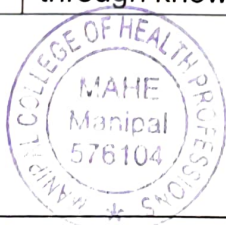## 2. PROGRAM EDUCATION OBJECTIVES (PEOs)

The overall objective of the learning outcome-based curriculum framework (LOCF) for M.Sc. Anaesthesia and Operation Theatre Technology are as follows:

PEO No.	Education Objective
PEO 1	Students will be able to use their fundamental knowledge and clinical competence in various scientific aspects of advanced techniques involved in Anaesthesia & Operation Theatre Technology
PEO 2	Students will demonstrate strong and well defined clinical / practical skills in performing various skill-based activities including assisting the anaesthetist and surgical teams in all kinds of surgical disciplines.
PEO 3	Students will be able to practice the profession with highly professional and ethical attitude, strong communication skills, and to work in an inter-disciplinary team so as to achieve professional excellence.
PEO 4	Students will be able to use interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution to assess the case independently
PEO 5	Students will be able to imbibe the culture of research, innovation, entrepreneurship and incubation through evidence-based to uplift the knowledge in recent techniques and procedure based on Anaesthesia and Operation Theatre Technology
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 trends and issues in the discipline related to innovation in the techniques and procedural skills

3. GRADUATE ATTRIBUTES

S No.	Attribute	Description
1	Domain Knowledge	Demonstrate comprehensive knowledge, competency and understanding of one or more disciplines that form a part of a professional domain
2	Clinical / Hands-on skills	Demonstrate clinical / hands-on skills in order to deliver and manage quality health care services
3	Communication Skills	Demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups using appropriate media.
4	Team work	Demonstrate the ability to effectively and efficiently work and collaborate with diverse teams in the best interest of health care needs of the community
5.	Professional ethics	Demonstrate the ability to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in professional 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	Demonstrate capacity to think critically and extrapolate from what one has learned by applying their competencies and knowledge to solve different kinds of non-familiar problems in real life situations.
8	Information/Digital Literacy	Demonstrate capability to use ICT in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources and to use appropriate software for analysis of data.
9	Multicultural Competence	Demonstrate knowledge of the values and beliefs of multiple cultures and a global perspective, effectively engage in a multicultural society, interact respectfully with diverse groups.
11.	Leadership qualities	Demonstrate leadership capability to formulate an inspiring vision, build a team, motivate and inspire team members to attain organizational vision
12.	Lifelong Learning	Demonstrate the ability to acquire knowledge and skills, that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to demands of work place through knowledge/skill development/reskilling.

4. PROGRAM OUTCOMES (POs):

After successful completion of Masters / MSc Anaesthesia and Operation Theatre Technology program students will be able to:

PO No.	Attribute	Competency
PO1	Domain knowledge	Possess and acquire **scientific knowledge** to work as a health care professional
PO2	Clinical/ Hands-on skills	Demonstrate and possess **clinical and hands-on skills** to provide quality health care services
PO3	Team work	Demonstrate **team work skills** to support shared goals with the interdisciplinary health care team to improve societal health
PO4	Ethical value & professionalism	Possess and demonstrate **ethical values and professionalism** within the legal framework of the society
PO5	Communication	**Communicate effectively** and appropriately with the interdisciplinary health care team and the society
PO6	Evidence based practice	Demonstrate high quality **evidence based practice** that leads to excellence in professional practice
PO7	Life-long learning	Enhance knowledge and skills with the use of advancing technology for the **continual improvement** of professional practice
PO8	Entrepreneurship, leadership and mentorship	Display **entrepreneurship, leadership and mentorship** skills to practice independently as well as in collaboration with the interdisciplinary health care team

6. COURSE STRUCTURE, COURSE WISE LEARNING OBJECTIVE, AND COURSE OUTCOMES (COs)

SEMESTER - I

Course Code	Course Title	Credit Distribution (hours/week)						Marks Distribution		
		L	T	P	PW	CL	CR	IAC	ESE	Total
ABS5101	Advanced Biostatistics & Research Methodology	3	1	-	-	-	4	30	70	100
AOT5101	Applied medical sciences	2	1	-	-	-	3	50	50	100
AOT 5102	Anaesthetic Equipments and Procedures	3	-	2	-	-	4	50	50	100
AOT5103	Pharmacology of Anaesthetics	2	1	-	-	-	3	50	50	100
AOT5151	Research project	-	-	-	6	-	2	100	-	100
AOT5131	Comprehensive clinical skills - I	-	-	-	-	12	4	100	-	100
	Total	**10**	**3**	**2**	**6**	**12**	**20**	**380**	**220**	**600**

Note:
ESE for:
ABS5101 will be conducted for 50 marks & normalised to 70marks for grading
AOT5101, AOT5102, AOT5103 Will be conducted for 100 marks & normalised to 50 marks for grading.
Research topic to be finalized by the end of the semester.

