

M.Sc. SPORTS SCIENCE

RULES AND REGULATIONS

(w.e.f. Academic Session 2022-23)



**DELHI PHARMACEUTICAL SCIENCES AND RESEARCH UNIVERSITY
PUSHP VIHAR, SECTOR-3, MEHRAULI-BADARPUR ROAD,
NEW DELHI-110017**

ACADEMY OF SPORTS SCIENCES RESEARCH AND MANAGEMENT

PREAMBLE

This is a marquee year for M.Sc. Sports Science, as its 1st Batch Post-graduates, in the summer of 2022.

The Master program in Sports Science has been brought into the university by the efforts of our visionary Vice-Chancellor Prof. Ramesh K. Goyal. With a vision of sporting excellence and podium finish in sports, it is essential that capital of our country “New Delhi” plays a pivotal role in structuring sports in India.

Sports Science is absolutely essential for development of world-class athletes, as proved by USA, Australia, England, Germany & China. All these countries are power-house of performance in sport as they have a legacy of structured program in Sports for all stakeholders. Keeping this scenario in mind, specialist in the field of sports training & support services take up a big roll.

Delhi Pharmaceutical Sciences and Research University with its institute, Academy of Sports Science Research and Management, has taken up the mandate to be the torch bearers. Our 1st batch of students who will graduate this year will go on to showcase the value addition of the university in the space of sports development.

ASSRM seeks advancement in development of these students by adding Master’s and Doctorate programs to its portfolio, as it is essential for expediting compliance to the following Article 15th of the National Sports Policy: *“The significance of scientific back-up to sports stands well established. Accordingly, action will be initiated to strengthen this area, in accordance with international standards. Experts would be associated with each sports discipline or groups of sports disciplines, on a continuing basis, to provide the requisite support in terms of nutrition, psychology, medicine, pharmacology, physiology, bio-mechanics and anthropometry as well as other branches of sports sciences. Suitable mechanisms would be introduced to achieve co-ordination between the laboratory and the field, that is, between the coaches and the sports scientists, and particular care taken to ensure scientific support to talented sports persons and to sustain their mental health and competitive spirit.”*(NSP-2001, Article 15). Thus, the compliance to Indian Constitution (part IV A, Article 51A (h): to develop scientific temper...), National Sports Policy 2001, Article 15 and 1978 UNESCO Charter of Physical Education, Physical Activity & Sports (to Provide the right of access to sports to all individuals), will also be achieved soon with the introduction of B.Sc. (Hons.) Sports Science with Sports pharmacy.

On the initiative of our **Vice Chancellor (Prof. Ramesh K. Goyal)** the due need of integrating sports science with coaching and training has been expedited by starting M.Sc. Sports Science. Hopefully this step of integrating the benefits of large number of sub-disciplines of sports science at the grass root level of sports, in schools, will be soon visible by appointing one Sports Science expert in each school and at other coaching centers, sports complexes, fitness centers, that would bring excellence in sports, especially for improving India’s performance in sports at all levels of competition.

Dr. Anshul Bagai
Director, ASSRM

TABLE OF CONTENTS

1. OBJECTIVE	1
2. THE PROGRAMME	1
3. THE COURSE STRUCTURE	2
3.1 Research Project	2
3.2 Field Visits/Internship & Project	2
4. CREDIT ASSIGNMENT Error! Bookmark not defined.	3
5. SCHEME OF EXAMINATION	5
5.1 Semester Examination	5
5.2 Sessional Examination	6
6. MARKS DISTRIBUTION	6
6.1 Internal Assessment	9
6.2 Theory Examination	9
6.3 Practical Examination	11
6.4 Grading performances	13
6.5 Field work and Internship	14
6.6 Sport Specialization, Internship, Thesis/ Dissertation and Council work	14
6.7 Minimum Pass marks	15
7 ATTENDANCE CRITERIA	15
8 PROMOTION	16
9 AWARD OF DEGREE	16
10 CLASSIFICATION OF SUCCESSFUL CANDIDATE	17
11 SPAN PERIOD	17

RULES & REGULATIONS of M.Sc. SPORTS SCIENCE

1. OBJECTIVE

To prepare highly skilled and efficient sports scientists through the understanding of theoretical and practical aspects of various sub-disciplines of sports science.

2. THE PROGRAMME

- A. Name : M.Sc. Sports Science
B. Nature : Regular and full time
C. Duration : Two year (Four Semester) course
D. Pattern : Credit based system
E. Eligibility criteria : A candidate seeking admission to the M.Sc. Sports Science program must have passed B.Sc.(Hons.)Sports Science, B.Sc. (Physical Education, Health Education & Sports), B.P.Ed., B.P.E., B.P.E.S., or sports related undergraduate program and equivalent with 55% marks in aggregate in all the semesters in examinations by universities recognized by University Grants Commission or any statutory bodies of Govt. of India

Note: Relaxation of 5% will be given to SC/ST/OBC.

- F. Age : 20 years as on 31st December of the year in which the admission is sought.
G. Commencement : July / August of every year.
H. Mode of Admission : On merit of qualifying examination in best four subjects as decided by ASSRM. Written admission test and Physical Fitness test may also be introduced as and when decided by the department
I. Admission of Foreign Students Eligibility : Same as for general category Indian candidates.
J. Selection procedure : On merit and interview basis or as prescribed by DPSRU from time to time.
K. Total Seats : 30 (Thirty Seats)
(Reservation as per university/State Government rules)
L. Period of completion : Four years from the year of admission.

Note:

- I. The candidate having supplementary in the qualifying examination shall not be allowed admission in M.Sc. Sports Science.
- II. Migration of students will be governed by the Rules and Regulations of DPSRU, New Delhi.

3. THE COURSE STRUCTURE

The candidate shall study the key academic disciplines relating to sport science, aiming to gain an understanding of exercise and sport physiology, exercise and sport psychology, sport pharmacology, sports anthropometry, sport biomechanics, sport nutrition, sport kin-anthropometry, sport management, sports medicine etc. Through the, “Work placement module in two years, the candidate shall have the chance to apply their learning and knowledge in a professional setting, via a practical work-based experience. The course aims to prepare the candidates to acquire essential qualifications for employment in the field of sports science at National and State Sport organizations, coaching centers, fitness centers, schools, colleges, universities, sports industries etc. Mode of curriculum delivery and execution includes Classroom teaching, Assignments, Tests, Practical, Case Studies, Internship, Field Visits, participation in relevant sports and fitness events, and research project etc.

The Structure of the course will be as follows:

Semester –I, Semester- II, Semester-III, and Semester –IV

3.1 RESEARCH PROJECT

- In 4th semester a research project will be compulsory for each student. The project will be evaluated from the submission of thesis/dissertation followed by a viva-voce examination.
- The candidate will be required to submit a thesis/dissertation after finishing six weeks compulsory internship which will be based on the data collected during internship in the field under the supervision of an Internship In-charge.
- It will be evaluated by External and Internal Examiners separately as a part of final examination and marks will be awarded separately. It shall be the responsibility of the candidate to submit the thesis/dissertation for evaluation within 90 days of allotment of supervisor.
- In case of a Candidate failing to clear the examination of the thesis/dissertation, he/she shall re-submit the project with modifications as pointed out by the external examiner within one month of the declaration of the result.
- In 4th Semester the students shall complete their thesis/dissertation and submit their thesis/dissertation within 90 days of the appointment of supervisors by the Head/ In-charge course coordinator and approved by the research committee of ASSRM.

Note: -The thesis/dissertation should be restricted to any discipline of sports and sports science and duly approved by the research committee of ASSRM.

3.2 FIELD VISITS / INTERNSHIP

In 4th Semester students shall undergo internship training under the guidance of Internship In-charge for a period of 6 weeks. A register / log book shall be maintained by the student to document the data collected during the internship.

On completion of internship, the student shall submit an Internship File stating the offer letter, nature of work, learning outcomes and completion letter of internship

4. CREDIT ASSIGNMENT

The courses are broadly classified as theory and practical, and credits have been assigned for them separately. Further the courses have been categorized as Discipline specific courses, Skill courses and Personality development courses.

1. DSC = Discipline Specific Core Courses	=	12
2. DSE = Discipline Specific Elective Courses	=	04
3. DSS = Discipline Specific Skill Courses	=	13
4. VSE = Vocational Skill Enhancement Courses	=	07
5. AEC = Ability Enhancement Core Courses	=	04
Total	=	40

Table I: Semester –Wise Distribution of Skill, Discipline and Personality Development courses

SEMESTER	DISCIPLINE SPECIFIC COURSES		SKILL COURSE CODES		PERSONALITY DEVELOPMENT COURSE CODES
	DSC	DSE	DSS	VSE	AEC
Semester I	MSS-101 MSS -102 MSS -103	MSS -109	MSS -105 MSS -106 MSS -107	MSS -104 MSS -108	MSS -110
Semester II	MSS-201 MSS-203 MSS-204	MSS-209	MSS-205 MSS-207 MSS-208	MSS-202 MSS-206	MSS-210
Semester III	MSS-301 MSS-302 MSS-304	MSS-309	MSS-305 MSS-306 MSS-308	MSS-303 MSS-307	MSS-310
Semester IV	MSS-401 MSS-402 MSS-403	MSS-408	MSS-404 MSS-405 MSS-406 MSS-407	MSS-409	MSS-410

Table II:-Syllabus Structure of M.Sc. SPORTS SCIENCE

Semester- I			Semester-II		
Code no	Paper Title	Credit	Code no	Paper Title	Cred it
MSS-101	Research Methodology in Sports and Sports Science	3	MSS-201	Exercise and Sport Psychology	3
MSS -102	Tests and Measurements in Sports and Sports Science	3	MSS-202	Statistics in Sports and Sports Science	3
MSS -103	Exercise and Sport Physiology	3	MSS-203	Health Education and Sports Nutrition	3
MSS -104	Sports Management	3	MSS-204	Sports Pharmacy Ergogenic Aids & Doping	3
MSS -105	Research Methodology in Sports and Sports Science (P)	1	MSS-205	Exercise and Sport Psychology (P)	1
MSS -106	Tests and Measurements in Sports and Sports Science (P)	1	MSS-206	Statistics in Sports and Sports Science (P)	1
MSS -107	Exercise and Sport Physiology (P)	1	MSS-207	Health Education and Sports Nutrition (P)	1
MSS -108	Sports Management (P)	1		MSS-208	Sports Pharmacy Ergogenic Aids & Doping (P)
MSS -109	Sports Specialization: Track and Field/Swimming	2	MSS-209	Sports Specialization: Track and Field/Gymnastics	2
MSS -110	Council Work	2	MSS-210	Council Work	2
MSS 101-110	Total Semester-I	20	MSS-201-211	Total Semester-II	20
Semester-III			Semester-IV		
MSS-301	Sports Biomechanics	3	MSS-401	Sports Medicine	3
MSS-302	Science of Sports Training	3	MSS-402	Sports Sociology	3
MSS-303	Yoga Fitness and Wellness	3	MSS-403	Professional Preparation and Curriculum Planning	3
MSS-304	Information and communication technology in sports and sports science	3	MSS-404	Thesis/Dissertation	3
MSS-305	Sports Biomechanics (P)	1	MSS-405	Sports Medicine (P)	1
MSS-306	Science of Sports Training(P)	1	MSS-406	Sports Sociology(P)	1
MSS-307	Yoga Fitness and Wellness (P)	1	MSS-407	Professional Preparation and Curriculum Planning (P)	1
MSS-308	Information and communication technology in sports and sports science (P)	1	MSS-408	Sports Specialization: Football/Table Tennis	2
MSS-309	Sports Specialization Basketball/Volleyball	2	MSS-409	Internship	1
MSS-310	Council Work	2	MSS-410	Council Work	2
MSS 301-310	Total Semester-III	20	MSS 401-410	Total Semester-IV	20

5. SCHEME OF EXAMINATION OF A SEMESTER

a) The examination of each paper shall have two components- written/practical exam at the end of each semester(End-Semester) carrying 70% weightage to be conducted by DPSRU and internal (Mid-Semester) carrying 30% weightage to be conducted by ASSRM. Mid-Semester shall comprise of written component/practical/viva-voce/day to day assessment.

The above scheme is not applicable for Project work, Council work and Sport of Choice.

b) Every candidate shall be examined in the subject(s)/paper(s) as laid down in the syllabus prescribed by the academic council from time to time.

c) The date of commencement of examination as well as the last date for the receipt of examination forms and fees as fixed by the Vice-Chancellor shall be notified by the Controller of Examinations to the department.

d) The theory papers, practical papers and project will be treated as separate papers, in the scheme of studies / examinations.

e) Each examination shall be open to a regular student, who has been on the rolls of the department/ academy during the year preceding that semester examination.

f) The medium of instruction and examination shall ordinary be English.

g) The minimum number of marks required to pass the examination (both internal and external examination) shall be as under:

I. 50% in theory paper

II. 50% in practical

III. 50% aggregate

h) No reappear or improvement examination in internal/sessional/minor exam shall be allowed whatsoever.

5.1 Semester Examination

Semester examination of theory and practical shall be conducted at the end of each session as outlined below.

- a) Mode: Theory papers : Written only
Practical : Written, practical, Demonstration and viva-voce
Viva-voce : Viva voce
Thesis/Dissertation : Presentation and viva voce
- b) Duration : Theory : 03 hours
Practical : (Minimum 03 hours duration)

- c) Examiner
- a. Theory: 01
 - b. Practical's/viva-voce: 2 (1 internal and 1 external) from within the department or from the panel to be prepared by the Board of Studies and approved by Vice Chancellor/COE or as appointed by the Director.
- d) Number of attempts: In case a student has failed in any paper (theory/practical/project/internship), he/she will be allowed a maximum of TWO attempts of reappear which excludes the main examination given by the candidate.

5.2 Sessional Examination

- a) Student evaluation is carried out by way of university examinations, and continuous internal assessment during the semester. The internal assessment will constitute 30 marks for each subject.
- b) The faculty concerned/course coordinator shall maintain a regular record of the marks obtained by students in written tests and display the same on the notice board.
- c) The Examination Head shall display and/or as informed by course coordinator a copy of the compiled sheet, of internal assessment marks of all the papers, before forwarding it to the Controller of Exams at the conclusion of the Semester.
- d) In case a promoted candidate, who has a reappear in the examination of paper, internal assessment, marks of previous year will be retained/carried forward.
- e) In case of re-admission, the candidate shall have to go through the internal assessment process afresh and shall retain nothing of the previous year.
- f) The mode and duration (both theory and practical) of the internal exam shall be same as the semester exam.
- g) There shall be one sessional exam per semester.

6. MARKS DISTRIBUTION

The grade awarded to a student in any particular course will be based on the performance of the student in minor test, Co-curricular activities (assignment, viva voce, lab work, seminar, workshop, presentations, group discussions, quiz etc.) and major terminal tests at the end of each semester. The distribution of the weightage will be as under, for both theory and practical.

