurement
c. Teaching Aids.

UNIT - IV

a. Fundamental Skills – Dribbling-Basic and reverse dribbling, Dribbling, start and stop of a dribble, high, low and combinations of dribbles, Cross over dribbling, between the legs dribbling, behind the back dribbling .

b. Ball Handling – Grip, Pivoting, Stride stop, Jump Stop& fake and drive
c. Passing – Chest pass, over head pass, Bounce Pass - static and dynamic receiving.
d. Shooting – The Set Shot, The Jump Shot, The Lay-Up Shot and its variations, The Hook shot and the Slam Dunk.
e. The Rebound-Boxing out, Tipping-in, Defensive Catching, Offensive Catching
f. Defending-Stance, Defense against a dribbler, Marking a passer, Preventing pass reception.

UNIT -V - Drills

a. Dribbling Drills – Dribbling reaction, dribbling cones, dribbling tag, traffic jam dribbling.
b. Passing Drills-Wall passing, piggy in the middle, 2-player passing drill, Machine gun passing
c. Shooting Drills-One player drill, around the world, lay-up drill, three-man shooting drill
d. Rebound drills – One-player drill, Tipping in drill, one on one drill
e. Defensive Drills-Zig-Zag drills, Denial drill, two on two play.
f. Fast break drills with three players and five players.

UNIT - VI – Offensive Tactics

a. Individual passing fakes, shooting fakes, dribbling fakes, body and step fakes.
b. Change of pace and direction different ways of cutting, cross over dribble.
c. Combined tactics – give and go, criss-cross pick and roll, splitting the post, post plays out numbering situations, out of bound situations, jump ball situations, free throw situations, last movement situations.

UNIT - VII –Individual Defence

f. Guarding a man without the ball, with the ball.
g. Cutter pivot player, the shooter and over guarding defensive tactics strict to man.
h. Sliding switching, sandwiching, coupling fronting.

UNIT - VIII–Offensive Game

a. Fast break attack.
b. Freelance offense.
c. Passing game offense against man-man.
d. Offense against zone defense various systems of attack set plays and moves.
e. Defensive game man to man defense.
f. Floating man-man pressing man-man defense, man to man cum zone defense, different systems of zone defense, flexible man-man defense.

UNIT - IX

a. Selection of teams and organization of short-term camps
b. Teaching and Coaching aids and gadgets
c. Lay out construction and maintenance of play ground, equipment management.
d. Precautions and remedial measures of basketball injuries.

REFERENCES

(1) Drewett, Jim. Basketball Internet Linked, London: Ticktock Publishing Ltd. 2001.
(2) Jain, Naveen. Play and Learn Basketball, New Delhi: Sports Publications, 2005.
(3) Sharma, Basketball Skills and Rules, New Delhi: Sports Publications. 2005.
(4) Abbas Mootasir, Principles of basketball. Skunda Publications, Bombay.
(5) Ebert Cheatum. Basketball W.B. Saunders Company.
(6) Robert A Fox, The complete hand book of individual skills Basketball Prentice Hall Englewood Cliffs New Jersey.
(7) Paul Stimpson, Basketball. The skills of the game – the crow-wood press Ramaburry Marthorough Wiltshire.
(8) Roget Hain Basketball drills from college coaches, packet publishing co. Inc. West Nyack New York.
(9) Dean Smith, Basketball multiple offence in defense. Prentice Hall Inc. Englewood Cliffs New Jersey.

ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 –CRICKET (Specialization)

Course Learning Outcomes:

CO 1 Understand the history of game Cricket in Men/Women category and its organizational set up in the world, and Indian scenario.
CO 2 Able to design a Cricket field and a pitch.
CO 3 Understand the rules and umpiring in cricket.
CO 4 Understand different training plans.
CO 5 Understand the advanced techniques of Wicket Keeping.
CO 6 Understand the advanced techniques of various skills in Batting.
CO 7 Understand the advanced techniques of Bowling.
CO 8 Understand the various drills for perfecting skills.
CO 9 Perform as a referee to manage and control competitions situations of high standards.
CO 10 Demonstrate and mimic technical and tactical skills with high caliber of precision and accuracy during coaching sessions.
CO 11 Analyze game situations and adopt accurate tactics for the attainment of top form and preventing Injuries of the team.
CO 12 Understand and use relevant training procedure to establish psychology stability and elite physical standards which ultimately leads to high performance standard of the participant.
CO 13 Plan and execute micro, meso and macro cycles of training and coaching plans to school and college level participants.

