

B.Sc. (Hons.) 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 B.Sc. (Hons.) Sports Science, as its 1st Batch graduates, in the summer of 2020.

The degree 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 roll 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 Masters 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 B.Sc.(Hons.)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

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DPSRU

RULES & REGULATIONS of B.Sc. (Hons.) 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 : B.Sc.(Hons.) Sports Science
B. Nature : Regular and full time
C. Duration : Three year (Six Semester) course
D. Pattern : Credit based system
E. Eligibility criteria : A candidate seeking admission to the B.Sc. (Hons.) Sports Science program must have passed intermediate or equivalent examination (recognized by DPSRU) under 10+2 system of education with 50% marks in aggregate in 4 subjects from any stream with good working knowledge of English.

Note: SC candidates seeking admission may have passed 10+2 with 45% marks in the above said subjects of 10+2 examination.

- F. Age : 17 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 10+2 standard in best four subjects as decided by ASRRM. 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.

Selection procedure : On merit (of best 4 subjects) basis or as prescribed by DPSRU from time to time.

- J. Total Seats : 120 (One hundred and twenty)
(Reservation as per university / State Government rules)
K. Period of completion : Not more than six years from the date of first admission.

Note:

- i. The candidate having supplementary / compartment in the qualifying examination shall not be allowed admission in B.Sc. (Hons.) 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 sports physiology, sports psychology, sports pharmacology, sports anthropology, sports biomechanics, sports nutrition and biochemistry, Sports Physiotherapy etc. Through the, “Work placement module in year 3, 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 sport at National and State Sport organizations, coaching centers, fitness centers, schools, colleges, universities 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, Semester –IV, Semester –V, and Semester-VI.

3.1 Research Project

In 3rd year a research project will be compulsory for each student. The project will be evaluated from the written submission of thesis / report followed by a viva-voce examination. To begin with the project will be restricted only to sports.

3.2 Field Visits/Internship & Project

In third year during Semester V students shall undergo internship training in sports, under the guidance of teacher supervisors.

In semester VI, the students shall complete their Research Project involving application of knowledge in solving / analyzing /exploring a real life situation / difficult problem and submit their project report/thesis.

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	=	16
2. DSE = Discipline Specific Elective Courses	=	08
3. DSS = Discipline Specific Skill Courses	=	14
4. VSE = Vocational Skill Enhancement Courses	=	12
5. AEC = Ability Enhancement Core Courses	=	08
Total	=	58

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	
Semester I	BSS-101, BSS-103,	BSS-109,	BSS-105, BSS-107,	BSS-102, BSS-106,	BSS-104, BSS 108, BSS-110
Semester II	BSS-201, BSS-202, BSS-203,	BSS-209,	BSS-205, BSS-206 BSS-207	BSS-204, BSS-208,	BSS-210
Semester III	BSS-301, BSS-302, BSS-303,	BSS-309,	BSS-306 BSS-307	BSS-304, BSS-305, BSS-308,	BSS – 310
Semester IV	BSS-401, BSS-404,	BSS-403(A/B/C/D), BSS-407 (A/B/C/B) BSS- 409	BSS-402, BSS-405, BSS-406,	BSS-408,	BSS-410
Semester V	BSS-501, BSS-502, BSS-503	BSS-508,	BSS-504 BSS-505	BSS-506, BSS-507,	BSS-509
Semester VI	BSS-601, BSS-602, BSS-604	BSS-608,	BSS-605, BSS-606,	BSS-603, BSS-607,	BSS-609

Table II: Summary sheet & credit details of B.Sc.(Hons) Sports Science

Semester- I			Semester-II		
Code no	Paper Title	Credit	Code no	Paper Title	Credit
BSS-101	Foundation of Sports Science and Sports	4	BSS-201	Sports Anthropometry and Body Composition	4
BSS-102	Computer Application in Sports Technology	4	BSS-202	Sports and Exercise Nutrition	4
BSS-103	Introduction to Anatomy and Physiology	4	BSS-203	Health Education	4
BSS-104	Communication Skills	4	BSS-204	Sports Digitalization & Data Analytics	4
BSS-105	Foundation of Sports Science and Sports(P)	1	BSS-205	Sports Anthropometry and Body Composition (P)	1
BSS-106	Computer Application in Sports Technology (P)	1	BSS-206	Sports and Exercise Nutrition (P)	1
BSS-107	Introduction to Anatomy & Physiology (P)	1	BSS-207	Health Education (P)	1
BSS-108	Communication Skills (P)	1	BSS-208	Sports Digitalization & Data Analytics (P)	1
BSS-109	Sport of Choice : Individual Games (P)	2	BSS-209	Sport of Choice : Team Games (P)	2
BSS-110	Council Work (P)	2	BSS-210	Council Work (P)	2
BSS 101-110	Total Semester-I	24	BSS-201-210	Total Semester-II	24
Semester-III			Semester-IV		
BSS-301	Test, Measurements and Evaluation in Sports	4	BSS-401	Sports Pharmacy	4
BSS-302	Organization and Administration in Sports	4	BSS-402	Sports and Event Management	4
BSS-303	Sports and Exercise Physiology	4	BSS-403	Choose Any One Of The Following:- A. Sports For All, B. Fitness and Wellness C. Sports Journalism and Mass Media D. Sports Tourism	4
BSS-304	Curriculum Design	4	BSS-404	Research Methods and Statistical Concepts	4
BSS-305	Test, Measurements and Evaluation in Sports (P)	1	BSS-405	Sports Pharmacy (P)	1
BSS-306	Organization and Administration in Sports (P)	1	BSS-406	Sports and Event Management (P)	1
BSS-307	Sports and Exercise Physiology (P)	1	BSS-407	Optional Paper (P) - As per options: (A) / (B) / (C) / (D)	1
BSS-308	Minor Project Report & Viva (P)	1	BSS-408	Minor Project Report & Viva (P)	1
BSS-309	Sport of Choice: Swimming/ Athletics (P)	2	BSS-409	Sport of Choice: Gymnastics(P)	2
BSS-310	Council Work (P)	2	BSS-410	Council Work (P)	2
BSS 301-310	Total Semester-III	24	BSS-401-410	Total Semester-IV	24
Semester V			Semester VI		
BSS 501	Sports Kinesiology and Biomechanics	4	BSS 601	Science of Sports Training	4
BSS 502	Sports and Exercise Psychology	4	BSS 602	Sports Injuries, Prevention and Rehabilitation	4
BSS 503	Sports Sociology	4	BSS 603	Yogic Science	4
BSS 504	Sports Kinesiology and Biomechanics (P)	1	BSS 604	Environmental Studies	4
BSS 505	Sports and Exercise Psychology (P)	1	BSS 605	Science of Sports Training (P)	1
BSS 506	Internship - Field Work Experience (P)	4	BSS 606	Sports Injuries, Prevention and Rehabilitation (P)	1
BSS 507	Major Project: Report & Viva (P)	4	BSS 607	Major Project: Thesis (P)	4
BSS 508	Sport of Choice (P): Athletics	2	BSS 608	Sport of Choice :Yoga (P)	2
BSS 509	Council Work (P)	2	BSS 609	Council Work (P)	2
BSS 501-509	Total Semester-V	26	BSS 601-609	Total Semester-VI	26
Grand Total	Semester I to VI				148

5. SCHEME OF EXAMINATION

- a) The examination of each paper shall have two components- written/practical exam at the end of each semester(End-Semester) carrying 60% weightage to be conducted by DPSRU and internal (Mid-Semester) carrying 40% 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.

4.1 Semester Examination

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

a) Mode

Theory Paper : Written only

Practical : Written, practical, demonstration and viva voce

b) Duration

Theory : 03 hours or 180 mins

Practical : (minimum 03 hours duration)

c) Examiner

Theory : 01

Practical/Viva Voce : 02(1 internal and 1 external; from within the department or from the panel to be prepared by the Board of studies & research and approved by Vice Chancellor/COE or as appointed by the head/dean/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 upto 40 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 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 AND GRADING SYSTEM

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 assessment: Sessional Exam/Minor Test	40% marks
External assessment: Major test	60% marks
Research project:	150 marks (75 marks by an expert other than Supervisor + 75 marks by the Supervising Teacher)

Table III: Semester-wise 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	
BSS 101	Foundation of Sports Science and Sports	4	-	-	4	40	60	100	4
BSS 102	Computer Application in Sports Technology	4	-	-	4	40	60	100	4
BSS 103	Introduction to Anatomy and Physiology	4	-	-	4	40	60	100	4
BSS 104	Communication Skills	4	-	-	4	40	60	100	4
PRACTICALS									
BSS 105	Foundation of Sports Science and Sports (P)	-	-	2	2	20	30	50	1
BSS 106	Computer Application in Sports Technology (P)	-	-	2	2	20	30	50	1
BSS 107	Introduction to Anatomy & Physiology (P)	-	-	2	2	20	30	50	1
BSS 108	Communication Skill (P)	-	-	2	2	20	30	50	1
BSS 109	Sport of Choice: Individual Games (P)	-	-	2	2	-	-	50*	2
BSS 110	Council Work (P)	-	-	2	2	-	-	50*	2
Total		16	-	12	28	240	360	700	24

*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	
BSS 201	Sports Anthropometry and Body Composition	4	-	-	4	40	60	100	4
BSS 202	Sports and Exercise Nutrition	4	-	-	4	40	60	100	4
BSS 203	Health Education	4	-	-	4	40	60	100	4
BSS 204	Sports Digitalization & Data Analytics	4	-	-	4	40	60	100	4
PRACTICALS									
BSS 205	Sports Anthropometry and Body Composition (P)	-	-	2	2	20	30	50	1
BSS 206	Sports and Exercise Nutrition (P)	-	-	2	2	20	30	50	1
BSS 207	Health Education (P)	-	-	2	2	20	30	50	1
BSS 208	Sports Digitalization & Data Analytics (P)	-	-	2	2	20	30	50	1
BSS 209	Sport of Choice: Team Games (P)	-	-	2	2	-	-	50*	2
BSS 210	Council Work (P)	-	-	2	2	-	-	50*	2
Total		16	-	12	28	240	360	700	24

*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/S		Int	Ext	Total	
BSS 301	Test, Measurements and Evaluation in Sports	4	-	-	4	40	60	100	4
BSS 302	Organization and Administration in Sports	4	-	-	4	40	60	100	4
BSS 303	Sports and Exercise Physiology	4	-	-	4	40	60	100	4
BSS 304	Curriculum Design	4	-	-	4	40	60	100	4
PRACTICALS									
BSS 305	Test, Measurements and Evaluation in Sports (P)	-	-	2	2	20	30	50	1
BSS 306	Organization and Administration in Sports (P)	-	-	2	2	20	30	50	1
BSS 307	Sports and Exercise Physiology (P)	-	-	2	2	20	30	50	1
BSS 308	Minor Project Report & Viva (P)	-	-	2	2	-	-	50*	1
BSS 309	Sport of Choice: Swimming/ Athletics (P)	-	-	2	2	-	-	50*	2
BSS 310	Council Work (P)	-	-	2	2	-	-	50*	2
Total		16	-	12	28	220	330	700	24

* BSS-308, BSS-309 and BSS-310 to be evaluated only by the Internal Examiner

SEMESTER IV

Course Code	THEORY COURSES	Periods*			Hrs/week	Evaluation Scheme			Credit units	
		L	T	P		Int	Ext	Total		
BSS 401	Sports Pharmacy	4	-	-	4	40	60	100	4	
BSS 402	Sports and Event Management	4	-	-	4	40	60	100	4	
BSS 403	Choose Any One of The Following:- A. Sports For All B. Fitness and Wellness C. Sports Journalism and Mass Media D. Sports Tourism	4	-	-	4	40	60	100	4	
	BSS 404	Research Methods and Statistical Concepts	4	-	-	4	40	60	100	4
	PRACTICALS									
	BSS 405	Sports Pharmacy (P)	-	-	2	2	20	30	50	1
BSS 406	Sports and Event Management (P)	-	-	2	2	20	30	50	1	
BSS 407	Optional Paper (P) - As per options (A) / (B) / (C) / (D)	-	-	2	2	20	30	50	1	
BSS 408	Minor Project Report & Viva (P)	-	-	2	2	-	-	50*	1	
BSS 409	Sport of Choice: Gymnastics (P)	-	-	2	2	-	-	50*	2	
BSS 410	Council Work (P)	-	-	2	2	-	-	50*	2	
Total		16	-	12	28	220	330	700	24	

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

SEMESTER V

Course Code	THEORY COURSES	Periods*			Hrs/week	Evaluation Scheme			Credit units
		L	T	P		Int	Ext	Total	
BSS 501	Sports Kinesiology and Biomechanics	4	-	-	4	40	60	100	4
BSS 502	Sports and Exercise Psychology	4	-	-	4	40	60	100	4
BSS 503	Sports Sociology	4	-	-	4	40	60	100	4
PRACTICALS									
BSS 504	Sports Kinesiology and Biomechanics (P)	-	-	2	2	20	30	50	1
BSS 505	Sports and Exercise Psychology (P)	-	-	2	2	20	30	50	1
BSS 506	Internship Field Work Experience (P)	-	-	-	-	-	-	100*	4
BSS 507	Major Project : Report & Viva (P)	-	-	2	2	-	-	100*	4
BSS 508	Sport of Choice: Athletics (P)	-	-	2	2	-	-	50*	2
BSS 509	Council Work (P)	-	-	2	2	-	-	50*	2
Total		12	-	10	22	160	240	700	26

*BSS-506, BSS-507, BSS-508 and BSS-509 to be evaluated only by the Internal Examiner

SEMESTER VI

Course Code	THEORY COURSES	Periods*			Hr/Week	Evaluation Scheme			Credit Units
		L	T	P		Int.	Ext.	Total	
BSS 601	Science of Sports Training	4	-	-	4	40	60	100	4
BSS 602	Sports Injuries Prevention and Rehabilitation	4	-	-	4	40	60	100	4
BSS 603	Yogic Science	4	-	-	4	40	60	100	4
BSS 604	Environmental Studies	4	-	-	4	40	60	100	4
PRACTICALS									
BSS 605	Science of Sports Training (P)	-	-	2	2	20	30	50	1
BSS 606	Sports Injuries Prevention and Rehabilitation (P)	-	-	2	2	20	30	50	1
BSS 607	Major Project Thesis (P)	-	-	2	2	-	100	100	4
BSS 608	Sport of Choice: Yoga (P)	-	-	2	2	-	50	50	2
BSS 609	Council Work (P)	-	-	2	2	-	-	50*	2
Total		16	-	10	26	200	450	700	26

* **BSS-609** 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)	30
TOTAL	40

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 Examination

- 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:
- i. Semester Examination:
The subject teacher or teacher selected by the examination committee will be the examiner. The examiner shall set question paper independently and send it in a sealed envelope directly to the COE / Head, as the case may be.
 - ii. Sessional Examination:
The subject teacher or teacher selected by the Head will be the examiner. The examiner shall set question paper independently and send it in a sealed envelope directly to the Head/concerned faculty in charge, as the case may be.
- c) 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 two marks each, including one liners, (Multiple choice questions). All these questions are compulsory.	5 x 2 =10
<u>Section B:</u> Four questions – five marks each (Section B Comprises of 6 questions of five marks each out of which 4 questions are to be attempted)	4 x 5 =20
<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	60 marks

Question paper pattern for theory-sessional examination

	<u>Max. Marks</u>
Section A: Ten questions – short answer type, of one mark each, including one liners or Multiple Choice Questions, All compulsory	10 x 1 = 10
Section B: Two questions – five marks each (Section B Comprises of 3 questions of five marks each out of which 2 questions have to be attempted)	2 x 5 = 10
Section C: One long questions of 10 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 10 = 10
TOTAL	30 marks
Semester Exam	60 marks
Internal Assessment:	
Sessional Exam	30 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 department/ 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) Selection Criteria of Examiners and Centre: For any Practical examination of B.Sc.(Hons.)Sports Science, such examination shall be conducted at the Academy of Sports Science Research & Management or as decided by the university.

- 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 Director/Course coordinator / Head of the Department / Dean, 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 Minor and Major Project Report and Viva is as follows:

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

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

Components	Max. Marks
File	= 05
Demonstration	= 20
Viva-Voce	= 25
Total	= 50

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

Components	Max. Marks
Attendance	= 05
Report/File	= 15
Viva-Voce	= 30
Total	= 50

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

Components	Max. Marks
Report	= 30
Viva-Voce	= 20
Total	= 50

6.4 Grading performances

Based on the performances, 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:

$$\text{SGPA} = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4G_4 + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

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:

$$\text{SGPA} = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4 * \text{ZERO} + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

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:

$$\text{CGPA} = \frac{C_1S_1 + C_2S_2 + C_3S_3 + C_4S_4 + C_5S_5 + C_6S_6}{C_1 + C_2 + C_3 + C_4 + C_5 + C_6}$$

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,....

6.5 Field work and Internship

During the field work and internship, the candidate will be required to prepare a project under the supervision/guidance of local institution's Administrative Officer/Secretary. The project will be evaluated and credits awarded. In case of, candidate failing to clear the project examination, she/he shall re-submit the project after thorough re-vision in light of the details provided to the candidate regarding the objections of the external examiners.

6.6 Sport of Choice, Council work, Minor Project and Major Project

1. The Sport of choice (BSS109, BSS209, BSS309, BSS409, BSS508, BSS608), Council Work (BSS110, BSS210, BSS310, BSS410, BSS509, BSS609), Minor Project (BSS308, BSS408) and Major Project (BSS507, BSS607) shall be graded along with the semester examination.

2. No external examiner will be called for Sport of Choice, Council Work, Minor and Major project. Students will be assessed in the semester examination by internal faculty. In the sixth semester, external faculty will be called for Sport of Choice and Major project.

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.

