

2. PROGRAM EDUCATION OBJECTIVES (PEOs)

The overall objective of the learning outcome-based curriculum framework (LOCF) for BSc. Exercise and Sports Science/ BSc. Exercise and Sports Science Honours Program are as follows:

PEO No.	Education Objective
PEO 1	Students will be able to use their fundamental knowledge, technical and practical competence in enhancing human performance as and when required to achieve professional excellence.
PEO 2	Students will demonstrate strong and well defined practical and technical skills in optimizing human performance for sporting excellence and health benefits
PEO 3	Students will be able to practice the profession maintaining high professional standards, exhibiting ethical behaviours, strong communication skills, and effective inter-personal skills to work in an inter-disciplinary team.
PEO 4	Students will be able to use collaborative skills to identify, assess and formulate problems and execute the solution to the needs of athletes and organizations.
PEO 5	Students will be able to imbibe the culture of research, innovation, entrepreneurship and incubation in the sporting community.
PEO 6	Students will be able to participate in lifelong learning process for a highly productive career and will be able to relate the concepts of maximising human potentials and minimize injury risk, while serving the cause of the society.



3. GRADUATE ATTRIBUTES

S No.	Attribute	Description
1	Professional Knowledge	Demonstrate scientific knowledge and understanding to work as an exercise and sport scientist.
2	Technical/Practical/Laboratory Knowledge	Demonstrate technical and practical skills in order to assess and design programs for enhancing human performance and manage injury risk.
3.	Communication	Ability to communicate effectively and appropriately in writing, orally and non-verbally with clients, coaches, parents/guardians, colleagues, managers other stakeholders in the sporting fraternity.
4.	Cooperation/Team work	Ability to work effectively and respectfully with an interdisciplinary team to achieve coordinated, high quality work environment.
5.	Professional ethics	Ability to identify ethical issues and make an informed decision, which upholds human and organizational values life.
6.	Research / Innovation-related Skills	A sense of inquiry and investigation for raising relevant and contemporary questions, synthesizing and articulating.
7.	Critical thinking and problem solving	Ability to think critically in an unbiased manner and devise solutions (feasible and affordable) that positively influences all stakeholders.
8.	Reflective thinking	Ability to employ reflective thinking along with the ability to create the sense of awareness of one self and society
9.	Information/digital literacy	Ability to adapt quickly to the changes in the technological progress in all facets of sport science.
10.	Multi-cultural competence	Be sensitive to the cultural differences and needs of colleagues, people on the personal and professional circle.
11.	Leadership readiness/qualities	Ability to have a positive influence over the clients and colleagues by serving them without hierarchical boundaries.
12.	Lifelong Learning	Every graduate will be converted into lifelong learner and consistently update himself or herself with current knowledge, skills and technologies. Acquiring Knowledge and creating the understanding in learners that learning will continue throughout life.

5. PROGRAM OUTCOMES (POs):

After successful completion of Bachelor of Science in Exercise and Sports Science, the students will be able to:

PO No.	Attribute	Competency
PO 1	Professional knowledge	Possess and acquire scientific knowledge to work as a professional, optimizing human function
PO 2	Clinical/ Technical skills	Demonstrate and possess technical skills to provide quality care for athletes and teams
PO 3	Teamwork	Demonstrate ability to be a team player and support shared goals within an interdisciplinary environment
PO 4	Ethical value & professionalism	Possess and demonstrate ethical values and professionalism within the legal framework of the society
PO 5	Communication	Communicate effectively and appropriately within an interdisciplinary environment and the society
PO 6	Evidence based practice	Devise assessment and programs that are evidence informed and aligns with professional excellence
PO 7	Life-long learning	Continues to exhibit interest in enhancing knowledge and skills, which evolve over a period of time
PO 8	Entrepreneurship, leadership and mentorship	Display entrepreneurial inclination, leadership and mentorship skills

Program Specific Outcomes (PSOs)