COURSE CONTENT

CRICKET

UNIT - I

a. History and development of Cricket – Bodyline and Ashes Series. Historical development of Cricket in England, Australia, West Indies, South Africa, New Zealand, India, Pakistan, Sri Lanka, Zimbabwe and Bangladesh.
b. History of Women's Cricket.
c. History of Indian Cricket.
d. History of One-day cricket.
e. History of World Cup Cricket.

UNIT- II

a. Cricket controlling Bodies and its Organizational Set up-ICC, MCC and TCCB.
b. Organizational setup, aims and objectives of B.C.C.I.
c. Standing Committees of B.C.C.I.
d. Major Tournaments organized by B.C.C.I.

UNIT- III

a. Layout and maintenance of the oval.
b. Dimensions of the field.
c. Pitch-Types of Pitches and preparation and maintenance of a Turf Wicket.
d. Essential equipments, measurements of equipments.
e. Teaching Aids.
f. Warming up, importance of warming up.

UNIT - IV

a. Fundamental skills-batting-basics. Defensive strokes, Attacking strokes, Modern improvised strokes. Funning between the wickets and Drills to improve the batting skills.
b. Bowling-Basics. Out swinger. In swinger, Reverse Swing, Off spin and its variations, Leg spin and its variations and Drills to improve the bowling skills.
c. Fielding-Ground fielding. (Stationary, on the run and Slide stop) Catching. (High, Low, Flat and Feflex Catching)
d. Wicket Keeping-Drills to improve the wicket keeping skills.

UNIT- V

a. The laws of cricket with interpretations.
b. Officials in Cricket.
c. Umpires and their duties.
   (i) Duties before the match
   (ii) Duties during the interval. (iii)Duties after the match.
d. Signals, Unofficial and additional signals.

UNIT - VI

a. Captaincy: Qualities of a good captain.

b. Duties of captain
c. Symptom of bad captaincy.

UNIT - VII

a. Criteria for selection of players at various levels.
b. Warming up – conditioning and training process.
c. Training methods.
d. Planning a Coaching camp: Annual, Weekly and daily plan.

UNIT - VIII

a. Psychological qualities of cricket player.
b. Method of developing psychological qualities. Psychological skills training.

UNIT - IX

a. Injuries in cricket, prevention and first aid.
b. Nutrition for cricket players.

UNIT - X

a. Modern Trends in Cricket
b. Cricket Vocabulary, Award winners and Records.

REFERENCES

(1) A handbook of Practical Training in Cricket, Mumbai: Jaico Publishing House. 1998.
(2) Bose, Mihir. A History of Indian Cricket, New Delhi: Rupa & Co. 1990.
(3) Bradman, Donald. The Art of Cricket, London: Robson Books. 1998.
(4) Coaching Youth Cricket. Australian Cricket Board, New York: Human Kinetics. 2000.
(5) Elliot, Bruce et. Al. The Science of Fast Bowling, Mumbai: Marine Sports, 2001.
(6) Rundell, Michael. The Dictionary of Cricket, London: George Allen & Unwin. 1985.
(7) Smith, Tom. New Cricket Umpiring and Scoring, London: Weidenfeld & Nicolson 2004.
(8) Stewart, Alec. The Yough Cricketer, London: DK 1999.
(9) The Laws of Cricket (2000 code 2nd Edition 2003) issued by BCCI.
(10) Tyson, Frank, Learn Cricket with Frank Tyson. New Delhi: Rupa& Co. 2002.
(11) Wills Book of Excellence: Cricket, Hyderabad: Orient Longman Limited 1987.
(12) Wisden Cricketer's Alamanack 2006.

ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 - JUDO (Specialization)

Course Learning Outcomes

CO 1 Understands the History and Development of Judo in India and in the World.
CO 2 Understands advanced Skills and Techniques of Judo
CO 3 Able to demonstrate the Skills and Techniques of
Judo. CO 4 Understand the various drills for perfecting
skills.

CO 5 Understand the various drills of perfecting the offensive and defensive strategies.

CO 6 Understands concepts of coaching Judo
CO 7 Understand the rules and officiating of Judo.
CO 8 Plan and execute micro, meso and macro cycles of training and coaching plans to school and college level participants.

