MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI

(A constituent unit of MGM INSTITUTE OF HEALTH SCIENCES)

(Deemed to be University u/s 3 of UGC Act 1956)

Grade "A^{++}" Accredited by NAAC

Sector 1, Kamothe, Navi Mumbai-410209, Tel.No.022-27437631, 27437632

Email. sbsnm@mgmuhs.com / Website: www.mgmsbsnm.edu.in

CHOICE BASED CREDIT SYSTEM (CBCS)

(Academic Year 2025 - 26)

Curriculum for

M.Sc. Allied Health Sciences

M.Sc. OPERATION THEATRE & ANESTHESIA TECHNOLOGY

Semester I & II

DIRECTOR'S MESSAGE

Welcome Message from the Director

Dear Postgraduate Students,

Welcome to **MGM School of Biomedical Sciences (MGMSBS), MGMIHS**, a premier institution dedicated to advancing allied and health sciences education. As you embark on this transformative academic journey, you are joining a community that fosters excellence in research, clinical expertise, and innovation**.**

MGMIHS, accredited with **NAAC 'A^{++}' Grade (CGPA 3.55, 2022)** and recognized as a **Category I Institution by UGC**, offers an ecosystem that nurtures both academic and professional growth. With **NIRF (151-200 rank band) recognition, NABH-accredited hospitals, NABL-accredited diagnostic labs, and JCI accreditation for MGM New Bombay Hospital**, we uphold global benchmarks in education and healthcare.

At MGMSBS, our **15 postgraduate programs** are meticulously designed to align with the National Commission for Allied and Healthcare Professionals **(NCAHP)** standards**,** National Education Policy **(NEP)** 2020**,** and the National Credit Framework **(NCrF).** We have implemented the **Choice-Based Credit System (CBCS)** to provide academic flexibility while ensuring rigorous training in clinical and technical skills**.** Our state-of-the-art research laboratories, digital classrooms, and the Central Research Laboratory (CRL) foster an environment that encourages innovation and evidence-based learning**.**

Postgraduate education at MGMSBS goes beyond theoretical learning—our curriculum integrates **hands-on clinical training, interdisciplinary collaboration, and exposure to real-world healthcare challenges**. We emphasize **research-driven education**, encouraging students to actively participate in **scientific discoveries, publications, and international collaborations**.
Beyond academics, we believe in **holistic development**, with initiatives such as the **AARAMBH Science and Wellness Club**, which promotes **mental well-being, leadership, and professional networking**.

As you step into this **next phase of academic and professional growth**, we encourage you to explore new ideas, engage in impactful research, and contribute meaningfully to the **healthcare ecosystem**. We are confident that your journey at MGMSBS will shape you into **skilled, compassionate, and visionary professionals**, ready to lead in the ever-evolving healthcare landscape.

We look forward to witnessing your achievements and contributions!

Dr. Mansee Thakur
Director, MGM School of Biomedical Sciences
MGM Institute of Health Sciences, Navi Mumbai

ABOUT MGM SCHOOL OF BIOMEDICAL SCIENCES

Mission

To improve the quality of life, both at individual and community levels by imparting quality medical education to tomorrow's doctors and medical scientists and by advancing knowledge in all fields of health sciences though meaningful and ethical research.

Vision

Bytheyear2022, MGM Institute of Health Sciences aims to be top-ranking Centre of Excellence in Medical Education and Research. Students graduating from the Institute will have the required skills to deliver quality health care to all sections of the society with compassion and benevolence, without prejudice or discrimination, at an affordable cost. As a research Centre, it shall focus on finding better, safer and affordable ways of diagnosing, treating and preventing diseases. In doing so, it will maintain the highest ethical standards.

About–School of Biomedical Sciences

MGM School of Biomedical Sciences is formed under the aegis of MGM IHS with the vision of offering basic Allied Science and Medical courses for students who aspire to pursue their career in the Allied Health Sciences, teaching as well as research.