PSO No.	Attribute	Competency
PSO 1	Self-Management	Work and learn independently take responsibility for personal learning and actions.
PSO 2	Critical Thinking	Raise vital questions, gather and assesses relevant information, come to well-reasoned conclusions, and examine implications and practical consequences
PSO 3	Multicultural Competence	Demonstrate an understanding of self, local, and global culture in relation to interacting with/learning about other culture



6. COURSE STRUCTURE, COURSE WISE LEARNING OBJECTIVE, COURSE OUTCOMES (COs)
SEMESTER - I

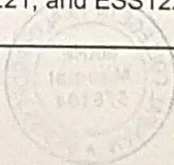
Code	Course	Credit Distribution (L,T,P - Hours/week)				Marks Distribution		
		L	T	P	C	IAC	ESE	Total
ESS1101	Introduction to Sport	2	2	-	4	50	50	100
ESS1111	Introduction to Sport Practicum	-	-	8	4	50	50	100
ESS1102	Anatomy for Exercise and Sports Science	3	1	-	4	50	50	100
ESS1103	Physiology for Exercise and Sports Science	3	1	-	4	50	50	100
ESS1104	Computer Applications	2	-	-	2	100	-	100
ESS1105	Essentials of Photography and Videography	2	-	-	2	100	-	100
Total		12	4	8	20	400	200	600

Note: ESE for ESS1101, ESS1102, ESS1103, and ESS1111 will be conducted for 100 and normalized to 50.

SEMESTER - II

Code	Course	Credit Distribution (L,T,P - Hours/week)				Marks Distribution		
		L	T	P	C	IAC	ESE	Total
ESS1201	Functional Anatomy	3	1	-	4	50	50	100
ESS1221	Sports Coaching	2	-	4	4	50	50	100
ESS1222	Basic Evaluation in Sport	1	1	6	5	50	50	100
BIC 1202	Biochemistry	3	-	-	3	100	-	100
CSK 1001	Communication Skills	2	-	-	2	100	-	100
EIC 1001	Environmental Science and Indian Constitution	2	-	-	2	100	-	100
Total		13	2	10	20	450	150	600

Note: ESE for ESS1201, ESS1221, and ESS1222 will be conducted for 100 and normalized to 50.



SEMESTER - III

Code	Course	Credit Distribution (L,T,P - Hours/week)				Marks Distribution		
		L	T	P	C	IAC	ESE	Total
ESS2101	Sports Biomechanics	3	1	-	4	50	50	100
ESS2111	Sports Biomechanics Practicum	-	-	6	3	50	50	100
ESS2102	Motor control, Learning and Skill Acquisition	2	1	-	3	50	50	100
ESS2103	Physical Activity in Health and Disease	2	1	-	3	50	50	100
ESS2104	Academic Writing	1	1	-	2	100	-	100
ESS2126	First Aid	-	1	2	2	100	-	100
*** **	Open Elective - I	-	-	-	3	S/NS		
Total		8	5	8	20	400	200	600

Note: ESE for ESS2101, ESS2111, ESS2102, and ESS2103 will be conducted for 100 and normalized to 50

SEMESTER - IV

Code	Course	Credit Distribution (L,T,P - Hours/week)				Marks Distribution		
		L	T	P	C	IAC	ESE	Total
ESS2201	Exercise Physiology	4	1	-	5	50	50	100
ESS2211	Exercise Physiology Practicum	-	-	8	4	50	50	100
ESS2202	Essentials of Fitness Training	2	1	-	3	50	50	100
ESS2212	Essentials of Fitness Training Practicum	-	-	6	3	50	50	100
GPY 2204	General Psychology	2	-	-	2	100	-	100
ESS****	Program Elective 1	3	-	-	3	50	50	100
		11	2	14	20	350	250	600

Note: ESE for ESS2201, ESS2211, ESS2202, and ESS2212 will be conducted for 100 and normalized to 50