COURSE CONTENT

JUDO

Unit-I

a. Origin, history and growth of Judo in India and in the world.
b. World, Olympic and National Competitions. World Championships and regional championships.

Unit II

a. Rules and Regulations of Judo competition.
b. Code of Ethics
c. Anti-doping rules
d. Tatami, Planning the Layout, construction and marking &maintenance of the competition arena.
e. Officiating & Officials signals.

Unit-III

a. Fundamentals of Judo: Salutation.
b. How to wear a Judogi, Kumi Katha, Ukemi, Posture, Kuzushi, Tskuri and Kake, Shintai, Tai Sabaki.

Unit-IV

a. Techniques and tactics of Judo.
b. Throwing Techniques: Nage-Waza.
c. Standing Techniques (Tachi-Waza).
d. Hand Techniques (Te-Waza).
e. Foot Techniques (Ashi-Waza).
f. Hip Techniques (Koshi-Waza)
g. Sacrifice Techniques (Sutemi-Waza).

h. Back Sacrifice (Ma-Sutemi-Waza)
i. Side Sacrifice (Yoko-Sutemi-Waza).
j. Grappling Techniques: Katame-Waza.
k. Pinning Techniques (Osaekomi-Waza)
l. Choking Techniques (Shime-Waza)
m. Joint Locking Techniques (Kansetsu-Waza), Nage-no-Kata

Unit-V

a. Training for Judo competition.
b. Long term and short term plans.
c. Preparations for competitions.
d. Teaching and coaching Lesson plans.

Selected References :

1. Kodokan Judo , Jigarokano , Kodansha International /USA Ltd , ISBN4-7700-1181-4,1990
2. Judo Formal Techniques: A Complete Guide to Kodokan Randori No Kata (Tuttle Publishing) Paperback – 15 November 1990
3. Training manual Judo , SAI NSNIS Patiala ,Phulkian press , 2003
4. Kodokan Judo: throwing techniques, Oshirō Daigo, Kodansha International 2016

ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 - TAEKWONDO (Specialization)

Course Learning Outcomes

CO 1 Understands the History and Development of Taekwondo in India and in the World.
CO 2 Understands advanced Skills and Techniques of Taekwondo.
CO 3 Able to demonstrate the Skills and Techniques of Taekwondo. CO 4 Understand the various drills for perfecting skills.
CO 5 Understand the various drills of perfecting the offensive and defensive strategies.
CO 6 Understands concepts of coaching Taekwondo.
CO 7 Understand the rules and officiating of Taekwondo.
CO 8 Plan and execute micro, meso and macro cycles of training and coaching plans to school and college level participants.

COURSE CONTENT

TAEKWONDO

UNIT- I

a. Origin and history of Taekwondo.
b. Definition and meaning of Taekwondo.
c. Organization of the sport, conduct rules in the Dojang.
d. Taekwondo oath, objectives and tenets of Taekwondo

UNIT - II

a. Taekwondo terminology: Taekwondo terms and its meanings.
b. Types of Seogi (Stances), Chagi (kicks), Special kicks and its Korean terms, Korean numbering.
c. Basic Movements-18 steps, block combinations, hand techniques, elbow strikes, fighting steps.

UNIT- III

a. Training methods of taekwondo, specific warm-up, endurance training, knee-up circuit/ strengthening circuit

UNIT – IV

a. Injuries in taekwondo and their treatment, bodily vital points and target of attacks.
b. Self defense (Hoshinsool)

UNIT - V

a. Kyorugi and Poomsae,
b. Competition rules of Kyorugi and Poomsae.
c. Taegeuk one Jang to Taegeuk five Jang

UNIT - VI

a. Taekwondo Demonstration.
b. Types and contents of Taekwondo demonstration.

PRACTICUM

a. Basic movements -18 steps, block combinations & hand techniques.
b. Self defense, demonstration.
c. Taegeuk 1 Jang, Taegeuk 2 Jang, Taegeuk 3 Jang, Teageuk 4 Jang, Taegeuk 5 jang,

REFERENCES

1. Taekwondo Text Book, prepared and published by Technical Committee (TAKE-Taekwondo Association of Kerala).
2. Taekwondo: A Path to Excellence by Doug Cook, YMAA Publications Centre, October 16, 2009.
3. Traditional Taekwondo: Core Techniques, History and Philosophy by Doug Cook, YMAA Publications Centre, March 29, 2009.
4. Complete Taekwondo Poomsae: The Official Taegeuk, Palgwae and Black Belt Forms of Taekwondo by Kyu Hung Lee & Sang H Kim, Turtle Press U.S, 2007.
5. Taekwondo: The Indomitable Martial Art of Korea by Dong Keun ParkDong & Allan Schein, Invisible Cities Press, December 15, 2006.

ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 –BADMINTON (Specialization)

Course Learning Outcomes

CO 1 Understand the history of game Badminton and its organizational set up in the world, and Indian scenario.
CO 2 Understand and interpret the rules and regulation and also the preparation and maintenance of Badminton indoor/outdoor courts.
CO 3 Understand the advanced techniques of shuttle receiving skills.
CO 4 Understand the advanced techniques of services in Badminton.
CO 5 Understand the advanced techniques of smashing skills.
CO 6 Understand the advanced techniques of various Defensive skills.
CO 6 Understand the advanced techniques of various Offensive skills.
CO 7 Understand the various drills for perfecting skills.

CO 8 Understand the various drills of perfecting the offensive and defensive strategies of play.
CO 9 Perform as a referee to manage and control competitions situations of high standards.
CO 10 Demonstrate and mimic technical and tactical skills with high caliber of precision and accuracy during coaching sessions.
CO 11 Analyze game situations and adopt accurate tactics for the attainment of top form of the team and individual Competitions.
CO 12 Understand and use relevant training procedure to establish psychology stability and elite physical standards which ultimately leads to high performance standard of the participant.
CO 13 Plan and execute micro, meso and macro cycles of training and coaching plans to school and college level participants.

COURSE CONTENT

BADMINTON

UNIT – I

i. Origin, history (ancient & modern) & development of badminton in India & in the World - before & after the inclusion in Olympic games.
j. Various National & International tournaments / ranking tournaments.
k. Planning the Layout, Construction, Maintenance of Badminton court, court marking

UNIT - II

a. Badminton rules, interpretations and officiating.
b. Score sheet and duties of the officials.
c. , planning to recognize tournament for the game concerned including knock out and League fixtures, seeding and bye.

UNIT – III

a. Grips, Stance, Foot work.
b. Fundamental skills of Badminton, types of service, types of footwork, different types of court movements.
c. Drills and lead up games.
d. Forehand & Backhand Strokes (defensive & offensive)
e. Advance court movements.
f. Offensive and defensive strategy.
g. Selection of players.
h. Qualities for a singles player, doubles player, mixed doubles player.
i. Systems of doubles game.

Philosophy of coaching, coaching schedule & coaching camps.

UNIT IV

a. Individual game plan, Doubles game plan, Mixed doubles game plan, Team championship strategies.
b. Motor abilities - basic & advance, Training plans in Badminton, Training for different age groups (middle childhood, late childhood, pubescence & adolescence), Badminton training during practice & competition.
c. Types of shuttle feeding (hand & racket), shuttle feeding for singles & doubles, shuttle feeding for basic & advance players, shuttle feeding for game situations.
d. Common badminton injuries.

ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 - Track and Field (Specialization)

Course Learning Outcomes

CO 1 Understand the history & development of track & field.
CO 2 Able to design track & field layout.
CO 3 Understand the rules and officiating in track & field.
CO 4 Understand different training plans.
CO 5 Understand the fundamental techniques of sprint events.
CO 6 Understand the fundamental techniques of crouch starts.
CO 7 Understand the fundamental techniques of baton exchanges.
CO 8 Understand the fundamental techniques of sprint finishing.
CO 9 Understand the fundamental techniques of Long distance running.
CO 10 Understand the fundamental techniques of race walking.
CO 11 Understand the fundamental techniques of low and High Hurdling. CO 12 Understand the fundamental techniques of Long Jump.
CO 13 Understand the fundamental techniques of High Jump.
CO 14 Understand the fundamental technique of Tripple Jump. CO 15 Understand the fundamental technique of Pole Vault.
CO 16 Understand the fundamental techniques of Shot Put.
CO 17 Understand the fundamental technique of Discus Throw.
CO 18 Understand the fundamental technique of Hammer Throw.
CO 19 Understand the fundamental techniques of Steeple chase.
CO 12 Ability to handle teaching and coaching classes.

COURSE CONTENT

TRACK AND FIELD

UNIT- I

a. Introduction: History and Development of Track and field events
b. Organizational setup of Track and Field Athletics
c. Major competitions at National and Inter national levels.