- Internal Examination: Minor / Sessional test (average of two) 30% marks
- External Examination: Semester: 70% marks
- Thesis/Dissertation: 100 marks (100 marks by external examiner only)

Table III: -Semester-Vise Evaluation/Examination Structure of the Courses**SEMESTER-I**

Course Code	THEORY COURSES	Periods*			Hrs /we ek	Evaluation Scheme			Credit units
		L	T	P		Int.	Ext.	Total	
MSS-101	Research Methodology in Sports and Sports Science	3	-	-	3	30	70	100	3
MSS -102	Tests and Measurements in Sports and Sports Science	3	-	-	3	30	70	100	3
MSS -103	Exercise and Sport Physiology	3	-	-	3	30	70	100	3
MSS -104	Sports Management	3	-	-	3	30	70	100	3
PRACTICALS									
MSS -105	Research Methodology in Sports and Sports Science(P)	-	-	2	2	20	30	50	1
MSS -106	Tests and Measurements in Sports and Sports Science (P)	-	-	2	2	20	30	50	1
MSS -107	Exercise and Sport Physiology (P)	-	-	2	2	20	30	50	1
MSS -108	Sports Management(P)	-	-	2	2	20	30	50	1
MSS -109	Sports Specialization: Track and Field/Swimming	-	-	2	2	-	-	50*	2
MSS -110	Council Work	-	-	2	2	-	-	50*	2
Total		12	-	12	24	200	400	700	20

*BSS 109 and BSS 110 to be evaluated only by the Internal Examiner

SEMESTER-II

Course Code	THEORY COURSES	Periods*			Hrs /We ek	Evaluation Scheme			Credit Units
		L	T	P		Int.	Ext.	Total	
MSS-201	Exercise and Sport Psychology	3	-	-	3	30	70	100	3
MSS-202	Statistics in Sports and Sports Science	3	-	-	3	30	70	100	3
MSS-203	Health Education and Sports Nutrition	3	-	-	3	30	70	100	3
MSS-204	Sports Pharmacy Ergogenic Aids & Doping	3	-	-	3	30	70	100	3
PRACTICALS									
MSS-205	Exercise and Sport Psychology (P)	-	-	2	2	20	30	50	1
MSS-206	Statistics in Sports and Sports Science (P)	-	-	2	2	20	30	50	1
MSS-207	Health Education and Sports Nutrition (P)	-	-	2	2	20	30	50	1
MSS-208	Sports Pharmacy Ergogenic Aids & Doping (P)	-	-	2	2	20	30	50	1
MSS-209	Sports Specialization: Track and Field/Gymnastics	-	-	2	2	-	-	50*	2
MSS-210	Council Work	-	-	2	2	-	-	50*	2
Total		12	-	12	24	200	400	700	20

* BSS 209 and BSS 210 to be evaluated only by the Internal Examiner

SEMESTER-III

Course Code	THEORY COURSES	Periods*			Hrs /week	Evaluation Scheme			Credit units
		L	T	P		Int.	Ext.	Total	
		MSS-301	Sports Biomechanics	3		-	-	3	
MSS-302	Science of Sports Training	3	-	-	3	30	70	100	3
MSS-303	Yoga Fitness and Wellness	3	-	-	3	30	70	100	3
MSS-304	Information and communication technology in sports and sports science	3	-	-	3	30	70	100	3
PRACTICALS									
MSS-305	Sports Biomechanics (P)	-	-	2	2	20	30	50	1
MSS-306	Science of Sports Training(P)	-	-	2	2	20	30	50	1
MSS-307	Yoga Fitness and Wellness (P)	-	-	2	2	20	30	50	1
MSS-308	Information and communication technology in sports and sports science (P)	-	-	2	2	20	30	50	1
MSS-309	Sports Specialization Basketball/Volleyball	-	-	2	2	-	-	50*	2
MSS-310	Council Work	-	-	2	2	-	-	50*	2
Total		12	-	12	24	200	400	700	20

* BSS 309 and BSS 310 to be evaluated only by the Internal Examiner

Course Code	THEORY COURSES	Periods*			Hrs /week	Evaluation Scheme			Credit units
		L	T	P		Int.	Ext.	Total	
		MSS-401	Sports Medicine	3		-	-	3	
MSS-402	Sports Sociology	3	-	-	3	30	70	100	3
MSS-403	Professional Preparation and Curriculum Planning	3	-	-	3	30	70	100	3
MSS-404	Thesis/Dissertation	3	-	-	3	-	100	100	3
PRACTICALS									
MSS-405	Sports Medicine (P)	-	-	2	2	20	30	50	1
MSS-406	Sports Sociology(P)	-	-	2	2	20	30	50	1
MSS-407	Professional Preparation and Curriculum Planning (P)	-	-	2	2	20	30	50	1
MSS-408	Sports Specialization: Football/Table Tennis	-	-	2	2	-	50	50	2
MSS-409	Internship	-	-	2	2	-	-	50*	1
MSS-410	Council Work	-	-	2	2	-	-	50*	2
Total		12	-	12	24	150	450	700	20

* BSS 409 and BSS 410 to be evaluated only by the Internal Examiner

6.1 INTERNAL ASSESSMENT

The internal assessment shall ensure a continuous mode of assessment. The internal assessment shall be awarded as per the scheme given below.

Table IV: Scheme of awarding Internal Exam

Criteria	Maximum Marks
Attendance (refer Table V)	5
Academic activities (average of any 3 activities e.g. quiz, assignment, field work, group discussion)	5
Sessional Exam (Written)	20
TOTAL	30

Table V: Guidelines for allotment of marks for attendance

Percentage of Attendance	Theory Marks
95-100	5
90-94	4
85-89	3
80-84	2
76-79	1
Less than 75	0

6.2 THEORY EXAMINATIONS

- a) Marks allotted to the entire paper and /or individual sections of the paper shall be semester wise for internal assessment of the entire paper or its individual sections.
- b) Board of paper setters: The subject teacher or teacher selected by the Head will be the examiner. OR a panel of examiners of 30% internal faculty will be drawn and approved by the Board of Studies (BOS). The examiner shall set question paper independently and send it in a sealed envelope directly to the COE / Head, as the case may be.
- a) Instructions to paper setters:
 - i. The paper shall cover the entire syllabus of the subject.
 - ii. Instructions, if any, shall be stated in bold letters e.g. “Draw Neat Diagram”, etc.
 - iii. The paper shall be in three sections A,B and C.

Question paper pattern for theory – semester examination

	<u>Max. Marks</u>
<u>Section A:</u> Five questions – short answer type, of three marks each, including one liner's, (Multiple choice questions). All these questions are compulsory.	5 x 3 =15
<u>Section B:</u> Five questions – five marks each (Section B Comprises of 7 questions of five marks each out of which 5 questions are to be attempted)	5 x 5 =25
<u>Section C:</u> Two long questions of 15 marks each (Section C Comprises of 3 long questions out of which two are to be attempted). Any question may comprise of two parts.	2 x 15 =30
TOTAL	70 marks

Question paper pattern for theory-sessional examination

	<u>Max. Marks</u>
<u>Section A:</u> Six questions – short answer type, of one mark each, including one liners or Multiple Choice Questions, All compulsory	6x1= 6
<u>Section B:</u> Two questions – three marks each (Section B Comprises of 3 questions of three marks each out of which 2 questions have to be attempted)	2x 3 =6
<u>Section C:</u> One long questions of 08 marks each (Section C Comprises of 2 long questions out of which 1 has to be attempted). Any question may comprise of two parts.	1 x 08 = 08
TOTAL	20 marks

Semester Exam	70 marks
Internal Assessment:	
Sessional Exam	20 marks
Attendance	5 marks
Academic Activities	5 marks
GRAND TOTAL	100 marks

6.3 PRACTICAL EXAMINATION

- a) **Panel of Examiners:** There shall be minimum TWO examiners per Practical examination having one Internal and one External examiner. The internal as well as external Examiner shall be appointed by Head/ from the faculty, who can be the subject teacher or any other faculty member of the Academy, as appointed by Head of the department/ Dean of the Faculty / Academy. If the examiners are unable to agree and there is a difference in the award, the average of the two shall be taken as the final award. Both the examiners shall jointly plan the overall conduct of examination prior to its commencement and conduct the ENTIRE examination together.
- b) **Thesis/Dissertation:** There shall be one internal examiner and one external examiner for evaluation of thesis/dissertation. Internal Examiner shall be appointed by Head, whereas the external examiner shall be drawn from the panel as approved by the Board of Studies (BOS), comprising of minimum 6 examiners. In case the external examiner does not turn up for the purpose of examination at the appointed time, the Head/Dean may appoint an external examiner from the University Teaching Departments itself and also under circumstances, one teacher from other department may also be appointed as observer by the Vice-Chancellor, if need be. If the examiners are unable to agree and there is a difference in the award, the average of the two shall be taken as the final award.
- c) **Number of candidates to be evaluated per day:** The number of candidates to be evaluated per day or batch for any practical examination shall be decided by Course coordinator/ Head of the Department / Director, ASSRM.
- d) **Pattern of examination:** The pattern shall be according to the need of the particular subject. The examiner shall take care that maximum syllabus shall be covered in the Practical Examination which includes Viva-voce.
- e) **Conduct of Practical examination:** Before the assessment of the candidate, examiner shall jointly prepare questions and allot marks for each such question and accordingly evaluate the candidate.

Pattern of semester practical examination is as follows

Components	Max. Marks
File	= 05
Written Assessment	= 15
Demonstration and Viva-Voce	= 10
Total	= 30

Pattern of Sessional practical examination is as follows

Components	Max. Marks
File	= 05
Written Assessment	= 15
Demonstration and Viva Voce	= 20
Total	= 40

Semester Exam	30 marks
*Sessional Exam	20 marks
GRAND TOTAL	50 marks

*Students are assessed out of 40 marks and then the 50% marks scored by the student are forwarded to the examination department of the university.

Pattern of semester practical examination for Thesis/Dissertation Project Report and Viva is as follows:

Components	Max. Marks
Report/File	= 70
Viva-Voce	= 30
Total	= 100

Pattern of semester practical examination for Sport Specialization is as follows:

Components	Max. Marks
File	= 10
Demonstration	= 20
Viva-Voce	= 20
Total	= 50

Pattern of semester practical examination for Council Work is as follows:

Components	Max. Marks
Attendance	= 05
Report/File	= 25
Viva-Voce	= 20
Total	= 50

Pattern of semester practical examination for Internship Field Work Experience is as follows:

Components	Max. Marks
Report	= 25
Viva-Voce	= 25
Total	= 50

6.4 GRADING PERFORMANCES

Based on the performance, each student shall be awarded a final letter grade in percentage at the end of the semester for each course. The letter grade and their corresponding grade points are given in the Table VI.

Table VI: Letter grades and grade points equivalent to percentage of marks and performances

Percentage of Marks Obtained	Letter Grade	Grade Point
90.00-100	O	10
80.00-89.99	A	9
70.00-79.99	B	8
60.00-69.99	C	7
50.00-59.99	D	6
Less than 50	F	0
Absent	AB	0

A learner who remains absent for any end semester examination shall be assigned a letter Grade of AB and a corresponding grade point of zero. He/she should reappear for the said Evaluation/examination in due course.

The Semester grade point average (SGPA)

The performance of a student in a semester is indicated by a number called ‘Semester Grade Point Average’ (SGPA). The SGPA is the weighted average of the grade points obtained in all the courses by the student during the semester. For example, if a student takes five courses(Theory/Practical) in a semester with credits C1, C2, C3, C4 and C5 and the student’s grade points in these courses are G1, G2, G3, G4 and G5, respectively, and then students’ SGPA is equal to:

$$\text{SGPA} = \frac{\text{C1G1} + \text{C2G2} + \text{C3G3} + \text{C4G4} + \text{C5G5}}{\text{C1} + \text{C2} + \text{C3} + \text{C4} + \text{C5}}$$

The SGPA is calculated to two decimal points. It should be noted that, the SGPA for any semester shall take into consideration the F and AB grade awarded in that semester. For example if a learner has a F or ABS grade in course 4, the SGPA shall then be computed as:

$$\text{SGPA} = \frac{\text{C1G1} + \text{C2G2} + \text{C3G3} + \text{C4* ZERO} + \text{C5G5}}{\text{C1} + \text{C2} + \text{C3} + \text{C4} + \text{C5}}$$

Cumulative Grade Point Average (CGPA)

The CGPA is calculated with the SGPA of all the VI semesters to two decimal points and is indicated in final grade report card/final transcript showing the grades of all VI semesters and their courses. The CGPA shall reflect the failed status in case of F grade(s), till the course(s) is/are passed. When the course(s) is/are passed by obtaining a pass grade on subsequent examination(s) the CGPA shall only reflect the new grade and not the fail grades earned earlier. The CGPA is calculated as:

$$\text{CGPA} = \frac{\text{C1S1} + \text{C2S2} + \text{C3S3} + \text{C4S4}}{\text{C1} + \text{C2} + \text{C3} + \text{C4}}$$

where C1, C2, C3,.... is the total number of credits for semester I,II,III,.... and S1,S2, S3,.... is the SGPA of semester I,II,III,IV

6.5 FIELD WORK AND INTERNSHIP

- In 4th Semester students shall undergo internship training under the guidance of Internship In-charge for a period of 6 weeks. A register / log book shall be maintained by the student to document the data collected during the internship.
- On completion of internship, the student shall submit an Internship File stating the offer letter, nature of work, learning outcomes and completion letter of internship

6.6 SPORT SPECIALIZATION, INTERNSHIP, THESIS/ DISSERTATION AND COUNCIL WORK

1. The Sport Specialization (MSS -109, MSS-209, MSS-309, and MSS-408) , Internship (MSS 409) and council work (MSS -110, MSS-210, MSS-310 and MSS-410) shall be graded along with the semester examination.
2. No external examiner will be called for Sports Specialization, Council Work, and Internship. Students will be assessed in the semester examination by internal faculty. In the fourth semester, external faculty will be called for Sports Specialization and Thesis/Dissertation.
3. Under the council work, 7 committees have been formed – Student Council, Sports, Public Relations, Placement, NGO, Academic and Admission. The students will be part of the committee for a span of a year and undertake responsibilities in relation to the committees objectives.

TableVII: Marks distribution for Sports Specialization, Council work, Internship and Thesis/Dissertation

Sports Specialization	
Criteria	Maximum marks
File	10
Demonstration	20
Viva-Voce	20
TOTAL	50
Internship	
Report	25
Viva-Voce	25
TOTAL	50

Thesis/Dissertation	
Report	70
Viva-Voce	30
TOTAL	100
Council Work	
Attendance	05
Report	25
Viva	20
TOTAL	50

6.7 MINIMUM PASS MARKS

The minimum pass works in all the individual theory papers, practicals, thesis/dissertation, viva voce and internship shall be 50% (inclusive of internal assessment). The details of the minimum percentage of passing marks required to pass the examination shall be under:

- I. 50% in each theory paper including sessional/minor and terminal, internal assessment, viva voce and internship.
- II. 50% in practical (including sessional and external)
- III. 50% in aggregate.

7. ATTENDANCE:

- a) No candidate admitted to the course shall be allowed to appear in the University Examination unless and until he/she has completed 70 per cent of the lecturers in each paper separately viz. theory, practical, seminar, case discussion, field work, tutorials, internship, etc.
- b) If a candidate fails to attend his/her class continuously for fifteen days from the date of commencement of classes (date of marking of attendance), without leave, his/her admission shall be cancelled. Provided that he/she may be allowed, re-admission in accordance with the rules of the University and subject to availability of seat.
- c) Each hour classroom teaching shall account for one attendance unit. However, every scheduled practical class will account for one unit, irrespective of the number of contact hours.
- d) That the concerned teacher will take a roll call in every scheduled lecture and practical classes.
- e) The respective teacher shall maintain and consolidate the attendance record, which would be submitted to the Head/Dean at the conclusion of the month/academic semester.
- f) Attendance on account of participation in the prescribed co-curricular/ extra-curricular activities can be granted by the Head/Dean on receipt of Certificates or recommendations of the respective activity – Coordinators, countersigned by the Head of the department/Centre/ Academy up to 10%.
- g) The Vice Chancellor/Dean/appropriate authority on the recommendation of the Co-coordinators of the respective activity may consider to condone attendance up to 10% on account of sickness and/or any other valid reason. No application for condone of attendance (except when duly certified by a competent authority/ from M.O./from State government hospital, dispensary) will be entertained after 03 days from the recovery from illness, etc. Prior information to the office should be given in such cases.
- h) The statement of attendance of the students shall be displayed on the ASSRM Notice Board after the conclusion of each month/term and/or informed by the course coordinator.

- i) Notice displayed in respect of the short attendance on notice board and/or as informed by the Course coordinator/Dean shall be deemed to be a proper notification and no individual notice need necessarily be sent to the students/Parents/Guardian.
- j) In case, a student is found to be continuously absent from the classes without information for a period of fifteen day, the teacher in charge shall report it to the Head of the Department /Centre/ Dean, ASSRM, in writing.
- k) Head of the Department/Centre/Attendance In-charge may recommend for striking of the name of a student from rolls after ensuring in writing about one-month continuous absence from all the concerned teachers.
- l) A student, whose name has been struck off on account of long absence, may apply to the Vice Chancellor/Dean/Head for readmission within 15 days of the notice of striking of the name. The readmission shall be effected on payments of prescribed readmission fees after the approval of the Head / Dean.
- m) A student with less than 70% attendance, in aggregate, shall not be allowed to appear in the semester examination. The Head shall recommend such cases to the Vice Chancellor/Dean/appropriate authority for detention from the examination.