Table VII: Marks distribution for Sport of Choice, Council work, Minor and Major

Sport of Choice	
Criteria	Maximum marks
File	5
Demonstration	20
Viva-Voce	25
TOTAL	50
Minor Project	
Report	25
Viva-Voce	25
TOTAL	50
Major Project	
Report	50
Viva-Voce	50
	100
Council Work	
Attendance	5
Report	15
Viva	20
TOTAL	50

6.5 Minimum Pass marks

The minimum pass works in all the individual theory papers, practicals, research project, 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, research project, viva voce and internship.
- II. 50% in practical (including sessional/minors and external)
- III. 50% in aggregate.

7 ATTENDANCE CRITERIA

- a) No candidate admitted to the course shall be allowed to appear in the University Examination unless and until he/she has completed 80 per cent of the lecturers in each paper separately viz. theory, practical, seminar, case discussion, field trips, tutorials, training, etc.
- b) Each one-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.
- c) The concerned faculty will take a roll call in every scheduled lecture and practical classes.
- d) The Admin executive shall maintain a consolidated the attendance record, which would be submitted to the concerned authority at the conclusion of the month/academic year.
- e) Attendance on account of participation in the prescribed co-curricular/ extra-curricular activities can be granted by the Director/appropriate authority on receipt of Certificates or recommendations of the respective activity – Coordinators, countersigned by the Head of the department/Centre up to 10%.

A student who is involved in sports competition and representing the University at State and National tournaments will be considered as on duty and will be entitled for attendance.

- f) The Director/appropriate authority on the recommendation of the Head of the Department/Centre may consider condoning 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 department should be given in such cases.

- g) The statement of attendance of the students shall be displayed on the department Notice Board after the conclusion of each month/term and/or informed by the academic office.
- h) In case, a student is found to be continuously absent from the classes without information for period of fifteen day, the faculty in charge shall report it to the academic office.
- i) Head of the Department/Faculty may recommend for striking off the name of a student from rolls after ensuring in writing about one-month continuous absence from all the concerned faculty.
- j) A student, whose name has been struck off on account of long absence, may apply to the admission office for readmission within 15 days of notice of striking of the name. The readmission shall be effected on payments of prescribed readmission fees.
- k) A student with attendance less than 80% shall not be allowed to appear in the semester examination. The Controller of Examination shall recommend such cases to the Director/appropriate authority.
- l) A student detained on account of short attendance will have to attend the class and/or practical and/or research project/and or Dissertation afresh, as the case may be, of the respective year(semester) in which he/she is detained, after payment of fees except enrolment fee and security deposit.
- m) A student detained on account of short attendance will have to attend the class and/or practicals and/or research Project/ and or Dissertation afresh, as the case may be, of the respective year (semester) in which he/she is detained, after payment of fees except enrollment fee, identity card fee and security deposit.

8 PROMOTION

- a) Promotion to IIIrd semester:

For promotion from 2nd to 3rd semester a candidate will pass 75% of the courses offered in 1st and 2nd semester.

- b) Promotion to Vth semester:

For promotion to 5th semester, a candidate will pass 100% of the courses offered in 1st and 2nd semester and 75% those of 3rd and 4th semester.

Note: Promotion to 3rd and 5th semester:

The minimum CGPA required for promotion to the 3rd and 5th semester is 4.0 at the end of the even semester examinations. This CGPA will be calculated after giving the candidate chance of one summer examination in each course whose grade is lower than 'D'.

c) Project with Viva-voce:

The candidate will be required to make a presentation of the project after finishing six weeks compulsory internship which will be based on the field work and data collected during field work under the supervision of a supervisor as appointed by the course-coordinator/Dean. It will be evaluated and marks will be awarded.

In case of, Candidate failing to clear the project examination, she/he shall re-submit the revised project with modification as per the observations made by the external examiner.

9 AWARD OF DEGREE

- a) The candidates will be awarded a Bachelor's Degree Certificate only on successful completion of the course including successful completion of field work, Internship and Project work.
- b) The entire course of study in first, second, third, fourth, fifth and sixth semesters must be completed within six years of the date of first admission.
- c) Evaluation will be based on grading of students on 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 Bachelor of Science degree shall be classified at the end of the completion of the program 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) A candidate will be declared to have passed and secured the highest marks in aggregate amongst all the students of the Class, if he/she has passed all the examinations in first attempt.
- c) A candidate shall be awarded a gold medal if he/she secured first position with the highest marks in aggregate amongst all the students of the class who have passed all the examinations in first attempt.
- d) Total marks obtained by the candidate in each subject (Theory/Practical/Projects) in all semesters and Internship will be taken into consideration while determining the passed percentage of the candidate.

11 SPAN PERIOD

- a) Candidate must pass the first year examination within 2 years (3rd and 4th sem) and second year within four years of their first admission to the program otherwise the admission of the candidate shall deemed to be cancelled.
- b) Candidates must pass the examination in all the papers/subjects individually of IIIrd (5th and 6th semester) within six years of their admission to the first year of the program.
- c) Candidates must complete the internship within 6 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 6 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.

B.Sc. (Hons.) SPORTS SCIENCE

SYLLABUS

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



**Academy of Sports Science Research and Management
Department of Sports Science, DPSRU**

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

SEMESTER-I

BSS 101: FOUNDATION OF SPORTS SCIENCE AND SPORTS

Maximum Marks = 100 Marks

Time Allowed= 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Course Hours= 45 Hours

Learning Outcomes:

Students will be able to:

1. Students acquire the knowledge of history & foundations of Sports Science and Sports.
2. Understand the purpose & development of Sports Science physical education & Sports.
3. Enhance and Develop the knowledge of sports science and all the scientific sub-disciplines (branches) of sports science
4. Enhance and Develop an understanding of the scope and current status of sports science
Enhance and Develop of significance and application of sports science

UNIT-I

9 Hours

- Introduction to Sports Science: Meaning, and Philosophy of Sports Science; Relation of Sports Science to Physical Education, Sports.
- Important Basic Terms: Physical Activity, Exercise, Sports, Lifestyle, Fitness, Wellness, Broadcasting Sports.
- Significance of sub-disciplines of Sports Science: introduction to the sub-disciplines (physiology, biomechanics, psychology, anthropometry, nutrition, pharmacy)
- Individual roles, benefits and importance of each of the following sub-disciplines of sports science, sports and exercise as medicine.

UNIT-II

9 Hours

- Foundation of Sports Science: Heredity and Environment Growth & Development,
- Summary of Biological Principles; Biomechanical Foundations; Chemical
- Mechanical Principles; Psychological Foundations.
- Foundation. Scope and current status of sports science: Careers in sports science, current status of sports in India,
- Status of Sports Science and development of sports and exercise Science Laboratories, developing multidisciplinary approach to sports science.

UNIT-III

9 Hours

- Application of Sports Science: applications of various sub-disciplines of Sports and Exercise Science
- Implications of non-Introduction of Sports Science subject in majority of Universities.
- Role of sports science in broadcasting of sports, Sports talent selection, Role of sports science in the promotion of health, fitness & wellness.

UNIT –IV

9 Hours

- Origin of Sports: Historical prospective and modern trends in sports, Games, Sports as man's cultural heritage
- Concept of Olympic Movements, the ancient Olympic Games and the Modern Olympic games and its movement.
- Aim and symbols of the Olympic movement.
- Classification of Sports- Team Games, Individual Games, Dual Sports, Contact Sports and Recognized sports.

UNIT –V

9 Hours

- Introduction to Sports Federations: Local, State, National and International Bodies of Sports.
- Organisation of Sports Competitions- Intramural, Interscholastic, Intercollegiate, Interuniversity, Inter-district, Inter State, regional, National Sports, International Sports Asian, Commonwealth and Olympic Games
- Sports and Youth Development: Contribution of Sports to youth Development, Sports Authority of India and state sports Authorities: Nehru Yuvak Kendra and Sports,
- Role of Sports Hostels, Sports Schools, Sports Institutions, Sports Universities, Corporate sports including contribution of defense forces in sports development.

Suggested Readings:

1. Gupta, Rakesh (2013), Health and Physical Education, Pinnacle India Education Publisher, New Delhi.
2. Kamlesh ML (2013). Physical Education and Exercise Sciences: An Objective Approach. Friends Publication. Delhi.
3. Lumpkin, A. (2007). Introduction to Physical Education, Excises Science and Sports Studies, McGraw Hill. New York, USA.
4. Uppal AK & Gautam GP (2008). Health and Physical Education. Friends Publication. New Delhi.
5. Vanaik A. & Tyagi, Sarita (2018). Encyclopedia of Olympic Movement, Friends Publication. New Delhi
6. Vanaik A. (2005) Sharirik Shiksha ke Maulik Adhar, Friends Publication. New Delhi
7. Wuest DA and Bucher CA (2003). Foundations of Physical Education Exercise Science and Sports.
8. McGraw Hill Companies, Inc., New York, USA
9. Zeigler EF (2007). History and Status of Physical Education and Educational Sports. Sports Education, New Delhi

SEMESTER-I

BSS 102: COMPUTER APPLICATION AND SPORTS TECHNOLOGY

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours= 45 Hours

Learning Outcomes:

Students will be able to:

1. Enhance and develop the knowledge of technology in sports & digitalization for achieving efficiency.
2. Develop and enhance the knowledge and practices of sports digitalization.
3. To provide knowledge of computer application in games & sports.

UNIT-I

9 Hours

- To demonstrate an ability to work on Microsoft Word: Basics of using word, navigating a word document, creating and formatting a letter, creating and formatting a simple report, creating and using a table.
- To demonstrate an ability to work on Microsoft PowerPoint: Basics of using PowerPoint, designing the PowerPoint, adding graphics, animation and sound, creating slide transitions
- To demonstrate an ability to work on Microsoft Excel: Basics of using excel, editing tables, working with formula and functions, formatting cells, sorting and filtering data
- To draft an email: Basics of email

UNIT-II

9 Hours

- Introduction to Sports Technology & Digitalization: Components of sports included in digitalization technology in Sports
- Various Stakeholders of Sports and their roles, Stakeholders of sports, Current methodology, Lack of connectivity in sports industry Lack of dissemination of information, advantage of digitalization for sports.
- Technological revolution in Sport, Tools and Techniques: Hawk-Eye Technology, Sport Specific Technology
- Computer Software, Cloud Based Sports Technology etc.) and Role of Digitalization in successful implementation of Khelo-India Scheme.

UNIT-III

9 Hours

- Technology and Online Athlete Marketing: Introduction, advantages of creating sports profile, media and sources of creating sports profile
- To demonstrate an ability to showcase Sports Achievements: Introduction, basics of Hall of Fame, Awards and Accolades and Sports Certification

UNIT-IV

9 Hours

- To demonstrate an ability to create Sports CV: Basics of Sports CV, Sections of Sports CV, OnlinePromotion of Sports CV
- Understanding of Content Management System (CMS): Basics of CMS, advantages of CMS Social Media Integration
- Basics of Social Media Outreach and its Advantages

UNIT-V

9 Hours

- Games Management System (GMS): Introduction, use of advance System and digitalization forconducting sports events for various stakeholders
- Advancement in sportstech, Usage Massage gun and technology used,
- AI (Artificial Intelligence) used in sports, Technology used in compression wear, Advancement in wearable technology.

Suggested Readings:

1. Cabri, J., J. Barreiros and P. Pezarat- Correia Eds. (2015). Sports Science Research andTechnology Support. Springer International publishing, Switzerland.
2. Fridell, R. (2009). Sports Technology. Lerner publishing Inc. North Minneapolis, Minnesota,USA.
3. Thomson, G. (2001). Sports Technology. Nelson Thomson Learning, Southbank, Victoria,Australia.
4. Fuss, F.K., A.Subic, M. Strangwood and R.Mehta (2013). Routledge handbooks CRC Press,Taylor & Francis Group, London, U.K.

SEMESTER I
BSS 103: INTRODUCTION TO ANATOMY AND PHYSIOLOGY

Maximum Marks = 100 Marks

Time Allowed= 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. Use anatomical terminology to identify and describe locations of major organs of each system covered.
2. To provide students with the basic knowledge of anatomical structures & functions of human body.
3. Understand the various physiological systems of the body
4. Understand the functions of various physiological systems.

UNIT –I

6 Hours

- Introduction to Anatomy and Physiology: Meaning and definition of anatomy & physiology,
- Body structure & functions from cell to organ systems, tissues and membranes
- Intracellular and extracellular fluids, homeostatic mechanisms.

UNIT –II

10 Hours

- Skeletal system and Muscular system: Classification, structure, functions
- Properties of bones, types of bones, types of joints, factors effecting growth and maintenance of bones
- Muscular System: Classification, structure, functions, and properties of muscle, muscular contractions.

UNIT –III

10 Hours

- Cardiovascular system: Structure of heart, Cardiac cycle, blood pressure, heart rate and cardiac output, Structure & functions of blood, athlete heart
- Respiratory System: Basics of respiratory System- structure and function; regulation of fluid oxygen and carbon dioxide concentration, Oxygen debt, VO₂ max and its significance in sports and exercise.

UNIT –IV**9 Hours**

- Digestive System: Basics of digestive system; its structure and functions, protective and regulatory functions
- Metabolism and body temperature maintenance
- Integumentary System: Basics of integumentary system; structures and functions.

UNIT –IV**10 Hours**

- Nervous system: Structure of brain, spinal cord, types of neurons, sympathetic and autonomic nervous system, reflex action
- Endocrine system: Basics of endocrine system; role of various endocrine glands, regulation of hormone secretion
- Urinary System: Basics of urinary system; its structure & function, structure & function of Kidneys.

Suggested Readings:

1. Jain AK(2002). Anatomy & Physiology for nurses. Arya publishers, Delhi.
2. Prives M and others (2004). Human Anatomy, Vol.I & II Paragon, Delhi.
3. Sherwood, L.(2016) Human Physiology: From Cells to Systems, Wadsworth Publishing Company, Belmont, California, USA.
4. Seeley & Others (2008). Anatomy & Physiology. McGraw Hill, Boston, USA.
5. Tortora (2003). Principles of Anatomy & Physiology, John Willy & Sons, New York, USA.
6. William CS (2000). Essentials of Human Anatomy & Physiology, Benjamin Cummings, San Francisco, California, USA.

SEMESTER – I

BSS 104: COMMUNICATION SKILLS

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. Apply effective communication skills in personal and professional settings
2. Communicate effectively orally and in writing
3. Understand the methods of communication at various level

UNIT –I

10 Hours

- Introduction of Communication Skills: Goals, Objective, approach and expectations
- Listing and introduction to communication skills, identification of individual areas of strength and weakness with respect to communication psychology, identifying areas that comprise effective communication
- Identification of personal circle of excellence, individual report generation to identify current pitfalls & limiting patterns.

UNIT –II

9 Hours

- Advanced Reading: Understanding business-related correspondences; Comprehension of factual material; Interpreting Visual Information: Tables, Graphs, Charts; Speed Reading.
- Speaking: Business Etiquettes; Impromptu Speech; Debate, Presentations, Barriers in Speaking, Questioning skills
- Listening: Business-related Conversations; Exercises

UNIT –III

10 Hours

- Written Communication: difference between informal and formal writing, report/essay writing process (format of academic report, sentence structure, paragraph structure
- Use of punctuation and rules of capitalization in English), note-taking, Business Correspondences (Letter, Fax, e-mail) for making enquiries
- Placing orders, asking & giving information, capturing MOMs, resume writing, registering complaints, handling complaints

UNIT –IV

8 Hours

- Presentation Skills: Greeting and introducing, Preparing for and Facing a Job Interview, Bodylanguage during presentation
- Vendor handling, Drafting Purchase Requisition Format
- Purchase Order, Work Order, Bills.

UNIT –V

8 Hours

- Conflict Management: Introduction to conflict management, level of conflict, managing conflict.
- Time Management: Concept, Importance & need, steps towards better time management.
- Projecting a Better Social Image: Definition & importance of social image, grooming basics, public speaking, voice modulation, body language

Suggested Readings:

1. Adler, M.J. (1997) How to Speak How to Listen. Simon & Chuster, Inc. New york, USA.
2. Carnegie, D. (2016) How to Win Friends and Influence People. Finger Print, New Delhi.
3. Loundes, L. (2014) how to Talk to Anyone. Harper Element, Lambeth, London, UK.
4. Gallo, C. (2014) Talk Like TED: The 9 Public Speaking Secrets of the World’s Top Minds. MacMillan Publishing, New Delhi.
5. Giblin, L. (2012). Skill with People. Maanu Graphics, New Delhi.
6. Murphy, R. (2004). English Grammar in Use. Cambridge University Press, Oxford, U.K.
7. Noonan, P. (2010) On Speaking Well : How to Give a Speech with Style, Substance and Clarity.
8. Patterson, K., J. Grenny, R. McMillan and A. Switzler (2017). Crucial Conversations: Tools for
9. Talking When Stakes are High. McGraw hill Education, New Delhi.
10. Sherman, L. (2014). Skills in Counselling and Psychotherapy with Children and young People. Sage Publications Limited, New Delhi.

SEMESTER-I

BSS 105: FOUNDATION OF SPORTS SCIENCE AND SPORTS (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. Pictorial demonstration of scientific advancement in sports.
2. To demonstrate knowledge of health and safety codes while working in the labs.
3. To demonstrate the conduct of intramural sports competitions.
4. To identify sports anthropometric equipment namely stadiometer, weighing machine, sliding caliper, steel tape, spreading caliper, and skinfold caliper.
5. To identify sports biomechanical equipment namely a High-speed video camera, kinematic system.
6. To identify sports physiology equipment namely B.P. apparatus, stethoscope, Leg & back Dynamometer, and Grip Dynamometer.
7. To demonstrate the general scheme of conduct of an athletic meet.
8. Enlist the norms of sports talent identification models.
- 9.

