

Kota University, Kota
Master of Physical Education Syllabus
Semester Scheme 2015-17

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1. NEW ORDINANCES RELATED TO Master of Physical Education (Semester Scheme)

O.-----1: The examination of Regular students of Master degree (Post-graduate) courses of the University admitted in the academic session 2013-14 and after shall be based on (a) Semester Examinations, (b) Continuous Assessment, (c) Choice Based Credit System, and (d) Semester Grade Point Average and Cumulative Grade Point Average system as provided in O.199F1 to O.199F5. The ordinances which were in force prior to academic session 2011-12, will be applicable for Non-collegiate students (wherever permissible) and students admitted prior to academic session 2011-12 only. The ordinances O.199F1 to O.199F5 will have overriding effect over other ordinances for the Regular courses leading to Masters' degree.

O.-----2: Fifteen (15) hours of theory teaching will lead to one credit (which means one hour per week theory teaching in a semester of 90 teaching days) and in case of practical 45 hours of laboratory work will lead to two credit (which means 3 hours practical class per week in a semester of 90 teaching days). Each semester of Master's course shall offer 36 credits or more. Number of Semester Examinations and Minimum Credit required to be earned for award of Master degree in various Post-Graduate courses is specified in table given below.

O.-----3:

- a) The Department in context of this ordinance means the Department/Centre of concerned PG subject at University of Rajasthan or that of an affiliated institution or college, as the case may be. Teacher of parent Department means a duly appointed Teacher as per UGC prescribed qualifications in the Department where student is enrolled for the course.
- b) A Credit Monitoring Committee (CMC) of the Department will consist of the Head and THREE Senior Most Teachers on roll of the Department with Head of the Department as Chairperson. Under special circumstance, when the number of teachers on roll is less than four, the Vice-Chancellor may constitute the Credit Monitoring Committee. Registration of candidates in the First and subsequent Semesters after the prescribed last date shall not be permitted. For subsequent semesters no minimum credit earning criterion will be applicable. Credit registration atleast once in all Compulsory Credit Course shall be binding, however, earning all CCC Credits for accumulation of the prescribed minimum credits shall not be required.
- c) The candidate will be required to finalize the number of credits at the time of registration in a semester and no change will be permitted after seven days of start of the semester. The CMC of the Department shall forward the credit registration details of all students enrolled in the semester, latest by the tenth day of commencement of the semester. The prior approval of Credit Monitoring Committee will be essential and decision of Credit Monitoring Committee shall be final and binding.
- d) The Credit Courses have been classified as
 - i. Compulsory Core Courses(CCC)

- ii. Elective Core Courses(ECC),
 - iii. Seminar (SEM), Project Work (PRJ), Field Study (FST), Self Study Courses(SSC), and other Supportive Courses (OSC), Research Publications [RPJ] can also be taken in support of Core or Elective course wherever so prescribed.
- e) The aim of the seminar is to give students an exposure to recent developments and advance topics of research interest. The Seminar preparations can be undertaken only on prior approval of Credit Monitoring Committee of the Department. The CMC will allot Seminar Credits on Merit Basis out of desiring students. Seminar preparations are to be undertaken under guidance of a Teacher of parent Department. No teacher shall be permitted to guide more than three students in a semester for Seminar supervision. The guiding teacher will make continuous internal assessment of the Seminar. At the End of Semester Examination (EoSE) the Seminar will be conducted and credits will be awarded by a Board of Three Examiners consisting of the Head of the Department, guide and one faculty member other than guide.
- f) The aim of Project Work or Field Study is to introduce students to research methodology in the subject and prepare them for pursuing research in theoretical or experimental or computational areas of the subject. The project work or Field Study is to be undertaken under guidance of a Teacher of the Department or a Scientist or any other suitable person with proven research excellence in the concerned field of study. The Project Work or Field Study can also be taken up in an outside institution of repute on approval by Credit Monitoring Committee of the Department. The Project Work or Field Study can be undertaken only on prior approval of Credit Monitoring Committee of the Department. The CMC will allot Project Work or Field Study Credits on Merit Basis out of desirous students. The guiding teacher will make continuous internal assessment of the Project Work/ Field Study. No teacher shall be permitted to guide more than three students in a semester for Project Work/Field Study under his/her supervision. EoSE for Project Work/ Field Study will be held at the unit where project work has been undertaken by a board of three examiners consisting of HoD, guide and one senior faculty.
- g) Each department is required to arrange delivery of all compulsory core courses and special number of elective core courses so that the students enrolled for the course can complete prescribed minimum number of credits. It is not binding on the Department to make provision for all elective core courses.
- h) A course is identified by a course code designated by a string of six alphanumeric characters and a course title. In a course code the first three characters of the string indicate the Department offering the course and the later three alphanumeric characters designate a particular course. In the case of compulsory core course the fourth character identifies the semester numeric digit and in case of the elective core courses the fourth character indicates the cluster of specialization. For compulsory theory core courses the fifth character is '0' , for laboratory core courses it is '1' and for Project Work/ Seminar/Field Study it is '2' and for Research Publications in journals it is '3'.
- i) There will be no supplementary/due paper/special examination. Students with grade 'F' or 'E' will have to get themselves re-registered in the course if they so desire with option either as a Self Study Course or as a regular course depending on the feasibility at the Department. The credit will be considered and counted only if registered and approved by the Credit Monitoring Committee at the time of semester registration.
- j) The candidate shall not be permitted to appear in EoSE of a particular credit if (i) he/she does not fulfil the minimum 75% attendance requirement, or (ii) he/she fails to secure a Semester Grade Point Average (SGPA) of 1.5 in the continuous assessment. The concerned department will have to communicate the eligibility of candidate for EoSE to the University Fifteen days before commencement of Examination.

O.199F4: In Continuous Assessment (Department/ College/Institution wise) and End of Semester Examination (EoSE) examination (University as a whole) separate Grades will be awarded as specified under this ordinance. The continuous assessment will consist of two components, namely, (i) Internal Assessment and (ii) Sessional Test(s) in ratio 30:70. The internal assessment component will comprise of assessment of students performance on the basis of factors like Attendance, Classroom Participation, Quiz, Home Assignment etc. The sessional test shall be conducted on coverage of 50% of course content specified in the syllabus. The Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) for Continuous Assessment will be calculated on the Department/College level and for EoSE at the University level. The name of College/Department will be mentioned with SGPA and CGPA of Continuous Assessment.

O.199F5:

- a) Grades in a particular examination with less than 10 students registered in the course (cumulative at Department level for continuous assessment and cumulative at university level for EoSE) will be awarded on the basis of percentage of marks obtained as per table given below.

Percentage Range	Grade	Grade Point	Grade Definition
75-100	O	6	Outstanding
65-74	A	5	Very Good
55-64	B	4	Good
45-54	C	3	Average
33-44	D	2	Below Average
25-33	E	1	Poor
0-24	F	0	FAIL

- b) Grades in a particular examination with more than 10 students registered in the course (cumulative at Department level for continuous assessment and cumulative at university level for EoSE) will be calculated on the basis of relative merit of marks obtained, that is, Grade O (Point 6) to top 10% students, Grade A (Point 5) to next 25 % students in merit order, Grade B (Point 4) to further next 30% students in the merit order and Grade C (Point 3) to further next 25% in the merit order and Grade D (Point 2) to remaining last 10% students with exceptions permitted (i) to the extent to award students with same mark and the same grade, (ii) to award Grade E (Point 1) to those students securing less than 33% but more than 25% marks in the examination, and (iii) to award Grade F (Point 0) to those students securing less than 25% marks in the examination. The grade point assignment is also given below in tabular form.