SEMESTER - V

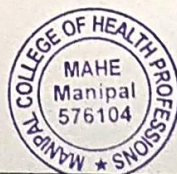
Code	Course	Credit Distribution (L,T,P - Hours/week)				Marks Distribution		
		L	T	P	C	IAC	ESE	Total
ESS3101	Athletic Injuries and Management	2	1	-	3	50	50	100
ESS3111	Athletic Injuries and Management Practicum	-	-	6	3	50	50	100
ESS3102	Exercise and Sport Psychology	3	-	-	3	50	50	100
ESS3103	Sports Nutrition	3	-	-	3	50	50	100
ESS3104	Leadership and Management in Sports	2	1	-	3	50	50	100
ESS3105	Ethical Issues for Sport Scientists	1	1	-	2	100	-	100
*** ****	Open Elective - II	-	-	-	3	-	-	S/NS
		11	3	6	20	350	250	600

Note ESE for ESS3101, ESS3111, ESS3102, ESS3103, and ESS3104 will be conducted for 100 and normalized to 50

SEMESTER - VI

Code	Course	Credit Distribution (L,T,P - Hours/week)				Marks Distribution		
		L	T	P	C	IAC	ESE	Total
ESS3201	Strength and Conditioning	2	2	-	4	50	50	100
ESS3211	Guided Practical Training	-	-	10	5	100	-	100
ESS3202	Entrepreneurship and Innovation	1	1	-	2	100	-	100
ESS3251	Project	-	1	4	3	100	-	100
BST3201	Biostatistics and Research Methodology	3	-	-	3	30	70	100
ESS****	Program Elective - II	3	-	-	3	50	50	100
	Total	9	4	14	20	430	170	600

Note: ESE for BST3201 will be conducted for 100 marks and normalized to 70 marks
ESE for ESS3201 will be conducted for 100 and normalized to 50 marks



Open Electives

Open elective is credited, choice-based and is graded as satisfactory / not satisfactory (S/NS). Students make a choice from pool of electives offered by MAHE institution / Online courses as approved by the department

Program Electives

Program elective is credited and choice-based. The students make a choice from pool of electives offered by the department. The ESE is conducted for 50 marks.

Semester	Course Code	Course Title	Credit (s) Distribution (L,T,P,CL are hours/ week)			
			L	T	P	C
IV Semester	ESS2241	Material Science for Sports and Exercise	3	-	-	3
	ESS2242	Sport Instrumentation and Technology	3	-	-	3
VI Semester	ESS3241	Performance Analysis	2	1	-	3
	ESS3242	Adapted Physical Activity	2	1	-	3

ESE for ESS2241, ESS2242, ESS3241 and ESS3242 will be conducted for 100 and normalized to 50.

Honours Year

Eligibility Criteria for Honours Year:

1. CGPA of 8.5
2. Interview
3. Subject to availability of projects



SEMESTER - VII

Code	Course	Credit Distribution (L,T,P - Hours/week)				Marks Distribution		
		L	T	P	C	IAC	ESE	Total
ESS4151	Mentored Research - I	-	-	24	12	100	-	100
ESS4101	Literature Seminar	2	-	-	2	100	-	100
ESS****	Program Elective - III	2	1	-	3	100	-	100
ESS****	Program Elective - III Practicum	-	-	6	3	100	-	100
Total		4	1	30	20	400	-	400

Note: The students may choose any one option from the list of program elective combinations from the table below

SEMESTER - VIII

Code	Course	Credit Distribution (L,T,P - Hours/week)				Marks Distribution		
		L	T	P	C	IAC	ESE	Total
ESS4251	Mentored Research - II	-	-	40	20	100	-	100
Total				40	20	100	-	100

Program Elective - III

Option	Code	Course	Credit Distribution (L,T,P - Hours/week)			
			L	T	P	C
1	ESS4111	Advanced Strength and Conditioning	2	1	-	3
	ESS4112	Advanced Strength and Conditioning Practicum	-	-	6	3
2	ESS4121	Advanced Sports Biomechanics	2	1	-	3
	ESS4122	Advanced Sports Biomechanics Practicum	-	-	6	3
3	ESS4131	Advanced Exercise Physiology	2	1	-	3
	ESS4132	Advanced Exercise Physiology Practicum	-	-	6	3
4	ESS4141	Advanced Physical activity	2	1	-	3
	ESS4142	Advanced Physical Activity Practicum	-	-	6	3