Suggested Readings:

1. ACSM (2006) Exercise Physiology and Health Related Physical Fitness Assessment Manual. Lippincott, London, U.K.
2. American College of Sports Medicine (1998), Fitness Book. Human Kinetics, Urban Champaign, Illinois, USA.
3. Kansal, D.K. (2017) Test Evaluation, Accreditation Measurements & Standards, K.K Publications, New Delhi (In Press).
4. Kansal , D.K. (2008) Textbook of applied Evaluation Measurement and Sports Selection. Sports and Spritual Science publications, New Delhi.
5. Singla SP and P. Malhotra (2003) Anthropometry , Human Biology Dept. PBI University Patiala.

SEMESTER-I

BSS 106: COMPUTER APPLICATION AND SPORTS TECHNOLOGY (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. Online Document Management and Presentation
 - i. Microsoft Word Basics
 - ii. Microsoft PowerPoint Basics
 - iii. Microsoft Excel Basics
2. Emailing
 - i. Send Email and check status
 - ii. Email Statuses
 - iii. Spamming
 - iv. Send attachments
3. To create sports profile online of Individual and Institution user types on Sports Management Platform (SMP)
 - i. Simple registration process for athletes & other institutions
 - ii. Registration through social media
 - iii. Basic details
 - iv. Advance details
 - v. Dashboard and its features
4. To create gallery and other solutions for uploading sports specific photos and managing sports achievements
 - i. Image Gallery
 - ii. Hall of fame
 - iii. Awards and accolades
 - iv. Sports Certifications
5. To create connectivity between users like individuals and institutions
 - i. Search Users and Send connection request

- ii. Accept connection request
 - iii. View connected user profile
6. Showcasing capabilities of individuals and institutions for sports data
- i. Public Profile (Content Management System) creation and uses
 - ii. Online Sports CV management
7. Showcasing of online Sports Games Management System (GMS)
8. Social media understanding with online examples (digital and social media marketing)

Suggested Readings:

1. Cabri, J., J. Barreiros and P. Pezarat- Correia Eds. (2015). Sports Science Research and Technology Support. Springer International publishing, Switzerland.
2. Fridell, R. (2009). Sports Technology. Lerner publishing Inc. North Minneapolis, Minnesota, USA.



SEMESTER-I

BSS 107: INTRODUCTION TO ANATOMY AND PHYSIOLOGY (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practicals:

1. Identify different body organs and systems on the human model/chart.
2. Identify different muscles and bones of the human model/chart.
3. Demonstration of skeleton articulated and disarticulated.
4. Demonstration of measuring pulse rate.
5. To measure blood pressure using sphygmomanometer.
6. Identification on blood cells from slides.
7. Estimation of Hemoglobin, total Red Blood Cells and total White Blood Cells (demonstration only).
8. Estimation of blood grouping, bleeding and clotting time (demonstration only).

Suggested Readings:

1. Jain AK(2002). Anatomy & Physiology for nurses. Arya publishers, Delhi.
2. Moried EN(2007). Essential of Human Anatomy & Physiology. Ed.8th dorling Kindersley, India.
3. Prives M and others (2004). Human Anatomy Vol.I & II Paragon, Delhi.
4. Sherwood, L.(2016) Human Physiology: From Cells to Systems,
5. William CS (2000). Essentials of Human Anatomy & Physiology, Benjamin
6. Wilson and Waugh (1996). Anatomy & Physiology in Health & Illness. Churchill Livingstone.

SEMESTER-I

BSS 108: COMMUNICATION SKILLS (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practicals:

1. To demonstrate ability to read and interpret given comprehension.
2. Pronunciation practice: Stress and syllables; word stress; contracted forms; utterance stress; uses of a dictionary for pronunciation practice
3. To demonstrate and execute short speech on the given subject.
4. To participate in a debate on the given topic.
5. To draft an informal letter, application, and official letters of request and denial.
6. To draft notice
7. To draft Advertisement
8. To write professional CVs, covering letters and applications for jobs

Suggested Readings:

1. Luxmoore, N. (2014). Essential Listening Skills. Jessica Kingsley Publishers, Philadelphia, Pennsylvania, USA.
2. Murphy, R. (2004). English Grammar in Use. Cambridge University Press, Oxford, U.K.
3. Noonan, P. (2010) On Speaking Well : How to Give a Speech with Style, Substance and Clarity.
4. Patterson, K., J. Grenny, R. McMillan and A. Switzler (2012). Crucial Conversations: Tools for Talking When Stakes are High.
5. Sherman, L. (2014). Skills in Counselling and Psychotherapy with Children and young People. Sage Publications Limited.

SEMESTER-I

BSS 109: SPORT OF CHOICE: INDIVIDUAL GAMES (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 50 Marks

Practical:

1. Introduction General Introduction of Badminton, Tennis and Table Tennis.
2. Historical Development and Modern Trends (National and International Level)
3. Organizational Structure (State, National and International Level)
4. Playfield Technology – Marking and Construction of the playfields.
5. Basic skills and techniques of above games.
6. Rules and their interpretation.
7. Concept of Conditioning exercises, warming up and cooling down and its effects.
8. Role of weight training in above games.
9. Techniques of Coaching – Pep talk, Pre, during and Post match coaching.
10. Introduction to Physical and Motor Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility. Motor Fitness Components Testing of above components.

Suggested Readings:

1. Chauhan VS (1999). Khel Jagat Main Athletics. A.P. Pub, Jalandhar.
2. Gerb Amato, DA ATC et all (2002). Practical Exam Preparation Guide of Clinical Skills of Athletic Training. Slack Incorporated. 1st ed., USA.
3. Gothi E (2004). Teaching & Coaching Athletics. Sport Pub., New Delhi.
4. Gupta R. (2004). Layout & Marking of Track & Field. Friends Publications. India. New Delhi.
- Handbook-Rules and Regulation. International Athletic Federation (2010).
5. Kumar, Pardeep. (2008). Historical Development of Track & Field. Friends Publication. New Delhi.
6. Maughan, R. and Gluson, M. (2004). The Biomechanical Basics of Athletic Performance. Oxford University Press, U.K.
7. Prentice, W. and Arnhem, D. (2005). Arnhem's Principles of Athletic Training 12th Ed. McGraw Hill. In place of Knight (1998).

SEMESTER I

BSS 110: COUNCIL WORK (P)

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 requires 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

BSS 201: SPORTS ANTHROPOMETRY AND BODY COMPOSITION

Maximum Marks = 100 Marks

Time Allowed= 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

The students will be able to:

1. Enhance knowledge and understanding of concepts of anthropometry and body composition.
2. Understand the implications of anthropometry
3. Demonstrate knowledge of different methods of somatotyping
4. Enhance knowledge of different methods of studying body composition

UNIT –I

7 Hours

- Introduction to anthropometry: Meaning and definition of Anthropometry, sports anthropometry
- Kinanthropometry, landmarks, types of anthropometric measurements
- Applications of sports anthropometry in sports promotion.

UNIT –II

8 Hours

- Growth, Development, and Maturity: Anthropometry for understanding growth & development
- Anthropometry for the study of distance and velocity curves of growth; age changes, growth percentiles of Body height and Weight
- Anthropometric Characteristics of Olympic athletes and their significance.

UNIT –III

10 Hours

- Physique Development: Anthropometry and human physique
- Somatotyping; anthropometric method of somatotyping, Apple and Pear shapes, sex differences in physique
- The role of anthropometric somatotyping in different categories of sports
- Differences in the anthropometric status of different sportspersons; Heath-Carter Method of somatotyping, somato-charts of the different physique of Olympians.

- Introduction, the meaning & definition of body composition,
- Anthropometric methods of studying body composition in sportspersons
- Finding percentage body fat, lean body Mass from skinfold measurement.
- Body composition of Sports Persons; differences in Body composition of different sportspersons
- The significance of body composition in different categories of sports, general differences in the body composition of male and female.

- BMI: Introduction, role of BMI in Sports, BMI charts, Waist-hip ratio, formula of BMI and Waist- Hip Ratio, Role of Genes in selection of sports.
- Role of landmarks in Anthropometry- Vertex, Glabella, Opisthocranion, Gnathion, Gonon, Nasion , Subnasle, Tragion, Supersternale.

Suggested Readings:

1. Heath, B. H. and J.E.L. Carter (1980). Somatotyping Method. San Diego State University press, San Diego, California, USA.
2. Kansal, D. K. (2017) A Textbook of Sports Science: Test, Evaluation, Accreditation Measurements and Standards. K. K. Publications, New Delhi, In Press.
3. Olds, K. and K. Norton (2007) Anthropometrica: A Textbook of Body Measurement for Sports and health Education. CBS Publishers and Distributors, New Delhi.
4. Singh, S. P. and P. Malhotra (1989). Kinanthropometry. Lunar Publications, Patiala, India.
5. Tanner, J. M. (1964). The physique of the Olympic Athlete. George Allen and Unwin Limited, London, U.K.
6. Wiener, J. S. and J. A. Lourie (1981). Practical Human Biology. Academic Press, London, U.K.

SEMESTER II

BSS 202: SPORTS AND EXERCISE NUTRITION

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

1. To acquaint student with the knowledge of basic nutrition and nutrition in Sports & Exercise and other related aspects important to sports persons.
2. The student would be able to apply the knowledge of nutrition in day to day life and in sports and training. Such core knowledge and skill helps to create a strong foundation to engage human subject of all ages, sexes and abilities.

UNIT –I

6 Hours

- Introduction to basic concepts in nutrition-nutrients of physiological significance and their functions
- Sources of food and requirements in normal health conditions
- Nutritional requirements for sports and for an exercising person.

UNIT –II

8 Hours

- Carbohydrates, Protein, Fat – Meaning, classification and its function
- Role of carbohydrates, Fat and protein during exercise
- Vitamins, Minerals, Water – Meaning, classification and its function,
- Role of hydration during exercise, water balance, Nutrition – daily caloric requirement and expenditure.

UNIT –III

10 Hours

- Enzymes definition, classification of enzymes with examples, factor affecting enzyme action
- Dehydration & fluid balance, symptoms and prevention of dehydration
- Sports foods: Sports drinks (Hypo, Iso and Hypertonic drinks for hydration, energy and recovery drink)
- Sports energy bars, and sports gels.

UNIT –IV**10 Hours**

- Energy metabolism- BMR, RMR, energy expended on physical activity,
- Energy requirements of specific sports groups, Energy cost of aerobic and anaerobic activities
- Concept of energy balance in maintaining weight.
- Chronic dieting and eating disorder,
- Female athlete triad, sports anemia, nutrient as ergogenic aids for sports and exercise.

UNIT –V**11 Hours**

- Planning balanced meal, Basic food groups
- Concept of balanced diet, General and specify dietary guidelines in planning meals for children, adolescents, adult men and women and elderly.
- Nutritional considerations for sports/exercising persons (endurance and strength sports/ exercise training) as compared to normal, active person meals during training
- Pre competition meal, during event and post competition meal

Suggested Readings:

1. Antoni, J. et al, Editors (2008). Essentials of Sports Nutrition and Supplements. Humana Press, USA.
2. Benardot, D. (2005). Advanced Sports Nutrition. Human Kinetics, USA.
3. Brown Judith E (2002). Nutrition Now. Canada Pub. Peter Marshal
4. Caliendo Mang Alica (1981). Nutrition and Preventive Health Care McMillan Publication Co.
5. Clark, N. (2008). Sports Nutrition. 4th Ed. Human Kinetics, USA.
6. Eberle, S.G. (2007). Endurance Sports Nutrition. Human Kinetics, USA.
7. Finic HH et al (2006), Practical Applications in Sports Nutrition J & B Publisher, USA.
8. Lal PR (2009) Handbook of Sports Nutrition, Friends Publication.
9. McArdle, W.d. & Katch, V.L. (2008). Sports and Exercise Nutrition. 3rd Ed. LippincottWilliams
10. and Wilkins, USA.
11. Meyer, D.E.L. (2006). Vegetarian Sports Nutrition. Human Kinetics Publishers, USA.
12. Whitney E. and Rolfes S.R. (2005). Understanding Nutrition. Thomson Wadsworth. Belmont. California. U.S.A.

SEMESTER II

BSS 203: HEALTH EDUCATION

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. Understand the concept of health and develop a personal view of health
2. Understand knowledge of basics of first-aid
3. Understand the role of national and international organizations in health promotion
4. Understand the concepts of stress management
5. The Students will be able to adopt knowledge and practices to lead a healthy life and promote and maintain healthy practices and assist the practices of preventive medicine. Such core knowledge and

UNIT –I

9 Hours

- Introduction: Definitions of health & health education, aims of objectives of health education,
- Dimensions of health and their interrelationships, factors influencing health and health education; difference between teaching health and health education.
- Influence of media on health education, importance of health education for all, Hygiene: personal hygiene, food hygiene, environmental hygiene-meaning, need and importance; associated practices related to promotion of health

UNIT –II

9 Hours

- Communicable and Non-communicable diseases: meaning, distinction between communicable and non-communicable diseases.
- Communicable diseases- their mode of spread and prevention of diarrhea diseases, typhoid, malaria, STD Respiratory disease
- Non-communicable diseases- causes and prevention of diabetes, CVD, cancers, renal diseases and respiratory diseases.

UNIT –III

9 Hours

- Contemporary health problems of college youth- Alcohol, drugs, use of tobacco (chewing, sniffing, smoking)- their harmful effects substance abuse management Population education- the importance of small family, methods of controlling conception, oral rehydration therapy
- National health programme- components of existing national health programs.

UNIT –IV

9 Hours

- Introduction to first aid: definition of first aid, roles, and responsibilities of the first-aid provider, first-aid for minor wounds, burns, dislocated or knocked out tooth, poisoning, drowning, fractures, sprains, strains, and dislocation.
- First -aid for snake bite, heat stroke, heat exhaustion and hypothermia, DRABCH of first aid, Steps to CPR.
- Role of organizations in health promotion: WHO, UNICEF, Red Cross, Indian Health Services (IHS) - their constitution and role in promoting health.

UNIT –V

9 Hours

- Stress Management and Wellness: Meaning and Definition of stress, management, fitness & wellness.
- Components of wellness; Measurement and evaluation of stress and wellness; Health wellness counselors
- Types of physical activity for stress management and wellness; the distinction between stress and anger; Anger Management, Meditation; Recreation and stress management.

Suggested Readings:

1. Anspaugh, D and G. Ezell (2012) Teaching Today's Health. Pearson Denjamin-Cummings Publishing Company, San Francisco, California, USA.
2. Donatelle RJ (2005). Health the Basics. Sixth Edition. Oregon State University.
3. Floyd PA SE Mimms and C Yeilding (2003). Personal Health: Perspectives and Lifestyles. Thomson Wads-Worth. Belmont. California. USA.
4. Hales D (2005). An Invitation to Health. Thomson-Wadsworth, Belmont. California. USA.
5. Khatri, H.L. and S. Lata (2015). Health and Physical Education. Paragon International Publishers, New Delhi.
6. Park K (2007). Park's Text Book of Preventive & Social Medicine. Banarsi Das Bhanot & Company. Delhi.
7. Snehlata (2006). Shareer, Vigyan Evam Swasthya Raksha. Discovery Pub. House, New Delhi.

SEMESTER II
BSS 204: SPORT DIGITALIZATION AND DATA ANALYTICS

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

The students will be able to:

1. Demonstrate knowledge of different aspects of sports management
2. Conduct motor skill assessment using a digital platform
3. Demonstrate an understanding of digital fan base management system
- 4.

UNIT –I

6 Hours

- Sports Digitalization: Introduction, Application, Basics of Cloud, Desktop Application, App, Software as a Service (SAAS)
- Influence of Information Technology in Sports Development: Application of Information
- Technology in Sports Science and Management, General idea of how information technology can result in positive change in the nature of management practices in sport

UNIT –II

11 Hours

- Cloud based Sports Event Management: Introduction, Drawbacks of Manual Sports Event Management by Sports Stakeholders, Advantages of Digital Presence of Sports Stakeholders
- Sports Ecosystem Digital Transformation: Introduction, Sports Ecosystem in India and digitaltransformation, Stakeholders and Components and role of digitalization
- Cluster/Branch Level Sports Event Management using digital platform: Introduction, Definition and Meaning of Cluster/Branch Level Sports Event Management,
- Process of creating hierarchical structure by creating various levels in which the higher-level user can monitor activities and view details at lower level
- Importance of Digitalization for Managing Cluster/Branch Level Event Management

UNIT –III

8 Hours

- Schedule Management: Introduction, importance of scheduling sports activity online, ways by which scheduling can be done
- Motor Skill assessment: Need for Motor Skill Assessment, Using Cloud based solution for Motor Skills Assessment, Stakeholders and their roles, Benefits for players, instructors and institutions.
- Leaderboard: definition and uses of leaderboard, definitions and uses of individual and team leaderboard

UNIT –IV

11 Hours

- Method of Conduct of Sports Event and Data Analytics: Definition and Meaning, Types of Sports Events, Events Planning & Marketing,
- Online Teams and Trials Management, Online Tournament Management
- Online Ladder System Management: Definition and uses of Ladder System, definition and uses of Individual Ladder System and Team Ladder System, Online Management of Ladder System
- Online Leaderboard Management: Definition and uses of Leaderboard, definitions and uses of Individual and Team Leaderboard, Online Management of Leaderboard
- Data Interpretation for Performance review

UNIT –V

9 Hours

- Fan Base Engagement: Ways by which Social Media has an influence in Sport,
- Sports Promotion through different Social Media sources, Fan base Management System,
- Impact of Social Media on Sports Community, Creating and Marketing Sports Contests
- Portfolio Management: Introduction, Sections of Portfolio, Portfolio showcasing and promotion Project on Conduct of a Tournament Event Online

Suggested Readings:

1. Ammon R., Southall RM and Blair DA (2003). Sports Facility Management. Fitness Information Technology Publishers. West Virginia. USA.
2. Bucher C (1979), Administration Physical Education & Athletic Programs. McGraw Hill. New York. USA.
3. Bucher, CA and ML Krotee (2001), Management of Physical Education and Sport with Powerhub: Health and Human Performance McGraw Hill Higher Education, New York, USA.
4. Chakraborty S (1998), Sports Management. Sports Publications. Delhi
5. Gupta R. (2008). Techniques of Supervision Friends Publication. New Delhi.
6. Kamlesh ML (2000). Management Concept in Physical Education and Sport. Metropolitan Book Co. Pvt. Ltd. New Delhi.