UNIT- II

a. Rules and officiating in Track and field; Principles of officiating
b. Track and Field lay out and marking

UNIT - III

a. Fundamental techniques of Track events; Sprint events – Running form, starting and finishing technique.
b. Middle and long distance running

c. Walking events – walking technique

d. Hurdles Events – Hurdling technique

UNIT - IV

a. Fundamental techniques of jumping events, Long jump – Mechanics of Jumping Hang style and hitch-kick techniques – Approach run, Take off, action in the air, landing
b. High Jump-Straddle-role and Fosbury flop techniques

UNIT - V

a. Fundamental Technique of Throwing events – Mechanics of throwing
b. The shot put, Initial stance, glide/turn, throwing position, release, recovery.
c. The Discuss throw, Technique-initial stance, preliminary swing, the turn throwing position, release, recovery.
d. The Javelin throw, Technique-the grip, carry, five-stride rhythm, release, recovery.
e. The hammer throw, technique-the grip, initial position, preliminary swing, the turn release, and reverse.

UNIT - VI

a. Combined Events – Decathlon and Heptathlon- General principles of training for combined events.

UNIT - VII

a. Pedagogic Principles of Track and Field Training:
   (i) Periodisation of training – preparatory training – build up training – high performance training.
   (ii) Training plans – Long term plan, yearly plan, monthly and weekly schedule, day's programme – physical qualities.

UNIT - VIII - Training Means and Methods:

a. Conditioning.
b. Warming up – general and specific
c. Development of Physical fitness and motor qualities.
d. Specific training for techniques development tactics – effect of training in attitude.

UNIT - IX

a. Talent Identification
b. Training youth athletes and women athletes
c. Psychological preparation for competition in track and field.

UNIT - X

a. Common Injuries in Track and Field during training and competitions
b. Prevention, treatment and rehabilitation of athletic injuries.
c. Doping and its control

PRACTICALS - FUNDAMENTAL SKILLS

a. Starting technique – Standing start crouch start and its variations, props use of blocks.
b. Finishing techniques – Run, through forward lunging shoulder shrug.
c. Relays – Various patterns of Baton exchange and understanding to relay zones.
d. Hurdles – Approach, clearance over the Hurdle lead leg action, Trail leg action and recovery middle and long distance running.
e. Steeple chase – Approach clearance recovery walking technique
f. Long Jump (hang style and running in the air style) Approach run, take off, flight in the air and landing.
g. High Jump (Straddle technique and Fosbury flop) – Approach run take off clearance over the bar and landing.
h. Triple Jump – Approach run, take off hop step and Jun phase (action in the air) and landing.
i. Pole vault – Hand grip and pole curry. The run and pole plant, take off, bar clearance and landing.
j. Shot-put grip, stance glide, release and reverse (o' Brain style)
k. Discuss Throw – Grip, stance preliminary swing. Turns release and reverse.
l. Javelin Throw – Grip, curry approach run release and reverse.
m. Hammer Throw – Grip, preliminary swing turns, release and reverse.
n. Combined Events : Decathlon and Heptathlon.

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ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 - KHO-KHO & KABADDI (Specialization)

Course Learning Outcomes

CO 1 Understand the history of game Kabaddi and Kho-Kho and its organizational set up in the world, Asia and Indian scenario.
CO 2 Understand and interpret the rules and regulation and also the preparation and maintenance of both Kabaddi and Kho-Kho courts.
CO 3 Perform as a referee to manage and control competitions situations of high standards of both Kabaddi and Kho-Kho.
CO 4 Demonstrate and mimic technical and tactical skills of both Kabaddi and Kho-Kho with high caliber of precision and accuracy during coaching sessions.
CO 5 Analyze game situations and adopt accurate tactics for the attainment of top form of Kabaddi and Kho-Kho teams.

COURSE CONTENT

KHO-KHO & KABADDI

UNIT – I

a. Origin-History and development of Kabaddi.
b. Rules and regulations of the game.
c. Planning the Layout, construction and marking &Maintenance of play field.
d. Officiating & Officials signals.

UNIT - II –Techniques

a. Raid-pre consideration of Raid-Cant-Entry-Retreat.
b. Defence: Pre-requisites of a defensive player-right Zone-Centre Zone-Left Zone, Ankle-hold, Thigh hold, Knee hold, Waist, Wrist hold and Blocking.
c. Chain system, Corner chain, Center Over chain.