School of Biomedical Sciences is dedicated to the providing the highest quality education in basic medical sciences by offering a dynamic study environment with well-equipped labs. The school encompasses 24 courses each with its own distinct, specialized body of knowledge and skill. This includes 8 UG courses and 16 PG courses. The college at its growing years started with mere 100 students has recorded exponential growth and is now a full-fledged educational and research institution with the student strength reaching approximately **800** at present.

Our consistent theme throughout is to encourage students to become engaged, be active learnersandtopromotemedicalresearchsothatultimatelytheyacquireknowledge,skills,andunderstanding so as to provide well qualified and trained professionals in Allied Health Sciences to improve the quality of life.

As there is increased need to deliver high quality, timely and easily accessible patient care system the collaborative efforts among physicians, nurses and allied health providers become ever more essential for an effective patient care. Thus the role of allied health professionals in ever-evolving medical system is very important in providing high-quality patient care.

Last but by no means least, School of Biomedical Sciences envisions to continuously grow and reform. Reformations are essential to any growing institution as it fulfills our bold aspirations of providing the best for the students, for us to serve long into the future and to get ourselves up dated to changing and evolving trends in the health care systems.

Name of the Degree: M.Sc. Operation Theatre & Anesthesia Technology

Duration of Study:

The duration of the study for M.Sc. Operation Theatre & Anesthesia Technology will of 2 years.

Eligibility Criteria:

Candidate should be minimum B.Sc. Operation Theater & Anesthesia Technology/ B.Sc. Anesthesia & Critical Care Technology / B.Sc. Operation Theater Technology with minimum 50% marks in qualified examination.

Medium of Instruction:

English shall be the Medium of Instruction for all the Subjects of study and for examinations.

For any query visit the website: www.mgmsbsnm.edu.in/www.mgmuhs.com

M.Sc. Operation Theatre & Anesthesia Technology

Program Outcomes (PO)

Program Code	Program Outcome
PO1	Nurture the scientific and/or clinical knowledge and skills for development of industrial applications, health care practices and entrepreneurship.
PO2	Develop the ability of critical thinking to analyze, interpret problems and to find out systematic approach for solution.
PO3	Impart decision making capability for handling various circumstances in their respective areas
PO4	Demonstrate research skills for planning, designing, implementation and effective utilization of research findings for community.
PO5	Develop an ability to function as an efficient individual and team player in multidisciplinary sectors for effective outcomes
PO6	Demonstrate an effective written and oral communication skills to communicate effectively in health care sector, industries, academia and research.
PO7	Inculcate code of ethics in professional and social circumstances to execute them in daily practices and research in respective areas of specialization
PO8	Develop lifelong learning attitude and values for enhancement of professional and social skills for an overall development

Program Specific Outcome (PO)

Program Code	Program Outcome
PO1	Students will be competent to work in Hospital Operation Theatres, Critical Care Units and Emergency sections.
PO2	Students will be skilled in problem solving, critical thinking and will be able to assist the Surgeon or Anesthetist.
PO3	The students will acquire in-depth knowledge of Anesthesia, Surgery, Critical care pain Management.
PO4	Students will be able to have all the relevant knowledge of Anesthesia & Surgery and will be able to do various procedures required.
PO5	This Program will create a great source of manpower which can aid in our health sector especially in Trauma, Emergency, ICU & Operation Theatres.
PO6	Students will be able to explore new areas of research in both Anesthesia & Surgery and can also go for research as well.
PO7	Students will be able to integrate knowledge of various types of Surgical Procedures & Anesthetic procedures along with their in-depth knowledge.