7. Krotee, M. and Bucher, C. (2006). Management of Physical Education and Sports. McGrawHill, USA.
8. Masteralexis LP, Barr C and Hums M (2008). Principles and Practice of Sports Management. Jones and Bartlett Publishers. USA.
9. Parks, J., Quarterman, J. and Thibault, L. (2006) Contemporary Sports Management. HumanKinetics, USA.
10. Sivia GS (1991). Sports Management in Universities. A.I.U. Deen Dayal Upadhyaya Marg. New Delhi.

SEMESTER II
BSS 205: SPORTS ANTHROPOMETRY AND BODY COMPOSITION (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical-

1. To measure BMI.
2. To measure body circumferences: upper arm thigh and calf.
3. To measure body fat percentage: biceps, triceps.
4. To measure hand strength
5. To measure back strength
6. To locate landmarks: vertex, nasion, and glabella.
7. To measure sitting height through anthropometric rod.
8. To identify anthropometric instruments with their name.

Suggested Readings:

1. Heath, B. H. and J.E.L. Carter (1980). Somatotyping Method. San Diego State University press, San Diego, California, USA.
2. Kansal, D. K. (2017) A Textbook of Sports Science: Test, Evaluation, Accreditation Measurements and Standards. K. K. Publications, New Delhi, In Press.
3. Olds, K. and K. Norton (2007) Anthropometrica: A Textbook of Body Measurement for Sports and health Education. CBS Publishers and Distributors, New Delhi.
4. Singh, S. P. and P. Malhotra (1989). Kinanthropometry. Lunar Publications, Patiala, India.
5. Tanner, J. M. (1964). The physique of the Olympic Athlete. George Allen and Unwin Limited, London, U.K.
6. Wiener, J. S. and J. A. Lourie (1981). Practical Human Biology. Academic Press, London, U.K.

SEMESTER II

BSS 206: SPORTS AND EXERCISE NUTRITION (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. Determination of energy expenditure based on participation time in different sports and exercise activity.
2. To perform calorie calculation using Harris Benedict equation.
3. Calculating a day's energy intake and energy expenditure and evaluating the state of energy balance.
4. Planning a carbohydrate-rich snack/meal and protein-rich snack/meal.
5. Planning a pre-event meal and liquid meal.
6. Planning a post –event meal, high energy meal.
7. Planning meal for Weight lifters, Long distance runner, and Short distance runners.
8. To calculate estimated energy requirement (EER) for self and to demonstrate the percentage of carbohydrate, protein and fat (CPF) intake.

Suggested Readings:

1. Antoni, J. et al, Editors (2008). Essentials of Sports Nutrition and Supplements. Humana Press,USA.
2. Benardot, D. (2005). Advanced Sports Nutrition. Human Kinetics, USA.
3. Brown Judith E (2002). Nutrition Now. Canada Pub. Peter Marshal
4. Caliendo Mang Alica (1981). Nutrition and Preventive Health Care McMillan Publication Co.
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10. and Wilkins, USA.
11. Meyer, D.E.L. (2006). Vegetarian Sports Nutrition. Human Kinetics Publishers, USA.
12. Whitney E. and Rolfes S.R. (2005). Understanding Nutrition. Thomson Wadsworth. Belmont.California. U.S.A.

SEMESTER II
BSS 207: HEALTH EDUCATION (P)

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

Time Allowed = 3 Hrs.

Practical:

1. To demonstrate artificial breathing method : CPR
2. To prepare and demonstrate health habits and common health skills list.
3. To demonstrate Immunization Schedule.
4. To prepare a general health education practice chart.
5. To demonstrate measures for substance abuse control
6. To visit WHO office in Delhi for learning health promotion activities.
7. To assess Hypokinetic diseases
8. To demonstrate and explain the:
 - i. Benefits of an active lifestyle and regular exercise.
 - ii. Importance of safety measures
 - iii. Harmful effects of smoking, drinking, and steroids

Suggested Readings:

1. Anspaugh DJ Ezell G and Goodman KN (2006). Teaching Today's Health. Mosby Publishers.Chicago. USA.
2. Dewan AP (1996). School Health Manual. Nature Cure and Yoga Health Centre. New Delhi.
3. Dixit Suresh (2006). Swasthya Shiksha. Sports Publication. Delhi.
4. Hales D (2005). An Invitation to Health. Thomson-Wadsworth, Belmont. California. USA.
5. Donatelle RJ (2005). Health the Basics. Sixth Edition. Oregon State University.
6. Snehlata (2006). Shareer, Vigyan Evam Swasthya Raksha. Discovery Pub. House s. New Delhi.
7. Uppal AK & Gautam GP (2008). Health & Physical Education. Friends Publication. New Delhi.
8. Park K (2007). Park's Text Book of Preventive & Social Medicine. Banarsi Das Bhanot &Company. Delhi.

SEMESTER II

BSS 208: SPORTS DIGITALIZATION AND DATA ANALYTICS (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. To demonstrate the process of schedule management
 - i. Creating schedule
 - ii. Invitation for schedule
 - iii. Schedule dashboard
2. To demonstrate the ability to work on Motor Skills Assessment
 - i. Assessment activation process.
 - ii. Process of creating Assessment batches of Students and assign to Instructor.
 - iii. Take assessment by an Instructor.
 - iv. Publish result to display Assessment result on Students panel.
 - v. Re-allocate batches to the other Instructors.
 - vi. Calculate Students Results after Task Finished by assigned Instructor (entering values of parameters by Instructors).
 - vii. Take assessment by Virtual Instructor.
 - viii. Create self-assessment by an Instructor.
 - ix. Take self-assessment by a virtual Instructor.
 - x. Assessment notifications
 - xi. Report Card
3. To demonstrate the process of teams and trials management
 - i. Process of conducting trial.
 - ii. Creating teams after trial process.
 - iii. Creating teams without trial process (Direct team creation)
 - iv. Creating Virtual Teams
4. To demonstrate the digitalization process for conducting the tournament event
 - i. Create Tournament Event
 - ii. Creating different format tournaments like Elimination, League, Time Based and judgment Based Tournaments
 - iii. Conduct individual and team games
 - iv. Practical on process of schedule creation, draw creation, pool creation, score update, match results publish and tournament results automation.
 - v. Practical on Football Elimination and League Tournament Management with online score update

5. To demonstrate the ability of managing cluster level games online
 - i. To demonstrate the setup of Cluster
 - ii. To demonstrate the skill of creating hierarchical structure with the provision of monitoring by the higher-level user
 - iii. Create Teams on Cluster Level
 - iv. Showcasing of Cluster
6. To demonstrate the ability of social media sharing of different articles, content & videos on Sports Community
 - i. Create Posts and Articles
 - ii. Social Sharing of Articles and Posts
 - iii. Showcasing other features like Like, Dislike, Report etc.
7. To demonstrate the ability of creating and marketing Sports Contests.
8. To demonstrate different sections of Portfolio for individuals and institutions.

Suggested Readings:

1. Ammon R., Southall RM and Blair DA (2003). Sports Facility Management. Fitness InformationTechnology Publishers. West Virginia. USA.
2. Bucher, CA and ML Krotee (2001), Management of Physical Education and Sport with Powerhub: Health and Human Performance McGraw Hill Higher Education, New York, USA.
3. Chakraborty S (1998), Sports Management. Sports Publications. Delhi
4. Parks, J., Quarterman, J. and Thibault, L. (2006) Contemporary Sports Management. HumanKinetics, USA.

SEMESTER II
BSS 209: SPORT OF CHOICE (P): TEAM GAMES

Maximum Marks= 50 Marks
Semester Exams: 50 Marks

Time Allowed = 3 Hrs.

Practical:

1. Introduction General Introduction of Football, Hockey, Basketball, Volleyball, Handball and Kabaddi .
2. Historical Development and Modern Trends (National and International Level)
3. Organisational Structure (State, National and International Level)
4. Playfield Technology – Marking and Construction of the above games.
5. Basic skills and techniques of the above games.
6. Rules and their interpretation.
7. Concept of Conditioning exercises, warming up and cooling down and its effects.
8. Role of weight training in above games.
9. Techniques of Coaching – Pep talk, Pre, during and Post match coaching.
10. Introduction to Physical and Motor Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility. Motor Fitness Components Testing of above components.

Suggested Readings:

1. Downey, J. (1990). How to Coach Badminton. Collins Publishers, London, U.K.
2. Gupta, R.K. and S. Tyagi (2008). Textbook on teaching skills and Prowess. Friends Publications, New Delhi.
3. Fox EL (1998) Physiological basis of Physical Education and Athletics. Brown Pub.
4. Kamlesh, M.L. (2003) Foundation of Sports and Field Manual. Sports Publications, New Delhi.
5. Manghan, R. and M. Gulshan (2004). The Biomechanical basis of athletic Performance. Oxford University, Press, U.K.
6. Renwick, GR (2001) Play Better Athletics. Sports Publications, Delhi.

SEMESTER II

BSS 210: COUNCIL WORK (P)

Maximum Marks = 50 Marks
Semester Exam = 50 Marks

Time Allowed = 3 Hrs.

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

- 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 requires 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

BSS 301: TEST, MEASUREMENTS AND EVALUATION IN SPORTS

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Student will be able to:

- Develop concept of test, measurement, evaluation and relationship among them.
- Develop understand of variety of test for evaluating the performance of students.
- Develop concept of somato typing and how different anthropometric measurements can be recorded.
- Develop understanding to how different scale and can be used for gathering information with regarding to different characteristics.

UNIT-I

7 Hours

- Definition of Test, Measurement and *Evaluation. Importance* of Test Measurement and Evaluation in Sports science, Physical Education and Sports.
- Relationship among Test, Measurement and Evaluation, Objectives of Test, Measurement and Evaluation.
- Types of Tests and their uses. Criteria of Test Selection- Scientific authenticity, Administrative feasibility and Educational application.

UNIT-II

12 Hours

- Concept of Physical Fitness, Motor Fitness, General Motor Ability and Motor Educability. Components of Physical Fitness, Motor Fitness, General Motor Ability and Motor Educability.
- Tests of Cardio – vascular Efficiency (Harvard Step Test and Cooper 12 - min. Run / Walk Test)
- Motor Fitness Tests (AAHPERD Youth Fitness Test, JCR Test, Indiana Motor Fitness Test, Canada Fitness Test)
- General Motor Ability Test- Barrow Motor Ability Test and Scott Motor Ability Test.
- Strength Test- Roger's Physical Fitness Index and Kraus Weber Test.
- Motor Education Test -Metheny- Johnson Test and IOWA Brace Test of Motor Educability.

UNIT-III**11 Hours**

- Tests of Specific Sports Skills:-Badminton-Lockhart and McPherson Badminton Test, Miller Volley Test and French Short Service Test.
- Basketball- Johnson Basketball Ability Test, Leilich Basketball Test, and Knox Basketball Ability Test.
- Soccer- McDonald Soccer Test, AAHPER Test of Soccer Skills
- Hockey- Henry Friedel Field Hockey Test, Chapman Ball Control Test and Dribbling and Goal Shocking Test
- Volleyball- Russel Lange Volleyball Test, Brady Volleyball Test and Helman Volleyball Test.
- Tennis- Dyer Tennis Test.

UNIT-IV**10 Hours**

- Anthropometry: Concept and Definition of anthropometry. Somatotyping - Hippocrates, Kretchmer and Sheldon (Health – Carter Method)
- Anthropometric Measurements: Height – Stature and Sitting height.
- Girth measurements – Chest, Upper arm, Thigh and Calf girth.
- Width Measurements – Biacromial Chest, Iliocrestal, Bicipicondylar (Femur and Humerus).
- Equipment and Instruments for anthropometric measurements (Anthropometric Kit.)

UNIT-V**5 Hours**

- Administration of Senior Fitness Test: Chair Stand Test for lower body strength,
- Chair Sit and Reach Test for lower body flexibility
- Back Scratch Test for upper body flexibility
- Eight foot up and go test for Agility
- Six minute walk test

Suggested Readings:

1. ACSM's (2001) Guidelines for Exercise Testing and Prescription by American College of Sports Medicine Human Kinetics, USA.
2. Balyan, Sunita (2006). Sharirik Shiksha main Parikshan evm maapan, Khel Sahitya. Delhi.
3. Barrow H.M. and McGee R. (1979). A Practical Approach to Measurement in Physical Education. Lea & Febiger, Philadelphia. U.S.A.
4. Baumgartner TA, Jackson AS, Mahar MT and Rowe DA (2007). Measurement for Evaluation in Physical Education. The McGraw Hill Companies. Inc. New York. USA.
5. Kansal D.K. (2012). A practical approach to Measurement, Evaluation & Sports selection. Sports & Spiritual Science Publications, New Delhi.
6. Miller, David K (2006). Measurement by the Physical Educator: Why and How. McGraw-Hill. Boston, U.S.A.
7. Mishra SC (2005). Tests And Measurement in Physical Education, Sports Publications, Delhi.
8. Sharma JP (2006). Test and measurements in physical education. Khel Sahitya. Delhi
9. Srivastava AK (2006). Sharirik Shiksha Evam Khel Main Maapan Evam Mullyakan. Sport Pub. Delhi.
10. Tritschler K. Barrow & McGee's (2000). Practical Measurement and Assessment. Lippincott Williams &

SEMESTER III

BSS 302: ORGANIZATION AND ADMINISTRATION IN SPORTS

Maximum Marks = 100 Marks

Time Allowed= 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. Develop clear concept about Organisation and administration.
2. Learn the proper procedure of how office is to be managed and how the records are to be kept.
3. Learn the proper procedure of management of facilities for sports and sports science.
4. Develop clear concept about management of how the budget is prepared.
5. Learn about the factors that influence time-table.
6. Learn the procedure of making fixtures for different types of programme and also learn how sports competitions are organized.

UNIT-I

9 Hours

- Meaning and definition of Organisation and administration. Importance of Organisation and administration in sports, sports science and physical education.
- Factors affecting good Organisation and administration.
- Types and procedure of administration. Qualities of a good teacher of physical education, coach and sports scientist.

UNIT-II

10 Hours

- Office Management – Meaning, definition and types of office management.
- Records & Register – Maintenance of stock register, cash register, physical efficiency and medical examination records.
- Budget – Meaning and importance of budget, criteria of a good budget, sources of income and expenditure. Preparation of a good budget.

UNIT-III

6 Hours

- Facilities and equipment management. Types of facilities – indoor and outdoor.
- Care of gymnasium, swimming pool and play fields. Management of sports science laboratory

UNIT-IV**10 Hours**

- Equipment management: Need and importance of equipment management.
- Purchase and care of equipment. Maintenance of equipment. Process of write off and condemnation of stock.
- TIME-TABLE: Meaning of time-table. Importance of time-table.
- Important factors affecting time- table. Preparation of a good time-table.

UNIT-V**10 Hours**

- Importance of tournaments.
- Types of tournaments: a) Knock out or Elimination tournaments. B) League or Round Robin tournaments. C) Combination tournaments. D) Challenge tournaments.
- Organisation of Athletic Meet – pre-meet work, meets work and post-meet work.
- Intramural and Extramural tournaments and their objectives and planning.

Suggested Readings:

1. Rathore V, (2013), Administration and Organisation in Physical Education, Edition ISBN-978-81-7879-750-2
2. Kamlesh, M.L., Management concepts of physical education and sport, New Delhi: Metropolitan Book Co., Pvt., Ltd.
3. Bucher, C.A. Administration of Physical Education and Athletic Programme. 7th Edition, St. Louis: The C.V. Mosby Co.
4. Daughtrey, G. & Woods, J.B. (1976). Physical Education and Intramural Programmes, Organisation and Administration. Philadelphia U.S.A. : W.B. Saunders Cp.
5. Kailash Kotikrao Pawar (2019) Organization and Administration in Physical Education, Joseph, P., Organization and administration of Physical Education, Gwalior
6. Bucher, Chales and Krotee, Mar L, (1997) Management of physical Education and Sport, London: Mospay Publishing Co
7. Chakraborty, Samiram (1988), Sports Management, Sports publications, New Delhi.
8. Lazer. W and Cultey. J Marketing Management. Boston Houghton Miffling Co. 5. Ruben Acosta Hernandez, Managing sport organizations, Human kinetics

SEMESTER III

BSS 303: SPORTS AND EXERCISE PHYSIOLOGY

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Student will be able to:

1. Understand the effect of exercise on various body systems
2. Understand the concept of Energy Metabolism
3. Understand the importance of Exercise and its impact on lifestyle

UNIT-I

12 Hours

- Introduction Definitions of Physiology, Exercise Physiology and Sport Physiology
- Importance of Exercise Physiology in physical education and sport Scope of Exercise physiology.
- Muscle Structure and Function: Muscle – its types, characteristics and functions.
- Microscopic structure of muscle fiber.
- Sliding Filament Theory of Muscular Contraction. Types of muscle fiber and sports performance. Effect of exercise on muscular system.

UNIT-II

12 Hours

- Bio-energetics: Aerobic & Anaerobic systems and Energy production, Fat and Protein metabolism, Basal Metabolic Rate.
- Physiology of circulation and respiration. Effect of exercise of circulatory and respiratory.
- Cardio – respiratory adaptation to long and short term physical activities.
- Neuro-muscular Function. Neuro-muscular function and transmission of nerve impulse.
- Kinesthetic sense organs. Neural control of motor skills. Effect of exercise on nervous system.

UNIT-III

10 Hours

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

- Women and sport performance. Trainability.
- Physiological gender differences.
- Special problems of women sportsperson. Massage manipulations and their effect on different systems.

- Recovery Process. Physiological effects of fatigue.
- Restoration of energy stores. Factors contributing to recovery.
- Aging: Physiological consequences of aging. Lifestyle management. Healthful aging.