8. PROMOTION:

Promotion to III semester:

For promotion from 2nd to 3rd semester a candidate should pass 100% of the courses offered in 1st and 2nd semester.

9. AWARD OF DEGREE:

- i. The candidates will be awarded a Degree Certificate only on successful completion of the course including successful completion of field work, Internship and Thesis/Dissertation.
- ii. The entire course of study in first and second semesters must be completed within 2years of the date of first admission.
- iii. Evaluation will be based on grading of students in Theory, Practical examinations including communication and professional skills viz. personality development, punctuality and attendance etc.

10. CLASSIFICATION OF SUCCESSFUL CANDIDATES:

- a) The result of successful candidate, who fulfill the criteria for the award of Certificate shall be classified at the end of the completion of the programme as follows:
 - i. Passed with honors : 80% and above (all papers cleared in first attempt)
 - ii. Passed with distinction : 70% and above (all papers cleared in first attempt)
 - iii. Passed with 1st division : 60% and above
 - iv. Passed with 2nd division : 55% and above
 - v. Passed : 50% and above
- b) Total marks obtained by the candidate in each subject (Theory/Practical/thesis/dissertation) in all semesters and Internship will be taken into consideration while determining the pass percentage of the candidate.

11 SPAN PERIOD:

- a) Candidate must pass the first semester examination within one year (1st and 2nd sem) and second year within four years of their first admission to the program otherwise the admission of the candidate shall be deemed to be cancelled.
- b) Candidates must pass the examination in all the papers/subjects individually within four years of their admission to the first year of the program.
- c) Candidates must complete the internship within four years from the date of the first admission to the program.
- d) The entire course inclusive of internship should be completed within a period of four years from the date of first admission to the program.

“However, in case of any ambiguity or contradiction the general Rules and Regulations of the University will have precedence over the relevant provisions of these Rules & Regulations” or the decision of Vice Chancellor will be binding and final to all parties hereto.

M. Sc. SPORTS SCIENCE
Syllabus

Semester- I			Semester-II		
Code no	Paper Title	Credit	Code no	Paper Title	Credit
MSS-101	Research Methodology in Sports and Sports Science	3	MSS-201	Exercise and Sport Psychology	3
MSS -102	Tests and Measurements in Sports and Sports Science	3	MSS-202	Statistics in Sports and Sports Science	3
MSS -103	Exercise and Sport Physiology	3	MSS-203	Health Education and Sports Nutrition	3
MSS -104	Sports Management	3	MSS-204	Sports Pharmacy Ergogenic Aids & Doping	3
MSS -105	Research Methodology in Sports and Sports Science (P)	1	MSS-205	Exercise and Sport Psychology (P)	1
MSS -106	Tests and Measurements in Sports and Sports Science (P)	1	MSS-206	Statistics in Sports and Sports Science (P)	1
MSS -107	Exercise and Sport Physiology (P)	1	MSS-207	Health Education and Sports Nutrition (P)	1
MSS -108	Sports Management (P)	1			
MSS -109	Sports Specialization: Track and Field/Swimming	2	MSS-209	Sports Specialization: Track and Field/Gymnastics	2
MSS -110	Council Work	2	MSS-210	Council Work	2
MSS 101-110	Total Semester-I	20	MSS-201-211	Total Semester-II	20
Semester-III			Semester-IV		
MSS-301	Sports Biomechanics	3	MSS-401	Sports Medicine	3
MSS-302	Science of Sports Training	3	MSS-402	Sports Sociology	3
MSS-303	Yoga Fitness and Wellness	3	MSS-403	Professional Preparation and Curriculum Planning	3
MSS-304	Information and communication technology in sports and sports science	3	MSS-404	Thesis/Dissertation	3
MSS-305	Sports Biomechanics (P)	1	MSS-405	Sports Medicine (P)	1
MSS-306	Science of Sports Training(P)	1	MSS-406	Sports Sociology(P)	1
MSS-307	Yoga Fitness and Wellness (P)	1	MSS-407	Professional Preparation and Curriculum Planning (P)	1
MSS-308	Information and communication technology in sports and sports science (P)	1	MSS-408	Sports Specialization: Football/Table Tennis	1
MSS-309	Sports Specialization Basketball/Volleyball	2	MSS-409	Internship – Field And Work Experience (P)	1
MSS-310	Council Work	2	MSS-410	Council Work	2
MSS 301-310	Total Semester-III	20	MSS 401-410	Total Semester-IV	20

Semester-Vise Evaluation/Examination Structure of the Courses
Table III: -Semester-Vise Evaluation/Examination Structure of the Courses
SEMESTER-I

Course Code	THEORY COURSES	Periods*			Hrs/ week	Evaluation Scheme			Credit units
		L	T	P		Int.	Ext.	Total	
MSS-101	Research Methodology in Sports and Sports Science	3	-	-	3	30	70	100	3
MSS -102	Tests and Measurements in Sports and Sports Science	3	-	-	3	30	70	100	3
MSS -103	Exercise and Sport Physiology	3	-	-	3	30	70	100	3
MSS -104	Sports Management	3	-	-	3	30	70	100	3
PRACTICALS									
MSS -105	Research Methodology in Sports and Sports Science(P)	-	-	2	2	20	30	50	1
MSS -106	Tests and Measurements in Sports and Sports Science (P)	-	-	2	2	20	30	50	1
MSS -107	Exercise and Sport Physiology (P)	-	-	2	2	20	30	50	1
MSS -108	Sports Management(P)	-	-	2	2	20	30	50	1
MSS -109	Sports Specialization: Track and Field/Swimming	-	-	2	2	-	-	50*	2
MSS -110	Council Work	-	-	2	2	-	-	50*	2
Total		12	-	12	24	200	400	700	20

*BSS 109 and BSS 110 to be evaluated only by the Internal Examiner

SEMESTER-II

Course Code	THEORY COURSES	Periods*			Hrs /Week	Evaluation Scheme			Credit Units
		L	T	P		Int.	Ext.	Total	
MSS-201	Exercise and Sport Psychology	3	-	-	3	30	70	100	3
MSS-202	Statistics in Sports and Sports Science	3	-	-	3	30	70	100	3
MSS-203	Health Education and Sports Nutrition	3	-	-	3	30	70	100	3
MSS-204	Sports Pharmacy Ergogenic Aids & Doping	3	-	-	3	30	70	100	3
PRACTICALS									
MSS-205	Exercise and Sport Psychology (P)	-	-	2	2	20	30	50	1
MSS-206	Statistics in Sports and Sports Science (P)	-	-	2	2	20	30	50	1
MSS-207	Health Education and Sports Nutrition (P)	-	-	2	2	20	30	50	1
MSS-208	Sports Pharmacy Ergogenic Aids & Doping (P)	-	-	2	2	20	30	50	1
MSS-209	Sports Specialization: Track and Field/Gymnastics	-	-	2	2	-	-	50*	2
MSS-210	Council Work	-	-	2	2	-	-	50*	2
Total		12	-	12	24	200	400	700	20

* BSS 209 and BSS 210 to be evaluated only by the Internal Examiner

SEMESTER-III

Course Code	THEORY COURSES	Periods*			Hrs /we ek	Evaluation Scheme			Credit units
		L	T	P		Int.	Ext.	Total	
		MSS-301	Sports Biomechanics	3		-	-	3	
MSS-302	Science of Sports Training	3	-	-	3	30	70	100	3
MSS-303	Yoga Fitness and Wellness	3	-	-	3	30	70	100	3
MSS-304	Information and communication technology in sports and sports science	3	-	-	3	30	70	100	3
PRACTICALS									
MSS-305	Sports Biomechanics (P)	-	-	2	2	20	30	50	1
MSS-306	Science of Sports Training(P)	-	-	2	2	20	30	50	1
MSS-307	Yoga Fitness and Wellness (P)	-	-	2	2	20	30	50	1
MSS-308	Information and communication technology in sports and sports science	-	-	2	2	20	30	50	1
MSS-309	Sports Specialization Basketball/Volleyball	-	-	2	2	-	-	50*	2
MSS-310	Council Work	-	-	2	2	-	-	50*	2
Total		12	-	12	24	200	400	700	20

* BSS 309 and BSS 310 to be evaluated only by the Internal Examiner

SEMESTER-IV

Course Code	THEORY COURSES	Periods*			Hrs /we ek	Evaluation Scheme			Credit units
		L	T	P		Int.	Ext.	Total	
		MSS-401	Sports Medicine	3		-	-	3	
MSS-402	Sports Sociology	3	-	-	3	30	70	100	3
MSS-403	Professional Preparation and Curriculum Planning	3	-	-	3	30	70	100	3
MSS-404	Thesis/Dissertation	3	-	-	3	-	100	100	3
PRACTICALS									
MSS-405	Sports Medicine (P)	-	-	2	2	20	30	50	1
MSS-406	Sports Sociology(P)	-	-	2	2	20	30	50	1
MSS-407	Professional Preparation and Curriculum Planning (P)	-	-	2	2	20	30	50	1
MSS-408	Sports Specialization: Football/Table Tennis	-	-	2	2	-	50	50	2
MSS-409	Internship	-	-	2	2	-	-	50*	1
MSS-410	Council Work	-	-	2	2	-	-	50*	2
Total		12	-	12	24	150	450	700	20

* BSS 409 and BSS 410 to be evaluated only by the Internal Examiner

Semester-I

MSS-101: RESEARCH METHODOLOGY IN SPORTS AND SPORTS SCIENCE

Maximum Marks=100Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will be able to:

1. Develop research aptitude and understand the importance of research in creating new knowledge.
2. Develop familiarity with different methods of research and their suitability.
3. Develop the skill of identifying research problem and acquire the procedure of finding out delimitation and limitation.
4. Develop concept of thesis format and procedure of writing research report.

UNIT-I

A. Meaning and Concept of Research.

- (i) Meaning and definition of research.
- (ii) Importance of research.
- (iii) Characteristics of research.
- (iv) Types of research.

B. Research Problem.

- (i) Meaning and definition of research problem.
- (ii) Location of research problem.
- (iii) Criteria of selection of problem.
- (iv) Formulation of research problem, Delimitations and Limitation.

UNIT-II

Methods of Research

A. Laboratory Research.

- (i) Meaning and types of variables.
- (ii) Concept of experiment v/s control.
- (iii) Experimental Designs and their research protocols.
- (iv) Control of Experimental Factors.
- (v) Internal and external validity.

B. Quasi Experimental Designs – Basic concept.

UNIT-III

Non-Laboratory Research

- (i) Descriptive research – Questionnaire survey, interview survey, case studies, normative surveys and profiles.
- (ii) Historical research – Meaning and procedure.
- (iii) Philosophical research.
- (iv) Library research.

UNIT-IV

A. Concept of Population and sampling.

- (i) Characteristics of a good sample.
- (ii) Advantage of sampling.
- (iii) Probability sampling designs.
- (iv) Non-probability sampling designs.

B. Hypothesis

- (i) Meaning of hypothesis.
- (ii) Importance and characteristics of hypothesis.
- (iii) Types of hypothesis.
- (iv) Errors in formulating hypothesis.

UNIT-V

A. Writing of Research Report.

- (i) Format of thesis writing.
- (ii) Procedure of organizing different chapters of thesis.
- (iii) Headings and sub-headings.
- (iv) How to write bibliography?
- (v) How to prepare Appendices and procedure of numbering them.

Reference Books.

1. Best, John W. Research in Education (4th Ed.) New Delhi, Prentice Hall India, 1981
2. Clark, David H. Clarke, Harrison H. Research Processes in Physical Education, Englewood Cliffs: New Jersey (2nd Ed.) Prentice Hall Inc. 1984
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; Illinois; Human Kinetics;
5. Kamlesh, M. L. (1999) Research Methodology in Physical Education and Sports, New
6. Delhi Moses, A. K. (1995) Thesis Writing Format, Chennai; Poompugar Pathippagam
7. Rostein Anne. L. Research Design & Statistics for Physical education, Englewood Cliffs, New Jersey, Prentice Hall, Inc. 1985
8. Sandhu A. N. Sing Amarjith, Research Methodology in Social Sciences (4th Ed.) Bombay: Himalaya Publishing House, 1985
9. Sharma T. R. How to write a Thesis? Patiala: Kalia Prakashan, 157-D Model Town, 1991
10. Sprinthall, Richard C, Schmutte, Gregory, Sirois Lee. Understanding Education Research, Englewood Cliffs, New Jersey Prentice Hall, 1991

MSS- 102: TEST AND MEASUREMENTS IN SPORTS AND SPORTS SCIENCE

Maximum Marks=100Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will be able to:

1. Develop concept of test, measurement, evaluation and relationship among them.
2. Develop understanding of variety of tests for evaluating the performance of students.
3. Develop concept of somatotyping and how different anthropometric measurements can be recorded.
4. Develop understanding to how different scales can be used for gathering information with regard to different characteristics.

UNIT – I

A. Introduction

- (i) Definition of Test, Measurement and Evaluation.
- (ii) Importance of Test Measurement and Evaluation
- (iii) Relationship among Test, Measurement and Evaluation.
- (iv) Objectives of Test, Measurement and Evaluation
- (v) Types of Tests and their uses.

B.

Criteria of Test Selection.

- (i) Scientific authenticity.
- (ii) Administrative feasibility.
- (iii) Educational application.

UNIT – II

Tests

- (i) Concept of Physical Fitness, Motor Fitness, General Motor Ability and Motor Educability.
- (ii) Components of Physical Fitness, Motor Fitness, General Motor Ability and Motor Educability.
- (iii) Motor Fitness Tests.
 - AAHPERD Youth Fitness Test.
 - JCR Test.
 - Indiana Motor Fitness Test.
 - Canada Fitness Test.
- (iv) General Motor Ability Tests.
 - Barrow Motor Ability Test.
 - Scott Motor Ability Test.
- (v) Motor Educability Tests
 - Metheny- Johnson Test.
 - IOWA Brace Test of Motor Educability.

UNIT-III-

Tests for cardio-vascular efficiency and Strength

- (i) Tests of Cardio – vascular Efficiency.
 - Harvard Step Test.
 - Cooper 12 - min. Run / Walk Test.
- (ii) Strength Tests
 - Roger's Physical Fitness Index.
 - Kraus Weber Test.

UNIT – IV

TESTS FOR SPECIFIC SPORTS

- (i) Badminton.
 - Lockhart Mc Pherson Badminton Test.
 - Miller Volley Test.
 - French Short Service Test.
- (ii) Basketball.
 - Johnson Basketball Ability Test.
 - Leilich Basketball Test.
 - Knox Basketball Ability Test.
- (iii) Soccer.
 - McDonald Soccer Test.
 - AAHPER Test of Soccer Skills.
- (iv) Hockey
 - Henry Fiedel Field Hockey Test.
 - Chapman Ball Control Test.
 - Dribbling and Goal Shooting Test.
- (v) Volleyball
 - Russel Lange Volleyball Test.
 - Brady Volleyball Test.
 - Helman Volleyball Test.
- (vi) Tennis.
 - Dyer Tennis Test.

UNIT – V

A. ANTHROPOMETRY.

- (I) Concept and definition of anthropometry.
- (II) Somatotyping - Hippocrates, Kretchmer and Sheldon (Heath–Carter Method)
- (III) Anthropometric Measurements.
 - Height – Stature and Sitting height.
 - Girth measurements – Chest, Upper arm, Thigh and Calf girth.
 - Width Measurements – Biacromial Chest, illiocrestal, Biepicondylar (Femur and Humerus.)
- (IV) Equipment and Instruments for anthropometric measurements (Anthropometric Kit.)

Reference Books

1. Barrow, Harold M and McGee Rosemary (1979) A Practical Approach to Measurement in Physical Education (3rd Ed.) Lea & Febiger, Philadelphia
2. Dosco & James and Dustafon F. William (1983) Measurement and Evaluation in Physical Education, Fitness and Sports. Prentice – Hall Inc. Englewood Cliffs, N.J.
3. Clarke, Harrison and Clarke, David H. (1987) Application of Measurement to Physical Education (6th Ed.) Prentice – Hall Inc. Englewood Cliffs, N.J.
4. Johnson, L Barry and Nelson K Jack (1982) Practical Measurement for evaluation in Physical education, (3rd Ed.) 1st Indian Reprint 1982 Delhi, Surjeet Publications
5. Mathews, Donald k (1973) Measurement in Physical Education (4th Ed.) W.B. Saunders Company, Philadelphia
6. Philips, Allen A & Hornak, James E (1979) Measurement and Evaluation in Physical Education, John Wiley and Sons Inc. USA
7. Sodhi, H.S. (1991) Sports Anthropometry, A Kinanthropometric Approach, ANOVA Publication.