Learning Objective

Sr. No.	Learning Objective
At the end of completion of M.Sc. OTAT student shall achieve following skills	
1	Students shall learn and work as a link between OT Sisters and Doctor in OT.
2	Learn to prepare the OT prior to surgery, including anaesthesia preparation and Surgical Preparation.
3	Shall be trained in sterilization of OT and instruments.
4	Learn to prepare the OT prior to surgery, including anaesthesia preparation and Surgical Preparation.
5	Shall be trained in sterilization of OT and instruments.
6	Assist the Anaesthetist in delivering General anaesthesia and Regional anaesthesia.
7	Assist in common Surgeries as second SOS first assistant in emergency.
8	Shall be trained in performing basic nursing procedures like IV Catheterization, RT insertion, Nebulisation, Oxygen therapy, Injections.
9	Shall be trained in monitoring of the patient in pre-op and post-op room.
10	Shall be trained in Cardio-pulmonary resuscitation.
11	Shall be trained in use a defibrillator correctly during Cardio-pulmonary resuscitation.
12	Shall be trained in use of basic monitors, equipment's and C-arm in OT.
13	Shall be informed regarding maintenance of basic monitors, equipment's and C-arm in OT including sterilization of endoscopes.
14	Shall be trained in maintenance of all OT records in a proper way.
15	Shall be trained in Blood transfusion therapy.
16	Shall be trained in monitoring of the patient during Blood transfusion.
17	Shall be trained in monitoring of parameters as per check list before & after surgery.
18	Shall be trained in communication skills to provide psychological support to the patient.
19	Shall be trained in counselling patients' relatives.
20	Shall be trained in management of common accidents and untoward incidences in OT.
21	Shall be trained in managing the Arthroscopy unit.

22	Shall be trained in performing different injection techniques commonly used in OT.
23	Shall be trained in checking availability of emergency drugs in emergency tray in the OT.
24	Shall be trained in taking BP and Pulse of patients.
25	Shall be trained in verifying IPD papers for Preoperative preparation NBM status and consent for surgical procedure.
26	Shall be trained in preparation of dressing pads, swabs and packs.
27	Shall be trained in packing of drums for sterilization.
28	Shall be trained in observation of patient during surgery and postoperative period.
29	Shall be trained in segregation of biomedical waste.
30	Shall be trained in preparation of electric gadgets such as Laparoscope, cautery etc.
31	Shall be trained in monitoring of Central suction, electric suction machines and foot suction machines.
32	Shall be trained in Checking whether OT lists are signed by authorities.
33	Shall be trained in ensuring availability of anaesthesia disposables such as ETT, Tracheostomy tray, airways, laryngoscopes with all blades, connectors, styles, spinal and epidural tray, defibrillators, ventilators etc.
34	Shall be trained in ensuring availability of IV anaesthetics such as Thiopentone, propofol, ketamine and muscle Relaxants such as suxamethonium, pancuronium, atracurium, vecuronium. Local anaesthetics such as lignocaine, Bupivacaine etc.
35	Shall be trained in colour coding of various types of cylinders.
36	Shall be trained in monitoring of central oxygen system, manifolds, liquid oxygen, and measurement of pressures in Oxygen cylinders.
37	Shall be trained in use of fire extinguishers.
38	Shall be trained in various positions of operation table and their indications.
39	Shall be trained in inventories of various OT equipment's, instruments, consumables and disposables including indents, opening and closing balances.
40	Shall be trained in technical work as well as paper work equally.

Semester I

MOTAT 101 T	Applied Anatomy & Physiology	Mapped PO	Teaching-Learning Methodology	Assessment Tools
CO1	Explain the structure and function of the human body in relation to healthcare practices.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Quiz	Theory exam, Practical exam, Viva-voce, Seminar
CO2	Analyze physiological mechanisms and their relevance to clinical applications.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Quiz	Theory exam, Practical exam, Viva-voce, Seminar
CO3	Apply anatomical and physiological concepts to patient care and medical procedures.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Quiz	Theory exam, Viva-voce, Seminar, Log Book, Case-study
MOTAT 102 T	**Pre-operative Assessment & Optimisation Strategies**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Identify key pre-operative assessment parameters to ensure patient safety.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Demonstration, Role-Play, Videos	Theory exam, Viva voce, Seminar, Skill assessment, Case-study presentation
CO2	Analyze risk factors and develop optimization strategies for surgical interventions.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Group Discussion, Problem-Based Learning (PBL)	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CO3	Demonstrate decision-making skills in managing pre-operative patient conditions.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Group Discussion, Seminar, Workshops, Demonstration	Practical Exam, Station Exercise, Log book, Seminar Presentation, Skill assessment
MOTAT 104 P	**Pre-operative Assessment & Optimisation Strategies**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Identify key pre-operative assessment parameters to ensure patient safety.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Demonstration, Assignment,	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE Assignment, Journal
CO2	Analyze risk factors and develop optimization strategies for surgical interventions.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Demonstration, Assignment	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE Assignment, Journal
CO3	Demonstrate decision-making	PO1, PO2,	Lecture, Practical,	Internal Exam,