Suggested Readings:

1. Albert W. Taylor, and Michel J. Johnson, (2008), Exercise Physiology, Human Kinetics, UrbanaChampaign, Illinois, U.S.A.
2. Jack .H. Wilmore , David L. Costill (1994). Physiology of Sport and Exercise .Human Kinetics.
3. Katch F.L andMc Ardle W.D (2010) Nutrition, Weight Control and Exercise .Philadelphia, Lea& Febiger.
4. Khanna, G.L. (2006) Exercise and Sports Physiology for Therapeutic and Rehabilitation practices.Narosa Publishing House, New Delhi.
5. Allen W. Jakson , James R. Morrow (1999) Physical Activity for Health & fitness . HumanKinetics.
6. Tiwari, Sandhya, (1999).Exercise Physiology. Sports Publications, New Delhi.
7. David N. Camaione (1993). Fitness Management. WCB Brown & Benchmark.
8. Shaver, L.G. (2014) Essentials of Exercise Physiology. Surjeet Publications, Ludhiana, Punjab.

SEMESTER III

BSS 304: CURRICULUM DESIGN

Maximum Marks = 100 Marks

Time Allowed= 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. Understand the concept of Curriculum
2. Demonstrate the role and importance of curriculum sources
3. Demonstrate different teaching methods in the field of sports science

UNIT-I

12 Hours

- Introduction, Meaning and definition of curriculum, Importance of curriculum
- Principles of curriculum planning.
- Patterns of curriculum – Activity based, Movement Based, Concept Based, Developmental need based and student centered based
- Role of teacher in curriculum development

UNIT-III

9 Hours

- Curriculum Sources- Role and importance of curriculum sources (Text Books, Journals, Encyclopedias, Internet & Magazines).
- Curriculum Development Agencies- Role of NCERT, CBSE, NCTE & UGC,
- Curriculum of Colleges of Sports Science and Physical Education.

UNIT-III

8 Hours

- Types of Curriculum -: Old Concept, Subject centered curriculum,
- Broad field Curriculum and Conservative core curriculum

UNIT-IV

8 Hours

- Factors Affecting Curriculum - Political Factors, Social Factors, Economic Factors,
- Technological Factors & Environmental factors

- Method of Teaching -: Explanation Method, Demonstration Method, Command Method,
- Imitation Method, Whole- part whole Method, Set Drill Method.

Suggested Readings:

1. Murray Print (1993, Curriculum Development and Design, 2nd edition, ISBN 9781863733625
2. Carlinda Leite. Ana Mouraz & Preciosa Fernandes (Orgs., Curriculum Studies: Policies, Perspectives and Practices Edition: CIEE - Centro de Investigação e Intervenção Educativa November 2015
3. Srivastava H.R. (2017)Curriculum And Instructional Designing, Shipra Publications; 2017th Edition
4. Underwood, G. L. (1983). The physical education curriculum in secondary school: planning and implementation.England: Taylor and Francis Ltd.
5. Willgoose, C.E. (1979). Curriculum in physical education. 3rd Ed. Englewood Cliffs.: N.J. Prentice Hall, Inc

SEMESTER III
BSS 305: TEST, MEASUREMENTS AND EVALUATION IN SPORTS (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. To construct a health related fitness test.
2. To construction a frequency distribution table, calculate mean and standard deviation table from the given data.
3. Measure of Henry Friedel field hockey test
4. Demonstration of Barrow motor ability test, Harvard Step test, Cooper 12-min run/walk test
5. Demonstration of Brady Volleyball test , Johnson Basketball test, McDonald Soccer Test, Lockhart and McPherson Badminton Test, Miller Volleyball Test.
6. Demonstration of accreditation skill testing
7. Demonstration of AAHPERD youth fitness test, JCR test, Indiana Motor fitness test, Canada fitness test.
8. Demonstration of types of anthropometric measurement with examples.

Suggested Readings:

1. ACSM (2001). Guidelines for Exercise Testing and Prescription by American College of SportsMedicine Human kinetics USA.
2. Balyan Sunita (2006). Sharirk Shiksha main Parikshan evmn maapan. Khel Sahitya. Delhi.
3. Barrow H.M. and McGee R. (1979). A Practical Approach to Measurement in PhysicalEducation. Lea &Febiger, Philadelphia. U.S.A.
4. Baumgartner TA Jackson AS Mahar MT and Rowe DA (2007). Measurement for Evaluation inPhysical Education. The McGraw Hill Companies. Inc. New York. USA.
5. Kansal DK (2012).A practical approach to Measurement Evaluation in Physical Education&Sports selection. Sports & Spiritual Science Publications, New Delhi.
6. Miller David K (2006). Measurement by the Physical Educator: Why and How. McGraw-Hill.Boston,U.S.A.
7. Mishra Sharad Chandra (2005).Tests And Measurement in physical education. Sports. Delhi
8. Sharma JP (2006). Test and measurements in physical education. khel sahitya. Delhi
9. Srivastava AK (2006). Sharirik Shhiksha Evam Khel Main Maapan Evam Mullyakan. Sportpub. Delhi.
10. Tritschler K. Barrow & McGee"s (2000). Practical Measurement and Assessment. LippincottWilliams &Wilkins. Philadelphia. U.S.A.

SEMESTER III

BSS 306: ORGANIZATION AND ADMINISTRATION IN SPORTS (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. Demonstrating and listing the process of scoring /judgement of any sport/game
2. Drafting knockout and league fixture
3. Planning and organizing the sports competition
4. Demonstration and explanation of methods for managing gymnasium
5. Demonstration and explanation of methods for managing swimming pool
6. Steps for managing the play field
7. Demonstration and explanation of the steps for records and register
8. Demonstration and explanation of the steps of equipment management

Suggested Readings:

1. Alliance, A. (1999). Physical Best Activity Guide, New Delhi,
2. Carpel, S. et al Editors (2006). A Practical Guide to Teaching Physical Education. RoutledgePublishers, USA.
3. Dheer, S. and Radhika. (1991). Organisation and Administration of Physical Edu., ND: FriendsPub.
4. Frost, R.B. and Others. (1992). Administration of Physical Education and Athletics, Delhi:Universal Book.
5. Gangwar, B.R. (1999). Organisation Admn. & Methods of Physical education, Jalandhar: A.P.Pub.
6. Gangwar, B.R. (1999). Sharirik Shiksha Ka Prabandh Prashashan Avam Vidhiya, Jalandhar:A.P. Pub.
7. Graham, G.M. (2009). Children Moving: A Reflective Approach to Teaching Physical Education. 8th Ed.McGraw Hill, USA.
8. Gupta R. (2010). Sharirik Shiksha Mein Shikhshan Pradhyogiki. Friends Publication. NewDelhi.
9. Gupta R. Kumar P. & Sharma D.P. (1999). Lesson Plan in Physical Education & Sports. R.D.P.Publication. New Delhi.
10. Gupta R. Kumar P. & Sharma. D.P.S. (2004). Sharirik Shiksha Mein Path Yojna. Sahyog Prakashan. New Delhi.
11. Gupta R. Kumar P. & Tyagi S. (2008) Textbook on Teaching Skill & Prowess. Part I & II.Friends Publication. India. New Delhi.
12. Kamlesh ML (2005). Methods in Physical Education. Friends Publication. Delhi.
13. Kamlesh ML (2005). Sharirik Shiksha Ki Vidiyan. Friends Publication. Delhi.
14. Panday Laxmikant (1996). Sharririk Shiksha Ki Shiksha Padati. Metropolitan Book. NewDelhi.

SEMESTER III

BSS 307: SPORTS AND EXERCISE PHYSIOLOGY (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. To assess the Resting Heart Rate, Training Heart Rate and Recovery Heart Rate of three subjects.
2. To calculate BMR, RMR, VO₂ Max and Lactate of minimum 5 subjects.
3. To calculate methods of assessing body composition of 5 subjects.
4. To find WHR of minimum 3 subjects.
5. To administer the Harvard step test and record its measurements.
6. To measure vital capacity and total lung capacity using spirometer.
7. To measure Blood Pressure by using Sphygmomanometer
8. To measure peak expiratory flow rate using Peak Flow meter.

Suggested Readings:

1. Tiwari, Sandhya, (1999). Exercise Physiology. Sports Publications, New Delhi.
2. Wilmore Jack. H and David L. Costill (1994). Physiology of Sport and Exercise .Human Kinetics.
3. G.Gregory Half. (2012). Laboratory Manual for Exercise Physiology. USA. Human Kinetics,
4. W.Larry Kenney, Jack H. Wilmore, David L. Costill.(2015). Physiology of Sports and Exercise, Second Edition. USA. Human Kinetics.
5. Christophe. Hausswirth, Inigo Mujika. (2013). Recovery for Performance in Sports, USA, Human Kinetics.
6. Inigo Mujika.(2009). Tapering and Peaking For Optimal Performance. USA. Human Kinetics

SEMESTER III
BSS 308: MINOR PROJECT REPORT & VIVA

Maximum Marks= 50 Marks
Semester Marks= 50 Marks

Time Allowed = 3 Hrs.

Scope: The minor project report deals with students working in sports or sports science field
Report Writing: This minor project will help students to form basic outline and structure of a report. Each group of minimum 5 students will jointly work and individually submit the report in the area specified:

1. Sports Fitness Assessment
2. Sports and Exercise Nutrition
3. Sports specific assessment
4. Sports Anthropometry and Body Composition
5. Sports Management and Industry Marketing or any other sports related topic/field

All the students of 3th semester will be equally divided and under supervision of faculties allotted, they will be completing their minor project.

Score Scheme:

Total Marks: 50 Marks

Report Marks: 25 Marks

Viva- Voce Marks: 25 Marks

SEMESTER III

BSS 309: SPORT OF CHOICE: SWIMMING/ATHLETICS (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 50 Marks

Practical:

1. Introduction General Introduction of Swimming.
2. Historical Development and Modern Trends (National and International Level)
3. Organizational Structure (State, National and International Level)
4. Marking and Construction of the Swimming.
5. Basic skills and techniques in swimming.
6. Rules and their interpretation.
7. Concept of Conditioning exercises, warming up and cooling down and its effects.
8. To explain and demonstrate sprint events in swimming.
9. To explain and demonstrate Relay events in Swimming.
10. Techniques of Coaching – Pep talk, Pre, during and Post match coaching.

Suggested Readings:

1. Gupta R.K. and S.Tyagi (2008). Textbook on Teaching Skills and Prowess, FriendsPublications, New Delhi.
2. Fox, E.L. (1998). Physiology Basis of Physical Education and Athletics. Brown Publishers.
3. Kamlesh, M.L. (2003) Foundation of Sports & Field manual. Sports Publications, New Delhi.

ATHLETICS

Maximum Marks=50Marks
Semester Exam=50

Time Allowed = 3Hrs

Practical:

1. Introduction of Track & Field Athletics and historical development of event with reference of India
2. Organizational set-up of Track and Field athletic at National Level/ International Level
3. Important Tournament held at National and International Level

Track Event

4. Introduction to Start Technique: Standing start, crouch start and its variations
5. Introduction to Finishing Technique: Run through, Shoulder Shrug and Forward Lunge (Dip)

Field Event

6. Introduction to Long Jump/ Shot-Put
7. Technique of Long Jump: Sail Technique and Hang Technique
8. Teaching Stages: Approach Run, Take Off, Flight and Landing
9. Technique of Shot-Put: Parry O; Brien Technique
10. Teaching stages: Grip, Stance, Glide, Release and Reverse

Suggested Readings:

1. Chauhan VS (1999). Khel Jagat Main Athletics. A.P. Pub, Jalandhar.
2. Gerb Amato, DA ATC et all (2002). Practical Exam Preparation Guide of Clinical Skills of Athletic Training. Slack Incorporated. 1st ed., USA.
3. Gothi E (2004). Teaching & Coaching Athletics. Sport Pub., New Delhi.
4. Gupta R. (2004). Layout & Marking of Track & Field. Friends Publications. India. New Delhi. Handbook-Rules and Regulation. International Athletic Federation (2010).
5. Kumar, Pardeep. (2008). Historical Development of Track & Field. Friends Publication. New Delhi.
6. Maughan, R. and Gluson, M. (2004). The Biomechanical Basics of Athletic Performance. Oxford University Press, U.K.
7. Prentice, W. and Arnheim, D. (2005). Arnheim's Principles of Athletic Training 12th Ed.

SEMESTER III

BSS 310: COUNCIL WORK (P)

Maximum Marks = 50 Marks
Semester Exam = 50 Marks

Time Allowed = 3 Hrs.

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'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

BSS 401: SPORTS PHARMACY

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. Define principles and concepts of pharmacy and sports pharmacy. Describe their role in physical activity, exercise and sports.
2. Define pharmacological activities, pharmacokinetics of nutrients in physical activity, exercise and sports, and banned substances by WADA.
3. Introduce and define pharmaceutical sciences and its important terms.
4. Define pharmaceuticals of anti-nutrients and other toxic agents in foods.

UNIT-I

9 Hours

- Introduction to Pharmacy: Meaning, Definition, Description, Principles and Concepts.
- Introduction to Sports Pharmacy: Meaning, Definition, Description, Principles and concepts. Scope of sports pharmacy
- Role of general and sports pharmacy in physical activity, exercise and sports.

UNIT-II

9 Hours

- Pharmacological activities of major nutrients in athletes during exercise and sports.
- Pharmacokinetics of nutrients and sports performance.
- Harmful effects of substances banned by WADA (World Anti- Doping Agency)

UNIT-III

9 Hours

- Pharmaceutical Sciences: Introduction, basic terminology used in Physical Activity, Exercise and Physical Performance.
- Pharmacodynamics of delayed absorption of glucose, secretion of Insulin by Pancreas, Hypolipidemic reduction of body weight.
- Hypocholesterolemic effects of SDF, dietary fiber binding to trace minerals and effects on energy intake consequences of sports performance.

UNIT-IV

9 Hours

- Pharmaceutics of Anti nutrients namely Phytates, Lectins, Tannins,
- Oxalates, Goitrogens (anti- thyroid substances), other toxic agents in foods - substances leading to diseases Amino acid BOAA in Lathyrussatirus (Khesari dhal),
- Vicia faba (Bread beans); Cyanogenic glycosides of cassara.

UNIT-V

9 Hours

- Dietary Fiber Pharmacology: Pharmaceutics of dietary fibers crude fiber versus dietary fiber, effect on energy consumption for the fermentation of SDF.
- Pharmacological reference of SDF inactivity diseases like coronary heart diseases, type II diabetes and obesity.

Suggested Readings:

1. Gopalan, C., B.V. Rama Sastri, S.C Balasubramanian, B.S. Narasinga Rao, Y.GDeosthale & K.C.
2. Pant (2004) Nutritive Value of Indian Foods. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
3. Hatfield, F. (1999). Nature's Sports Pharmacy. McGraw-Hill Companies Inc., New York, USA.
4. Kayne, S.B. (2006). Sports and Exercise Medicine for Pharmacists. Pharmaceutical Press, Smith field, London, U.K.
5. Mamrack, M.D., T.J. Housh, D.J. Housch, H.A. Devries and M. Mamrack (2015). Exercise and
6. Sports Pharmacology. Holcomb Hathaway Publishers.
7. Mamrack M.D. (2017). Exercise and Sports Pharmacology. Routledge Publishers,ISBN:
8. Mottram, D.R. and N. Chester (2014). Drugs in Sports. Routledge, Taylor & Francis, Abingdon, Oxford, U.K.
9. Stuart, M. (2016). My Role as a Pharmacist at the Rio 2016 Olympics. The Pharmaceutical Journal,14 March, 2016.
10. Stuart, M., D. Motlram and T. Thomas (2013). Innovations in Olympic andParalympic Pharmacy services. Br. J. sports Med.

SEMESTER-IV

BSS 402: SPORTS AND EVENT MANAGEMENT

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. Define meaning, importance and fundamentals of scouting and nurturing sports talent.
2. Explain steps of sports talent selection and training of elite sportspersons
3. Understand and explain talent selection characteristics and guidelines. Explain how talented sports persons are prepared for excellence and selection of right sports (individual and mass)
4. Explain four cardinal components and two aspects of scouting sports talent
5. Describe nurturing talent in sportspersons

UNIT-I

12 Hours

- Introduction to Sports Management and marketing, Meaning and definition of sports Management and sports marketing, Aim, Scope and Objective of sports management,
- Guiding principle of sports management, Process or function of Sports Management (Planning, Organizing, Personnel/Staffing, Direction, Controlling, Coordination)
- Type of Sports: - Grassroots Development, Amateur Sports, Youth Sports, Professional Sports, University Sports.
- Social Impact of Sports: Olympics and its impact, Sociology of sports, Culture and its effect, Economic Considerations, Tourism, Sports Administration.

UNIT-II

8 Hours

- Sport Management: Sports Governance, Strategy, Sponsorship, Marketing, Branding/PR, Media,
- Event management, Operations, Facility Management, Retail in Sports,
- Agenting, finance, Legal, League Planning.

UNIT-III

8 Hours

- Structure of Sports Industry, Governing Model of Indian Sports
- Studies of Sports Consumers and Perspectives of sports Consumer behavior
- Careers in Sports Marketing/management.

UNIT-IV

8 Hours

- Sports ecosystem, market Segmentation, the Sports Product,
- Managing Sports Brand, Licensed and branded merchandise.
- Sports Ownership structure: Major and Minor Pro Leagues

UNIT-V

9 Hours

- Sponsorship in sport, pricing concepts, promotion and sales strategies in sports marketing,
- Globalization and sports, public relations, coordinating and controlling marketing mix, legal aspects of sports marketing
- Implementing and controlling the strategic sports marketing process
- Corporate social responsibility (CSR) initiative in sports development.