Standing in Merit of the Course or Marks Obtained in the course	Grade	Grade Point	Grade Definition
Top 10 % in Merit	O	6	Outstanding
Among Top 35% in Merit but not in Top 10%	A	5	Very Good
Among Top 65% in Merit but not in Top 35%	B	4	Good
Among Top 90% in Merit but not in Top 65%	C	3	Average
Among Last 10% in Merit	D	2	Below Average
25% <=Marks<33%	E	1	Poor

Marks<25%	F	0	FAIL
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- c) Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) will be calculated on the credit weighted average of the grade points obtained as given below.

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

Where

C_i : Number of credits earned in the i^{th} course of Semester for which SGPA is to be calculated.

P_i : Grade Point Earned in i^{th} course

i : 1, 2,n represents the number of courses in which a student is registered in the concerned semester.

$$CGPA = \frac{\sum_{i=1}^n C_i P_i}{\sum_{i=1}^n C_i}$$

Where

C_i : Number of credits earned in the i^{th} course of Course till date for which CGPA is to be calculated.

P_i : Grade Point Earned in i^{th} course

i : 1, 2,n represents the number of courses in which a student is registered in the concerned semester.

- d) The SGPA, CGPA grades will be assigned as per table given below.

SGPA or CGPA	Grade	Definition
5.50 to 6.00	O	Outstanding
4.50 to 5.49	A	Very Good
3.50 to 4.49	B	Good
2.50 to 3.49	C	Average
1.50 to 2.49	D	Below Average
0.50 to 1.49	E	Poor
0.00 to 0.49	F	FAIL

- e) The University will issue a complete transcript of credits, grade obtained, SGPA and CGPA on declaration of each semester result and a consolidated one on the accumulation of minimum credits required for the award of Master degree.
- f) The maximum period for accumulation of the credit for Award of Master degree is 5 years (8 years for Ten Semester courses). Failing which the credits earned will stand withdrawn and null and void.
- g) The details of conversion of seven point scale into percentage as per UGC notification is given below

SGPA or CGPA	Grade	Definition	Percentage
5.50 to 6.00	O	Outstanding	75-100
4.50 to 5.49	A	Very Good	65-74
3.50 to 4.49	B	Good	55-64
2.50 to 3.49	C	Average	45-54
1.50 to 2.49	D	Below Average	33-44

0.50 to 1.49	E	Poor	25-33
0.00 to 0.49	F	FAIL	0-24

Thus the percentage will be obtained by using this table

CGPA	%	CGPA	%	CGPA	%
6	100	4	60	2	39
5.9	95	3.9	59	1.9	37.8
5.8	90	3.8	58	1.8	36.6
5.7	85	3.7	57	1.7	35.4
5.6	80	3.6	56	1.6	34.2
5.5	75	3.5	55	1.5	33
5.4	74	3.4	54	1.4	32.2
5.3	73	3.3	53	1.3	31.4
5.2	72	3.2	52	1.2	30.6
5.1	71	3.1	51	1.1	29.8
5	70	3	50	1	29
4.9	69	2.9	49	0.9	28.2
4.8	68	2.8	48	0.8	27.4
4.7	67	2.7	47	0.7	26.6
4.6	66	2.6	46	0.6	25.8
4.5	65	2.5	45	0.5	25
4.4	64	2.4	43.8	0.4	20
4.3	63	2.3	42.6	0.3	15
4.2	62	2.2	41.4	0.2	10
4.1	61	2.1	40.2	0.1	5

The enhancement of CGPA by 0.01 will enhance percentage as given below:

Grade	SGPA or CGPA	Percentage enhancement on 0.01 CGPA enhancement
O	5.50 to 6.00	0.5
A	4.50 to 5.49	0.1
B	3.50 to 4.49	0.1
C	2.50 to 3.49	0.1
D	1.50 to 2.49	0.12
E	0.50 to 1.49	0.08
F	0.00 to 0.49	0.5

For example (i) CGPA of 5.73 is equivalent to 86.5%, (ii) CGPA of 5.12 is equivalent to 71.2%, (iii) CGPA of 4.34 is equivalent to 63.4%, (iv) CGPA of 3.26 is equivalent to 52.6%, (v) CGPA of 2.17 is equivalent to 41.04%, and (vi) CGPA of 1.11 is equivalent to 29.88%.

2. Eligibility:

A candidate who has secured more than 50% or CGPA of 3.0 in the UGC Seven Point scale [45% or CGPA 2.5 in the UGC Seven Point Scale for SC/ST/Non-creamy layer OBC] or equivalent in the Bachelor degree in physical Education shall be eligible for admission to First Semester of a Master of Physical Education course.

3. Scheme of Examination:

- (1) Each theory paper EoSE shall carry 100 marks. The EoSE will be of 3 hours duration. Part 'A' of theory paper shall contain 10 Short Answer Questions of 20 marks, based on knowledge, understanding and applications of the topics/texts covered in the syllabus. Each question will carry one mark for correct answer.
- (2) Part "B" of paper will consist of Four questions with internal choice (except in cases where a different scheme is specifically specified in the syllabus of 20 mark each. The limit of answer will be five pages.
- (3) Each Laboratory EoSE will be of four/six hour durations and involve laboratory experiments/exercises, and viva-voce examination with weightage in ratio of 75:25.

4. Course Structure:

The details of the courses with code, title and the credits assigned are as given below.

Abbreviations Used

Course Category

CCC: Compulsory Core Course

ECC: Elective Core Course

OEC: Open Elective Course

SC: Supportive Course

SSC: Self Study Core Course

SEM: Seminar

PRJ: Project Work

RP: Research Publication

Contact Hours

L: Lecture

T: Tutorial

P: Practical or Other

S: Self Study

Relative Weights

IA: Internal Assessment (Attendance/Classroom Participation/Quiz/Home Assignment etc.)

ST: Sessional Test

EoSE: End of Semester Examination

First Semester

S.No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	ThY	P
1	PHE-----	Research Methods and	CCC	6	3	1	0	3	0

		Statistics							
2	PHE-----	Scientific Principles of Sports Training	CCC	6	3	1	0	3	0
3	PHE-----	Measurement and Evaluation in Physical Education	CCC	6	3	1	0	3	0
4	PHE-----	Exercise Physiology	CCC	6	3	1	0	3	0
5	PHE-----	Seminar-1 Project-1/Field Work-1	PRJ/FST	4	0	0	2	0	1
6	PHE-----	Practical	CCC	8	0	0	12	0	4

CCC(24) PRG/FST(4) Practical (8)

Second Semester

S.No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	ThY	P
1	PHE-----	Research Methods and Statistics	CCC	6	3	1	0	3	0
2	PHE-----	Scientific Principles of Sports Training	CCC	6	3	1	0	3	0
3	PHE-----	Measurement and Evaluation in Physical Education	CCC	6	3	1	0	3	0
4	PHE-----	Exercise Physiology	CCC	6	3	1	0	3	0
5	PHE ----	Seminar-1 Project-1/Field Work-1	PRJ/FST	4	0	0	6	0	1
6	PHE ----	Practical	CCC	8	0	0	12	0	4