	skills in managing pre-operative patient conditions.	PO3, PO4, PO5,PO6, PO7, PO8	Demonstration, Assignment	University Exam, (Theory Exam) Seminar, Station Exercise / OSCE Assignment, Journal
MOTAT 103 T	**Surgical Equipments & Technology**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Describe the working principles of various surgical instruments and technologies.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Experiential, Industrial visit	Theory Exam, Practical Exam, Assignment, Skill assessment
CO2	Demonstrate safe handling and maintenance of surgical equipment.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Experiential, Industrial visit	Theory Exam, Practical Exam, Assignment, Skill assessment
CO3	Apply knowledge of surgical technology in clinical and emergency settings.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Experiential, Industrial visit	Theory Exam, Practical Exam, Assignment, Skill assessment
MOTAT 105 P	**Surgical Equipments & Technology**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Describe the working principles of various surgical instruments and technologies.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Demonstration, , Industrial Visit, Assignment	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE Assignment, Journal
CO2	Demonstrate safe handling and maintenance of surgical equipment.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Demonstration, , Industrial Visit, Assignment	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE Assignment, Journal
CO3	Apply knowledge of surgical technology in clinical and emergency settings.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Demonstration, , Industrial Visit, Assignment	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE Assignment, Journal
CC 001 T	**Research Methodology & Biostatistics (Core Course)**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Understand the fundamentals of research methodology and biostatistics.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, E-Learning, workshops	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CO2	Apply statistical tools to analyze healthcare data and	PO1, PO2, PO3, PO4,	Lecture, Practical, E-Learning, workshops	Internal Exam, University Exam,

	interpret research findings.	PO5,PO6, PO7, PO8		(Theory Exam) Seminar, Assignment
CO3	Develop research proposals addressing healthcare challenges.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, E-Learning, workshops	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CC 001 P	**Research Methodology & Biostatistics**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Understand the fundamentals of research methodology and biostatistics.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, E-Learning, workshops	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CO2	Apply statistical tools to analyze healthcare data and interpret research findings.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, E-Learning, workshops	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CO3	Develop research proposals addressing healthcare challenges.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, E-Learning, workshops	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
MOTAT 106 CP	**MOTAT Directed Clinical Education - I**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO5	Demonstrate fundamental skills in OT and anesthesia procedures.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Practical, Flip Classroom, Problem-Based Learning (PBL)	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE Assignment, Log book
CO6	Assist in preoperative and intraoperative patient care.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Experiential, Workshops	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
C07	Apply infection control and sterilization protocols in clinical settings.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Experiential, Workshops	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment

SEMESTER II

MOTAT 107 T	Anaesthetic Equipments & Procedures	Mapped PO	Teaching-Learning Methodology	Assessment Tools
CO1	Explain the principles and functioning of anaesthetic equipment.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Quiz, Flip classroom	Theory exam, Practical exam, Viva-voce, Seminar
CO2	Demonstrate proper handling and maintenance of anaesthetic devices.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Demonstration, PBL, Assignment	Theory exam, Viva-voce, Seminar, Log Book
CO3	Apply anaesthesia techniques based on clinical requirements.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Group Discussion	Theory exam, Viva-voce, Seminar, Log Book, Case-study
MOTAT 110 P	**Anaesthetic Equipments & Procedures**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Explain the principles and functioning of anaesthetic equipment.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Demonstration, Experiential, Industrial visit, Problem-Based Learning (PBL), Experiential	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE journal
CO2	Demonstrate proper handling and maintenance of anaesthetic devices.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Demonstration, Experiential, Industrial visit, Problem-Based Learning (PBL), Experiential	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE journal
CO3	Apply anaesthesia techniques based on clinical requirements.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Demonstration, Experiential, Industrial visit, Problem-Based Learning (PBL), Experiential	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE journal
MOTAT 108 T	**Advanced Anaesthesia Techniques**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Understand advanced anaesthesia techniques for different surgical procedures.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Practical, Quiz, Seminar	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CO2	Analyze patient responses and modify anesthetic plans accordingly.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Workshops, Case-Study, Lecture, Practical, Demonstration	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment

CO3	Demonstrate proficiency in administering specialized anaesthesia methods.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Workshops, Case-Study, Lecture, Practical, Demonstration	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
MOTAT 109 T	**Concept of Disease In Relation To Anesthesia & Critical Care**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Explain the pathophysiology of critical illnesses and their impact on patient management.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Problem Based learning, Group Discussion, Practical	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CO2	Analyze clinical conditions requiring critical care interventions.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Problem Based learning, Group Discussion, Practical	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CO3	Demonstrate decision-making skills in managing critically ill patients.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Problem Based learning, Group Discussion, Practical	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
MOTAT 111 P	**Concept of Disease In Relation To Anesthesia & Critical Care**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Explain the pathophysiology of critical illnesses and their impact on patient management.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lectures, Guest Lecture, Case Study, Seminar	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE journal
CO2	Analyze clinical conditions requiring critical care interventions.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lectures, Guest Lecture, Case Study, Seminar	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE journal
CO3	Demonstrate decision-making skills in managing critically ill patients.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lectures, Guest Lecture, Case Study, Seminar	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE journal
MOTAT 112 CP	**MOTAT Directed Clinical Education - II**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Manage anesthesia and surgical equipment effectively.	PO1, PO2, PO3, PO4, PO5,PO6,	Demonstration, Experiential, Industrial visit,	Internal Exam, University Exam, (Theory Exam)

		PO7, PO8	Problem-Based Learning (PBL), Experiential	Seminar, Station Exercise / OSCE Assignment, Log book
CO2	Assist in advanced anesthesia and OT procedures.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Demonstration, Experiential, Industrial visit, Problem-Based Learning (PBL), Experiential	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE Assignment, Log book
C03	Evaluate and respond to critical situations in the operation theatre.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Demonstration, Experiential, Industrial visit, Problem-Based Learning (PBL), Experiential	Internal Exam, University Exam, (Theory Exam) Seminar, Station Exercise / OSCE Assignment, Log book
SEC 001 T	**Innovation and Entrepreneurship**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Develop an entrepreneurial mindset in the healthcare sector.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Guest lecture, Industrial visit, Group Discussion, Internship	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CO2	Apply innovation strategies to improve medical practices and patient care.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Guest lecture, Industrial visit, Group Discussion, Internship	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
CO3	Demonstrate business planning and problem-solving skills in healthcare startups.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Guest lecture, Industrial visit, Group Discussion, Internship	Internal Exam, University Exam, (Theory Exam) Seminar, Assignment
SEC 002 T	**One Health (NPTEL)**	**Mapped PO**	**Teaching-Learning Methodology**	**Assessment Tools**
CO1	Understand the interconnectedness of human, animal, and environmental health in a global context.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Quiz, Assignment, E-learning	Internal Exam, University Exam, (Theory Exam) MCQ, Assignment
CO2	Analyze the impact of zoonotic diseases and antimicrobial resistance on public health and ecosystems.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Quiz, Assignment, E-learning	Internal Exam, University Exam, (Theory Exam) Assignment
CO3	Evaluate policies and strategies for disease prevention and sustainable development within the One Health framework.	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8	Lecture, Quiz, Assignment, E-learning	Internal Exam, University Exam, (Theory Exam) Assignment