Suggested Readings:

1. Brown, J. (2001). Sports Talent: How to Identify and Develop Outstanding Athletes. Human Kinetics publishing, Urbana Champaign, Illinois, USA.
2. NSTC (1985). National Sports Talent Contest Scheme. Sports Authority of India, Ministry of Youth Affairs & Sports, Govt. of India, New Delhi.
3. NTSP (2017). Nation Talent Search Portal, Ministry of Youth Affairs & Sports, Govt. of India.
4. Wormhoudt, R., G. Savelsbergh and J.W. Teunissen (2017). The Athletic Skills Model. Routledge
5. Taylor & Francis, Abingdon, Oxford, U.K.
6. Kansal, D.K. (2008). Textbook of Applied Measurement, Evaluation, and Sports Selection. Sports and Spiritual Science Publications, New Delhi.

SEMESTER- IV

BSS 403: OPTIONAL PAPER – (A) SPORTS FOR ALL

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. To provide the fitness and wellness management and its application in games & sports.
2. Students will learn to apply knowledge of physical fitness and exercise management for betterment and quality of life
3. Student will learn about the sports and recreation, and their health benefits for normal and challenged population

UNIT-I

8 Hours

- Introduction to sport for all: meaning and definition of sport, play, games, recreation, pleasure, happiness, comforts.
- Motivation towards Sports. Introduction to sports for fitness, fun, competitions, health, rehabilitation.
- Personality: aims, goals, objectives in sports.

UNIT-II

9 Hours

- Sports for fitness: Introduction to fitness and components of health related physical fitness.
- Measurement of health related physical fitness (HRPF); development and maintenance of health related fitness through sports participation.
- Sports for all ages: Young children's sports, teenaged, young adults, middle aged, old aged sports.

UNIT-III

9 Hours

- Sports for fun: Introduction to fun games, games festival, organization and guidelines for gamesfestival, games festival facility, sports clubs.
- Sports for competitions: meaning & definition of competition, sports selections, sports participation, sports competitions and sports counseling.

UNIT-IV

9 Hours

- Sports for health: Introduction to health, diagnosis of ill-health, preventive health measures and sports, treatment of ill health through sports and sports and health promotion.
- Sports for physiotherapy: Introduction to physiotherapy, exercise and sports participation for physiotherapeutic use. Measuring physiotherapeutic progress, physiotherapy practice.

UNIT-V

10 Hours

- Sports for differently-abled population: Introduction to meaning and definitions of different abled populations: visually challenged, auditory challenged, physical challenged.
- Modified sports for above categories of differently-abled populations, role of Paralympic movement
- Sports for figure and personality development: Introduction to figure, meaning, concept and definition of figure, general appearance, personality measures, overweight and its harming effects, weight control and exercise & sports.

Suggested Readings:

1. Bishop JG (2013). Fitness through Aerobics. 9th Edition, Benjamin Cummings. USA.
2. Cooper K (2001). Aerobics Program for Total Well Being. Banton Doubly Dell Publishers.USA.
3. Jordan, P. and C.M. Casten (2001). Aerobics Today. Brooks Cole Publishers, California (USA).
4. ISBN = 978-0-534-35833-4
5. Kennedy Carol A. & Yoke M.M. (2008). Methods of Groups Exercise Instruction. HumanKinetics. New York.
6. New York.
7. Kinder T. A (1992). Aerobics. Eddie Bowers Publishing Co. USA.
8. Kumari S (2009). Fitness, Aerobics & Gym Operations. Khel sahitya Kendra. New Delhi.
9. Portal R (2002). Aerobics The Invisible Advantage. Author House Publishers. USA.
10. Tomkinson G.R. & Olds T.S. (2007). (ED.) Pediatric Fitness. Karger. London.

SEMESTER-IV

BSS 403: OPTIONAL PAPER- (B) FITNESS AND WELLNESS

Maximum Marks = 100 Marks

Time Allowed= 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hour= 45 Minutes

Learning Outcomes:

Students will be able to:

1. To provide the fitness and wellness management and its application in games & sports.
2. Students will learn to apply knowledge of physical fitness and exercise management for betterment and quality of life

UNIT-I

10 Hours

- Physical Activity: Concept, Benefits of participants in physical activities, need and significance of total fitness,
- Types of Physical activities (Walking, Jogging, Running, Calisthenics, Rope Skipping, Cycling, Swimming, Circuit training, Weight training and Adventure Sports).
- Principle of Physical Fitness, Warming Up, Conditioning, Cooling Down.

UNIT-II

8 Hours

- Introduction of physical fitness, components of physical fitness,
- Wellness: Concept, Components, Significance with reference of positive lifestyle.
- Role of physical activity for the promotion of Wellness.

UNIT-III

9 Hours

- Fitness and wellness counseling- role of fitness councilor in motivating the people.
- Meditation, Anger management and Stress management
- Role of recreation, meditation and stress management in promotion of health and wellness.

UNIT-IV

10 Hours

- Concept of physical fitness and balanced diet, Dietary aids and Gimmicks.
- Energy and Activity-calorie intake and Expenditure, Energy Balance Equation.
- Weight management and obesity- Concept, Causes, Assessment,
- Obesity management; obesityrelated health problems.

UNIT-V

8 Hours

- Substance abuse and their hazards
- Role of prevention of substance abuse in wellness and physicalfitness
- Weight management and its role in wellness.

Suggested Readings:

1. Bishop JG (2013). Fitness through Aerobics. 9th Edition, Benjamin Cummings. USA.
2. Cooper K (2001). Aerobics Program for Total Well Being. Banton Doublay Dell Publishers.USA.
3. Jordan, P. and C.M. Casten (2001). Aerobics Today. Brooks Cole Publishers, California (USA).ISBN = 978-0-534-35833-4
4. Kennedy Carol A. & Yoke M.M. (2008). Methods of Groups Exercise Instruction. HumanKinetics. New York.
5. Kinder T. A (1992). Aerobics. Eddie Bowers Publishing Co. USA.
6. Kumari S (2009). Fitness, Aerobics & Gym Operations. Khel sahitya Kendra. New Delhi.
7. Portal R (2002). Aerobics The Invisible Advantage. Author House Publishers. USA.
8. Tomkinson G.R. & Olds T.S. (2007). (ED.) Pediatric Fitness. Karger. London.

SEMESTER IV

BSS 403: OPTIONAL PAPER – (C) SPORTS JOURNALISM AND MASS MEDIA

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. Students will learn apply knowledge of sports journalism and research in sports and physical.
2. To provide knowledge and understanding of the knowledge of the sports journalism and its application in the games and sports.

UNIT-I

9 Hours

- Introduction- meaning and definition of journalism, ethics off journalism.
- Sports Ethics and sportsmanship - The role of media- sports in present culture - Media and Olympism.
- National and International sports News agencies- Autonomy between the media and sporting institutions.

UNIT-II

8 Hours

- Journalism and Sports education- Structure of sports bulletin,
- Concept of sport bulletin- compiling sports bulletin
- Types of bulletin- role of journalism in field of sports; as an integral part- recording and reporting sports events

UNIT-III

9 Hours

- Mass Media in journalism- effects of sports on the media- effects of media on sports: players,
- Sports organizations and society.
- Radio and T.V commentary running commentary on live or recorded. Role of advertisement in journalism

UNIT-IV

10 Hours

- Brief review of Olympic Games- , Asian games, commonwealth games, world cup, national
- Games and Indian traditional games. Preparing report of an annual sports meet for publication in newspaper.
- Organization of press meets Journalism- Sports organization and sports journalism
- General news reporting and sports reporting. Methods of editing sports report.

UNIT-V

10 Hours

- Sports photography: Equipment- editing-publishing,
- Evaluation of reported news- Interviews with an elite player and coach.
- Introduction of Photo journalism, Forms of Photo Journalist,
- Methods of Photography and videography, Selection of visuals, visuals in Mass Communication and its Impact.

Suggested Readings:

1. Aamidor A (2003).Real Sports Reporting. Indiana University Press.Valparaiso. Indiana.U.S.A.
2. Ahuja, B.N (1988) Theory and Practice of Journalism. Surjeet Delhi.
3. Andrews P (2005). Sports Journalism: A Practical Introduction. Sage Publications Ltd.Delhi.
4. Boyle R (2006). Sports Journalism: Context and Issues. Sage Publications Ltd.
5. Kamath, M V (1980). Professional Journalism. K.S.K. New Delhi

SEMESTER IV
BSS 403: OPTIONAL PAPER – (D) SPORTS TOURISM

Maximum Marks = 100 Marks
Semester Exam = 60 Marks
Sessional Exam = 40 Marks
Contact Hours = 45 Hours

Time Allowed = 3 Hrs.

Learning Outcomes:

Students will be able to:

1. Students will learn apply knowledge of sports tourism and research in sports and physical.
2. To provide knowledge and understanding of the knowledge of the sports tourism and its application in the games and sports.

UNIT-I

8 Hours

- Introduction - Sport tourism concepts and definitions.
- Definition and historical development of tourism, its structure, components and elements.
- Nature and characteristics of tourism industry, Tourism as an industry in India

UNIT-II

9 Hours

- Sport tourist profiles, Consumer behaviors and trends, serious sport tourists Event-based sport tourism,
- Mega-events and sport tourism, Event bidding processes
- Indicators of sport tourism demand - Government and sport tourism

UNIT-III

10 Hours

- Categories of sports tourism – competitive, cultural, and traditional and adventure sport.
- Various form of arts and crafts.
- Geography perspective of sports tourism
- Sport tourism industry - Suppliers of sport tourism goods and services

UNIT-IV**8 Hours**

- Sport tourism and destination marketing
- Strategic Plan due, Destination image/branding and sport tourism
- Marketing Plan, Issues in sport tourism, summary

UNIT-V**10 Hours**

- Sport tourism impacts and measurements- Economic
- Environmental, Social-cultural and Political impacts
- Significance of tourism- positive and negative
- Natural Tourism resources in India-Existing use patterns vis-a-vis potential with relation to varied landforms

Suggested Readings:

1. [Ravindra Verma](#) Sports Tourism Publisher: Centrum Press Jun 2010
2. Sinha, P.C. Tourism Management. Anmol Publications, New Delhi.
3. Swain, S.K. and Mishra, J.M. Tourism : Principles and Practices.
4. Bhatia, A.K.. Tourism Development: Principles and Practice. Sterling Publishers Jayapalan.N.
An Introduction to Tourism. Atlantic Publishers.

SEMESTER IV

BSS 404: RESEARCH METHODS AND STATISTICAL CONCEPTS

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. The student will gain the knowledge about Research Methods of sampling, writing of Research Report and analysis of the data through statistical techniques.
2. The student will be able to use the knowledge of Research for analysis of data and leading to logical conclusion on any field of investigation.

UNIT-I

8 Hours

- Meaning of research: types, Formulation of research problem, Delimitations and Limitation, its importance in the field of sports, qualities of researcher.
- Statistical Concept: importance of statistic in sports science, ways to select a sample.
- Historical research: primary data and secondary data, general principles of historical criticism.

UNIT-II

9 Hours

- Descriptive research method: survey-definition, purpose, types, scope and nature and importance.
- Philosophical research: meaning and pitfalls.
- Experimental research: need, nature and technique of experimental research. Variables: independent, dependent variable, and control variable. Experimental design. Ethical issues in research area: Area of scientific dishonesty, copy right.

UNIT-V

8 Hours

- Concept of Population and sampling: Sampling (Random, Cluster, stratified)
- Characteristics of a good sample, Advantage of sampling,
- Probability sampling designs, Non-probability sampling designs.

- Research Proposal, Organisation of Thesis Report,
- Hypothesis- Meaning of hypothesis, Importance and characteristics of hypothesis, Types of hypothesis, Errors in formulating hypothesis.
- Research article, oral and poster presentation. Table, Figure and Bibliography

UNIT-V**10 Hours**

- Statistical Concepts in Research- Types of Data,
- Measure of central tendency (mean, median, mode),
- Measures of variability (range and standard deviation, numerical problems to be solved from raw data.
- Tests for measuring correlation and difference (independent T-test), numerical problems to be solved from raw data, plotting of graphs and charts.

Suggested Readings:

1. Author's guide: Research Methods applied to Health Physical and Recreation, Washington, D.C. 1991.
2. Best John & Kahni, J.V. 1992). Research in Education, New Delhi. Prentice Hall of India (Pvt.) Ltd..
3. Best, J.W. (1963). Research in education. U.S.A.: Prentice Hall.
4. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc.
5. Garrett, H.E. (1981). Statistics in psychology and education. New York: Vakils Feffer and Simon Ltd.
6. Koul, L. (2002). Methodology of Educational Research, Vikas Publishing House, New Delhi.
7. Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
8. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL:Human Kinetics Book

SEMESTER IV

BSS 405: SPORTS PHARMACY (P)

Maximum Marks= 50 Marks,

Semester Marks= 30 Marks

Sessional Marks = 20 Marks

Time Allowed = 3 Hrs.

Practical:

1. Visit to NADA labs
2. To demonstrate the pharmacological activities of a given food sample of illustrate pharmaceuticals of nutrients of the food sample.
3. To demonstrate the explanation of anti-nutrients and common substances used by athletes to boost their sports performance.
4. To demonstrate the detailed procedures of sample collection and preservation of write to dope text.
5. To demonstrate the role of dietary fiber in hypoglycemic properties and their effect on energy consumption.
6. To demonstrate the theoretical details of the practices banned as stimulant drugs commonly used to increase sports performance.
7. To demonstrate healthy non-banned nutrients having positive effect to increase VO₂ in long term planning.
8. To demonstrate the harmful effects of smoking simulate and useful effects of pharmaceutical grade vitamin c powder/amla powder.

Suggested Readings:

1. Gopalan, C., B.V. Rama Sastri, S.C Balasubramanian, B.S. Narasinga Rao, Y.G Deosthale & K.C.
2. Pant (2004) Nutritive Value of Indian Foods. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
3. Hatfield, F. (1999). Nature's Sports Pharmacy. McGraw-Hill Companies Inc., New York, USA.
4. Kayne, S.B. (2006). Sports and Exercise Medicine for Pharmacists. Pharmaceutical Press, Smith field, London, U.K.
5. Mamrack, M.D., T.J. Housh, D.J. Housch, H.A. Devries and M. Mamrack (2015). Exercise and Sports Pharmacology. Holcomb Hathaway Publishers.
6. Mamrack M.D. (2017). Exercise and Sports Pharmacology. Routledge Publishers, ISBN:
7. Mottram, D.R. and N. Chester (2014). Drugs in Sports. Routledge, Taylor & Francis, Abingdon, Oxford, U.K.
8. Stuart, M. (2016). My Role as a Pharmacist at the Rio 2016 Olympics. The Pharmaceutical Journal, 14 March, 2016.

SEMESTER IV

BSS 406: SPORTS AND EVENT MANEGEMENT

Maximum Marks= 50 Marks,

Semester Marks= 30 Marks

Sessional Marks = 20 Marks

Time Allowed = 3 Hrs.

Practical:

1. To Draft a Marketing Proposal.
2. To identify a sports product and design a marketing plan.
3. To develop a budget plan for an event.
4. To study Consumer Behavior in sports Industry
5. To provide solution for a case study on strategic sports marketing.
6. To devise a plan for a sports event management.
7. To Monitor Impact of Sports League in India (IPL)
8. To draft a sponsorship proposal.

Suggested Readings:

1. Brown, J. (2001). Sports Talent: How to Identify and Develop Outstanding Athletes. Human Kinetics publishing, Urbana Champaign, Illinois, USA.
2. NSTC (1985). National Sports Talent Contest Scheme. Sports Authority of India, Ministry of Youth Affairs & Sports, Govt. of India, New Delhi.
3. Affairs & Sports, Govt. of India, New Delhi.
4. NTSP (2017). Nation Talent Search Portal, Ministry of Youth Affairs & Sports, Govt. of India.
5. Wormhoudt, R., G. Savelsbergh and J.W. Teunissen (2017). The Athletic Skills Model. Routledge
6. Taylor & Francis, Abingdon, Oxford, U.K.
7. Kansal, D.K. (2008). Textbook of Applied Measurement, Evaluation, and Sports Selection. Sports and Spiritual Science Publications, New Delhi..

SEMESTER IV

BSS 407: (A) SPORTS FOR ALL (P)

Maximum Marks= 50 Marks,

Semester Marks= 30 Marks

Sessional Marks = 20 Marks

Time Allowed = 3 Hrs.

Practical:

1. To demonstrate the difference between play activity and sports activity taking game of one's choice like Badminton, Football etc. in different play areas available.
2. To demonstrate components of health related physical fitness with examples from sports for all concepts.
3. To conduct a sports festival/ sport fest/ sports day
4. To demonstrate individualization of warming up, main exercise session and cool down before starting any fun sports differently abled characters among self and fellow students.
5. To measure strength by:
 - i. Grip strength test
 - ii. Leg raise test
 - iii. Sit-up.
6. To measure muscular endurance by:
 - i. Push-ups
 - ii. Pull ups
 - iii. Knee bend push up
7. To measure 1 Mile Run-walk to demonstrate cardiopulmonary endurance level.
8. To measure flexibility using: Sit and reach test

Suggested Readings:

1. Gupta Rakesh, Gupta BenuSports for All Friends Publications (India) 2019 ISBN: 9788193723401
2. Kristine Clark Sports for All , Rowman & Littlefield Publication ISBN: 9781475851526, 9781475851526
3. All About Sports & Games Collection(Audio Book) Publisher Highlights for Children, 2021
4. Rules and Measurements in Sports and Games 2021 by Prof. Dr. A. Mahaboobjan, Dr. C. Arulraj, Sports Publication; First Edition (1 January 2021)
5. Manual of Sports and Games By E Balaji: Justfiction Edition Publication
6. Kennedy Carol A. & Yoke M.M. (2008). Methods of Groups Exercise Instruction. Human Kinetics.New York.
7. KinderT. A (1992). Aerobics. Eddie Bowers Publishing Co. USA.
8. Kumari S (2009). Fitness, Aerobics & Gym Operations. Khel sahitya Kendra. New Delhi.

SEMESTER – IV

BSS 407: (B) FITNESS AND WELLNESS (P)

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

Time Allowed = 3 Hrs.