CCC(24) PRG/FST(4) Practical (8)

Third Semester

Any four papers out of 06 papers & Dissertation is compulsory

S.No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	ThY	P

1	PHE-----	Management of Physical Education & Sports	CCC	6	3	1	0	3	0
2	PHE-----	Health Education	CCC	6	3	1	0	3	0
3	PHE-----	Sports Medicine	CCC	6	3	1	0	3	0
4	PHE-----	Psychology in Physical Education & Sports	CCC	6	3	1	0	3	0
5	PHE-----	Sports Sociology	CCC	6	3	1	0	3	0
6	PHE-----	Sports Biomechanics	CCC	6	3	1	0	3	0
7	PHE-----	*Dissertation	CCC	12	0	0	12	0	4
8	PHE-----	Seminar-1 Project-1/Field Work-1	PRJ/ PRJ	4	0	0	6	0	1
9	PHE ---	Practical	CCC	8	0	0	12	0	4

***Dissertation must be submitted prior to admission in fourth Semester.**

CCC(48) PRG/FST(4) Practical (8)

Fourth Semester

S.No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	ThY	P
1	PHE-----	Management of Physical Education & Sports	CCC	6	3	1	0	3	0
2	PHE-----	Health Education	CCC	6	3	1	0	3	0
3	PHE-----	Sports Medicine	CCC	6	3	1	0	3	0
4	PHE-----	Psychology in Physical Education & Sports	CCC	6	3	1	0	3	0
5	PHE-----	Sports Sociology	CCC	6	3	1	0	3	0
6	PHE-----	Sports Biomechanics	CCC	6	3	1	0	3	0
7	PHE-----	Seminar-1 Project-1/Field Work-1	PRJ/FST	4	0	0	6	0	1
8	PHE ----	Practical	CCC	8	0	0	12	0	4

CCC(36) PRG/FST(4) Practical (8)

PHE ----- Research Methods and Statistics

Unit-I

- Meaning & Definition of Research.
- Need and Importance and its scope in Physical Education.
- Types of Research.
- Survey of Related Literature-Need for Library Search, Library Sources,
- Preparation of Bibliography and Abstracts.

Unit-II

- Formulation and Development of Research Problem:
- Source of Location of Research Problem,-
- Criterion in Selecting the Research Problem.
- Meaning of Hypothesis.
- Formulation of Hypothesis.

Unit-III

- Historical Research: Scope of Historical Research in Physical Education, Historical evidence.
- Validity of historical data.
- Survey Studies: Places of survey Research in Physical Education.
- Tools of survey Research; Questionnaire and Interviews.

Unit-IV

- Case studies: Definition of Case studies. Importance of case studies.
- Characteristics of Case studies.
- Data collection in case studies.
- Experimental Research: Meaning, Scope and nature,
- Control of Experimental factors, Experimental Designs.

Unit-V

- Definition of Philosophical Research.
- Importance of Philosophical Research.
- Data collection in Philosophical Research

Books Recommended:

1. Best, John W.: Research in Education. New Delhi: Prentice Hall of India (P) Ltd., 1963.
2. Campbell, William G.: Form and Style in Thesis Writing, Boston: Houghton Mifflin Company, 1954.
3. Clarke David H. and Clake H. Harrison: Research Process in Physical Education. Recreation and Health. Englewood Cliffs, N.J. Prentice Hall Inc. 1979.
4. Good, V. Carter and Scates, Douglas E.: Methods of Research. Appleton-Century-Crofts: New York, 1954.
5. Mouly, George J.: The Science of Educational Research. New Delhi Eurasia Publishing House (P) 1963.
6. Robson M. Brar T.S. and Uppal A.K.: These Format, Gwalior: LNCPE, 1979.
7. Blommers Paul and Lindquist, E.F.: Statistical Methods in Psychology and Education, Calcutta: Oxford Book Co., 1959.
8. Garret, Harry E. and Goodworth R.S.: Statistics in Psychology and Education, Bombay: Allied Pacific Private Ltd. 1958.

PHE - Scientific Principles of Sports Training

Unit-I

- Meaning and definition of Sports Training.
- Aim, Tasks and Characteristics of Sports Training.

- Principles of Sports Training.
- Definition of terms-conditioning, training and coaching.

Unit-II

- Important Features of Training Load-Intensity,
- Density, Duration and Frequency of training load
- Principles of Training Load.
- Adaptation Process and condition of Adaptation.
- Overload-Causes and Symptoms-Taking of overload.

Unit-III

- Meaning and definition of Strength.
- Strength-forms of strength, Characteristics of strength.
- Principles of Strength training.
- Means and methods of strength training for children and women.
- Form of Endurance, characteristics of Endurance,
- Endurance training means and methods.

Unit-IV

- Flexibility-Forms of flexibility.
- Characteristics of flexibility, basis of flexibility
- Methods of development of flexibility.
- Coordinative Abilities-Characteristics of Coordinative Abilities.
- Importance of coordinative abilities, classification of coordinative abilities, training methods.
- Training for motor Components for children and women.

Unit-V

- Definition of skill, Technique and Technical Training.
- Characteristics of Technique
- Phases of Skill acquisition
- Methods of Technique Training
- Causes and correction of faults

Books Recommended:

1. Haris, Dietrich: Principles of Sports Training (Berlin: Sportuclag, 1982).
2. Dick W. Frank: Sports Training Principles (London: Lepus Books, 1980).
3. Jensea, R. Clayne and Fisher A.G.: Scientific Basic of Athletic Conditioning (Philadelphia: Lea and Febiger 1979, Second Edition).
4. Matveyew, L.P.: Fundamentals of Sports Training (Moscow: Progress Publishers, 1981) (Translation from Russian).
5. Cratty, J. Bryant: Perceptual and Motor Development in Infants and Children (N.J.: Englewood Cliffs, Prentice Hall Inc. 1979).
6. Singh, R.: Sports Training General Theory and Methods (Patiala: NISNIS, 1984).

PHE - Measurement and Evaluation in Physical Education

Unit-I

- Meaning of Test; Measurement & Evaluation.
- Nature and scope of evaluation programme,
- Need and importance of evaluation in the field of Physical Education.
- Principles of Evaluation.

Unit-II

- Criteria of Test selection-scientific Authenticity, (Reliability, Validity, objectivity, norms) Administrative Feasibility and Educational application.
- Classification of Tests-Standardized and teacher made tests (objective and subjective tests.)

Unit-III

- Construction of Texts-Knowledge tests (written tests)and skill tests.
- Suggestions for administering tests. Medical Examination Testing personnel, Time and testing, Economy of testing, Test records, Preparation of reports, Construction of table groups, Purpose of reporting, Justification of particular phases of the programme worth of a change in methodology.

Unit-IV

- Measurement of organic Functions, Motor Fitness and General Motor Ability.
- Organic functions-Cardiovascular respiratory function, Cooper's 12 minutes Continuous Run/Walk Text. Tuttle Pulse ratio tests.
- Harward step test and its modifications (High School and college level-men and women)Hyman's Cardio-pulmonary Index(CPI).

Unit-V

- Motor Fitness: Oregon Motor Fitness test, JCR T, Canadian Fitness Test. AAHPER Youth Fitness Test.
- Indiana Motor Fitness test.
- General Motor Ability: Mc-Cloy's General Motor Ability Test Methany-Johnson Test.