SEMESTER - II

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	CL	CR	IAC	ESE	Total
EPG5201	Ethics & Pedagogy	1	1	-	-	2	100	-	100
AOT5221	Advanced Anaesthesia Techniques	2	2	2	-	5	50	50	100
AOT5222	Applied Surgical Technology	2	2	2	-	5	50	50	100
AOT5201	Operation Theatre Management	2	1	-	-	3	50	50	100
AOT5231	Comprehensive clinical skills - II	-	-	-	15	5	100	-	100
	Total	**7**	**6**	**4**	**15**	**20**	**350**	**150**	**500**

Note:
ESE for:
AOT5221, AOT5222, AOT5201 Will be conducted for 100 marks & normalised to 50 marks for grading
Submit and obtain IRC, IEC/CTRI approval for the research proposal by end of the semester.

SEMESTER - III

Course Code	Course Title	L	T	P	CL	CR	IAC	ESE	Total
		Credit Distribution (hours/week)					**Marks Distribution**		
AOT6121	Subspecialty Surgical Techniques	2	1	2	-	4	50	50	100
AOT6101	Disaster Management	2	-	2	-	3	50	50	100
AOT6102	Basic principles of Health Care management	2	1	-	-	3	100	-	100
AOT****	Program Elective	1	1	2	-	3	50	50	100
AOT6131	Comprehensive clinical skills -III	-	-	-	21	7	50	50	100
	Total	**7**	**3**	**6**	**21**	**20**	**300**	**200**	**500**

Note:
ESE for:
AOT6121, Will be conducted for 100 marks & normalised for 50 marks for grading.
AOT6101 will be conducted out of 50.
Data analysis to be completed by end of the semester.

SEMESTER - IV

Course Code	Course Title	L	T	P	CL	PW	CR	IAC	ESE	Total
		Credit Distribution (hours/week)						**Marks Distribution**		
AOT6201	Subspecialty Anaesthesia Techniques	3	2	-	-	-	5	50	50	100
AOT6221	Anaesthesia & Critical Care	1	1	4	-	-	4	50	50	100
AOT6251	Dissertation	-	-	-	-	9	3	50	50	100
AOT6231	Comprehensive clinical skills -IV	-	-	-	24	-	8	50	50	100
	Total	**4**	**3**	**4**	**24**	**9**	**20**	**200**	**200**	**400**

Note:
ESE for:
AOT6201, AOT6251 will be conducted for 100 marks & normalised to 50 marks for grading.
AOT6221will be conducted out of 50

LIST THE PROGRAM ELECTIVE

Elective Code	Elective Title	L	T	P	CR	IAC	ESE	Total
AOT6013	**Program Elective I:** Advanced Cardiac and Basic Life Support	1	1	2	3	50	50	100
AOT6023	**Program Elective II:** Transfusion and Intravenous Therapy	1	1	2	3	50	50	100

Note:
ESE for AOT6013 and AOT6023 will be conducted out of 50.

OVERALL CREDIT DISTRIBUTION

Semester	Credit distribution						Marks Distribution		
	L	T	P	PW	CL	CR	IAC	ESE	Total
I - Semester	10	3	6	6	12	20	380	220	600
II - Semester	7	6	4	-	15	20	350	150	500
III - Semester	7	3	6	-	21	20	300	200	500
IV - Semester	4	3	4	9	24	20	200	200	400
Grand Total	28	15	20	15	72	80	1230	770	2000

INTERNAL ASSESSMENT COMPONENT (IAC) WEIGHTAGE DISTRIBUTION

Theory		Practical	
Components	%	Components	%
Mid semester exam	50	Practical exam	50
Class seminar	30	Record submission	20
Assignments/Quiz	20	Practical/viva voce	30