UNIT- III

a. Offensive Skills: Hand though, Toe though, Plunging though the chain, Jumping over the chain, escaping from the holds.

UNIT - IV

a. Systems of Play: Tactics and Strategies in Offence and Defence of the Game.

UNIT – V

a. Training: Long term and short term plans.
b. Preparation for competitions.

UNIT – VI

a. Origin, History and Development of Kho-Kho.
b. Rules and regulations of the Game.
c. Planning the Layout, construction and marking & Maintenance of play field.
d. Officiating & Officials signals.

UNIT - VII

a. Defensive skills: Sitting in the square, giving Kho-Kho, advance Kho, pole turn moving out of square taking direction pole dive, flat dive, taping, covering, third attack, Correction of fouls.
b. Offensive skills: Initial position of the runner, single chain, double chain, three six up, sixth attack, seventh attack, eighth attack, ring game, avoiding, entry during the game.
c. Tactics and strategies in offence and defence.

UNIT – VIII

a. Training: Long term and short term plans.
b. Preparation for competitions.

ELECTIVE COURSE: MPPC 102, MPPC 202, MPPC 302, MPPC -305, MPIC -301, MPPC 402, MPPC 403, MPPC-405 & MPIC 401 -HANDBALL (Specialization)

Course learning outcomes

CO 1 Understand the history & development of Handball in India and in the world.
CO 2 Understand the advanced techniques of Dribbling skills.
CO 3 Understand the advanced techniques of Passing skills.
CO 4 Understand the advanced techniques of Throwing skills.
CO 5 Understand the advanced techniques of Shooting skills.
CO 6 Understand the advanced techniques of various Defensive skills.
CO 7 Understand the advanced techniques of various Offensive skills.
CO 8 Understand the advanced techniques of Goal Keeping.
CO 9 Understand the various drills for perfecting skills.
CO 10 Understand the various drills of perfecting the offensive and defensive strategies of play.
CO 11 Able to design Handball court layout.
CO 12 Understand the rules and officiating in Handball.
CO 13 Formulate training plans for various offensive and defensive Techniques.
CO 14 Understand common injuries in Handball and the rehabilitative exercises.

COURSE CONTENT

HANDBALL

UNIT – I

a. History of Handball. Development of Handball in India, Asia and World.
b. Prerequisites for a Handball player.

UNIT - II

a. Rules and Regulations of Handball.
b. Planning the Layout, construction and marking &Maintenance of playfield.
c. Officiating & Officials signals.

UNIT - III- Defensive Techniques

a. Basic stance, Basic qualities, Initial position and movements of a defensive player.

b. Group defense: Giving over-taking over of an opponent, Man to Man defence.

UNIT - IV Offensive Techniques

Catching, passing, Dribbling, Feints, Throw on goal, Jump shot long, Jump shot high, Straight shot, Hip throw, Dive shot and Fall shot.

UNIT - V - Offensive Tactics

Group Tactics – Frontal break through. Half position change, Positional change, screen, free throw combination, Counter attack. Systems of play in Offence and Defence: Offensive system – 3:3, 2:4, 4:2.

UNIT - VI Defensive system.

6:0, 5:1, 4:2, 3:3, 3:2:1, 5:0+1, 4:0+2.

UNIT - VIII

Training: Long term and short term plans. Preparing for competitions.

ELECTIVE COURSE MPPC- 103 - (2) Racket games (Badminton, Table Tennis or Tennis- any one)

ELECTIVE COURSE: MPPC 103 & MPPC 204- BADMINTON

Course Learning Outcomes

CO 1 Demonstrate basic skills of fore court , mid court and rear court and also the execution of service .

CO 2 Understand the rules and regulation of the game ultimately lead to the development of officiating competency.

ELECTIVE COURSE: MPPC 103 & MPPC 204- TABLE TENNIS

Course Learning Outcomes

CO 1 Demonstrate basic skills of fore court , mid court and rear court and also the execution of service .

CO 2 Understand the rules and regulation of the game ultimately lead to the development of officiating competency .

ELECTIVE COURSE: MPPC 103 & MPPC 204- TENNIS

Course Learning Outcomes

CO 1 Demonstrate basic skills of fore court , mid court and rear court and also the execution of service.

CO-2 : Understand the rules and regulation of the game ultimately lead to the development of

officiating competency.

COURSE CONTENT

Fundamental skills, techniques, tactics, drills, rules & officiating .The centre can opt any one racket game as per their choice.