OUTLINE OF COURSE CURRICULUM

M.Sc. Operation Theatre and Anaesthesia Technology

Semester I

Code No.	Core Course	Credits/Week					Hrs/Semester					Marks		
		Lecture (L)	Tutorial (T)	Practical (P)	Clinical Posing/ Rotation (CP)	Total Credits (C)	Lecture (L)	Tutorial (T)	Practical (P)	Clinical Posing/ Rotation (CP)	Total (hrs.)	Internal Assement (IA)	Semester End Exam (SEE)	Total
Discipiline Specific Core Theory														
MOTAT 101 T	Applied Anatomy & Physiology	3	-	-	-	**3**	45	-	-	-	**45**	**20**	**80**	**100**
MOTAT 102 T	Pre-operative Assessment &Optimisation Strategies	3	-	-	-	**3**	45		-	-	**45**	**20**	**80**	**100**
MOTAT 103 T	Surgical Equipments & Technology	3	-	-	-	**3**	45	-	-	-	**45**	**20**	**80**	**100**
CC 001 T	Research Methodology & Biostatistics (Core Course)	3	-	-	-	**3**	45	-	-	-	**45**	-	**50**	**50**
Discipiline Specific Core Practical														
MOTAT 104 P	Pre-operative Assessment &Optimisation Strategies	-	-	4	-	**2**	-	-	60	-	**60**	**10**	**40**	**50**
MOTAT 105 P	Surgical Equipments & Technology	-	-	2	-	**1**	-	-	30	-	**30**	**10**	**40**	**50**
MOTAT 106 CP	MOTAT Directed Clinical Education-I	-	-	-	12	**4**	-	-	-	180	**180**	-	**50**	**50**
CC 001 P	Research Methodology & Biostatistics (Core Course)	-	-	4	-	**2**	-	-	60	-	**60**	-	**50**	**50**
Total		**12**	**0**	**10**	**12**	**21**	**180**	**0**	**150**	**180**	**510**	**80**	**470**	**550**

OUTLINE OF COURSE CURRICULUM

M.Sc. Operation Theatre and Anaesthesia Technology

Semester II

Code No.	Core Course	Credits/Week					Hrs/Semester					Marks		
		Lecture (L)	Tutorial (T)	Practical (P)	Clinical Posing/ Rotation (CP)	Total Credits (C)	Lecture (L)	Tutorial (T)	Practical (P)	Clinical Posing/ Rotation (CP)	Total (hrs.)	Internal Assement (IA)	Semester End Exam (SEE)	Total
Discipiline Specific Core Theory														
MOTAT 107 T	Anaesthetic Equipments & Procedures	3	-	-	-	**3**	45	-	-	-	**45**	**20**	**80**	**100**
MOTAT 108 T	Advance Anesthesia Techniques	3	-	-	-	**3**	45		-	-	**45**	**20**	**80**	**100**
MOTAT 109 T	Concept of Disease In Relation To Anesthesia And Critical Care	3	-	-	-	**3**	45	-	-	-	**45**	**20**	**80**	**100**
Discipiline Specific Core Practical														
MOTAT 110 P	Anaesthetic Equipments & Procedures	-	-	2	-	**1**	-	-	30	-	**30**	**10**	**40**	**50**
MOTAT 111 P	Concept of Disease In Relation To Anesthesia And Critical Care	-	-	2	-	**1**	-	-	30	-	**30**	**10**	**40**	**50**
MOTAT 112 CP	MOTAT Directed Clinical Education-II	-	-	-	18	**6**	-	-	-	270	**270**	-	**50**	**50**
Skill Ehancement Course														
SEC 001 T	Innovation and Enterprenuarship	3	-	-	-	**3**	45	-	-	-	**45**	-	**50**	**50**
SEC 002 T	One Health (NPTEL)													
Total		**12**	**0**	**4**	**18**	**20**	**180**	**0**	**60**	**270**	**510**	**80**	**420**	**500**