Books Recommended:

1. Larson,L.A.and Yown,R.D.:Measurement and Evaluation in Physical,Health and Recreation Education(St.Lous.C.V.Mosby Co.1957).
2. Mathew,Donald K.:Measurement in Physical Education (London:W.B.Saunders Co.1973)Edn.5
3. Clarke,H.David and Clarke Harison,H.:Application of Measurement Physical Education (Englewood Cliffs.,Prentice Hall,Inc.1987).Edn.6
4. Hubbard W.Afred:(Ed.):Research Method in Health Physical Education and Recreation.3rd Revised Edn. (Washington:D.C.America Association of Health Physical Education and Recreation,1979).
5. Larson,L.A.:Encylopaedia of Sports Sciences and Medicine (New York Macmilan Co.1971).

PHE - Exercise and Physiology

Unit-I

- Introduction: Definition of Physiology and Exercise Physiology.
- Importance of Exercise Physiology in the field of physical Education and Sports.
- Role of Exercise Physiology in the field of physical Education and Sports.

Unit-II

- Muscle: structure and Function: A comparative study of different types of muscles (Voluntary, Involuntary and Cardiac)
- Chemical Composition of skeletal muscle.
- Muscle fiber types (Red and White muscle).

Unit-III

- Bioenergetics: Fuel for muscular work,(ATP),energy of muscular contraction and contractile and biochemical changes during muscular contraction Heat production and thermodynamics of muscle contraction, Aerobic and An-aerobic muscular activity.

Unit-IV

- Neuro-muscular Junction and Coordination of Muscular activity: Motor Unit transmission of nerve impulse, bio-electric potentials, neuro-muscular junction and transmission of nerve impulse across it. Proprioception and Kinesthesia.

Unit-V

- Other Physiological aspects of Exercise and Sports: Concept of Physical Fitness and Physical training warming-up, conditioning and fatigue, Physiological aspects of development of strength, endurance, skill.

Books Recommended:

1. Guyton, Arthur C.: Test Book of Medical Physiology (Philadelphia: W.B. Saunders Company, 1976).
2. Morehouse, L.E. and Miller, A.T.: Physiology of Exercise (Saint Louis: The C.V. Mosby Company, 1976) 7th Edition.
3. Karpovich, P.V. and Sinning, Wayne E.: Physiology of Muscular Activity (Philadelphia: W.B. Saunders Company, 1971) 7th Ed.
4. Bourne, Geoffrey H.: The Structure and Function of Muscles London: Academic Press, 1972.
5. Astrand, P.O. and Rodahl, Karre: Test Book of Work Physiology Tokyo: McGraw-Hill Kogakusha Ltd., 1970
6. Mathew, D.K. and Fox E.L., Physiological Basis of Physical Education and Athletics. (Philadelphia: W.B. Saunders Company, 1976).

PHE- SEMINAR

PHE - PRACTICALS

PHE - Research Methods and Statistics

Unit-I

- Meaning of Statistics?
- Definition and need in Physical Education and sports Research
- Normal Curve: Definition,
- Properties and principle of normal curve,
- Skewness, Kurtosis, standard scales: Percentile Z, t 6 Sigma and 7 Sigma scales, Standard scores.

Unit-II

- Statistical Inference: Reliability limits, factors effect of reliability
- "t". F. and Z Statistics.
- Null hypothesis & its Importance of Null hypothesis.
- Type I and II errors, One tail and two tailed tests. Level of significance

Unit-III

- Meaning & Definition of sampling, formulation
- Random Sampling: and stratified random sampling,
- Standard error and Sample error
- Coefficient of variation.

Unit-IV

- Meaning & definition Correlation.
- Type of Correlation.
- Chi-square
- One way analysis of variance, with equal and unequal sample sizes.
- LSD and Scheffe's Test.

Unit-V

- Research proposal.
- Preparation of research report.
- Introduction to Computer Analysis.

Books Recommended:

1. Best, John W.: Research in Education. New Delhi: Prentice Hall of India (P) Ltd., 1963.
2. Campbell, William G.: Form and Style in Thesis Writing, Boston: Houghton Mifflin Company, 1954.
3. Clarke David H. and Clake H. Harrison: Research Process in Physical Education. Recreation and Health. Englewood Cliffs, N.J. Prentice Hall Inc. 1979.
4. Good, V. Carter and Scates, Douglas E.: Methods of Research. Appleton-Century-Crofts: New York, 1954.
5. Mouly, George J.: The Science of Educational Research. New Delhi Eurasia Publishing House (P) 1963.
6. Robson M. Brar T.S. and Uppal A.K.: These Format, Gwalior: LNCPE, 1979.
7. Blommers Paul and Lindquist, E.F.: Statistical Methods in Psychology and Education, Calcutta: Oxford Book Co., 1959.
8. Garret, Harry E. and Goodworth R.S.: Statistics in Psychology and Education, Bombay: Allied Pacific Private Ltd. 1958.

PHE-Scientific Principles of Sports Training

Unit-I

- Definition of tactics and strategy
- Basic Tactical Concepts-Offensive, Defensive and High Performance.
- Methods of Tactical Training
- Control of Tactical Knowledge

Unit-II

- Planning and Organisation of training:
- Importance of Planning
- Principles of Planning
- System of Planning
- Periodisation and its types
- Contents for various periods of training

Unit-III

- Competition Planning and Preparation,
- Importance of Competitions
- Competition Frequency
- Main and Build-up competitions
- Direct preparation for an important competition.

Unit-IV

- Meaning of evaluation.
- Items to be included in evaluation programme.
- Importance of evaluation programme in physical education

Unit-V

- Uses of Graphs and principles of graphical representation
- Forms of diagrams used for evaluation checking progress
- Rules governing performance checks and motor tests.

Books Recommended:

1. Haris,Dietrich: Principles of Sports Training (Berlin:Sportuelag,1982).
2. Dick W.Frank: Sports Training Principles (London:Lepus Books,1980).
3. Jensea,R.Clayne and Fisher A.G.: Scientific Basic of Athletic Conditioning (Philadelphia:Lea an Febiger 1979,Second Edition).
4. Matveyew,L.P.:Fundmentals of Sports Training (Moscow:Progress Publishers,1981) (Translationfrom Russian).
5. Cratty,J.Bryant:Perceptual and Motor Development in Infants and Children (N.J.:Englewood Cliffs,Prentice Hall Inc.1979).
6. Singh,R.:Sports Training General Theory and Methods (Patiala:NISNIS,1984).

PHE - Measurement and Evaluation in Physical Education

Unit-I

- Tests for Strength and Skill strength: Roger's Physical Fitness Index and Suggested changes in the P.F.I. Test. Skill: Volleyball-Brady test, Russel and Lange test Basketball-Johnson test,
- Knox test. Soccer-Mc Donald Test,

- Field Hockey-Harbans Singh Field Hockey Test.
- Badminton-Miller Volley Test, Lockart Mcpherson Test.
- Tennis-Broer Miller test, Dyer tennis test.

Unit-II

- Measures of Posture.
- Anthropometry Social Efficiency an Psychological Factors.
- Measure of Posture-IOWA Posture Test.(Cureton's)

Unit-III

- Anthropometric Measurements-
 - i. Girth Measurements-Upper arm, forearm ,Calf ,Chest.
 - ii. Width Measurements Biacromial chest illiocrestal, Bicondylar (Femur and Humerus).
 - iii. Height Measurement-Stature and sitting height.