MSS-103: EXERCISE AND SPORT PHYSIOLOGY

Maximum Marks=100Marks
Semester Exam=70
Sessional Exam=30

Time Allowed = 3Hrs

Learning Outcomes:

The student will able to:

1. Develop knowledge regarding how different systems of the body function.
2. Develop understanding about the effect of exercise on different systems and how recovery can be ensured.
3. Develop concept about effect of different environments on human physiology.
4. Develop understanding of physiological gender differences and special problems of female sports person.

UNIT – I

A. Introduction

- (i) Definitions of Physiology, Exercise Physiology and Sport Physiology.
- (ii) Importance of Exercise Physiology in physical education and sport.
- (iii) Scope of Exercise physiology.

B. Muscle Structure and Function.

- (i) Muscle – its types, characteristics and functions.
- (ii) Microscopic structure of muscle fiber.
- (iii) Sliding Filament Theory of Muscular Contraction.
- (iv) Types of muscle fiber and sports performance.
- (v) Effect of exercise on muscular system.

UNIT – II

A. Cardio-respiratory functions

- (i) Physiology of circulation and respiration.
- (ii) Effect of exercise of circulatory and respiratory systems.
- (iii) Cardio – respiratory adaptation to long and short term physical activities.

B. Neuro-muscular Function.

- (i) Neuro-muscular function and transmission of nerve impulse.
- (ii) Kinesthetic sense organs.
- (iii) Neural control of motor skills.
- (iv) Effect of exercise on nervous system.

UNIT – III

- A. Environmental influence on human physiology under exercise.
 - (i) Temperature.
 - (ii) Altitude.
 - (iii) Air Pollution.
 - (iv) Spectators.
- B. Bio-chemical aspects of exercise.
 - (i) Forms of energy, structure and sources.
 - (ii) Aerobic and anaerobic metabolism during rest and exercise.
 - (iii) Direct and indirect methods of measuring energy cost.

UNIT – IV

- A. Women and sport performance.
 - (i) Trainability.
 - (ii) Physiological gender differences.
 - (iii) Special problems of women sportsperson.
- B. Massage manipulations and their effect on different systems.

UNIT – V

- A. Recovery Process.
 - (i) Physiological effects of fatigue.
 - (ii) Restoration of energy stores.
 - (iii) Factors contributing to recovery.
- B. Aging.
 - (i) Physiological consequences of aging.
 - (ii) Life style management.
 - (iii) Healthful aging.

References Books

1. Astrand per – Olf & Rodalph Kaare (1986) Textbook of Work Physiology. *Physiological bases of Exercise 3rdEd.* New York, Mcgraw Hill
2. Bowers, R.W. & Fox E.L. (1992) Sports physiology USA, WmC. Brown.
3. Clarke D.H. (1975) Exercise Physiology. New Jersey Prentice Hall.
4. Chatterjee C.C. (1984) Human Physiology Vol.I, IX Ed. Calcutta: Medical Allies Agency
5. Falls, H.B. (1968) Exercise Physiology, New York: Acadmic Press.
6. Fox E.L. and Mathews D.K (1981) The Physiology bases of Physical Education and Athletics III Ed Philadelphia, W.B.
7. Guyton, Arthur C. (1976) Textbook of Medical Physiology Ed. Philadelphia, W.B.Saunders.
8. Khanna G. L. and Goswami Asis (2017), Physiology of Exercise, Friends Publications (India).
9. McArdle W.D.Katch F.I. & Katch V.L (1986) Exercise Physiology: Energy, Nutrition and Human Performance II Ed. Philadelphia; Lea & Febiger.
10. Morehouse L.E., Miller A.T. (1971) Physiology of Exercise VI Ed. St Louis: C.V. Mosby.

MSS-104: SPORTS MANAGEMENT

Maximum Marks=100Marks
Semester Exam=70
Sessional Exam=30

Time Allowed = 3Hrs

Learning Outcomes:

The student will be able to:

1. Develop clear understanding regarding planning, organizing and administering a programme.
2. Develop knowledge regarding class managements and how to develop an effective lesson plan.
3. Develop concept of how to prepare tournaments fixtures and properly organize different types of sports programs.
4. Develop understanding of different methods of teaching.

UNIT – I

- (I) Meaning and concept of management.
- (II) Importance of management.
- (III) Principles of management.
- (IV) Functions of management.
 - Planning.
 - Organizing.
 - Administering
 - Staffing.
 - Directing
 - Controlling.
 - Evaluating.

UNIT – II

Financial Management

- (i) Need for financial management.
- (ii) Principles of financial management.
- (iii) Advantage of good budget.
- (iv) Preparation of budget.
- (v) Sources of budget.
- (vi) Expenditure of funds.
- (vii) Audit.

UNIT- III

- A. Class management
 - (i) Importance and Principles of class management.
 - (ii) Steps in class management.
 - (iii) Ideal size of the class.
 - (iv) Safety measures and discipline
- B. Audio – Visual Aids.
 - (i) Principles governing the use teaching aids.
 - (ii) Uses of Audio – Visual Aids.
 - (iii) Audio – Visual Aids used in Sports and sports science
- C. Lesson Plans.
 - (i) Importance of Lesson Plan.
 - (ii) Types of Lesson Plan – General and Specific.
 - (iii) Parts of Lesson Plan.
- D. Time Table.
 - (i) Importance of time table.
 - (ii) Principles of preparing time table.

UNIT – IV

Organization of Sport Competitions and Tournaments

- A. Types of tournaments.
 - (i) Knockout or Elimination.
 - (ii) League and Round Robin
 - (iii) Combination Tournament.
 - (iv) Challenge Tournaments.
- B. Intramural and Extramural Programme.
 - (i) Objectives of intramural and extramural.
 - (ii) Procedure of organizing intramural and extramural.

UNIT – V

- A. Facility Management.
 - (i) Outdoor facilities and their maintenance
 - (ii) Indoor Facilities and their management
- B. Methods of Teaching.
 - (i) Explanation Method.
 - (ii) Demonstration Method.
 - (iii) Command Method.
 - (iv) Imitation Method.
 - (v) Set Drill Method.
 - (vi) Whole Method.
 - (vii) Part Method.
 - (viii) Whole – Part – Whole Method.
 - (ix) Project Method.

REFERENCE BOOKS

1. Butcher Charles A. (1987) Management of Physical Education and Athletic Programmes (9th Ed.) Santaclara Toronto St. Louis, Times Mirror.
2. Chelladurai P. (1985) Sport Management Macro Perspectives London, Ontario, Sports Dynamics.
3. Dheer, S. & Kamal Radhika (1991) Organization and Administration of Physical Education New Delhi, Friends Publications.
4. Horins, Larry (1991) Administration of Physical Education. Education and Sports Programme USA Wm.c. Brown.
5. Hewell Reet, Howell Maxwell and Uppal A. K. (1994), Friends Publications (India).
6. Mason James G. & Paul Jim (1988) Modern Sport Administration Englewood Cliffs N.J. Prentice Hall
7. Tripathi, P.c. & Reddy P.N. (1991) Principles of Management (2nd Ed.) New Delhi Tata Mc Graw Hill.
8. Vander Zwaag Harold J (1985) Sport Management in School and Colleges New York Macmillan
9. Voltmer Edward, Organization and Administration of Physical Education (5th Ed.) Englewood Cliffs N.J. Prentice Hall
10. Zeigler, Earle F.Z & Browie Gary W. (1983) Management Competency Development in Sport and Physical Education, Philades

**MSS-105: RESEARCH METHODOLOGY IN SPORTS AND SPORTS SCIENCE
(Practical)**

Maximum Marks=50Marks
Semester Exam=30
Sessional Exam=20

Time Allowed = 3Hrs

Practicals:

1. Select a topic for research and identify independent and dependent variables.
2. Select a research problem in an area of your choice and develop a synopsis.
3. Select a topic for research and identify attributes and discrete and continuous variables.
4. Select a large group and classify them into groups using different random sampling techniques.
5. Select few research problems and identify suitable hypothesis.
6. Select few research problems where experimental research techniques are applicable. Identify appropriate experimental designs and workout their research protocols.
7. Select ten books and five journals from the library and write their bibliography.

**MSS- 106: TESTS AND MEASUREMENTS IN SPORTS AND SPORT SCIENCE
(Practical)**

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester

Exam=30

Sessional

Exam=20

Practicals:

1. Develop a chart indicating relationship among test, measurement and evaluation.
2. Identify performance variable of a sport and select appropriate test to measure the proficiency of students.
3. Prepare a chart indicating differences in Physical Fitness, Motor Fitness and General Motor Ability and identify their components. Also list appropriate test to assess the components.
4. Write a detailed note on AAHPERD Motor Fitness and specify when the test was constructed, and also point out modifications done from time to time.
5. Evaluate the skill proficiency of students of a particular sport with the help of standardized sport skill test.
6. Select a group of students and record their anthropometric measurements with respect to height, weight, chest circumference, waist circumference, hip circumference, calf circumference at appropriate land marks.
7. Select five students and evaluate their static and dynamic leg strength.

MSS-107: EXERCISE AND SPORT PHYSIOLOGY (PRACTICAL)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester

Exam=30

Sessional

Exam=20

Practical:

1. Identifying muscles and their movement pattern (charts).
2. Identifying muscles in relation to movements.
3. Measurement of heart rate in different positions.
4. Measurement of heart rate response to loads of different intensities.
5. Recording effect of exercise on heart rate and blood pressure.
6. Assessment of vital capacity using spirometer.
7. Measurement of muscular strength.

MSS-108: SPORTS MANAGEMENT (Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester

Exam=30

Sessional

Exam=20

Practical:

1. Identify a sports project and outline its aim and objectives.
2. Identify a sports project and develop organization and administration details.
3. Prepare a budget (both income and expenditure) for the purchase of sports equipment's for school.
4. To develop a lesson plan for teaching a skill in a sport of choice.
5. To demonstrate preparation of tournaments fixture for knockout and league tournaments.
6. To demonstrate Whole – Part – Whole Method with help of a skill in any sport.
7. To develop details for the management of an outdoor sports facility.

MSS-109 SPORTS SPECIALIZATION: TRACK AND FIELD/SWIMMING

Maximum Marks=50Marks
Semester Exam=50

Time Allowed = 3Hrs

Practical:

1. Organizational set-up of Track and Field Athletics at National Level.

2. Important tournaments held at National and International levels.

3. Fundamental Skills.

3.1 Track Event

4.1.1 Starting techniques

Standing start, Crouch start and its variations

4.1.2 Finishing techniques

Run through, Shoulder Shrug, Forward Lunge (Dip).

4.1.3 Technique of Relay Race

Various methods of batton exchange.

4.1.4 Technique of Hurdle events.

Technique of Race Walking.

4.2 Field events

4.2.1 Technique of Long Jump (Sail technique, Hang technique).

Approach run, take off, flight and landing.

4.2.2 Technique of Shot Put (O' Brien technique)

Grip, Stance, Glide, Release and Reverse.

4.2.3 Technique of Triple Jump- Approach Run, Take-off,

Hop, Step and Jump.

4.2.4 Technique of Discus throw

Grip, Stance, Swing, Release and Reverse.

4.2.5 Technique of High Jump (Straddle roll)

Approach run, take off, Bar clearance and landing

4.2.6 Technique of Javelin Throw (Grip, Carry, Approach and Five Stride Rhythm)

4.2.7 Technique of Pole-Vault (Grip, Approach, Take- off, Bar)

Clearance and Landing)

4.2.8 Technique of Hammer Throw (Grip, Preliminary Swings,

Turns, Release and Recovery)

3.2 Brief Introduction about Combined events

(Heptathlon and Decathlon)

4. General Competition Rules of track and field events.

5. Marking for Track & Field Events.

Reference Books

1. Chauhan VS (1999). Khel Jagat Mein Athletics. A.P. Pub, Jalandhar.
2. Evans DA (1984). Teaching Athletics. Hodder, London.
3. Fox EL (1998). Physiological Basis of Physical Education and Athletics Brown Pub.
4. Gothi E (2004). Teaching & Coaching Athletics. Sport Pub., New Delhi.
5. Gupta R. (2004). Layout & Marking of Track & Field. Friends Publications. India. New Delhi.
6. Handbook-Rules and Regulation. International Athletic Federation (2010).
7. Herb Amato, DA ATC et al (2002). Practical Exam Preparation Guide of Clinical Skills of Athletic Training. Slack Incorporated. 1st ed., USA.
8. Kumar, Pardeep. (2008). Historical Development of Track & Field. Friends Publication. New Delhi
9. Prentice, W. and Arnhem, D. (2005). Arnhem's Principles of Athletic Training 12th Ed. McGraw Hill. in place of Knight (1988).
10. Renwick GR (2001). Play Better Athletics. Sports Pub, Delhi.

SWIMMING

1. Introduction of Swimming and historical development with special reference to India.
2. Important Championships held at National and International levels and distinguished personalities related to the swimming.
3. Fundamental Skills.
 - 3.1 Entry into the pool.
 - 3.2 Developing water balance and confidence-
 - 3.2.1 Water-fear removing drills.
 - 3.2.2 Floating-Mushroom and Jelly- fish etc.
 - 3.2.3 Gliding-with and without kickboard.
4. Teaching of competitive swimming strokes (minimum two strokes)-Body position, leg, kick, arm pull, breathing and co-ordination.
5. Starts and Turns of the concerned strokes.
6. Water treading and simple jumping.
7. Rules of competitive, swimming-officials and their duties, pool specifications, seeding of heats and finals, rules of the race and swimming strokes.

Reference Books

1. Harlen, Bruce. How to improve your Diving Poona Modern Book Stall.
2. Reckhan, George, Diving Complete. London: Faber and Faber Ltd.
3. David A, Rober H. and Hobert, Swimming and Diving, The C.V. Mosby Company, Saint Lovis-1968
4. Kanika K. Swimming Coaching Manual, Sports Publication, New Delhi-2005
5. D. Jain, Swimming Skill & Rules, Khel Sahitya, Kendra, New Delhi,2003
6. Kelvin Juba, Swimming for fitness, Kelvin Juba-2001
7. Dick Hannula, Coaching Swimming, Successfully (Second edition) friends Publication (India)2003

MSS- 110: COUNCIL WORK

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 50 Marks

Purpose: To increase the staff-student engagement, the formation of seven committees has been initiated. The meetings of the committees are an opportunity for the students to express their views and ideas related to administrative, academic and to their broader experiences as a student at ASSRM.

Aims and Responsibilities of the Committees:

A. Student Council

The Students Council Committee promotes the interests of the department and the involvement of students in the affairs of the department. The committee shall be responsible for:

- Enhancing the communication between students, management, staff and faculties.
- Represent the views of the students on matters of general concern to them
- Organize and conduct cultural events at ASSRM.

B. Placement

The Placement committee plays an important role in developing relationships in the industry that would be helpful for the placement of ASSRM students. The committee shall be responsible for:

- Connect the talent to the recruiters.
- Increase the scope of sports sciences.
- Identify and connect companies prevailing in the area of sports
- To update the students of opportunities prevailing in sports sciences.

C. Academic

The Academic committee serves as a point of contact between the students and the academic department of ASSRM. The committee shall be responsible for:

- Provide course feedback at the end of each semester
- Ensure that students are informed of all existing academic policies.
- Raise any academic related queries with the concerned department.

D. NGO

The NGO Committee shall be focused on increasing sports engagement for Schools and Children. The NGO committee shall be responsible for:

- To promote Sports as a priority in schools and encourage adaptation of different physical activities.
- To share knowledge about sports technology in schools.
- To identify talent in Children's and help to promote them on higher level.
- To create campaign in Social Media for Sports Development activities.
- To connect with Corporates and create different campaign for getting funds for Sports Equipment's.

E. Admissions

The Admissions committee shall be focused on increasing awareness of ASSRM's sports science course with the prospectus students. The committee shall be responsible for:

- Preparation for school outreach program.
- Preparation for Open day event.
- Conducting student counseling sessions and handling admissions related works.