Practical:

1. To demonstrate the use of music for an aerobic session
2. To calculate Target Heart Rate (THR) using Karvonen method for one male and one female subject.
3. To calculate heart rate in aerobic zone for subjects in three different ages.
4. To perform and demonstrate warm-up and cool down exercises for an aerobic session.
5. To perform and demonstrate specific conditioning exercises used for aerobics.
6. To conduct a step aerobics session.
7. Measuring height, weight, waist circumference and hip Circumference.
8. Measure muscular strength, muscular endurance.

Suggested Readings:

1. Bishop JG (2013). Fitness through Aerobics. 9th Edition, Benjamin Cummings. USA.
2. Cooper K (2001). Aerobics Program for Total Well Being. Bantou Doubly Dell Publishers. USA.
3. Jordan, P. and C.M. Casten (2001). Aerobics Today. Brooks Cole Publishers, California (USA). ISBN = 978-0-534-35833-4
4. Kennedy Carol A. & Yoke M.M. (2008). Methods of Groups Exercise Instruction. Human Kinetics. New York.
5. Kinder T. A (1992). Aerobics. Eddie Bowers Publishing Co. USA.
6. Kumari S (2009). Fitness, Aerobics & Gym Operations. Khel sahitya Kendra. New Delhi.
7. Portal R (2002). Aerobics The Invisible Advantage. Author House Publishers. USA.
8. Tomkinson G.R. & Olds T.S. (2007). (ED.) Pediatric Fitness. Karger. London.

SEMESTER IV

BSS 407: (C) SPORTS JOURNALISM AND MASS MEDIA (P)

Maximum Marks= 50 Marks,

Semester Marks= 30 Marks

Sessional Marks = 20 Marks

Time Allowed = 3 Hrs.

Practical:

1. To make a report on an elite sports person national and international.
2. To write a report on an sports team and coach
3. To present different equipment's of photography
4. To observe the matches and prepare report
5. To interview and prepare a report on player from JLN stadium
6. To visit a newspaper office and present a report
7. To write a report on different TV Centre departments
8. To collect the album of newspaper cuttings

Suggested Readings:

1. Aamidor A (2003).Real Sports Reporting. Indiana University Press.Valparaiso. Indiana.U.S.A.
2. Ahuja, B.N (1988) Theory and Practice of Journalism. Surjeet Delhi.
3. Andrews P (2005). Sports Journalism: A Practical Introduction. Sage Publications Ltd.Delhi.
4. Boyle R (2006). Sports Journalism: Context and Issues. Sage Publications Ltd.
5. Kamath, M V (1980). Professional Journalism. K.S.K. New Delhi

SEMESTER IV

BSS 407 (D): SPORTS TOURISM (P)

Maximum Marks= 50 Marks,

Semester Marks= 30 Marks

Sessional Marks = 20 Marks

Time Allowed = 3 Hrs.

Practicals:

1. To make a report on Indian historical tourist destination
2. To write sports tourist profiles
3. To present different form of tourist places
4. To make a budget for a particular tourist designation
5. To prepare a report on event specific advertisement for sports tour.
6. To prepare a speech for communicating to a tourist regarding a particular sports specific destination.
7. To analysis statistically the current trends in sports tourism
8. To make a plan for current international sports event of sports tourism for economic growth.

Suggested Readings:

1. Ravindra Verma Sports Tourism Publisher: Centrum Press Jun 2010
2. Sinha, P.C. Tourism Management. Anmol Publications, New Delhi.
3. Swain, S.K. and Mishra, J.M. Tourism : Principles and Practices.
4. Bhatia, A.K.. Tourism Development: Principles and Practice. Sterling Publishers
5. Jayapalan.N. An Introduction to Tourism. Atlantic Publishers.

SEMESTER IV

BSS 408: MINOR PROJECT: REPORT & VIVA (P)

Maximum Marks= 50 Marks

Time Allowed = 3 Hrs.

Semester Marks= 50 Marks

Scope: The minor project report deals with students working in sports or sports science field
Report Writing: This minor project will help students to form basic outline and structure of a report. Each group of minimum 5 students will jointly work and individually submit the report in the area specified:

6. Sports Fitness Assessment
7. Sports and Exercise Nutrition
8. Sports specific assessment
9. Sports Anthropometry and Body Composition
10. Sports Management and Industry Marketing or any other sports related topic/field

All the students of 4th semester will be equally divided and under supervision of faculties allotted, they will be completing their minor project.

Score Scheme:

Total Marks: 50 Marks

Report Marks: 25 Marks

Viva- Voce Marks: 25 Marks

SEMESTER IV

BSS 409: SPORT OF CHOICE: GYMNASTICS (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 50 Marks

Practical:

1. Introduction General Introduction of Gymnastics
2. Historical Development and Modern Trends (National and International Level)
3. Organizational Structure (State, National and International Level)
4. Playfield Technology – Marking and Construction of the above games.
5. Basic skills and techniques in gymnastics.
6. Rules and their interpretation.
7. Demonstration for Men and Women Floor Exercises: Forward Roll, Backward Roll, Sideward Roll, Cartwheel; Handstand to Forward Roll for Men, and Leg Split for Women.
8. Concept of Conditioning exercises, warming up and cooling down and its effects.
9. Techniques of Coaching – Pep talk, Pre, during and Post match coaching.
10. Role of flexibility and stretching training in gymnastic.

Suggested Readings:

1. An and O.P. (2001). Yoga Dwara Kaya Kalp. Sewasth Sahitya Parkashan, Kanpur.
2. Iyengar, B.K.S. (1995). Light on Yoga: The Bible of Modern Yoga. Schocken Publishers.
3. Kirk, M. (2005). The Hatha Yoga Illustrated. Human Kinetics, USA.
4. Mukerji, A.P. (2010). The Doctrine and Practice of Yoga, General Books, LLC, New Delhi

SEMESTER IV

BSS 410: COUNCIL WORK (P)

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 requires 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 V
BSS 501: SPORTS KINESIOLOGY AND BIOMECHANICS

Maximum Marks = 100 Marks

Time Allowed= 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours= 45 Hours

Learning Outcomes:

Students will be able to:

1. To impart the knowledge about the various movements of the body affecting performance in sports and a basic knowledge of various Sports Injuries and their management.
2. Students will learn the science of movement for better sports performance and the basic knowledge of the various injuries and their management. Such core knowledge and skill helps to create a strong foundation to engage human subject of all ages, sex, and ability.

UNIT-I

7 Hours

- Introduction to Kinesiology- Definition , meaning, Historical perspectives of kinesiology ,
- Importance in sports sciences, Aim and Objectives of Kinesiology in sports sciences
- Scope of kinesiology, modern technological enhancement in Kinesiological analysis and methods.

UNIT-II

8 Hours

- Anatomical and Physiological fundamentals- Classification of joints and muscles,Types of Musclecontractions ,Angle of Pull.
- Upper Extremity –origin and insertion of major muscles, major characteristics of joints - Shoulder, Elbow, Wrist related to sports
- Lower Extremity- origin and insertion of major muscles,
- Major characteristics of joints –Hip, Knee, and Ankle related to sports.

UNIT-III

10 Hours

- Fundamental Movements- Flexion, Extension, Abduction, Adduction, and Rotation.
- Muscularanalysis of fundamental movements – walking, running, jumping, throwing, catching, pulling, pushing, striking, hanging and fundamental starting position.
- All and none law and reciprocal Innervations.
- Axis and Planes of motion.

UNIT-IV

10 Hours

- Introduction to mechanics and sports biomechanics- meaning and its definition.
- Importance of Biomechanics. Newton's law of motion
- Motion and types of motion-linear and angular, Linear Kinematics and Angular kinematics.
- Relationship between linear and angular motion.
- Biomechanics principles: Principles of initial force, principles of optimum path of acceleration, principles of conservation of movement and principle of counter action.

UNIT-V

10 Hours

- Definition of biomechanical concepts: - speed, distance, displacement, time, acceleration, velocity, mass, weight, momentum, impulse, power, impact, force, inertia, friction, force, pressure and work.
- Gravity- Definition, line of gravity, Centre of gravity.
- Equilibrium and types of equilibrium.
- Forces-its types of forces, application of forces on sports activities

Suggested Readings:

1. Blazevich, A.J. (2017). Sports Biomechanics. Bloomsbury Sports Publishers.
2. Colby, L.A and C. Kisner (2002). Therapeutic Exercise. F.A. Davis Co. Publishers, Philadelphia, Pennsylvania, USA.
3. Dillon, G. (2017). Principles of Exercise Therapy. Syrawood Publishing House, ISBN: 978168286-489-0, New York, NY100017, USA.
5. Souza, P.D. (2016). Sports Biomechanics and Medicine. Callisto Publishers, New York, USA.
6. Watkins, J. (2014) Fundamental Biomechanics of Sports and Exercise. Routledge Publishes, USA.

SEMESTER V

BSS 502: SPORTS AND EXERCISE PSYCHOLOGY

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. The students is provided with the knowledge of psychological aspects which determining/impact sports performance
2. The students learn the psychological aspects to apply to improve the performance in sports. Such core knowledge and skill helps to create a strong foundation to engage humansubject of all ages, sex, and ability.
3. Understand and explain learning & personality concepts and motivation & emotions

UNIT-I

9 Hours

- Introduction & Definition of psychology, Sports and Exercise psychology.
- Historical development and future of Sport psychology, Scope, role of sports and exercise psychologist,difference between educational psychology and sport psychology.
- Importance of sport psychology in the field sports science.

UNIT-II

9 Hours

- Motivation in sport. Definition and types. Theories of motivation.
- Dynamics of motivation in sport. Psychological factors affecting sports performance (Stress, Anxiety, Aggression, Tension, Emotions, Self-confidence, Concentration, Mental practice, Goal setting.)
- Aggression in sports- types, phenomena of aggression, Instinct Theory and Social Learning Theory, Assessment of Aggression.

UNIT-III

9 Hours

- Personality- Definition of personality, Traits and Types of personality, Theories of personality, Measurement of personality, Personality and sport performance.
- Arousal and Anxiety: Types, phenomena of Anxiety in relation to performance- Drive Theory,Inverted U theory and IZOF.
- Cognitive Process- Meaning of cognition, Characteristics of cognitive process, Memory andthinking, Principles of motor skills learning

- Transfer of training- Definition of transfer of training and its implications in sport, Types of transfer of training, Factors affecting transfer of training.
- Attention in sports- Definition and meaning of attention,
- Role of attention in individual and team sports, Strategies of improving attention.

- Psychology preparation for competition- Long and short-term psychological preparation, Strategies of psychological preparation (Imagery & Self-talk),
- Psychological skill training for activation and relaxation.
- Team Cohesion- a conceptual model of cohesion, assessment of Cohesion, relationship of Cohesion with performance.

Suggested Readings:

1. William M Jeans & Vikki Krane, (2015) Applied Sports Psychology, McGraw-Hill, 2 Penn Plaza, New York, NY 10121
2. Covey, S. (1989) 7 Habits of Highly Effective People, Covey Publications, USA.
3. Leunes, A. and I.R. Nation (2001) Sports Psychology (with InfoTrac). Wadsworth.
4. Magill, R.A. (2004) Motor Learning and Control: Concepts and Applications, McGraw Hill, New York, USA.
5. Sandhu, K., (2006) Trends and Developments in Professional Preparation in Physical Education (New Delhi : Friends Publication).
6. Siendentop, P. (2003) Introduction to Physical Education, Fitness & Sports. McGraw Hill, New York, USA.
7. Martin, G.L. (2003) Sports Psychology- Practical Guidelines from Behaviour Analysis. Sports Press, Winnipeg, Canada.
8. Schmidt, R.A. and C.A. Wrisberg (2004) Motor Learning Performance. Human Kinetics, Champaign, Illinois, USA.

SEMESTER V

BSS 503: SPORTS SOCIOLOGY

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. The students is provided with the knowledge of sociological aspects which determining/impact sports performance
2. The students learn the sociological aspects to apply to improve the performance in sports. Such core knowledge and skill helps to create a strong foundation to engage humansubject of all ages, sex, and ability.

UNIT-I

9 Hours

- Meaning, nature and scope of sociology. Definition of socialization. Meaning, Aim, Scope andImportance of Sports Sociology.
- Meaning of society, community, association and institution.
- Social control – its meaning and importance.

UNIT-II

9 Hours

- Group (primary and secondary). Social stratification and social class and caste.
- Social mobility.Marriage, family and kinship.
- Concept and Types of Sports Socialization, Agents of Sports Socialization.

UNIT-III

9 Hours

- Concept of Sports Culture, characteristics of Sports Culture,
- Element of culture in relation tosports, Club culture and Sports,
- Commercialization in sports.

UNIT-IV

9 Hours

- Sports as a social phenomenon. Socialization through physical education and games and sports.
- Sports and mass media. Sports and politics.
- Women Participants in sports. Alternative sports programmers for women,

- Professional ethics, ethics and values related to sports, sportsmanship.
- Role of teacher in changing society through Sports science, physical education and sports.
- Culture – Definition – Effect of culture on the lifestyle of people. Relationship of culture to sports, Sociometry.

Suggested Readings:

1. Ansbaugh, D.J., M.H. Hamrick & F.D. Rosato (2005). Wellness: Concepts and Application. McGraw Hill, USA.
2. Hill, USA.
3. Chopra, D. (1994). The Seven Spiritual Laws of Success. Amber-Allen Publishers, New World Library, New Delhi.
4. Covey, S.R. (2004). The Eighth Habit: From Effectiveness to Greatness. Franklin Covey Co., USA.
5. Kansal, D.K. (2013) Wholistic Personality Development. Sports & Spiritual Science Publications, New Delhi.
6. Kansal, D.K. (2018) Balanced Education, Sports & Spiritual Science Publications. In Press.
7. Loehr, J. And T. Schwartz (2003). The Power of Full Engagement : Managing Energy, not Time, Is the Key to High Performance and Personal Renewal. Free Press Paperbacks, New York, USA

SEMESTER V

BSS 504: SPORTS KINESIOLOGY AND BIOMECHANICS (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. To demonstrate about bones and structure through chart and diagram.
2. To demonstrate about muscles and their insertion and origin from the chart and diagram
3. To demonstrate axes at two different joints in relation to sports biomechanics.
4. To demonstrate planes in lieu of their axes at two different joints in relation to sports biomechanics.
5. To locate and identify the center of gravity on three different sports person.
6. To locate and identify the angle of pull of sports person
7. To illustrate the origin, insertion and action of major muscles related to sports.
8. To demonstrate and explain the method of finding center of gravity of a Badminton Racket with suspension method.
9. To demonstrate the application of bio-mechanics in sports & exercise with the help of any lab equipment.

Suggested Readings:

1. Bartlett, r. 92014). Introduction to Sports Biomechanics: Analysing Human Movement Patterns, Routledge.
2. Blazevich, A.J. (2017). Laboratory and field Exercise in Sport and Exercise Biomechanics. Routledge Publishers.
3. Watkins, J. (2017). Laboratory and field Exercise in Sport and Exercise Biomechanics. Routledge Publishers

SEMESTER V

BSS 505: SPORTS AND EXERCISE PSYCHOLOGY (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. Demonstrate the technique of Progressive Muscle Relaxation using a partner.
2. Select a sportsperson from your college teams, analyze her/his personality, and correlate with performance.
3. Apply the technique of positive thinking and motivation to improve her/his performance. Write a report on the outcome.
4. Assessment of motivation, level to play or act.
5. Assessment of personality traits.
6. Assessment of anxiety levels – pre-game and post-game (after the game is over).
7. Assessment of self-concept.
8. Assessment of self-esteem.

Suggested Readings:

1. Covey, S. (1989) 7 Habits of Highly Effective People, Covey Publications, USA.
2. Kaushik, S. and Shaw, D. (2000) Sharirik Shiksha Mein Paath Niyojan Va Shiksham Paddhathi Ke Siddhant (New Delhi: Friends Publications).
3. Kumar, Pradeep, (2007) Historical Development of Track and Field. Friends Publications, New Delhi.
4. Leunes, A. and I.R. Nation (2001) Sports Psychology (with InfoTrac). Wadsworth.
5. Magill, R.A. (2004) Motor Learning and Control: Concepts and Applications, McGrawHill, New York, USA.
6. Sandhu, K., (2006) Trends and Developments in Professional Preparation in Physical Education (New Delhi : Friends Publication).
7. Shaw, and Kaushik, (2001) Lesson-Planning, Teaching Methods and Class-Management in Physical Education (New Delhi: Khel Sahitya Kendra).
8. Siendentop, P. (2003) Introduction to Physical Education, Fitness & Sports. McGraw Hill, New York, USA.
9. Martin, G.L. (2003) Sports Psychology- Practical Guidelines from Behaviour Analysis. Sports Press, Winnipeg, Canada.
10. Schnidt, R.A. and C.A. Wrishberg (2004) Motor Learning Performance. Human Kinetics, Champaign, Illinois, USA

SEMESTER V
BSS 506: INTERNSHIP – FIELD AND WORK EXPERIENCE (P)

Maximum Marks = 100 Marks

Semester Marks = 100 Marks

Time Allowed = 3 Hrs.

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 intern's work place.

The students enrolled in the B.Sc. (Hons.) 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 : 100 Marks

Report Marks : 75 Marks

Viva- Voce Marks: 25 Marks

SEMESTER V

BSS 507: MAJOR PROJECT: REPORT & VIVA (P)

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 100 Marks

Scope: The Major project report deals with the selection of a research project to be carried upto the end of 6th semester conduct of classes. Topics for research will be selected by the group themselves related to sports and sports science. Each group will be under the supervision of a faculty allotted to them and after the finalization of topic, the topic will be completed under their guidance in 6th semester

Objective: On completion of this project report and Viva, the students should be able to:

- i. Prepare Synopsis for their proposed research work in the form of document and presentation format.
- ii. Express details of their selected topic in the form of hypothesis and methodology to be followed.