Unit-IV

- Meaning and definition of Somatotypes
- Somatotypes-Sheldon's technique-an introduction.
 - i. Social Efficiency.
 - ii. Socio-metric techniques Introduction.

Unit-V

- Psychological factors:
- Anxiety Scale-Speil-berger's Competitive State-Anxiety Scales.
- Eysenck Personality Inventory (H.J.Eysenck and Sybil B.G.Eysenck)

Books Recommended:

1. Larson,L.A.and Yown,R.D.:Measurement and Evaluation in Physical,Health and Recreation Education(St.Lous.C.V.Mosby Co.1957).
2. Mathew,Donald K.:Measurement in Physical Education (London:W.B.Saunders Co.1973)Edn.5
3. Clarke,H.David and Clarke Harison,H.: Application of Measurement Physical Education (Englewood Cliffs.,Prentice Hall,Inc.1987).Edn.6
4. Hubbard W. Affred:(Ed.):Research Method in Health Physical Education and Recreation.3rd Revised Edn. (Washington:D.C.America Association of Health Physical Education and Recreation,1979).
5. Larson,L.A.:Encyclopaedia of Sports Sciences and Medicine (New York Macmilan Co.1971).

PHE - Exercise and Physiology

Unit-I

- Physiological changes due to Exercise: Immediate effect of exercise/work on various systems of body.
- Effect of Exercise and training on:
 - a. Heart and circulatory systems
 - b. Respiratory system
 - c. Muscular System

d. Theroregulatory System

Unit-II

- Brief discussion on other system during rest, sub-maximal and maximal work. Oxygen debt, second wind stitches on the side respiratory volumes, Breathing capacity. Recovery rate, Blood Supply to Skeletal muscle and regulation of blood flow during exercise.
- Physiological aspects of development of speed, agility and co-ordination.

Unit-III

- Basic concept of a balanced diet.
- Appropriate diet before, during and after athletic performance and the effect of alcohol, drugs and smoking on athletic performance.

Unit-IV

- Work and Environment. Obesity and Weight Control. Work Capacity under different environmental condition: Hot, humid, cold and high altitude, Definition of Obesity, measurement of body fat by various methods (under water weight and skin-fold measurement) Body weight control, Positive and Negative energy balance.

Unit-V

- Energy cost of various sports activity: Definition of Energy cost, Energy cost of various sports activity and various direct/indirect methods of assessing them.

Books Recommended:

1. Guyto, Arthur C.: Test Book of Medical Physiology (Philadelphia: W.B. Saunder Company, 1976).
2. Morehouse, L.E. and Miller, A.T.: Physiology of Exercise (Saint Louis: The C.V. Mosby Company, 1976) 7th Edition.
3. Karpovich, P.V. and Sinning, Wayne E.: Physiology of Muscular Activity (Philadelphia: W.B. Saunders Company, 1971) 7th Ed.
4. Bourne, Geoffery H.: The Structure and Function of Muscles London: Academic Press, 1972.
5. Astrand, P.O. and Rodahl, Karre: Test Book of Work Physiology Tokyo: McGraw-Hill Kogakusha Ltd., 1970)
6. Mathew, D.K. and Fox E.L., Physiological Basis of Physical Education and Athletics. (Philadelphia: W.B. Saunders Company, 1976).

PHE- SEMINAR

PHE- PRACTICALS

PHE - Management of Physical Education and Sports

Unit-I

- Concept of Management; Philosophical and historical background of management.
- Principles and Function of Management.

- Competency based approaches and implementation in sports and Physical Education.

Unit-II

- Change process ; Theory & System approach in Management.
- Marketing. System approach in marketing. Sponsorship approach competitive sports
- Successful management in the future.

Unit-III

- Organization / Management of Sports in-Schools, College and Universities: Inter-University, District, State and National Level, Indian and International Olympic Associations. (I.O.A & I.O.C.)
Sports Authority of India.

Unit-IV

- Management of Physical Education Programmes.
 1. Progressive concepts of Management/Administration, Personnel and material management, Programming for instruction and activities.
 2. Hierarchy of education administration in Central, State and Local authorities and individual institutions in India.

Unit-V

- Management of Physical Education Programmes.
 1. Responsibility of General Administrator, Technical Expert, Educational Administrator, Professional Educator and Specialist.
 2. Training of Administration-Liberal Education, Group Dynamics, Subject Specialization

Books Recommended:

1. Earle F.Zeigler & Gary W.Bowie: Management Competency Development in Sports and (Physical Education.9 Philadelphia:W.Lea and Febiger,1993).
2. Joseph Bucher and Earnest Koenigeberg: Scientific Inventory Management (New Delhi:Prentice Hall of India Pvt.Ltd.1968).
3. Ashton D.:Administration of Physical Education for Women (New York:The Ronald Press C.1968)
4. Bucher C.A.: Administration of Physical Education and Athletic Programme (St.Louis: The C.V.Mosby Co.,1979)7th Ed.
5. Daughtrey G.and Woods J.B.: Physical Education and Intramural / Programmes: Organisation and Administration Philadelphia U.S.A. :W.B. Saunders Co.,1976.11th Ed.
6. Fersythe G.E.and Duncan R.C.: Administration of Physical Education (New York: Prentice Hall Inc.1951).

PHE ... - Health Education

Unit-I

- History of Health in India. concept and various levels of Health Care of India. Medical care in rural and urban areas. Primary Health Centre Concept .Three tier system of Health Care, Health for all by 2000 A.D.: Latest trends in Health Education.

- Health Education: Its contents and aims. Use of Audio-visual aids, methods of individual, group, mass approaches of Health Education.

Unit-II

- Inter-relationship between different components of Health and Spiritual Health. Role and responsibility of individual, community, state and spectrum of Health. Role of Heredity and Genetics in achieving positive health.
- Nutrition: Proximate principles and their imbalance. Brief description of nutrients in various food stuffs and trace elements. Milk and borne disease.

Unit-III

- School Health services and school Health Programme in relation to the following:
Role of Physical Education Teacher, Principal, Class Teacher, Doctor.
Health appraisal: Meaning, aim, method.
Medical check-up/examination.
Common childhood diseases and their control.

-Food for children at Primary, Middle and Secondary level
-School Health administration and maintenance of records. Preparation of Health

Unit-IV

- School living under fine clinics and road to health:
-Food for children at Primary, Middle and Secondary level
-School Health administration and maintenance of records. Preparation of Health Card.

Unit-V

- Water Impurities, purification of water and water borne -diseases with reference to worm infestations and Amoebas Defection of Chlorine in water.

Books Recommended:

1. Park, J.E., Park K.: Text Book of Preventive and Social Medicine. (Jabalpur: Message Banarasidas Bhanot, 1980), Edn. 2.
2. Turner, C.E.: The School Health and Health Education. (St. Louis: The C. V. Mosby Co. 1952), Edn. 2.
3. Bedi: Yaspal, Social and Preventive Medicine (Delhi: Atma Ram and Sons. 1983) Edn. 14.
4. Ghosh, B.N.: A Treatise of Hygiene and Public Health. (Calcutta: Scientific Publishing Co.) Edn. 15.
5. Hamlon, J. John.: Principles of Public Health Administration. (St. Louis: C. V. Mosby Co., 1969), Edn. 5.
6. Bucher, A. Charles: Administration of Health and Physical Education and Programme. (St. Louis: The C. V. Mosby Co. 1979). End. 6.
7. Turner, C.E.: Personal and Community Health, (St. Louis: The C. V. Mosby Co., 1972), Edn. 14.