F. Public Relations

The PR committee is to spread awareness about ASSRM through press release and social media. Its responsibilities are:

- Designing marketing communication Material (i.e Posters, banners).
- Creating and managing social media posts.
- Organizing press conferences and conducting press interviews.
- Creating all the marketing material for the outreach program.
- Managing PR events at ASSRM.

G. Sports

The Sports committee is dedicated to the development of sports at ASSRM. It shall be responsible for:

- Conducting sports events and gathering sponsorship for the events.
- Sports inventory and logistics management.
- Sports digital marketing and on-ground promotion of sports.

Semester-II

MSS-201: EXERCISE AND SPORT PSYCHOLOGY

Maximum Marks=100Marks

Time Allowed-3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will able to:

1. Develop understanding of the subject as well as its importance in games and sports.
2. Develop clear concept about the psychological factors that affect performance in games and sports.
3. Develop knowledge regarding various principles of psychology and how they relate to games and sports.
4. Develop understanding regarding how psychological preparation of a sport person is to be done for participation in competition.

UNIT – I

A. Introduction

- (i) Definition of psychology, exercise psychology and sport psychology.
- (ii) Difference between exercise psychology and sport psychology.
- (iii) Importance of sport psychology in the field of sports.

B. Motivation in sport.

- (i) Definition and types.
- (ii) Theories of motivation.
- (iii) Dynamics of motivation in sport.

UNIT - II

Psychological factors affecting sports performance.

- (i) Stress.
- (ii) Anxiety.
- (iii) Aggression.
- (iv) Tension.
- (v) Emotions.
- (vi) Self-confidence.
- (vii) Concentration.
- (viii) Mental practice.
- (ix) Goal setting.

UNIT - III

A. Personality.

- (i) Definition of personality.
- (ii) Types of personality.
- (iii) Theories of personality.
- (iv) Measurement of personality.

- (v) Personality and sport performance.

B. Cognitive Process.

- (i) Meaning of cognition.
- (ii) Characteristics of cognitive process.
- (iii) Memory and thinking.
- (iv) Principles of motor skills learning.

UNIT – IV

A. Transfer of training

- (i) Definition of transfer of training and its implications in sport.
- (ii) Types of transfer of training.
- (iii) Factors affecting transfer of training.

B. Attention in sports

- (i) Definition and meaning of attention.
- (ii) Role of attention in individual and team sports.
- (iii) Strategies of improving attention.

UNIT –V

Psychological preparation for competition

- (i) Long and short-term psychological preparation.
- (ii) Strategies of psychological preparation.
 - Imagery.
 - Self-talk.
- (iii) Psychological skill training for activation and relaxation.

References books.

1. Alderman, R.S., (1974) Psychological Behavior in Sports Saunders Company. Philadelphia.
2. Cratty Bryant J. (1989) Psychology in Contemporary Sports 3rd Ed. Englewood Cliffs, N.J. Prentice Hall Inc.
3. Cratty Bryant J. (1975) Movement behavior and Motor Learning, Lea & Febiger, Philadelphia
4. Cox, Richard H. (1985) Sport Psychology Concepts and Application, Wm C Brown Publishers.
5. Gill, Diane L. (1986) Psychological Dynamics of Sport. Human Kinetics Publishers, Inc. Champaign, II
6. Kamlesh M.L. (1988) Psychology in Physical Education and Sport 2nd Edition Metropolitan Book Co. Pvt. Ltd. , Delhi

7. Singer, Robert N. (1975) *Motor Learning and Human Performance* Macmillan Publishing co., New York.
8. Singer, Robert N. (1984) *Sustaining Motivation in Sport*, Sport Consultants, International Inc. Tallahassee, Florida.
9. Singer, Robert N.; Murphy M and Tannant, Keith L. (1992) *Handbook on Research in Sport Psychology*, Macmillan Publishing Company, New York.
10. Singh Agyajit (2018), *Psychological Foundations of Sports*, Friends Publications (India).
11. Uppal A. K. (2013), *Scientific Basis of Sports Conditioning*, Friends Publications (India).

MSS-202: STATISTICS IN SPORTS AND SPORTS SCIENCE

Maximum Marks=100Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will be able to:

1. Understand the use of statistics in sports and sports science.
2. Understand the concept of quantitative as well as qualitative data.
3. Statistically compute data employing different statistical procedures.
4. Understand the concept of tests of significance depending upon the nature of data.

UNIT – I

A. INTRODUCTION TO STATISTICS

- (i) Meaning of Statistics.
- (ii) Importance of Statistics.
- (iii) Types of data and their characteristics.
- (iv) Method of organizing data into frequency distribution.

B.

- (i) Measures of Central Tendency – their meaning and concept.
- (ii) Computation of measures of central tendency using ungrouped and grouped data methods.
- (iii) Uses of mean, median and mode.

UNIT – II

A. Percentiles and Quartiles.

- (i) Concept of percentiles and quartiles.
- (ii) Computation of percentiles and quartiles and their interpretation.

B. Measures of Variability or Dispersion.

- (i) Meaning of variability.
- (ii) Measures of variability – Range, Quartile Deviation and Standard Deviation.
- (iii) Computation of measures of variability using ungrouped and grouped data methods.
- (iv) Uses of measures of variability.

UNIT – III

A. Graphical representation of data.

- (i) Meaning and advantages of graphical representation of data.
- (ii) Principles of graphical representation.
- (iii) Histogram.
- (iv) Frequency Polygon.
- (v) Smoothed frequency polygon.
- (vi) Cumulative frequency polygon.
- (vii) Bar and Pie Diagrams.

UNIT – IV

Probability and Normal Probability Curve

- (i) Concept of probability.
- (ii) Computation of probability of various combinations of Heads & Tails, Playing Cards and Dice.
- (iii) Concept of normal probability curve and its properties.
- (iv) Measuring divergence from normality –Skewness and Kurtosis.
- (v) Preparation of normative scales – Sigma scale, Hull scale and T-scale.

UNIT- V

A. Correlation.

- (i) Meaning and concept of correlation.
- (ii) Magnitudes of coefficient of correlation.
- (iii) Methods of computing coefficient of correlation using Product Moment Method and Rank Difference Method.

B. Test of signification.

- (i) t - ratio (computing significance of different between two means)
- (ii) F - ratio– Meaning and concept of Analysis of variance and Co-variance.
- (iii) One – tail and two - tail tests.
- (iv) Degree of freedom.
- (v) Independent and dependent variables.

References.

Clarke. H. The Application of Measurement in Health and Physical Education,1992.

Clarke, David H. and Clake H. Hares N. Research Process in Health Education Physical Education and Recreation . Englewood Cliffs, New Jersey, Prentice Hall, Inc.1986.

Shaw. Dhananjay. Fundamental Statistics in Physical Education & Sports sciences, sports publication, 2007.

Margaret J. Safrit : Introduction to Measurement in Physical Education and Exercise Science, Time Mirror/ Mosy, College Publishing St. Louis. Toronte Bosion (2Nd. Edition-1998.

Morey E. Garrett : Statistics in Psychology and Educated, David Meka Company Inc.

Devinder K. Kansal. Test and Measurement in Sports and Physical Education, D.V.S. Publications, Kalkaji, New Delhi –110019.

MSS-203: HEALTH EDUCATION AND SPORTS NUTRITION

Maximum Marks=100Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will be able to:

1. Develop clear understanding about different types of diseases, how they spread and how to prevent.
2. Develop understanding about causes of obesity and how to prevent it.
3. Develop concept about school health programme and responsibility of the school in maintaining health of the students.
4. Develop knowledge regarding importance of good nutrition and its role in improving sports performance.

UNIT – I

A. Introduction

- (i) Definition of Health and Health Education.
- (ii) Importance of Health Education.
- (iii) Principles of Health Education.
- (iv) Objectives of Health Education.

B. Diseases and their prevention

- (i) Disease – Communicable and Non – Communicable.
- (ii) Modes of spread of communication disease.
- (iii) Causes of spread of Communicable and Non – communicable disease and their symptoms.
- (iv) Prevention of diseases.

UNIT – II

A. Health – Related Physical Fitness.

- (i) Definition of Health Related Physical Fitness.
- (ii) Components of Health Related Physical Fitness.
- (iii) Development of Health Related Physical Fitness.

B. Body – Composition.

- (i) Definition of body composition.
- (ii) Obesity related health problems.
- (iii) How to tackle obesity.

UNIT – III

- A. School Health Programme.
 - (i) Definition of School Health Programme.
 - (ii) Components of School Health Programme.
 - (iii) Responsibility of the school in maintaining health of students.
- B. Personal Hygiene.
 - (i) Definition of Hygiene.
 - (ii) Hygiene of different systems of the body.

UNIT – IV

- A. Community Health Programme and Concept.
 - (i) Definition of community health programme.
 - (ii) International and National Health Agencies.
 - (iii) Government and Private Health Agencies.
- B. Pollution
 - (i) Air, Water and Sound pollution and Radiations.
 - (ii) Effect of pollution on health.
 - (iii) Preventive and Safety measures.
 - (iv) Effect of smoking, alcohol and drugs on health – prevention and rehabilitation.

UNIT – V

- A. Nutrition
 - (i) Definition of Balanced Diet.
 - (ii) Factor affecting nutrition.
 - (iii) Components of nutrition and detailed concept of each nutrient.
 - (iv) Nutritional deficiencies.
- B. Nutrition and Sports Performance.

Reference Books.

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

MSS-204: SPORTS PHARMACY, ERGOGENIC AIDS AND DOPING

Maximum Marks=100Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will be able to learn:

1. About the doping and drug abuse in sports
2. To highlights the harmful effects of doping
3. To know challenges faced by the sports person with they respect to doping
4. The roles of different national and international anti-doping organization/agencies
5. To identify the legal and arbitrator resolution and rights of the sports person

Unit I

The Evolution Of Doping In Anti-Doping In Sports, Definition, Classes, Methods Of Doping, Prevalence of Doping In Sports, Doping Control In Sports, Inadvertent Use of Prohibited Substance in Sports, Role of Athletes Support Personnel in Preventing Deliberate and Inadvertent Use of Prohibited Substances

Unit II

Introduction to Pharmacy Definition, Branches of Pharmacy, Different Type of Pharmaceutical Formulation, Role of Pharmacy in Sports Science, Channels Of Drug Administration

Unit III

Different methods and Chemicals of doping, anabolic Androgenic steroids, stimulants, Glucocorticoid, peptide protein hormone, Beta 2 agonist , hormone and metabolic Modulators, narcotics, beta blockers, Manipulation of blood and blood components, Chemical and physical manipulation of intake substances of doping

Unit IV

Substances and methods permitted to be used by athletes in sports, sports supplements and herbal preparation, evolving issues concerning drug used in Sports, athletic testing, analytical procedures and adverse analytical findings, the future of performance enhancing substances in sports, anti-doping movement.

Unit V

Ethics of Genetic testing and research in sports, Diuretics and masking gene therapy and gene doping, roleof IOC, FIMS, WADA, NADO, RADO, WADA Rules and regulations regarding in inadvertent use of prohibited substances. Arbitration and dispute resolution in doping case for sports person

MSS-205: EXERCISE AND SPORT PSYCHOLOGY (Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. Orientation with Sport and Exercise Psychology instruments available in the University.
2. To demonstrate the Procedure of lowering stress and anxiety using different types of breathing procedures.
3. To demonstrate the procedure of muscle relaxation using autogenous training, meditation and bio – feedback.
4. Assessment of motivation level of a student with the help of a questionnaire
5. Select a good sport person and develop the profile in respect of psychological characteristics.
6. Assessment of Psychology trails of a sport person with the help of a questionnaire.
7. To demonstrate the effect of bio – feedback on sport performance.

MSS-206: STATISTICS IN SPORTS AND SPORTS SCIENCE (Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. To demonstrate the procedure of collecting data in a field test and compute measures of Central Tendency.
2. Collect data from a large sample and prepare norms (both deciles and percentiles).
3. Test the students of your own class in any field test and then divide the class into equal ability groups.
4. Preparation of binomial expansions with different combination of tossing of coins.
5. Divide your class in two groups and work out coefficient of correlation between data on academic performance and scores in a field test.
6. Evaluate your class in a field test and using even – odd score divide them into two groups compare both the groups employment t – test.
7. Workout Sigma, Hull and T – scales for the data on any field test.

MSS-207: HEALTH EDUCATION AND SPORTS NUTRITION (Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. To prepare a chart of communicable and non – communicable diseases, their modes of spread and symptoms.
2. To prepare a chart of components of Health Related Physical Fitness along with their concepts and describe causes and how to tackle obesity.
3. To prepare a chart of responsibilities to be performed by the school in relation to school health programme.
4. To prepare a chart of effect of personal hygiene on different systems of the body.
5. To prepare a chart of harmful effects of smoking, alcohol and drugs on health.
6. To prepare a chart of harmful effects of pollution on health.
7. To prepare a plan of balanced diet along with brief explanation of all the nutrients.

BSS 208: Sports Pharmacy Ergogenic Aids & Doping (P)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. To explain the major concepts of pharmacokinetics and pharmacodynamics in Pharmacology.
2. To demonstrate use of an electronic drug resource to locate and identify indications, contraindications, precautions, and adverse reactions for common prescription and nonprescription medications.
3. To demonstrate the usage patterns, general effects, short-term and long-term adverse effects for the commonly used supplements in sports.
4. Explain the general therapeutic strategy, including drug categories used for treatment, desired treatment outcomes, and typical duration of treatment, for the following common diseases and conditions: asthma, diabetes, hypertension, infections, depression, GERD, allergies, pain, inflammation, and the common cold.
5. Describe how common pharmacological agents influence pain and healing and their influence on various therapeutic interventions.
6. To demonstrate the detailed procedures of sample collection and its preservation during a dope test.
7. To demonstrate the theoretical details of the banned practices which are commonly used to increase sports performance.
8. To demonstrate healthy non-banned nutrients having positive effect to increase VO₂ in long term planning.
9. To demonstrate the harmful effects of smoking and useful effects of pharmaceutical grade vitamin c powder/amla powder.

Suggested Readings:

1. Gopalan,C.,B.V.RamaSastri,S.CBalasubramanian,B.S.NarasingaRao,Y.GDeosthale& K.C.
2. Pant(2004)NutritiveValueofIndianFoods.NationalInstituteofNutrition,IndianCouncilof MedicalResearch,Hyderabad.
3. Hatfield,F.(1999).Nature'sSportsPharmacy.McGraw HillCompaniesInc.,NewYork,USA.
4. Kayne,S.B.(2006).SportsandExerciseMedicineforPharmacists.PharmaceuticalPress,Smith field,London,U.K.
5. Mamrack,M.D.,T.J.Housh,D.J.Housch,H.A.DevriesandM.Mamrack(2015).Exercise and SportsPharmacology.HolcombHathawayPublishers.
6. MamrackM.D.(2017).ExerciseandSportsPharmacology.RoutledgePublishers,ISBN:
7. .Mottram,D.R.andN.Chester(2014).DrugsinSports.Routledge,Taylor&Francis,Abingdon, Oxford,U.K.
8. Stuart,M.(2016).MyRoleasaPharmacistattheRio2016Olympics.ThePharmaceuticalJournal,

MSS-209: Sports Specialization: Track and Field/Gymnastics)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=50

Practical:

- 1. Introduction of the game and historical development with special reference to India**
- 2. Important tournaments held at National and International levels and distinguished personalities related to the game.**
- 3. Fundamental Skills**
 - 3.1 Floor exercise-
 - 3.1.1 Forward roll.
 - 3.1.2 Backward roll.
 - 3.1.3 Sideward roll.
 - 3.1.4 Cart Wheel.
 - 3.1.5 Hand stand and forward roll,
 - 3.1.6 Backward roll to hand stand.
 - 3.1.7 Diving forward roll.
 - 3.1.8 Side split.
 - 3.1.9 Head stand.
 - 3.1.10 Round off.
 - 3.2 Parallel Bars-
 - 3.2.1 Mount from one bar.
 - 3.2.2 Straddle walking on parallel bars.
 - 3.2.3 Single and double step walk.
 - 3.2.4 Perfect swing.
 - 3.2.5 Shoulder stand on one bar and roll forward.
 - 3.2.6 Roll side.
 - 3.2.7 Shoulder stand.
 - 3.2.8 Front on back vault to the side (dismount).
 - 3.3 Vaulting Horse-
 - 3.3.1 Approach run and jump from the spring board.
 - 3.3.2 Cat vault.
 - 3.3.3 Squat vault.
 - 3.3.4 Straddle vault.
- 4. Rules of gymnastics and their interpretations and duties of officials**

GYMNASTICS (Girls)

- 1. Introduction of the game and historical development with special reference to India**
- 2. Important tournaments held at National and International levels and distinguished personalities related to the game**
- 3. Fundamental Skills.**

3.1 Floor exercise-

- 3.1.1 Forward roll.
- 3.1.2 Backward roll.
- 3.1.3 Sideward roll.
- 3.1.4 Different kinds of scales.
- 3.1.5 Leg split.
- 3.1.6 Bridge.
- 3.1.7 Dancing steps.
- 3.1.8 Head stand.
- 3.1.9 Jumps-Leap, scissors leap.