Project report: This will be followed by the preparation of the Synopsis under the following chapters:

1. Introduction: Brief information about the topic, statement of problem, objectives, and significance of their Project as well as selection of topic and the hypotheses of the project.
2. Review of Literature (minimum 15 reviews)
3. Methodology
4. References (APA format)
5. Appendix (if any).

Examination: - the exam marks will be given on the bases of pre-presentation of synopsis, documentation and paraphrasing of introduction, review of literature, methodology and references.

Score Scheme:

Total Marks : 100 Marks
Report Marks : 50 Marks
File Marks : 25 Marks
Presentation Marks : 25 Marks

SEMESTER V

BSS 508: SPORT OF CHOICE (P): ATHLETICS

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 50 Marks

Practical:

1. Introduction General Introduction of Track and field events.
2. Historical Development and Modern Trends (National and International Level)
3. Organisational Structure (State, National and International Level)
4. Playfield Technology – Marking and Construction of the track and fields.
5. Basic skills and techniques of the track and field events.
6. Rules and their interpretation.
7. Concept of Conditioning exercises, warming up and cooling down and its effects.
8. Role of weight training in track and field events.
9. Techniques of Coaching – Pep talk, Pre, during and Post match coaching.
10. Introduction to Physical and Motor Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility. Motor Fitness Components Testing of above components.

Suggested Readings:

1. Guzman, R. (2006). The Swimming Drill Book. Human Kinetics, Urbana Champion, Illinois, USA.
2. Montgomery, J. and M. Chambers (2008). Mastering Swimming. Human Kinetic, Urbana Champaign, Illinois, USA.
3. Shrivastava, A.K. (2004). Shareerik shiksha, Khel, Mein Prashashan. Sports New Delhi.
4. Wrisberg, A. (2007). Sports Skill Institutions for Coaches, Human Kinetics, Urbana Champaign, Illinois, USA

SEMESTER V

BSS 509: COUNCIL WORK (P)

Maximum Marks = 50 Marks
Semester Exam = 50 Marks

Time Allowed = 3 Hrs.

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'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 VI

BSS 601: SCIENCE OF SPORTS TRAINING

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.
2. The student attains knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice in the areas of training, talent identification, officiating and coaching.

UNIT-I

7 Hours

- Meaning and definition of sports training. Aim and Objectives of sports training.
- Characteristics of sports training.
- Principles and characteristics of Sports training, Factors influencing high sports performance.

UNIT-II

8 Hours

- Training Load- Definition and types of training load.
- Principles of training load (*Intensity and Volume*). Relationship between load and adaptation.
- Over load and critical load.
- Concept of load & Application and factor affecting of load and adaptation.

UNIT-III

10 Hours

- Strength – Definition, types and their characteristics, types of muscular contraction,
- Development of strength using own body weight and external resistance, field tests for measuring strength.
- Speed – Definition, types and their characteristics, methods of speed development – acceleration runs and repeated high intensity runs, field tests for measuring speed.

UNIT-IV

10 Hours

- Endurance – Definition and types, development of endurance – methods based on continuous principle and interval principle.
- Flexibility – Definition and types, benefits of flexibility
- How to develop flexibility using different types of stretching movements.

- Planning and talent identification-Definition of planning and its importance.
- Brief orientation about systems of planning.
- Introduction to the concept of periodization.
- Definition of talent and important points to be kept in mind while identifying talent.

Suggested Readings:

1. Arnhem, Danial D. (1985) Modern Principles of Athletic Training. Toronto: Time Mirror
2. Arnhem, Danial D. & Arnhem, Helene (1987) Essentials of Athletic Training Toronto:Times Mirror.
3. Bunn, John W. (1955) Scientific Principles of Coaching, Englewood Cliffs N. J. PrenticeHall, 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), FriendsPublications (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)

SEMESTER VI

BSS 602: SPORTS INJURIES, PREVENTION AND REHABILITATION

Maximum Marks = 100 Marks
Semester Exam = 60 Marks
Sessional Exam = 40 Marks
Contact Hours = 45 Hours

Time Allowed = 3 Hrs.

Learning Outcomes:

Students will be able to:

1. To provide students with the basic knowledge of sports physiotherapy.
2. Understanding the functions of various therapies
3. The students will be able to apply the first aid for injuries.
4. Elucidate and demonstrate various modalities of sports physiotherapy.

UNIT-I

8 Hours

- Introduction to Sports Injuries and its Classification.
- Injury screening and Assessment of Performance. Injury process, prevention and return to performance.
- Immediate on-site care of injuries, medical and surgical management of sports injuries.

UNIT-II

9 Hours

- Rehabilitation: Meaning and Definition of Rehabilitation. Aims and Principles of Rehabilitation,
- Importance and Types of Rehabilitation.
- Role of Physiotherapy in Rehabilitation (Illness, Disease and Injury). Scope of Rehabilitation in general and Sports Science.

UNIT-III

10 Hours

- Physiotherapy Definition: Guiding principles of physiotherapy & Importance of physiotherapy.
- Treatment Modalities: Electrotherapy, infrared rays, Ultraviolet rays, short wave diathermy, ultra sound.
- Hydrotherapy: Meaning and Methods, Cryotherapy, Thermo therapy, Contrast Bath, Whirlpool Bath, Steam Bath, Sauna Bath, Hot Water Fomentation.
- Massage: Meaning and importance of massage, Indications and contraindications of massage. Types of Manipulation, Physiological effects of Massage

UNIT-IV

9 Hours

- Therapeutic Exercise Definition and Importance of Therapeutic Exercises. Principles of Therapeutic Exercises.
- Classification of Therapeutic exercise: Passive Movements (Relaxed, Forced and passive stretching). Active movements (concentric, Eccentric and static).
- Free Mobility Exercise for Shoulder, Wrist, Fingers, Hip, Ankle, Foot joints and Neck exercises.

UNIT-V

9 Hours

- Role of physiotherapy, athlete trainer & coaches for Injury prevention and Rehabilitation.
- Team medical care- concept & approaches. Treatments: Laceration, Blisters, Contusion, Strain, Sprain, Fracture, Dislocation and Cramps.
- Bandages: Types of Bandages, Taping and supports.

Suggested Readings:

1. Holtz, J.B. (1994). Sports Performance Analysis, Skills, Conditions, Training and Human
2. Factors.
3. Abbe Publishes Association of Washington, D.C., U.S.A.
4. Hughes, M. and I. Franks (2015). Essentials of Performance Analysis in Sports.
5. Taylor & Francis, London, England. ISBN = 978-1-317-691389
6. Kansal, D.K. (2018). A Textbook of Sports Science: Test, Evaluation, Accreditation,
7. Measurement and Standards (TEAMS). K.K. Publishers, New Delhi, In Press.
8. McGarry, T. (2015) Routledge. Handbook of Sports Performance Analysis. Taylor & Francis,
9. London, England.
10. O'donoghue, P.O. (2014). An introduction to Performance Analysis of Sport. Routledge
11. Publishers, Taylor & Francis, London, England.
12. 7. Wilde, P.D. (2018). Building Performance Analysis. Wildey-Blackwell, New York, USA.

SEMESTER VI

BSS 603: YOGIC SCIENCE

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours = 45 Hours

Learning Outcomes:

Students will be able to:

1. The Students will acquire knowledge and understanding of YOGA.
2. Students become proficient in the knowledge, skill and practical of yoga and tactical efficiency, rules of the game and training related to yoga, officiating and coaching

UNIT-1

8 Hours

- Origin of Yoga , Historical development of yoga in India, Meaning and Definition of Yoga,
- Aims and Objectives of Yoga, Yoga in Early Upanisads
- The Yoga Sutra: General Consideration, Need and Importance of Yoga in sports

UNIT-II

8 Hours

- The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi
- Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga,
- Benefits of Asanas.

UNIT-III

9 Hours

- Surya Namaskar: Importance of Surya Namaskar, Methods and benefits of Surya Namaskar.
- Pranayama: Types, methods and benefits importance of pranayama.
- Nadis: Meaning, methods and benefits. Major Chakaras Benefits of clearing and balancing Chakras.

UNIT-IV

10 Hours

- Effect of Asanas and Pranayama on various system of the body, Meditative posture on various system of the body Types of Bandhas and mudras,
- Type of kriyas. Meditation: Meaning, Techniques and Benefits of Meditation. Passive and active meditation, Saguna Meditaion and Nirguna Meditation.

- Applied and action research in Yoga Difference between yogic practices and physical exercises.
- Yoga education centers in India and abroad,
- Role of Yoga in Psychological Preparation of athlete.
- Importance of vegetarianism in yogic diet.

Suggested Readings:

1. An and O.P. (2001). Yoga Dwara Kaya Kalp. Sewasth Sahitya Parkashan, Kanpur.
2. Iyengar, B.K.S. (1995). Light on Yoga: The Bible of Modern Yoga. Schocken Publishers.
3. Kirk, M. (2005). The Hatha Yoga Illustrated. Human Kinetics, USA.
4. Mukerji, A.P. (2010). The Doctrine and Practice of Yoga, General Books, LLC, New Delhi

SEMESTER VI

BSS 604: ENVIRONMENTAL STUDIES

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 60 Marks

Sessional Exam = 40 Marks

Contact Hours= 45 Hours

Learning Outcomes:

Students will be able to:

1. Introduce environmental studies, natural resources and its equitable use for sustainable lifestyle.
2. Define ecosystem, its types and biotic factors of ecosystem.
3. Define biodiversity, bio-geographical classification of India and conservation of biodiversity.
4. Define social issues and the environment, social and legal aspects and environmental ethics
5. Define importance of human population & environment and sustainable development.

UNIT-I

7 Hours

- Introduction: definition, scope and importance of environmental studies.
- Need for public awareness of environmental issues. Natural resources (renewable and non-renewable resources) and associated problems.
- Equitable use of resources for sustainable lifestyle.

UNIT-II

8 Hours

- Ecosystems: concept, structure and function of ecosystem.
- Types of ecosystem (forest, grassland, desert, aquatic).
- Biotic factors: producers, consumers and decomposers.
- Energy flow in the ecosystem and ecological succession. Food chains, food webs and ecological pyramids.

UNIT-III

10 Hours

- Biodiversity: Definitions of species, genetic and ecosystem diversity, biogeographical
- Classification of India, value of biodiversity (consumptive use, productive use, social, ethical, aesthetics and option values), biodiversity at global, national and local levels, India as a mega-diversity nation, hotspots of
- Biodiversity, threats to biodiversity (habitat loss, poaching to wildlife, man-wildlife conflicts), endangered and endemic species of India, conservation of biodiversity (in-situ and ex-situ conservation of biodiversity)

UNIT-IV

12 Hours

- Social issues and the environment: From unsustainable to sustainable development, urban problems related to energy, water conservation (rain-water harvesting, watershed management), environmental ethics (issues and possible solutions).
- Social and legal aspects of the current environmental crisis: environmental protection act, Air prevention and control of pollution act, water prevention and control of pollution act,
- Wildlife protection act, forest conservation act, issues involved in enforcement of environmental legislation, global environmental conflicts.

UNIT-V

8 Hours

- Human population and Environment: population growth-variations among nations, population explosion (family welfare programs)
- Environment and human health, human rights and value education, HIV/AIDS, women and child welfare, role of information technology in environmental and human health.
- Sustainable development: goals of sustainable development, sustainable cities and communities.

Suggested Readings:

1. Broucha, E. (2010) Textbook of Environmental Science. University Girants Commission.
2. Mishra, S. and D.Kumar (2012) Concepts of Environmental Science. Rahesh Publications, New Delhi.

SEMESTER VI

BSS 605: SCIENCE OF SPORTS TRAINING (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. To demonstrate guidelines for training load for the given subject.
2. To demonstrate general motor Components needed for starting Sports training: Speed, Strength, Flexibility, Coordination, IRM.
3. To demonstrate measurement procedure and to measure the muscular endurance of minimum two subjects.
4. To demonstrate training load with the help of heart rate measurement.
5. To demonstrate the process of Periodization.
6. To demonstrate the differences between different types of periodization of training methods.
7. To demonstrate training guidelines for preparation to any sports competition of one's game of choice.
8. Measure Cardio-vascular endurance of minimum five subjects.

Suggested Readings:

1. Dick, F.W. (1999). Sports training Principles. A & C Black Publishers, London, UK.
2. Horger, W.W. and S. Hoeger (2007). Fitness and Wellness. Thompson Wordsworth, New York, USA.
3. Knopt, K. (2008). Total Sports Conditioning for Athletes. Ulysses Press. Berkeley, California, USA.
4. Singh, H. (1991). Science of Sports Training. D.V.S. Publishers, Delhi.

SEMESTER VI

BSS 606: SPORTS INJURIES, PREVENTION AND REHABILITATION (P)

Maximum Marks = 50 Marks

Time Allowed = 3 Hrs.

Semester Exam = 30 Marks

Sessional Exam = 20 Marks

Practical:

1. To conduct assessment of any individual and identifying the postural deformities.
2. To perform massage Manipulations on fellow students.
3. To demonstrate Bandaging, Strapping and Taping.
4. To demonstrate the Crutch Walking.
5. To help fellow student in performing Therapeutic exercise for different body parts.
6. To perform free body exercise for different muscle groups.
7. To demonstrate any of the Hydrotherapy.
8. To perform any of the Treatment Modalities.

Suggested Readings:

1. Baumgartner TA Jackson AS Mahar MT and Rowe DA (2007). Measurement for Evaluation in
2. Physical Education. The McGraw Hill Companies. Inc. New York. USA.
3. Hughes, M. and I. Franks (2015). Essentials of Performance Analysis in Sports. Taylor & Francis, London, England.
4. Kansal D.K. (2012). A practical approach to Measurement Evaluation in Physical Education & Sports selection. Sports & Spiritual Science Publications, New Delhi.
5. Mcgarry, T. (2015). Routledge. Handbook of Sports Performance Analysis. Taylor & Francis, London, England.
6. O'donoghue, P.O. (2014). An introduction to Performance Analysis of Sport. Routledge Publishers, Taylor & Francis, London, England

SEMESTER VI

BSS 607: MAJOR PROJECT: THESIS (P)

Maximum Marks = 100 Marks

Time Allowed = 3 Hrs.

Semester Exam = 100 Marks

Scope: This project report deals with the interpretation of data collected for the research work. The topic which was selected by the student in 5th semester will be concluded in 6th semester. Each group of minimum 5 students formed in 5th semester will be presenting a thesis along with PPTs.

Each group will be under the supervision of a faculty allotted to them and under their guidance they will complete their research work, which will be submitted in the form of thesis

Project: - Based on their field experience and data/information collected, each group of minimum 5 students will jointly analyze quantitative and qualitative aspects from different sports related arenas for data collection.

The students will master the art of writing the theory part of the project Report under the following chapters:

1. Title Page
2. Acknowledgement
3. Abstract
4. Table of Contents
5. Introduction
6. Review of related literature
7. Procedure and methodology
8. Results & discussion
9. Discussions, summary and conclusions
10. Bibliography / References.
- 11.

Examination: - The examiner will give marks on the basis of documentation/presentation of research work, data analysis technique, explanation and understanding of results and conclusions, future recommendations

Score Scheme:

Total Marks: 100 Marks

Thesis Marks: 75 Marks

Viva-Voce Marks: 25 Marks

Format for research reports

TITLE OF THE PROJECT

[NAME OF THE STUDENT]

**UNDER THE SUPERVISION OF
[NAME OF FACULTY]**



ACADEMY OF SPORTS SCIENCES RESEARCH AND MANAGEMENT

DEPARTMENT OF SPORTS SCIENCE

DELHI PHARMACEUTICAL SCIENCES AND RESEARCH UNIVERSITY

PUSHP VIHAR, SECTOR-3, MEHRAULI-BADARPUR ROAD,

NEW DELHI-110017

SEMESTER VI

BSS 608: SPORT OF CHOICE: YOGA (P)

Maximum Marks = 50 Marks

Time Allowed = 3Hrs.

Semester Exam = 50 Marks

Practical:

1. Introduction General Introduction of Yoga.
2. Historical Development and Modern Trends (National and International Level)
3. Organizational Structure (State, National and International Level)
4. Explaining Meanings, techniques, precautions and effects of yoga practice.
5. Demonstrations for the Introduction and classification of Astang Yoga: Yam, Niyam, Asana, Pranayam, Pratyahar, Dharna, Dhyan, Samadhi.
6. Demonstration of common Asanas: Padamasana, Vajrasana, Sidhasana, Halasana, Bhujangasana, Tadasana, Gomukhasana, Paschimottanasana.
7. Demonstration and Practice sessions of Pranayana: Anulom – Vilom; Bhastrika, Suryabhedhan, Pranayama, Sheetal, Bhramari.
8. Demonstration of relaxation techniques.
9. Role of flexibility and stretching training in yoga.
10. Explain and demonstrate the test for flexibility testing.

Suggested Readings:

1. Brown (2009). How to Improve at Gymnastics. Crabtree Publishing Co., USA.
2. Chakraborty S (1995). Fundamental of Gymnastics. DVS Pub. New Delhi.
3. Federation International Gymnastics (2006). Federation Int. De Gymnastics.
4. Harvey FJ (1998). Physical Exercises & Gymnastics. Khel Sahitya, New Delhi.
5. Jain R (2005). Play and Learn Gymnastics. Khel Sahitya Kendra
6. Mitchell, D., Davis, B. and Lopez, R. (2002). Teaching Fundamental Gymnastics Skills. Human Kinetics, USA.
7. Schlegel, E. and Dunn, CR. (2001). The Gymnastics Book : The Young Performer's Guide to Gymnastics. Firefly Books, USA.
8. Stickland, L.R. (2008). Gender Gymnastics. Trans Pacific Press, Japan.
9. Kamlesh, M.L. (2009). Field Manual of Sports & Games. Nageen Prakashan, Meerut, UP

SEMESTER VI

BSS 609: COUNCIL WORK (P)

Maximum Marks = 50 Mark

Time Allowed = 3Hrs.

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'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 sport

