## 2. PROGRAM EDUCATION OBJECTIVES (PEOs)

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

| PEO No. | Education Objective |
|---------|---------------------|
| PEO 1 | Students will be able to use their fundamental knowledge and technical competence in the operating rooms as and when required to achieve professional excellence. |
| PEO 2 | Students will demonstrate strong and well defined skills in 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 effective professional skills to work in an inter-disciplinary team in Assisting the anaesthetist in handling critical events, and during basic and advanced life support |
| PEO 4 | Students will be able to maintain an inventory of all equipment and drugs |
| PEO 5 | Manages central sterile services department, packing of equipment and linen. Sterilization procedures such as autoclaving, plasma sterilization and disinfection procedures as per guidelines, checking, storage and dispatch |
| PEO 6 | Assist disaster team in disaster situations and national emergencies on field and safe transport in ambulance |

## 3. GRADUATE ATTRIBUTES

| S No. | Attribute | Description |
|-------|-----------|-------------|
| 1 | **Professional Knowledge** | Demonstrate **scientific knowledge and understanding** to work as a health care professional |
| 2 | **Technical** | Demonstrate **Technical** to implement the preventive, assessment, and management plans for quality health care services |
| 3. | **Communication** | Ability to communicate effectively and appropriately in writing and orally to patients/clients, caregivers, other health professionals and other members of the community |
| 4. | **Cooperation/ Teamwork** | Ability to work effectively and respectfully with interdisciplinary team members to achieve coordinated, high quality health care |
| 5. | **Professional ethics** | Ability to identify ethical issues and apply the ethical values in the 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** | Ability to think critically and apply once learning to real-life situations |
| 8. | **Reflective thinking** | Ability to employ reflective thinking along with the ability to create the sense of awareness of oneself and society |
| 9. | **Information/digital literacy** | Ability to use ICT in a variety of learning situations |
| 10. | **Multi-cultural competence** | Ability to effectively engage in a multicultural society and interact respectfully |
| 11. | **Leadership readiness/qualities** | Ability to respond in an autonomous and confident manner to planned and uncertain situations, and should be able to manage themselves and others effectively |
| 12. | **Lifelong Learning** | Every graduate to be converted into lifelong learners 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 BSc Anaesthesia and Operation Theatre Technology program, students will be able to:

| PO No. | Attribute | Competency |
|--------|-----------|------------|
| PO 1 | Professional knowledge | Possess and acquire **scientific knowledge** to work as a health care professional |
| PO 2 | Clinical/ Technical skills | Demonstrate and possess **clinical skills** to provide quality health care services |
| PO 3 | Teamwork | Demonstrate **teamwork skills** to support shared goals with the interdisciplinary health care team to improve societal health |
| 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 with the interdisciplinary health care team and the society |
| PO 6 | Evidence based practice | Demonstrate high quality **evidence-based practice.** that leads to excellence in professional practice |
| PO 7 | Life-long learning | Enhance knowledge and skills with the use of advancing technology for the **continual improvement** of professional practice |
| PO 8 | Entrepreneurship, leadership and mentorship | Display **entrepreneurship, leadership, and mentorship** skills to practice independently as well as in collaboration with the inter disciplinary health care team |

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

## SEMESTER I

| Course Code | Course Title | Credit Distribution (hours/week) | | | | | Marks Distribution | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | T | P | CL | CR | IAC | ESE | Total |
| ANA1301 | Anatomy - I | 3 | - | - | - | 3 | 30 | 70 | 100 |
| ANP1302 | Anatomy practical - I | - | - | 4 | - | 2 | 100 | - | 100 |
| PHY1301 | Physiology - I | 2 | - | - | - | 2 | 30 | 70 | 100 |
| EIC1501 | Environmental Science and Indian Constitution | 2 | - | - | - | 2 | 100 | - | 100 |
| AOT1301 | Introduction to Anaesthesia Practice | 1 | 1 | - | - | 2 | 100 | - | 100 |
| AOT1302 | Patient Safety in Peri- operative Area | 3 | 1 | - | - | 4 | 50 | 50 | 100 |
| AOT1303 | Comprehensive Clinical Skills- I | - | - | - | 9 | 3 | 100 | - | 100 |
| YGA1301 | Yoga | 1 | - | 2 | - | 2 | 100 | - | 100 |
| **Total** | | **12** | **2** | **6** | **9** | **20** | **610** | **190** | **800** |