3.2 Balancing Beam- (Girls)

- 3.2.1 Walking and running on the beam.
- 3.2.2 Turning movement on the beam.
- 3.2.3 Cat Jump.
- 3.2.4 Dancing steps and movements.
- 3.2.5 Different kinds of scales.
- 3.2.6 Mount (1/4 turn to cross sitting).
- 3.2.7 Dismount (jump, from the end of the beam with legs straddle in the air).
- 3.2.8 Straddle mount.
- 3.2.9 Forward roll on the bench and beam.
- 3.2.10 Dismount (from front support leg, swing upward dismount sideways).

3.3 Vaulting Horse-

- 3.3.1 Approach run.
- 3.3.2 Take off from the beat board.
- 3.3.3 Cat vault.
- 3.3.4 Squat vault.

Reference Books

1. Brown (2009). How to Improve at Gymnastics. Crabtree Publishing Co., USA.
2. Chakraborty S and Sharma L (1995). Fundamental of Gymnastics. D.V.S. Pub. NewDelhi.
3. Chakraborty S (1995). Fundamental of Gymnastics. DVS Pub. New Delhi.
4. Chakraborty S (1998). Women's Gymnastics. Friends Pub.Delhi.
5. Code of Points Trampoline Gymnastics (2005). Federation Int. DE Gymnastics
6. Federation International Gymnastics (2006). Federation Int. DE Gymnastics
7. Harvey FJ (1998). Physical Exercises & Gymnastics. Khel Sahitya. New Delhi.
8. Jain R (2005). Play and Learn Gymnastics. Khel SahitayaKendra
9. Mitchell, D., Davis, B. and Lopez, R. (2002). Teaching Fundamental Gymnastics Skills. Human Kinetics, USA.
10. Price, R.G. (2006). The Ultimate Guide to Weight Training for Gymnastics. 2ndEd. Sportsworkout.com.
11. Schlegel, E. and Dunn, CR. (2001). The Gymnastics Book: The Young Performer's Guide to Gymnastics. Firefly Books, USA.
12. Smither Graham (1980). Behing the Science of Gymnastics. London.

MSS 210: COUNCIL WORK

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 50 Marks

Purpose: To increase the staff-student engagement, the formation of seven committees has been initiated. The meetings of the committees are an opportunity for the students to express their views and ideas related to administrative, academic and to their broader experiences as a student at ASSRM.

Aims and Responsibilities of the Committees:

A. Student Council

The Students Council Committee promotes the interests of the department and the involvement of students in the affairs of the department. The committee shall be responsible for:

- Enhancing the communication between students, management, staff and faculties.
- Represent the views of the students on matters of general concern to them
- Organize and conduct cultural events at ASSRM.

B. Placement

The Placement committee plays an important role in developing relationships in the industry that would be helpful for the placement of ASSRM students. The committee shall be responsible for:

- Connect the talent to the recruiters.
- Increase the scope of sports sciences.
- Identify and connect companies prevailing in the area of sports
- To update the students of opportunities prevailing in sports sciences.

C. Academic

The Academic committee serves as a point of contact between the students and the academic department of ASSRM. The committee shall be responsible for:

- Provide course feedback at the end of each semester
- Ensure that students are informed of all existing academic policies.
- Raise any academic related queries with the concerned department.

D. NGO

The NGO Committee shall be focused on increasing sports engagement for Schools and Children. The NGO committee shall be responsible for:

- To promote Sports as a priority in schools and encourage adaptation of different physical activities.
- To share knowledge about sports technology in schools.
- To identify talent in Children's and help to promote them on higher level.
- To create campaign in Social Media for Sports Development activities.
- To connect with Corporates and create different campaign for getting funds for Sports Equipment's.

E. Admissions

The Admissions committee shall be focused on increasing awareness of ASSRM's sports science course with the prospectus students. The committee shall be responsible for:

- Preparation for school outreach program.
- Preparation for Open day event.
- Conducting student counseling sessions and handling admissions related works.

F. Public Relations

The PR committee is to spread awareness about ASSRM through press release and social media. Its responsibilities are:

- Designing marketing communication Material (i.e Posters, banners).
- Creating and managing social media posts.
- Organizing press conferences and conducting press interviews.
- Creating all the marketing material for the outreach program.
- Managing PR events at ASSRM.

G. Sports

The Sports committee is dedicated to the development of sports at ASSRM. It shall be responsible for:

- Conducting sports events and gathering sponsorship for the events.
- Sports inventory and logistics management.
- Sports digital marketing and on-ground promotion of sports.

Semester-III

MSS-301: SPORTS BIOMECHANICS

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Learning Outcomes:

The student will able to:

1. Develop clear concept of the subject and will develop the proficiency of analysing skills bio – mechanically.
2. Develop understanding regarding scalar and vector quantities relating to linear and angular motion.
3. Develop knowledge regarding how levels help in performing body movements and concept of balance.
4. Develop the skill of identifying center of gravity in the human body.

UNIT – I

A. Introduction.

- (i) Definition of bio-mechanics and sports bio-mechanics.
- (ii) Importance of sports bio-mechanics.
- (iii) Scope of sports Bio-mechanics.

B.

- (i) Concept of axes and planes.
- (ii) Meaning of the terms – Movement analysis, Kinesiological analysis and Bio-mechanical analysis.

UNIT – II

- (i) Motion – its laws and their application in sports
- (ii) Levers – Types and identification of levers in the human body and their application in sport.
- (iii) Projectile and its application in sports.

UNIT – III

A. Kinematic and Kinetic Factors.

- (i) Linear Kinematic Factors.
- (ii) Angular Kinematic Factors.

B.

- (i) Linear Kinetic Factors.
- (ii) Angular Kinetic Factors.

C. Concept of Scalar and Vector quantities.

- ##### D. Centripetal and Centrifugal forces and factors of force affecting sports performance, Force Systems.

UNIT – IV

- A. Friction – types and its application in sports.
- B. Spin – types and its application in sports.
- C. Impact and Elasticity.
- D. Equilibrium – types and factors affection degree of stability.

UNIT –V

- A. Air and Water mechanics.
 - (i) Air resistance
 - (ii) Floatation.
 - (iii) Water resistance – and factors that cause loss of force in swimming.
- B. Mechanical analysis of sports skills in games and sports.
 - (i) Track and Fields.
 - (ii) Soccer.
 - (iii) Basketball.
 - (iv) Volleyball.
 - (v) Tennis.
 - (vi) Swimming.
 - (vii) Cricket.

REFERENCE BOOKS.

1. Bindal V. D. (2018), Text Book of Kinesiology, Friends Publications (India).
2. Broer, M Rich & Zemicke, F 1979: Efficiency of Human Movement, Philadelphia, W.B Saunder Co.
3. Hay, James G. (1985), The Biomechanics of Sports Technique, 3rd Ed. Englewood Cliffs; NJ: Prentice Hall, Inc.,.
4. Hay, James G. & Reid J. Gavin. (1988), Anatomy, Mechanics and Human Motion (2nd Ed.) Englewood Cliffs, N.J. Prentice Hall Inc.
5. Margaria, Rodolfo (1979) Biomechanics and Energetics of Muscular Exercise: Oxford, G.B., Oxford University Press.
6. Rai Ramesh (2005), Biomechanics-Mechanical Aspects of Human Motion, Agrim Publications, India.
7. Simonain, Charles (1981), Fundamentals of Sports Biomechanics Englewood Cliffs, NJ: Prentice Hall Inc.
8. Uppal A. K. (2013) Scientific Basis of Sports Conditioning, Friends Publications (India).
9. Uppal A. K. , Kumar V. Lawrence Gray, Panda MamtaManjari (2004), Biomechanics, Friends Publications (India).
10. Uppal A. K. , Kumar V. Lawrence Gray, Panda MamtaManjari (2010), Kinesiology, Friends Publications (India)

MSS-302: SCIENCE OF SPORTS TRAINING

Maximum Marks=100Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will be able to:

1. Develop the concept of conditioning, sports training and coaching and differentiate among them.
2. Understand the concept of training load and identify different features.
3. Understand the role of different motor components in training process and how they are to be trained.
4. Develop clear concept of periodization and how to prepare a sports person for competition.

UNIT-I

A. Introduction

- (I) Concept of Conditioning, Sport Training and Coaching.
- (II) Principles of sport training.
- (III) Objectives and tasks of sport Training.
- (IV) Characteristics of sport training.

B. Training Load and Recovery

- (i) Training load and its types and features.
- (ii) Adaptation Process.
- (iii) Over load – causes, symptoms and how to tackle over load.
- (iv) Meaning and phases of recovery, methods of recovery.

UNIT-II

Development of Motor Components

- (I) Strength – Meaning, types of strength, method of improving different forms of strength, types of muscular contraction.
- (II) Speed – Meaning and types of speed, methods of improving speed.
- (III) Endurance – Meaning and types, methods of improving endurance.
- (IV) Flexibility – Meaning and types of flexibility and methods of improving flexibility.
- (V) Coordinative Abilities – Meaning and different coordinative abilities that affect sport performance, development of coordinative abilities.

UNIT-III

Technical and Tactical Training

A. Technical Training

- (I) Definition of technique, skill and style.
- (II) Skill Acquisition Process
- (III) Methods of teaching

B. Tactical Training

- (i) Definition of tactics and strategy.
- (ii) Different tactical concepts.
- (iii) Procedure of tactical training.

UNIT-IV

A. Planning.

- (i) Planning and Organization of training.
- (ii) Systems of planning.
- (iii) Procedure of evaluation training plans.

B. Preparation for Competition.

- (i) Importance of competition.
- (ii) Types of competitions.
- (iii) Preparation for competitions.

UNIT-V

A. Periodization and Talent Identification.

- (i) Meaning of periodization.
- (ii) Parts of periodization.
- (iii) Types of periodization.

B. Talent Identification.

- (i) Meaning of talent.
- (ii) Principles of talent identification.
- (iii) Process of talent development.

Reference Book

1. Arnheim, Danial D. (1985) Modern Principles of Athletic Training. Toronto: Time Mirror
2. Arnheim, Danial D. & Arnheim, Helene (1987) Essentials of Athletic Training Toronto: Times Mirror.
3. Bunn, John W. (1955) Scientific Principles of Coaching, Englewood Cliffs N. J. Prentice Hall, Inc.
4. Dick, Frank W. (1980) Sports Training Principles. London: Lepus Books
5. Hare, Dietrich (1982) principles Sports Training, Berlin: Sportverlag.
6. Jensen, Clayne R & Fisher, Garth A. (1979) Scientific Basis of Athletic Conditioning.

Philadelphia: Lea &Febiger

7. Joan A. (1987) Coaching – an Effective Behavioural Approach, Toronto: Time Mirror
8. Novich, Max M. & Taylor Buddy (1983). Training and Conditioning of Athlets. Philadelphia: Lea &Febiger
9. Singh, Hardayal (1991) Science of Sports Training. New Delhi: D.A.V. Publication
10. Tandon D. K., Uppal A. K., Alegaonkar P. M. and Kanwaljeet Singh (2001), Friends Publications (India)
11. Uppal A. K. (2010). Principles of Sports Training, Friends Publications (India)
12. Uppal A. K. (2013). Science of Sports Training, Friends Publications (India)
13. Uppal A. K. (2013). Scientific basis of Sports Conditioning, Friends Publications (India)

MSS-303: YOGA FITNESS AND WELLNESS

Maximum Marks=100Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will able to:

1. Understand the concept yoga, physical fitness and wellness.
2. Learn the importance of yoga, physical fitness and wellness for developing a good life style.
3. Learn how life style diseases can be prevented by improving these three concepts.
4. Differentiate the principles to be followed for practicing yoga and physical activity.

UNIT – I

Introduction to Yoga

- (i) Concept and Definition of Yoga.
- (ii) Historical Development of Yoga from ancient to modern times.
- (iii) Aim and objectives of Yoga.
- (iv) Importance of Yoga.

UNIT – II

Training Process of Yoga.

- (i) Asanas – meaning, types, preparation, technique of different asanas and their effect on the body.
- (ii) Pranayama – meaning, types, preparation, technique of different pranayama and their effect on the body.
- (iii) Shatkiryas - meaning, types, preparation, technique and their effect on the body.
- (iv) Bandhas - meaning, types, technique and their benefits on the human body.

UNIT – III

A. Ashtang Yoga, Meditation and Relaxation.

- (i) Ashtang Yoga – meaning, principles and types.
- (ii) Meditation – meaning, technique and benefits.
- (iii) Relaxation – meaning, importance and techniques of relaxation for reducing physical and mental stress.

B. Nutrition and Wellness.

- (i) Yogic diet and its benefits.
- (ii) Ingredients of yogic diet.
- (iii) Care of injuries and diseases through Yoga.

UNIT – IV

Physical Fitness

- (i) Meaning and importance of physical fitness.
- (ii) Components of physical fitness.
- (iii) Factors affecting physical fitness.
- (iv) Principles of physical fitness development.
- (v) Types of physical fitness.
- (vi) Means of physical fitness.

UNIT – V

Wellness

- (i) Concept and definition of wellness.
- (ii) Importance of wellness.
- (iii) Components of wellness.
- (iv) The wellness challenge.
- (v) Principles of wellness.
- (vi) Factors affecting wellness.

Reference Books

1. David K. Miller & T. Earl Allen, Fitness, A life time commitment, Surjeet Publication Delhi 1989.
2. Dificore Judy, the complete guide to the postnatal fitness, A & C Black Publishers Ltd. 35 Bedfordrow, London 1998
3. Elizabeth & Ken day, Sports fitness for women, B.T. Batsford Ltd, London, 1986.
4. Emily R. Foster, KarynHartiger& Katherine A. Smith, Fitness Fun, Human Kinetics Publishers2002.
5. Karbelkar N.V.(1993) Patanjali Yogasutra Bhashya (Marathi Edition) Amravati: Hanuman Vyayam Prasarak Mandal
6. Lawrence, Debbie, Exercise to Music. A & C Black Publishers Ltd. 37, Sohe Square, London 1999Robert Malt. 90 day fitness plan, D.K. publishing, Inc. 95, Madison Avenue, New York 2001 Swami Kuvalayanda, (1998), Asanas. Lonavala: Kaivalyadhama.
7. Swami Satyananada Sarasvati. (1989), Asana Pranayama Mudra Bandha. Munger: Bihar Schoolof Yoga.
8. Swami Satyananda Saraswathi. (1984), Kundalini and Tantra, Bihar: Yoga Publications Trust. Swami Sivananda, (1971), The Science of Pranayama. Chennai: A Divine Life Society
9. Publication.
10. Thirumalai Kumar. S and Indira. S (2011) Yoga in Your Life, Chennai: The Parkar Publication.Tiwari O.P. (1998), Asanas-Why and How. Lonavala: Kaivalyadham.
11. Uppal A. K. (1992), Physical Fitness- How to Develop, Friends Publications (India).
12. Warner W.K. Oeger& Sharon A. Hoeger, Fitness and Wellness, Morton Publishing Company,1990.

**MSS-304: INFORMATION AND COMMUNICATION TECHNOLOGY IN SPORTS
AND SPORTS SCIENCE**

Maximum Marks=100Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will able to:

1. Develop understanding about importance of ICT in physical education and sports.
2. Develop clear concept regarding computers, its different tools i.e. software and hardware.
3. Develop knowledge how ICT is to be effectively used for office applications.
4. Develop understanding regarding SPSS and how it can be effectively used.