CORE COURSE: MPPC 104: (3) YOGA

Course Learning Outcomes

CO 1 Understand traditional methods of
Yoga CO 2 Understand the science and art of
Yoga
CO 3 Able to demonstrate and analyze limbs of yoga
CO 4 Able to design relaxation methods
CO 5 Able to prescribe therapeutic measures
CO 6 Able to teach Yogic sessions.

COURSE CONTENT - YOGA

Yoga, Asanas prescribed by Maharshi 'Patanjali', Shudhi Kriyas, jalneti, sutraneti, dugdhaneti, kunjal, Nauli, Bhastika, shatkriya, Pranayams, Anulom-vilom, Kapalbhati.

CORE COURSE: MPIC-101, MPIC -201, MPIC-301 AND MPIC -401: Internship

CO 1 Demonstrate skills of handling Theory Class, manage class, class control and dissemination of domain knowledge.
CO-2 Learn to understand and behave to the students in a polished manner understanding the level of the students
CO 3 Demonstrate the skills of games in an elegant manner and perfectly on all aspects.

SEMESTER I - PART –C MPIC -101 -– INTERNSHIP

Teaching classes of the theory / history / rules etc of the games / sports. Each student has to complete minimum 10 lessons.

SEMESTER II - PART –C MPIC -201 – INTERNSHIP

Coaching – student should complete minimum 10 hours of coaching internship. Student can opt school / college / sports clubs / academy/associations and training centers for this purpose. The lesson plan must be maintained and duly signed by the internal assessor and the concerned authority of the school /

college / sports clubs / academy / associations and training centers.

SEMESTER III - PART –C - MPIC-301- INTERNSHIP

Officiating - Each student has to complete minimum 10 officiating. It can be of different games/ sports or from the specialized game. The in-charge teacher of the internship must keep the proper record of the details of the officiating done.

SEMESTER IV - PART –C - MPIC-401 – INTERNSHIP

Class Room Teaching - Students must teach theory subjects in classroom settings. Student must complete 10 teaching lessons. The classes must be evaluated and grading has to be given on the basis of teaching ability/subject matter/ content/ presentation/ fluency/ methods used/ active participation of the students/ feedback etc – The History of the specialization game/ rules and its interpretations / tactics / major tournaments for the syllabus for the class.

SEMESTER II - PART –B - PRACTICUM COURSES

CORE COURSES -MPPC- 201 & MPPC 105 Track And Field : Field

Events Course Learning Outcomes

CO1 Understand the fundamental techniques of jumping events.
CO2 Understand the fundamental techniques of different styles of Long Jump.
CO 3 Understand the fundamental techniques of Straddle roll and Fosbury flop style in High Jump.
CO 4 Understand the fundamental techniques of throwing events.
CO 5 Understand the fundamental technique and various stages of Disco Put of Shot put.
CO 6 Understand the fundamental technique and various stages of gliding style of shot put.
CO 7 Understand the fundamental technique and various stages of Discus throw.
CO 8 Understand the fundamental technique and various stages of Hammer throw.
CO 9 Understand the fundamental technique and various stages of Javelin throw.
CO 10 Ability to handle teaching and coaching classes

COURSE CONTENT

Jumps and throws- Fundamental skills, techniques, rules & officiating, Teaching and coaching practice (Field events of Track and Field).

CORE COURSE - MPPC-203 (2) Indigenous games (Kho-Kho & Kabaddi)

Course Learning Outcomes

CO 1 Understand and interpret the rules and regulation and also the preparation and maintenance of Kabaddi and Kho-Kho courts (both indoor and outdoor and with and

without mats).

CO 2 Demonstrate and mimic technical and tactical skills with high caliber of precision and accuracy during coaching sessions in Kabaddi and Kho-Kho.

CO 3 Understand the Rules and Regulations of the game which helps to develop officiating competency in both Kabaddi and Kho-Kho.

COURSE CONTENT

The fundamental skills, rules, layout of the court & officiating.

CORE COURSE - MPPC-204 (3) Teaching Practice of Racket games

Course Learning Outcomes

CO1 Ability to handle teaching classes of skills in the selected racket game.

COURSE CONTENT

Each student has to complete five teaching lessons and he/she should submit the lesson plan for internal evaluation.