PHE - Sports Medicine

Unit-I

- Meaning and definition of sports medicine
- Concept of sports medicine,
- Aims and objectives of Sports Medicine.
- Need and scope of Sports Medicine in Physical Education.

Unit-II

- Role of Sports Physician, Physical Educator/Athletic Trainer, Coach and the player in Sports Medicine.

- Team Medical care. Brief history of Sports Medicine in India and abroad.

Unit-III

- Sports Medicine Problems: Low back problems and its management, Stretching and strengthening exercise for back problems, Mal-nutrition and management.
- Sex problems in athletics.
- Difference between the two sexes

Unit-IV

- Advantages and disadvantages of exercises before and after pregnancy.
- Common old age problems of athletics and rehabilitation.

Unit-V

- Cryotherapy and compression, Cry kinetics,
- Therapeutic Modalities and Procedure of Individual Modalities
- Hydrocollateral packs (Hot and Cold)
- Hydrotherapy (Whirlpool), Diathermy,
- Ultrasound, Electrical Muscle Stimulation,
- Combination of Ultrasound and Electrical Muscle stimulation,
- Cold spray. Contrast bath, Paraffin bath, Infra red and ultra violet rays, Piapulse and laser therapy.

Books Recommended:

1. Davies, J.E., Essentials of Sports Medicine, New Delhi, 1986.
2. Ellison, A.E. and others, Athletic Training & Sports Medicine, American Academy, 1984.
3. Eriksson, B.O.[et.al.], Sports Medicine, Great Britain: Guinness Pub., 1990.
4. Irvin, R. and others, Sports Medicine, USA : Allyn and Bacon, 1998.
5. Jain, Rachna, Sports Medicine, New Delhi: KSK, 2002.
6. Khanna, G.L & Jayprakash, C.S., Exercise Physiology & Sports Medicine, Lucky, 1990.
7. Khanna, G.L., Exercise Physiology & Sports Medicine, Lucky Enterprises, 1990.
8. Komi, P.V., Encyclopaedia of Sports Medicine, Blackwell, 1992

PHE - Psychology of Physical Education & Sports

Unit-I

- Meaning of Sports psychology.
- Nature and scope of sports psychology.
- Place of sport psychology in sports sciences hierarchy.
- Landmarks in the development of exercise and sport psychology.

Unit-II

- Development of sport psychology.
- Relationship of sport psychology with other sports sciences.

- Importance of Sports Psychology for Physical Education Teachers and Coaches.
Importance of sport psychology to-
 - Teachers
 - Coaches and trainers
 - Sportspersons
 - Administrators

Unit-III

Cognitive process in physical activities: Meaning of cognition.

- Characteristics of cognitive process in sports.
- Role of sensation, Perception, Thinking, Imagination and Memory in physical activities.
- Mental activity of athletes, Mental activity and sports related goals.

Unit-IV

- Meaning of attention, Dimensions of attention, Strategies to develop attention.
- Motor learning: meaning of motor learning.
- Factors affecting motor learning.
- Motor development in various periods of childhood and adolescence.

Unit-V

- Psychological aspects of action regulation: Meaning and importance of action regulation.
- Psychological characteristics of physical-activities.
- Structure of action programme.
- Action programme in different games and sports.

Books Recommended:

1. Alderman.R.B.:Psychological Behaviour in Sports-(Philadelphia:London,Saunders Company.1974).
2. Bust Susan Doreas: Pshychology of sports (Network:Van Nostrand Reinhold company).Edn.2.
3. Cratty Bryant,J.: Movement Behaviour and Motor Learning (Philadelphia Lea and Febiger,1973),Edn.3.
4. Cratty Bryant J.:Psychology and Physical Activity (New Jercey Englewood Cliffs,Prentice Hall Inc.1965).
5. Cratty Bryant J.:Psychological Preparation and Athletic Excellence (New York:Movement Publication Inc.1978).
6. Gold Stein and Joffery H.(ed).:Sport Games and Play Social and Psychological View Points (Lewerence Erihanm Association,Publishers R.J.1979).
7. Kamlesh M.L.:Psychology of Physical Education and Sports (New Delhi Motropolitan Book Co. Pvt. Ltd.1983).

PHE - Sports Sociology

Unit-I

- Nature, Scope and Methods of Sport Sociology.
- Sports as a social phenomenon.
- Sociological analysis of sport and sport sociology as an academic discipline.
- Social factor (appearance, sociality, aspiration level and audience) inference on participation and performance in sports.

Unit-II

- Study of sports groups.
- Group interaction. Competition and co-operation.

- Behavior Characteristics, qualities and role of sports leaders.
- Sports and Cultures.

Unit-III

- Relationship between sports and socializing institutions (family, school and educational systems).
- Inter-relationship between and regulating institutions (Politics and economy).
- Sports and cultural institutions (religion and arts)
- socialization via games and sports

Unit-IV

- Sports as a social institution.
- Sports an element of culture and a cultural product.
- Manipulative socialization and concerned conformity.
- Relationship between sports and culture.

Unit-V

- Social stratification in sports, sports as a stratification system.
- Discrimination and democratization in sports with special reference to socio-economic classes and women.
- Sports and aggression, Violence in sports.
- Problem regarding professionalisation and children in sports.

Books Recommended:

1. Loy, John W., Kenyon, Gerald, S. and McPherson, Barry D.: Sports Culture and Society (Philadelphia: Lea & Febiger, 1981).
2. Ball, Donald W. and Loy John W.: Sports and Social Order: Contribution to the sociology of sport (London Addison Wesley Publishing Co., Inc. 1975).
3. Loy John W., McPherson, Barry D., and Kenyon Gerald: Sports and Social system (London: Addison Wesley Publishing Company Inc. 1978).
4. Edward, Larry: Sociology of Sports (Illinois, The Dorsey Press, 1973). Chatty, Bryant J.: Social Dimensions of Physical activity New Jersey: Englewood Cliffs, Prentice Hall Inc., 1967).

PHE- Sports Biomechanics

Unit-I

- Introduction: Meaning of Biomechanics.
- Biomechanics in Physical Education.
- Sports and Research Fundamental skills-Basic of Sports.
- Importance of Biomechanics in Physical Education and Sports.

Unit-II

- Movement Analysis-Kinesiological Analysis.
- Mechanical Analysis and Bio-mechanical Analysis.

Unit-III

- Understanding and principles of Application Derived from the following
- Linear, Angular and General Motion: Distance and Displacement (Linear and Angular). Speed and Velocity (Linear and Angular) Acceleration (Linear and Angular Uniform Motion).
- Units of these, Relationship of Linear and Angular motion.
- Centrifugal and Centripetal forces.