UNIT – I

- (i) Meaning and nature of information and communication technology.
- (ii) Scope of ICT in Physical Education.
 - Teaching learning process
 - Research
 - Administration
 - Publication
 - Organization of sport competitions
- (iii) Challenges in integrating information and communication technology in physical education.
- (iv) Visual classroom – meaning and equipment of visual classroom.

UNIT – II

A. Introduction to Computer and Internet

- (i) Computer – It definition and structure.
- (ii) Hardware –
 - Input devices
 - Keyboard
 - Mouse
 - Microphone
 - Digital Camera
- (iii) Software –
 - a. Operating System – Concept and function.
 - b. Application software and its uses in physical education and sports.
 - Word Processor
 - Presentation
 - Spread sheet
 - Database management.

B. Internet

- (i) Facilities available for communication
- (ii) e-mail
- (iii) Chat
- (iv) Online conferencing
- (v) e-library
- (vi) Blog
- (vii) Search Engines and their uses.

UNIT – III

MS- Office Application

- (i) MS Excel – Main features and its application in physical education.
- (ii) MS Access – Main features and its uses in physical education.
- (iii) MS PowerPoint – Preparation of slides with multimedia effects.
- (iv) MS Publisher – Newsletter and Brochure.

UNIT- IV

ICT Supported Teaching / Learning Strategies e-Learning.

- (i) Computer Assisted Learning.
- (ii) Project Based Learning.
- (iii) Technology Aided Learning.
- (iv) E-Learning.
- (v) Web Based Learning.
- (vi) Viruses and its management.

UNIT – V

SPSS Software

- (i) SPSS software and its advantages.
- (ii) Limitations of SPSS software.
- (iii) Importance of SPSS software in research.
- (iv) Functions of SPSS software.
- (v) Creating and saving a SPSS data file.
- (vi) Data entry and computation of different statistical concepts.

Reference Books

1. Ram, New Age International Publication, Computer Fundamental, Third Edition-2006
Brain under IDG Book. India (p) Ltd Teach Yourself Office 2000, Fourth Edition- 2001
Teach Yourself Office 2000, Fourth Edition- 2001
2. Douglas E. Comer, The Internet Book, Purdue University, West Lafayette in
2005. Irtegov, D. (2004). Operating system fundamentals. Firewall Media.
3. Marilyn, M.& Roberta, B.(n.d.).Computers in your future. 2nd edition, India: Prentice Hall.
4. Milke, M.(2007). Absolute beginner's guide to computer basics. Pearson Education Asia.
Sinha, P. K. & Sinha, P. (n.d.).Computer fundamentals. 4th edition, BPB Publication.
5. Heidi Steel Low price Edition, Microsoft Office Word 2003- 2004
6. ITL Education Solution Ltd. Introduction to information Technology, Research and
DevelopmentWing-2006
7. Pradeep K. Sinha &Priti; Sinha, Foundations computing BPB Publications -2006. Rebecca
BridgesAltman Peach pit Press, Power point for window, 1999
8. Sanjay Saxena, Vikas Publication House, Pvt. Ltd. Microsoft Office for ever one, Second
Edition-2006

MSS-305: SPORTS BIOMECHANICS (Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. Orientation with Sport Bio – mechanics instruments available in the University.
2. Identification of axes and planes in different movements of the body.
3. To demonstrate scalar and vector quantities in linear and angular motion.
4. To demonstrate computation of kinetic and potential energy in different situation.
5. To demonstrate computation of centrifugal and centripetal forces.
6. To demonstrate identification of levers in different body movements.
7. To demonstrate computation of coefficient of elasticity of Basketball when dropped from a height on a hard surface.

MSS- 306: SCIENCE OF SPORTS TRAINING (Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. Identification of features of training load in development of different motor components - Strength, Speed and Endurance.
2. Assessment of symptoms of inner load.
3. To demonstrate measurement procedure of One Repetition Maximum (IRM) using Trial and error method as well as equations.
4. To demonstrate the procedure of measuring aerobic capacity.
5. To demonstrate the procedure of measuring anaerobic capacity.
6. To demonstrate the procedure of working out target training zones for interval training method.
7. To demonstrate the procedure of working out recovery in interval training method.

MSS-307: YOGA FITNESS AND WELLNESS (Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. To prepare a poster of different Yogic posture and mention their importance.
2. To prepare a chart of different types of physical fitness exercises and explain their correct procedure.
3. List and briefly explain the components of physical fitness and how to develop them.
4. List and briefly explain the components of wellness and how to ensure their attainment.
5. Demonstration of practice sessions of Pranayama i.e. Anulom-Vilom, Suryabhedan, Sheetal and Bhramari.
6. Demonstration of Relaxation techniques.
7. Classification of Ashtang Yoga and its components.

**MSS-308: INFORMATION AND COMMUNICATION TECHNOLOGY IN SPORTS
AND SPORTS SCIENCE (Practical)**

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. Make a list of information and communication technology equipments that are used in sports and sports science and write a brief note on them.
2. Learn the procedure of installing the various information and technology equipments.
3. To prepare a gallery of photographs of five male and five female international sports persons.
4. Learn the procedure of locating sports related information from different internet sites.
5. Learn the procedure of making different types of graphical representations (Bar, Line, Pie diagrams) from varying types of data.
6. Prepare your own resume on the computer.
7. Learn the use of SPSS for statistical computations.

MSS: 309- Sports Specialization Basketball/Volleyball

Maximum Marks=50Marks
Semester Exam=50

Time Allowed = 3Hrs

Practical:

1. **Introduction of the game and historical development with special reference to India.**
2. **Important tournaments held at National and International levels and distinguished personalities related to the sport.**
3. **Rules and their Interpretations.**
4. **Duties of official**
5. **Fundamental Skills**
 - 5.1 Player's stance and ball handling.
 - 5.2 Passing and Receiving Techniques.
 - 5.2.1 Two hand chest pass
 - 5.2.2 Two hand Bounce pass
 - 5.2.3 One hand Baseball pass,
 - 5.2.4 Side arm pass
 - 5.2.5 Overhead pass.
 - 5.2.6 Hook pass
 - 5.3 Receiving
 - 5.3.1 Two hand receiving.
 - 5.3.2 One hand receiving.
 - 5.3.3 Receiving in stationary position.
 - 5.3.4 Receiving while running.
 - 5.3.5 Receiving while jumping.
 - 5.4 Dribbling.
 - 5.4.1 How to start dribble.
 - 5.4.2 How to stop dribble.
 - 5.4.3 High dribble.
 - 5.4.4 Low dribble.
 - 5.4.5 Reverse dribble.
 - 5.4.6 Rolling dribble.

- 5.5 Shooting.
 - 5.5.1 Lay-up shot and its variations.
 - 5.5.2 One hand set shot.
 - 5.5.3 One hand jump shot.
 - 5.5.4 Hook shot.
 - 5.5.5 Free throw.
- 5.6 Rebounding.
 - 5.6.1 Defensive rebound.
 - 5.6.2 Offensive rebound.
 - 5.6.3 Knock out.
 - 5.6.4 Rebound organization.
- 5.7 Individual Defence.
 - 5.7.1 Guarding the man with the ball.
 - 5.7.2 Guarding the man without the ball.
- 5.8 Pivoting.

Reference Books

1. Drewett, J. (2007). How to Improve at Basketball. Crabtree Publishing Co., USA.
2. Goldstein, S. (1998). Basketball Fundamentals. 2nd Ed. Golden Aura Publishing, USA.
3. Jain Naveen (2003). Play and Learn Basket Ball. Khel Sahitya Kendra. New Delhi.
4. Nat BB (1997). Conditioning Coaches Association. NBA Power Conditioning. Human Kinetics.
5. Sharma OP (2003). Basket Ball Skills and Rules. Khel Sahitya Kendra, Delhi.

VOLLEY BALL

- 1. Introduction of the game and historical development with special reference to India.**
- 2. Important tournaments held at National and International levels and distinguished personalities related to the game.**
- 3. Fundamental Skills.**
 - 3.1 Player's stance- Receiving the ball & passing to the team mates.
 - 3.1.1 The Volley (Overhead pass)
 - 3.1.2 The Dig (Under hand pass).
 - 3.2 Service-
 - 3.2.1 Under arm Service.
 - 3.2.2 Side Arm Service.
 - 3.2.3 Tennis Service.
 - 3.2.4 Round Arm Service.
 - 3.3 Lead up Games-
 - 3.3.1 Three Volleys (These can be combined with service)
 - 3.3.2 Three Digs (Receiving service using dig and setting and placing using volleying action)
 - 3.4 Spike-
 - 3.4.1 Straight Arm Spike.
 - 3.4.2 Round Arm Spike.
 - 3.5 Block-
 - 3.5.1 Single Block.
- 4. Advanced Skills-**
 - 4.1 Pass-
 - 4.1.1 Back Pass.
 - 4.1.2 Back Roll Volley.
 - 4.1.3 Back Roll Dig.
 - 4.1.4 Jump and Pass.
 - 4.1.5 Side Roll Dig.
 - 4.2 Service-
 - 4.2.1 Side Arm Floater.
 - 4.2.2 Overhead Floater.

- 4.3 Spike-
 - 4.3.1 Spiking cross court.
 - 4.3.2 Spiking down the line.
- 4.4 Block-
 - 4.4.1 Double Block
 - 4.4.2 Triple Block.
- 4.5 Dive-
 - 4.5.1 Dive combined with dig (Two handed).
 - 4.5.2 Dive combined with dig (One handed).
- 5. Rules and their interpretations and duties of officials**

Reference Books

1. American Volleyball Coaches Association (2005). Volleyball : Skills & Drills. Human Kinetics,USA.
2. FIVB (1996). Backcourt Spiking in Modern Volley Ball. FIVB.Chennai.
3. Kenny, B. and Gregory, C. (2006). Volleyball : Steps to Success. Human Kinetics,USA.
4. Saggar SK (1994). Cosco Skills Statics - Volley Ball. Sport Publication. Delhi.
5. Scates AE (1993). Winning Volley Ball. WC Brown.USA.
6. Scates, A. and Linn, M. (2002). Complete Conditioning for Volleyball. Human Kinetics,USA.
7. Shondell, D. and Reynaud, C. (2002). The Volleyball Coaching Bible. Human Kinetics,USA.
8. The National Alliance for Youth Sports (2009). Coaching Volleyball. For Dummies Publishers,USA.
9. Volleyball, USA (2009). Volleyball : Systems and Strategies. Human Kinetics,USA.

MSS 310: COUNCIL WORK

Maximum Marks = 50 Marks

Time Allowed = 3

Hrs.Semester Exam = 50 Marks

Purpose: To increase the staff-student engagement, the formation of seven committees has been initiated. The meetings of the committees are an opportunity for the students to express their views and ideas related to administrative, academic and to their broader experiences as a student at ASSRM.

Aims and Responsibilities of the Committees:

A. Student Council

The Students Council Committee promotes the interests of the department and the involvement of students in the affairs of the department. The committee shall be responsible for:

- Enhancing the communication between students, management, staff and faculties.
- Represent the views of the students on matters of general concern to them
- Organize and conduct cultural events at ASSRM.

B. Placement

The Placement committee plays an important role in developing relationships in the industry that would be helpful for the placement of ASSRM students. The committee shall be responsible for:

- Connect the talent to the recruiters.
- Increase the scope of sports sciences.
- Identify and connect companies prevailing in the area of sports
- To update the students of opportunities prevailing in sports sciences.

C. Academic

The Academic committee serves as a point of contact between the students and the academic department of ASSRM. The committee shall be responsible for:

- Provide course feedback at the end of each semester
- Ensure that students are informed of all existing academic policies.
- Raise any academic related issues with the concerned department.

D. NGO

The NGO Committee shall be focused on increasing sports engagement for Schools and Children. The NGO committee shall be responsible for:

- To promote Sports as a priority in schools and encourage adaptation of different physical activities.
- To share knowledge about sports technology in schools.
- To identify talent in Children's and help to promote them on a higher level.

- To create campaign in Social Media for Sports Development activities.
- To connect with Corporates and create different campaign for getting funds for Sports Equipment's.

E. Admissions

The Admissions committee shall be focused on increasing awareness of ASSRM's sports science course with the prospectus students. The committee shall be responsible for:

- Preparation for school outreach program.
- Preparation for Open day event.
- Conducting student counseling sessions and handling admissions related works.

F. Public Relations

The PR committee is to spread awareness about ASSRM through press release and social media. Its responsibilities are:

- Designing marketing communication Material (i.e Posters, banners).
- Creating and managing social media posts.
- Organizing press conferences and conducting press interviews.
- Creating all the marketing material for the outreach program.
- Managing PR events at ASSRM.

G. Sports

The Sports committee is dedicated to the development of sports at ASSRM. It shall be responsible for:

- Conducting sports events and gathering sponsorship for the events.
- Sports inventory and logistics management.
- Sports digital marketing and on-ground promotion of sports.

Semester-IV

MSS-401: SPORTS MEDICINE

Maximum Marks=100Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will able to:

1. Develop understanding regarding why injuries take place and how they a lobe care of.
2. Develop clear concept about doping and its harmful effects.
3. Develop knowledge regarding cause of obesity and how it is to be controlled.
4. Develop understanding regards special problems of old age and women.

UNIT – I

A. Introduction

- (i) Meaning and concept of sport medicine.
- (ii) Scope of sports medicine in sport.
- (iii) History of sport medicine in India.

B. Prevention of sport injuries.

- (i) Role of physical education teachers and coaches in the prevention of sports injuries.
- (ii) Role of exercise in the prevention of sports injuries.
- (iii) Therapeutic exercises and their classification.

UNIT – II

A. Sports Injuries.

- (i) Classification of common injuries.
 - Soft tissue injuries – open and closed wound injuries and their management.
 - Dislocations – How to take care.
 - Fractures – types and their management.

B. Regional Injuries and their management.

- (i) Injuries of head, ears, eyes, nose, back, shoulder, elbows, hand, abdomen, thighs, knee, leg and ankle.

UNIT – III

Rehabilitation procedures of different types of sports injuries

- A. Principles of rehabilitation of injuries.
- B. Therapeutic of rehabilitation of injuries.
- C. RICE protocol.
- D. Massage – effect and principles.

UNIT –IV

A. Thermal Injuries.

- (i) Prevention of thermal injuries.
- (ii) Management of heat cramps, heat fatigue heat exhaustion and heat stroke.

B. Doping.

- (i) Definition of Doping.
- (ii) Classification of dopes.
- (iii) Harmful effects of doping.

UNIT – V

Aging and Sports

- (i) Common old age problems.
 - Arthritis.
 - Heart Disease.
 - Diabetes.
- (ii) Role of exercise in dealing with above age related problems.
- (iii) Obesity and weight control.
- (iv) Women in sports – Pregnancy and exercise.

REFERENCES

1. Roy Stevin & Richer Irvin (1983); Sports Medicine, Prentice Hall Kulund Danial, N (1988) The Injured Athlete (2nd Ed.) Philadelphia J B Lippincott Co.
2. Booher James M & Thibodeau Gary. A (1985) Athletic injury Assessment, St. Louis Toronto, Santha Clara, Times Mirror / Mosby College Publishing.
3. Govindrajulu N. (2006), Sports Medicine, Friends Publications (India).
4. Pande Pk & Gupta L C (1985) Outline of Sports Medicine, New Delhi, Jaypee Brothers.
5. Sharma Sita Ram. Adapted Physical Education. New Delhi: Friends Publications (India).
6. Singh Amandeep. Athletic Care and Rehabilitation. New Delhi: Friends Publications (India).

MSS- 402: SPORTS SOCIOLOGY

Maximum Marks=100 Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will able to:

1. Develop understanding about how sports inculcate social values.
2. Develop concept about culture and its influence on sports.
3. Develop knowledge about how sports help in tackling problems in sports.
4. Develop understanding regarding how sports activities can be organized for different social groups.

UNIT – I

Introduction to Sport Sociology

- (i) Meaning, concept and definition of Sport Sociology.
- (ii) Importance of Sport Sociology.
- (iii) Sociology of sport as a separate discipline.
- (iv) Psycho – social implication and impact of organized youth sports.
- (v) Role of sports in promoting social values.