. **SEMESTER III - PART –B - PRACTICUM COURSES**

ELECTIVE COURSE - MPPC- 301, MPPC 304 & MPPC 401 (1) Gymnastics / Swimming (

Centres can opt any one according to the feasibility and facility available (5 Internal lessons). Evaluation must be based on teaching or coaching ability, viva voce and record book.

ELECTIVE COURSE: MPPC 301, MPPC 304 & MPPC 401 : GYMNASTICS

Course Learning Outcomes

CO 1 Understands fundamental Skills and Techniques of different events in Gymnastics.

CO 2 Ability to demonstrate the Skills and Techniques of gymnastics while handling classes.

CO 3 Understands the rules and regulations related to the conduct of competitions.

CO4 Demonstrate skills of handling Theory Class, manage class, class control and dissemination of domain knowledge.

CO 5 Demonstrate the skills of gymnastics in an elegant manner and perfectly on all aspects.

ELECTIVE COURSE: MPPC 301, MPPC 304 & MPPC 401 : SWIMMING

Course Learning Outcomes

CO 1 Develop stroke competencies and techniques in swimming.

CO 2 Understand the rules of specific strokes in swimming.

CO 3 Acquire basic knowledge of Water safety, personal survival and lifesaving techniques.

CO 4 Ability to demonstrate the Skills and Techniques of different stokes, turning while handling classes.

CO 5 Understands the rules and regulations related to the conduct of competitions.

CO 6 Demonstrate skills of handling Theory Class, manage class, class control and dissemination of domain knowledge.
CO 7 Demonstrate the skills of different stokes an skills of swimming in an elegant manner and perfectly on all aspects.

COURSE CONTENT

Fundamental skills of various gymnastics events, techniques, rules and officiating, teaching / coaching - Fundamental skills of swimming, different strokes, techniques, rules & officiating, teaching / coaching.

ELECTIVE COURSE MPPC-303 & MPPC 404 (2) Team Games – Football, Volleyball, Basketball, Cricket, Hockey & Handball). The institution can opt any one game of their choice.

ELECTIVE COURSE: MPPC 303, & MPPC 404- FOOTBALL

Course Learning Outcomes

CO 1 Understands advanced Skills and Techniques in the game Football.
CO 2 Understands the History and Development of game
CO 3 Understands concepts of scientific aspects of Football coaching.

ELECTIVE COURSE: MPPC 303 & MPPC 404 -VOLLEYBALL

Course Learning Outcomes

CO 1 Demonstrate basic skills associated with volleyball including passing, setting, serving, attacking (spike) and blocking during training session .
CO 2 Perform Individual Offensive and Defensive Skills and Strategies.
CO 3 Understand the Rules and Regulations of the game which helps to develop Officiating Competency.

ELECTIVE COURSE: MPPC 303 & MPPC 404- BASKETBALL

Course Learning Outcomes

CO 1 Demonstrate basic skills associated with Basketball including Passing , Dribbling , Shooting, Pivot and Ball handling during training session.
CO 2 Perform Individual Offensive and Defensive Skills and Strategies .
CO 3 Understand the Rules and Regulations of the game which helps to develop Officiating Competency .

ELECTIVE COURSE: MPPC 303 & MPPC 404- CRICKET
Course Learning Outcomes

CO 1 Demonstrate basic skills associated with Cricket including Batting, Bowling, Fielding, and Wicket keeping during training session .

CO 2 Perform Individual Offensive and Defensive Skills and Strategies.
CO 3 Understand the Rules and Regulations of the game which helps to develop Officiating Competency.

ELECTIVE COURSE: MPPC 303 & MPPC 404- HANDBALL

Course Learning Outcomes

CO 1 Demonstrate basic skills associated with Handball including passing , Dribbling, Shooting, Pivot and Ball handling during training session.
CO 2 Perform Individual Offensive and Defensive Skills and Strategies .
CO 3 Understand the Rules and Regulations of the game which helps to develop Officiating Competency .

ELECTIVE COURSE: MPPC 303 & MPPC 404- HOCKEY

Course Learning Outcomes

CO 1 Demonstrate basic skills associated with Cricket including Passing , Dribbling , Shooting, Penalty corner, penalty and ball handling during training session.
CO 2 Perform Individual Offensive and Defensive Skills and Strategies.
CO 3 Understand the Rules and Regulations of the game which helps to develop Officiating Competency.

COURSE CONTENT

History, fundamental skills, techniques, tactics, drills, rules & officiating

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