Unit-IV

- Law of Inertia (Linear Motion)
- Law of moment of Inertia (Angular Motion)

- Law of Momentum (Linear Motion)
- Law of Angular Momentum (Angular Motion)
- Law of Action and Reaction (Linear Motion)
- Law of Action and Reaction (Angular Motion)

Unit-V

- Balance
- Equilibrium and stability
- Controlling balance in static positions
- Controlling balance during movement

Books Recommended:

1. Bunn, John W.: Scientific Principle of Coaching (Englewood Cliffs N.J.: Prentice Hall Inc., 1972).
2. Simonian Charles: fundamentals of Sports Bio-mechanics (Englewood Cliffs, N.J. Prentice Hall, Inc. 1981).
3. Hay, James, G.: The Bio-mechanics of Sports Techniques Englewood Cliffs, N.J.: Prentice Hall, Inc., 1970).
4. Broer, M. Rion R. and Zeraicke, R. Ronald F.: Efficiency of Human Movement (Philadelphia: W.E. Saunder Co. 1979).
5. Hay, James G. and Reid J. Gavind: the Anatomical and Mechanical Basis of Human Motion (Englewood Cliffs Prentice Hall, Inc. 1982).
6. Hay, James G. and Reid J. Gavind: Anatomy, Mechanics and Human Motion, Englewood Cliffs, N.J.: Prentice Hall, Inc., 1988).

PHE -Dissertation

Note: In place of word 'Thesis' 'Dissertation' of 100 marks to be awarded by the external examiners as per the University rules. No viva-Voce will be held.

PHE – SEMINAR

PHE ...- PRACTICALS

PHE - Management of Physical Education and Sports

Unit-I

Supervision & Leadership:

- i. Responsibilities of Physical Education Specialists.
- ii. Training of Supervisors of Physical Education.
- iii. Personal traits of the Supervisors
- iv. Relationship of the Supervisors to Administrative Offers & Teachers.

Unit-II

- Functions of the Supervisors: Duties pertaining to- Administration, Facilities and Equipment, Instruction Special Services, Supervision and Professional Growth.
- Evaluation of Supervision: Methods, Meaning and Need for evaluation Criteria of Evaluation, Follow-up.

Unit-III

- Professional Preparation in India.
- Selected problems in Management/Administration.
- Professional ethics, class discipline and student teaching.

Unit- IV

- Definition and meaning of planning
- Need and importance of planning
- Principle of planning
- Steps involved in planning

Unit- V

- Job satisfaction in Physical Educational Professional
- Career Avenues in Physical Education
- Press and Electronic media
- Communication- Skills, type, Hazards.

Books Recommended:

1. Chakraborty, S. Sports Management Delhi, Sports Publications, 1998.
2. Kamlesh, M. L. Management Concept in Physical Education and Sport, New Delhi Metropolitan Book Co. Pvt. Ltd, 2000.
3. Roy, S.S. Sports Management Delhi, Friends Publications, 1995.
4. Sivia, G.S. Sports Management in Universities, New Delhi: A.I.U. Deen Dayal Upadhyaya Marg, 1991.

PHE - Health Education

Unit-I

Community and Environmental Sanitation:

- Air pollution and its effects on health occupational diseases.
- Housing and its problems and health aspects.
- Light, noise, temperature and radiation their effects on health.

Unit-II

Communicable Diseases:

Natural history of communicable disease. Levels of Prevention: Brief description of following communicable disease and their prevention:

- Tetanus
- Tuberculosis
- Jaundice (Infections-Hepatitis)
- Scabies and common skin infections.
- Chicken pox, mumps and Measles.
- Malaria and filaria.
- Rabies (Hydrophobia and animal bite).
- Sexually transmitted diseases.

Unit-III

- Non communicable diseases and Evils of community: Brief description of important non-communicable diseases.
- Population policy, pollution dynamics, population explosion, national family welfare programme ,
- Need of sex education
- Alcoholism, Drugs habituation-dependence and addiction.
- Communicable Diseases, Causes & Prevention.

Unit-IV

- Meaning and concept of fitness
- Meaning and concept of wellness
- Components of Physical fitness
- Types of Physical Fitness components
 - a) Health Related
 - b) Motor Skill Related
- Components of wellness
- Factors affecting Physical Fitness and Wellness
- Principles of Physical Fitness and Wellness
- Importance of fitness and wellness in present scenario

Unit-V

- Means of Fitness Development: Aerobic Activities (walking, bicycling, jogging and running, swimming, exercise in water, indoor fitness, home-gym, stretching, strengthening, circuit training, participation in games and sports)
- Benefits of fitness programme Exercise Prescription: Mode of exercise, exercise frequency, exercise duration, exercise intensity.

Books Recommended:

- 1 Even, A WILLA EVERYDAY SAFETY Chicago Lyons & Carnahan 1990
- 2 FIRST AID TO THE INJURED. New Delhi: St. John Ambulance Association, 1989
- 3 Ghosh B.N. A TREATISE ON PREVENTIVE & SOCIAL MEDICINE, Calcutta: Scientific
- 4 HYGIENIC AND PUBLIC HEALTH AND PUBLIC HEALTH, 1991
- 5 Hanlon John. J. PRINCIPLES OF PUBLIC HEALTH ADMINISTRATION, 1992
- 6 Jonson, ALTH IN ACTION. Holt Rinehart and Winston, 1977
- 7 MOSS ET AL HEALTH EDUCATION, NATIONAL EDUCATION, Education Association of U.T.A. 1986
- 8 Nemir. A. THE SCHOOL HEALTH EDUCATION, New York: Harper and Brothers, 1991

PHE - Sports Medicine

Unit-I

- General and Regional Injuries and their Immediate Management (Brief Description):
- Soft tissue and muscular-skeletal injuries Tissue response to injuries Inflammation macro and micro trauma and stress related injuries.
- Injuries of head and face. Shoulder arm and elbow joints Injuries Specific injuries to the neck, trunk, and abdominal region. Thigh and knee, lower leg. Ankle and foot. Important over-use problems and their management.

Unit-II

- Specific Game injuries, Dope and athletic nutrition; Brief account of injuries of Football, Hockey, Track and Field, Swimming, Wrestling, judo, Weight Lifting and Training, Tennis, boxing, Gymnastics and Basketball.
- Dope: History, definition, Classification, signs and symptoms. Procedure and sampling at National and International levels.
- Net Protein Utilization: Planning & Justification of athletic diets for different categories of sports as per recommendations of National Sports Medical Advisory Body.

UNIT-III

- Biological, chronological age and age determination
- Suitability of sports at various stages of growth
- Special problems women and sports performance
- Exercise benefits at various stages of life
- Physical, physiological, bio-chemical and bio-mechanical difference between men & women

UNIT IV

- Various types of environmental conditions
- Medical problems due to environment and their symptoms
- Treatment of medical problem and acclimatization in temperature
- Training in different temperature and altitude (high & low Pressure)
- Training of different surface

UNIT V

- Aims and objectives of rehabilitation
- Meaning of functional and occupational rehabilitation
- Importance of adapted programme in rehabilitation
- Functional rehabilitation
- Psychological rehabilitation – adjust mental, environmental and personality development

M.P.ED. FINAL PRACTICAL: Sports Medicine

1. Visit to sauna Bath and its demonstration.
2. Demonstration and practices and measure and its different techniques.
3. Practical Demonstration and use of Therapeutic modalities and use of individual.
4. Modalities available at Sports Medicine Rehabilitation Centre, S.M.S. Hospital, Jaipur. & Other Hospitals of Jaipur.
5. Demonstration for assessing following Sports Medicine Problems.