UNIT – II

Sport and Culture

- (i) Meaning of culture, difference between culture and civilization.
- (ii) Structure of sport culture.
- (iii) Functions of sport culture.
- (iv) Sport as a cultural phenomenon.

UNIT – III

Social roots of sport society

- (i) Definition of society.
- (ii) Society as a web of social relationship.
- (iii) Place of games and sports in different societies.
- (iv) Role of physical education in the context of social problems

UNIT- IV

Culture and Socialization in Relation to sports

- (i) Concept of sports culture
- (ii) Characteristics of sports culture
- (iii) Elements of Culture in relation to Sports
- (iv) Club Culture and Sports
- (v) Concepts of Sports Socialization
- (vi) Types of Sports Socialization
- (vii) Agents of sports socialization

UNIT – V

- (i) Relationship of sports with social institutions.
- (ii) Family, Kinship, School, Education System Peer Groups, Voluntary Association.
- (iii) Women and sports
- (iv) Organized sports programs for children.

References:

1. Bucher. Charles A. “Foundations of Physical Education” St. Louis. 1979. The C.H. Mosby Company.
2. Barrow. Harold M- “ Man and Movement” Principles of Physical Education. Lea andFebiger, 1983
3. Barric Houlihan, “Sports and Society”, SAGE Publication, (2005) 2nd edition,New Delhi
4. Bhushan Vidya and Sachdeva, D.R. – “ An Intrroduction to Sociology” Kitab Mahal 22-A. Sarojini Naidu Marg. Allahabad.
5. Jay Coaklay, Sports in Society, (2004) McGraw Hill Publication.
6. Ponomaryou N.I. Sports and Society, Progress Publishers, Moscow, 1981.
7. Sharma Sita Ram. Sociological Foundations in Physical Education and Sports. New Delhi: Friends Publications (India).
8. Singh Bhupinder. Sports Sociology-An Indian Perspective. New Delhi: Friends Publications (India).
9. Singh, Yadwinder “Sociology in Sports”, (2005) Sports Publication, G-6, 23/23B EMCA House, Ansari Road, Darya Ganj New Delhi.

MSS-403: PROFESSIONAL PREPARATION AND CURRICULUM PLANNING

Maximum Marks=100 Marks

Time Allowed = 3Hrs

Semester Exam=70

Sessional Exam=30

Learning Outcomes:

The student will be able to:

1. Develop understanding of factors that affect professional preparation programmes U.G. and P.G. levels.
2. Develop knowledge regarding factors that influence development of curriculum and suitability of activities according to age and gender.
3. Develop the skill of preparing curriculum for various levels.
4. Develop proficiency regarding how programmes are to be evaluated.

UNIT – I

Foundations of Professional Preparation

- (i) Ideals of Indian Democracy: Contribution of sports and Physical Education.
- (ii) Forces and factors affecting education policies and programs – social, religious, economic and political. Education and professional preparation in physical education and sports in India and its comparison with the programmes organized in USA, USSR and UK.

UNIT – II

Programmes of Professional Preparation

- (i) Undergraduate preparation – its purpose and admission requirements. Classroom, laboratory and field experience including teaching practice.
- (ii) Post graduate preparation – its purpose and admission requirements. Classroom, laboratory and field experience. Need for orientation to research. Critical appraisal of P.G. Programmes.
- (iii) In service education of professional personnel – nature and scope of in service education, responsibility for in service education.

UNIT – III

Curriculum

- (i) Importance of curriculum development.
- (ii) Factors affecting curriculum.
- (iii) Principles of curriculum development.
- (iv) Role of teacher in curriculum development.
- (v) Classification of activities for different age groups and sexes.

UNIT – IV

A. Selecting Methods of Teaching.

- (i) Grouping of students for instruction.
- (ii) Methods of classification.
- (iii) Special gadgets used for development of skills keeping in mind the individual differences.

B. Development of Physical Education Programme For different levels of education.

- (i) Kindergarten.
- (ii) Primary.
- (iii) Upper primary.
- (iv) Secondary and senior secondary.

UNIT – V

A. Co – education in Physical Education.

- (i) Inter relating programmes for boys and girls.
- (ii) Activities suitable for co – education
- (iii) Levels at which co – education is desirable.
- (iv) Need for the development of special programmes for girls.

B. Evaluation and follow up process in Physical Education.

- (i) Nature of evaluation.
- (ii) Importance of evaluation.
- (iii) Procedure of evaluation.

Reference Books.

1. Barrow, H. M. (1983). Man and movement: principles of physical education. Philadelphia:Lea and Febiger.
2. Bucher, C. A. (1986). Foundation of physical education: St. Louis: The C. V. Mosby &Company.
3. Cassidy, R. (1986). Curriculum development in physical education. New York: Harper &Company.
4. Cowell, C.C. & Hazelton, H.W. (1965).Curriculum designs in physical education.Englewood Cliffs: N.J. prentice Hall Inc.
5. Gupta Rakesh. Curriculum Designs. New Delhi: Friends Publications (India).
6. James Jose. Curriculum Designs in Physical Education and Sports. New Delhi: FriendsPublications (India).
7. Larson, L.A. (n.d.). Curriculum foundation in physical education. Englewood Cliffs: N.J.Prentice Hall Inc.
8. Sandhu Kiran, Trends and Developments in Professional Preparation in Physical Education. NewDelhi: Friends Publications (India).
9. Underwood, G. L. (1983). The physical education curriculum in secondary school: planning andimplementation.England: Taylor and Francis Ltd.
10. Willgoose, C.E. (1979). Curriculum in physical education. 3rd Ed. Englewood Cliffs.:N.J.Prentice Hall,

MSS-404: THESIS/DISSERTATION

Maximum Marks = 100 Marks
Semester Exam: 100 Marks

Time Allowed = 3 Hrs.

Each student has to select an appropriate topic for research and work under the guidance of an appointed supervisor/guide. The research work has to be completed and submitted for evaluation as per the date fixed by the University. The thesis/dissertation is to be typed as per the applicable format.

Score Scheme:

Total Marks: 100 Marks

Report Marks: 50 Marks

File Marks: 25 Marks

Presentation Marks: 25

MSS-405: SPORTS MEDICINE (Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

1. Develop a chart of common sports injuries and classify them according to their nature.
2. Prepare a list of different physiotherapy equipment's available in the Physiotherapy OPD Clinic.
3. In consultation with the Physiotherapists available in the OPD, learn the procedure of identifying the nature of injury.
4. Learn the procedure of RICE protocol.
5. Prepare a chart of rehabilitation exercises for any one sports injury.
6. Prepare a list of different types of dopes used by the sports persons.
7. Prepare a list of different massage manipulations and mention their contraindications.

MSS- 406: SPORTS SOCIOLOGY (Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. Make a list of social factors and explain how they influence sports participation.
2. Prepare a chart explaining how social values can be attained through sports participation.
3. Select any five students from your class and list their social values.
4. Select any two male and female students from your class and differentiate them in terms of their social values.
5. Select five sports persons and five non-sports persons from your class and identify their social values. Indicate similarities and variations.
6. Make a list of social institutions and prepare a chart indicating the social activities organized by them.
7. Select any five students from your class (any two of them must be sports persons) and with the help of socio-gram identify the individual who is most sociable among them. Identify the reasons.

MSS-407: PROFESSIONAL PREPARATION AND CURRICULUM PLANNING
(Practical)

Maximum Marks=50Marks

Time Allowed = 3Hrs

Semester Exam=30

Sessional Exam=20

Practical:

1. Prepare a brief note of subjects learnt at bachelor level and explain any two indicating their utility in sports and sports science.
2. Prepare a list of important factors that affect curriculum development and list them according to their importance.
3. List different methods of teaching and briefly explain them.
4. List different education commissions and committees constituted after independence and explain the recommendations of any one of them.
5. Make a list of different evaluation techniques and briefly explain how they are used.
6. List advantages and disadvantages of co-education in schools and colleges.
7. Discuss the benefits of classification of students into equal ability groups for teaching.

MSS-408: SPORTS SPECIALIZATION: FOOTBALL/TABLE TENNIS

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 50 Marks

Practical:

1. Introduction of the game and historical development with special reference to India.
2. Important tournaments held at National and International levels and distinguished personalities related to the game.
3. Fundamental Skills.
 - 3.1 Kicks-
 - 3.1.1 Kicking with the inside of the foot
 - 3.1.2 Kicking with the instep of the foot
 - 3.1.3 Kicking with the outer instep of the foot
 - 3.1.4 Lofted Kick
 - 3.2 Trapping-
 - 3.2.1 Trapping rolling ball- with the inside, sole and instep of the foot
 - 3.2.2 Trapping bouncing ball with the sole
 - 3.3 Dribbling-
 - 3.3.1 With the instep of the foot
 - 3.3.2 With the inside of the foot
 - 3.3.3 With the outer instep of the foot
 - 3.4 Heading-
 - 3.4.1 From standing
 - 3.4.2 From running
 - 3.4.3 From jumping
 - 3.5 Throw-in
 - 3.6 Feinting-
 - 3.6.1 With the lower limb
 - 3.6.2 With the upper part of the body
 - 3.7 Tackling-
 - 3.7.1 Simple tackling
 - 3.7.2 Slide tackling
 - 3.8 Goal Keeping-
 - 3.8.1 Collection of balls
 - 3.8.2 Ball clearance- Kicking, throwing and deflecting
4. Rules and their interpretations and duties of officials.

Reference Books

1. American Football Coaches Association (2002). The Football Coaching Bible. 1st Ed., Human Kinetics, USA.
2. Carling, C., Williams, M. and Reilling, T. (2006). Handbook of Soccer Match Analysis: A Systematic Approach to Improving Performance. Routledge Publishers, USA.
3. Long, H. and Czarnecki, J. (2007). Football for Dummies. For Dummies Publisher, USA.
4. N Kumar (2003). Play and Learn Football. K.S.K. New Delhi.
5. Reilly, T. (2006). The Science Training Soccer: A Scientific Approach to Developing Strength, Speed and Endurance. Routledge Publisher, USA.
6. Reilly, T. and J.C.D. Arau (2008). Science and Football V: The Proceedings of the 5th World Congress on Sports Science and Football, Volume5.
7. Sharma OP (2001). Teaching and Coaching –Football. Khel S.K.Delhi.

TABLE TENNIS

- 1. Introduction of the game and historical development with special reference to India.**
- 2. Important tournaments held at National and International levels and distinguished personalities related to the game.**
- 3. Fundamental Skills.**
 - 3.1 The grip-
 - 3.1.1 The Tennis grip (forehand grip and backhand grip)
 - 3.1.2 Penholder grip.
 - 3.2 Service-
 - 3.2.1 Forehand (Forward and backward spins).
 - 3.2.2 Back hand (Forward and backward spins).
 - 3.2.3 Side spin.
 - 3.2.4 High Toss.
 - 3.3 Strokes (From both forehand and backhand).
 - 3.3.1 Push.
 - 3.3.2 Chop.
 - 3.3.3 Drive (with top spin).
 - 3.3.4 Half volley.
 - 3.3.5 Smash.
 - 3.3.6 Drop-shot.
 - 3.3.7 Balloon.
 - 3.3.8 Flick shot.
 - 3.3.9 Loop drive.
 - 3.4 Stance and Ready position, and foot work.
- 4. Tactics – Defensive, attacking in singles doubles and mixed doubles.**
- 5. Rules and their interpretations and duties of officials.**

Reference Books

1. Sklorz Martin, Sport Table Tennis. Yorkshire : E.P. Ltd. Cast Ardsley, Wakefield, 1973.
2. Varner, Margaret and Harrison J. Rufford. Brown Physical Education, Activities series, Table Tennis. IOWA: WM. C. Brown Company Dubuque.
3. Myers Harold. Table Tennis: London L Faber & Faber Ltd. 3, Queen Square, 1977.
4. Earna Victor, Your Book of Table Tennis. London: Faber and Faber Ltd. 3, Queen Square, 1971.
5. Leslie Woallard, Table Tennis, Foyles Handbooks London.
6. Donal Parker & David Hewitt, Play the Game Table Tennis, Blandford-2003.
7. D. Jain, Table Tennis Skills & Rules, Khel Sahitya Kendra, New Delhi-2003
8. Ashok Kumar, DPH Sports Series-Table Tennis, Discovery publishing House-N.D.-1999.
9. Pankaj Chaudhary, Table Tennis Coaching Manual, Sports Publishing-N.D.-2005
10. Priyanka Narang, Teach Yourself Table Tennis, Prerna Prakashan-N.D.-2004

MSS 409: INTERNSHIP – FIELD AND WORK EXPERIENCE (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Marks = 50 Marks

Learning Outcomes:

1. Expose the student to the environment and expectation of performance on the part of accountants in professional accounting practice, private/public companies or government entities.
2. Enhance and/or expand the students' knowledge of a particular areas of accounting
3. Expose the students to professional role models or mentors who will provide the students with support in the early stages of the internship and provide an example of the behaviors expected in the interns' work place.

The students enrolled in the M.Sc. Sports Science program will be required to do an internship with an organisation which is sport field or can pursue their internship in sports industry/association/federations/organisations/sports labs/academy/schools/colleges. The duration of the internship should be at least for 20 days. At the end of the internship, a report along with completion letter/certificate shall be submitted to the department of sports science detailing the nature of work and learning outcomes and a viva will be conducted.

The faculty of sports science will supervise the students during the duration of internship.

Internship Report:-The report should contain the detailed information about the industry/association/federations/organisations/sports labs/academy/schools/colleges in which they have completed their internship. It should also contain the appointment letter, the nature of work and completion letter. In presentation the photography/ videography of internship is to be presented

Note: The examination for this field work will be internal and will be conducted by the concerned teacher in-charge. Internship will be conducted as per the instructions of the Head of the Department/Dean/Faculty of Sports Science.

Score Pattern:

Total Marks: 50 Marks

Report Marks: 25 Marks

Viva- Voce Marks: 10 Marks

Presentation Marks: 15 Marks

BSS 410: COUNCIL WORK

Maximum Marks = 50 Marks

Time Allowed = 3

Hrs.Semester Exam = 50 Marks

Purpose: To increase the staff-student engagement, the formation of seven committees has been initiated. The meetings of the committees are an opportunity for the students to express their views and ideas related to administrative, academic and to their broader experiences as a student at ASSRM.

Aims and Responsibilities of the Committees:

A. Student Council

The Students Council Committee promotes the interests of the department and the involvement of students in the affairs of the department. The committee shall be responsible for:

- Enhancing the communication between students, management, staff and faculties.
- Represent the views of the students on matters of general concern to them
- Organize and conduct cultural events at ASSRM.

B. Placement

The Placement committee plays an important role in developing relationships in the industry that would be helpful for the placement of ASSRM students. The committee shall be responsible for:

- Connect the talent to the recruiters.
- Increase the scope of sports sciences.
- Identify and connect companies prevailing in the area of sports
- To update the students of opportunities prevailing in sports sciences.

C. Academic

The Academic committee serves as a point of contact between the students and the academic department of ASSRM. The committee shall be responsible for:

- Provide course feedback at the end of each semester
- Ensure that students are informed of all existing academic policies.
- Raise any academic related issues with the concerned department.

D. NGO

The NGO Committee shall be focused on increasing sports engagement for Schools and Children. The NGO committee shall be responsible for:

- To promote Sports as a priority in schools and encourage adaptation of different physical activities.
- To share knowledge about sports technology in schools.
- To identify talent in Children's and help to promote them on higher level.
- To create campaign in Social Media for Sports Development activities.
- To connect with Corporates and create different campaign for getting funds for Sports Equipment'

E. Admissions

The Admissions committee shall be focused on increasing awareness of ASSRM's sports science course with the prospectus students. The committee shall be responsible for:

- Preparation for school outreach program.
- Preparation for Open day event.
- Conducting student counseling sessions and handling admissions related works.

F. Public Relations

The PR committee is to spread awareness about ASSRM through press release and social media. Its responsibilities are:

- Designing marketing communication Material (i.e Posters, banners).
- Creating and managing social media posts.
- Organizing press conferences and conducting press interviews.
- Creating all the marketing material for the outreach program.
- Managing PR events at ASSRM.

G. Sports

The Sports committee is dedicated to the development of sports at ASSRM. It shall be responsible for:

- Conducting sports events and gathering sponsorship for the events.
- Sports inventory and logistics management.
- Sports digital marketing and on-ground promotion of sports.