(a) Shin Splints evaluation. (b) Tennis elbow and related problem (C) Back Pain (d) Joint Injury

Books Recommended:

1. Pandey, P.K., Outline of Sports Medicine, Delhi: J.P. Brothers, 1987.
2. Prentice, W.E., Therapeutic Modalities in Sports Medicine, Times Mirror, 1990.
3. Renstrom, Encyclopaedia of Sports Medicine, Blackwell, 1993.
4. Roy and Irvin, Sports Medicine, New Jersey: Prentice-Hall, 1983.
5. Shephard and Astrand, Encyclopaedia of Sports Medicine, Blackwell, 1992.
6. Shephard, R.J. & Astrand, P.O., Encyclopedia of Sports Medicine, Blackwell, Sc. Pub., 1992.
7. Shephard, R.J., Yearbook of Sports Medicine, Mosby Yearbook, 1990.
8. Torg, J.S. and others, Current Therapy in Sports Medicine, New Delhi, 1996.
9. Vijay Ed., Handbook of Sports Medicine, Delhi : Friends Pub, 2001.

PHE - Psychology of Physical Education & Sports

Unit-I

- Personality: Meaning of Personality.
- Personality traits of sports person.
- Relationship of personality to sport performance. Personality differences among various sports.

Unit-II

- Motivation --Meaning of motive, need, drive .
- Role of motives.
- Attitudes and interest in physical activities.
- Meaning of motivation, Techniques of motivation, type of motivation.
- Relationship between extrinsic and intrinsic motivation.

Unit-III

- Emotions--: Meaning and types of emotion.
- Indulgence of emotions (Success and failure) on level of aspiration and achievement.
- Anxiety, fear, frustration, conflict and its effect on sports performance.

Unit-IV

- Psychological aspects of Competition: Defining competition determinates of competitive behavior.
- Psychological characteristics of Pre-competition, competition and post- competition.
- Selected psycho-regulative techniques for relaxation and activation.
- Psychological aspects of long term and short term preparation for. Competition; Psychological care of injured sports person typical responses to injures, prevention and coping techniques

Unit-V

- Sociological Facilitation :Presence of others coactions,
- Effect and audience effect in sports.
- Factors mediating social facilitations.
- Methods of Investigation in Sports Psychology: Various methods used in sports Psychology.

Books Recommended:

1. Kane J.:Pshchological Aspect of Physical Education and Sports.(London,boston:Routledge and Kegan Paul,1972).
2. Liewallyor jac H.and Blucker Judy A:Psychology of Coaching Theory and Application (Delhi:surjeet Publication 1982).
3. Martens Rainer:Social Psychology and Physical activity (New York:Harper and Row Publishers,1975).
4. Robert Glyn C.:Learning Experiences in Sports psychology (Illionois:Human Kinetlic Publishers Inc.1986).
5. Martens Raine:Coaching Guide to Sports Psychology (Illionois:Human Kinetic Publisers Inc.,1987).

Linda K.Binker,Robert J.Ratella and Ann S.Really:Sports Psychology Psychological Consideration in maximizing sports Performance (C.Brown Publisher Dubgae Jows).

PHE - Sports Sociology

UNIT-I

- Theories in sports sociology.
- Implications of social theories in sports.
- Comparative analysis of different theories of sport sociology

UNIT-II

- Sports as man's cultured heritage
- Sport in ancient times - Greece and Rome
- Spectacles and gladiator contests
- Approach to sport and physical activity through ages in India and abroad.
- Sports among various classes of different civilizations

UNIT-III

- Emergence of modern sport
- Traditional recreation to rational recreation
- Industrial Revolution and changes in sport dynamics

- Capitalistic and socialistic view - point on sport
- Professionalism versus amateurism in sport
- Commercialism in sport

UNIT-IV

- Research techniques in social sciences
- Positivism and field research
- Inductive and deductive methods.
- Empirical and analytical techniques
- Semiotics, and phenomenology, Hermeneutics
- Identifying research problems in sport sociology

UNIT – V

- Role of Social culture in sports
- Function of Sports Sociology.
- Importance of Social Culture in the life of sportsmen.

Books Recommended:

1. Bhusan, V. and Sachdeva, An Introduction to Sociology, Delhi: Kitab, 2003.
2. IGNOU, The Study of Society - Understanding Sociology, Delhi - IGNOU, 2007.
3. Inkeles, A. Ed., What Is Sociology, ND : Prentice Hall, 1997.
4. Jain, Rachna, Sports Sociology, New Delhi: KSK, 2005.
5. Kanwal Jeet, S., Sport Sociology, ND : Friends Pub., 2000.
6. Mitchell, G.D. Ed., Dictionary of Sociology, U.K : Routledge, 1999.
7. Sharma, R. N, Urban Sociology, ND : Surjeet Pub., 1993.
8. Singh, Bhupinder, Sports Sociology, New Delhi : Friends, 2004.
9. Turner, B., Cambridge Dictionary of Sociology, U.K., Cambridge, U.N. Press., 2006

PHE- Sports Biomechanics

Unit-I

- Force: Meaning, Units of force, Effects of Force, Sources of Force.
- Components and Resultant, Friction Pressure.
- Work, Power and Energy.
- Movement of Force, Movement of Inertia. Lever.

Unit-II

- Freely falling bodies, projectiles, momentum and Impulse. Stability (Static and Dynamic).
- Initiating Rotation in the air. Spin, Impact and Elasticity.
- Fluid Mechanics, Air Resistance and Water resistance.

Unit-III

- Analysis of Fundamental Skills:
 - Walking
 - Running
 - Throwing
 - Lifting
 - Pulling

Pushing
Catching
Climbing.

Unit-IV

- Analysis of sports skills of the following:
Athletics, Gymnastics, Swimming, Football, Hockey, Basketball, Cricket

Unit-V

- The effect of two or more torques on a system.
- Vector Composition of torque.
- Torque and the body's centre of gravity location.

Books Recommended:

1. Atha, J., Current Research in Sports Biomechanics, Switzerland: Karger, 1987.
2. Burstein, A.H & Wright, T, M., Fundamental of Orthopaedic Biomechanics, Baltimore : Williams & Wilkins, 1994.
3. Gheluwe, B.N. and Atha, J. [Ed], Medicine & Sport Science: Current Research & Sports Biomechanics, London: Karger, 1987.
4. Gowitzke, B.A. and Milner, M. (1988). Scientific Bases of Human Movement. (3rd. Ed.) Baltimore: Williams and Wilkins.
5. Grabiner, M. D. Current Issues in Biomechanics, New Delhi, 1993.
6. Grimshaw, Paul., Lees, Adrian., Flower, Neil.,&Burden, Adrian. Sports and Exercise Biomechanics. Taylor & Francis.
7. Groves, R and Camaine, D. (1983). Concepts in Kinesiology. (2nd. Ed.). Philadelphia: Saunders College Publishing.
8. Hall, S.J., Basic Biomechanics, London, Mosby, 1991.
9. Hay, J. (1978). The biomechanics of sport techniques. (2nd. Ed.). Englewood Cliffs: Prentice-Hall.
10. Hay, J. & Reid, J. (1982). The Anatomical and Mechanical Bases of Human Motion. Englewood Cliffs: Prentice-Hall.

PHE- SEMINAR

PHE- PRACTICALS