**Note:**
- ESE for ANA1301 and PHY1301 will be conducted for 50 marks and normalized to 70 marks for grading.
- AOT1302 will be conducted for 100 marks and normalized to 50 marks

## SEMESTER II

| Course Code | Course Title | Credit Distribution (hours/week) | | | | | Marks Distribution | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | T | P | CL | CR | IAC | ESE | Total |
| ANA1401 | Anatomy - II | 2 | - | - | - | 2 | 30 | 70 | 100 |
| ANP1402 | Anatomy Practical - II | - | - | 4 | - | 2 | 100 | - | 100 |
| PHY1401 | Physiology- II | 2 | - | - | - | 2 | 30 | 70 | 100 |
| BIC1401 | Biochemistry | 3 | - | - | - | 3 | 30 | 70 | 100 |
| CSK1501 | Communication Skills | 2 | - | - | - | 2 | 100 | - | 100 |
| AOT1401 | Anaesthetic Equipment | 2 | - | 2 | - | 3 | 50 | 50 | 100 |
| AOT1402 | Basic Life Support | 2 | - | 2 | - | 3 | 100 | - | 100 |
| AOT1403 | Comprehensive Clinical Skills - II | - | - | - | 9 | 3 | 100 | - | 100 |
| | **Total** | **13** | **-** | **8** | **9** | **20** | **540** | **260** | **800** |

**Note:**
- ESE for ANA1401, PHY1401 and BIC1401 will be conducted for 50 marks and normalized to 70 marks for grading.
- AOT1401 will be conducted for 50 marks.

## SEMESTER - III

| Course Code | Course Title | Credit Distribution (hours/week) | | | | | Marks Distribution | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | T | P | CL | CR | IAC | ESE | Total |
| MCB2303 | Microbiology | 3 | - | - | - | 3 | 30 | 70 | 100 |
| PAT2303 | Pathology | 3 | - | - | - | 3 | 30 | 70 | 100 |
| AOT2301 | General Medicine | 3 | 1 | - | - | 4 | 50 | 50 | 100 |
| AOT2302 | Patient Monitoring Techniques | 2 | 2 | - | - | 4 | 50 | 50 | 100 |
| AOT2303 | Comprehensive Clinical Skills - III | - | - | - | 9 | 3 | 100 | - | 100 |
| ********* | Open Elective - I | - | - | - | - | 3 | | S/NS | |
| | **Total** | 11 | 3 | 0 | 9 | 20 | 260 | 240 | 500 |

**Note:**
- ESE for MCB2303, PAT2303 will be conducted for 50 marks and normalized to 70 marks for grading.
- AOT2301, AOT2302 will be conducted for 100 marks and normalized to 50 marks for grading

## SEMESTER- IV

| Course Code | Course Title | Credit Distribution (hours/week) | | | | | Marks Distribution | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | T | P | CL | CR | IAC | ESE | Total |
| BST3401 | Biostatistics and Research Methodology | 3 | - | - | - | 3 | 30 | 70 | 100 |
| PHC2403 | Pharmacology | 3 | - | - | - | 3 | 30 | 70 | 100 |
| GPY2401 | General Psychology | 2 | - | - | - | 2 | 30 | 70 | 100 |
| AOT2401 | Basic Techniques of Anaesthesia | 3 | - | 2 | - | 4 | 50 | 50 | 100 |
| AOT2402 | Comprehensive Clinical Skills - IV | - | - | - | 15 | 5 | 50 | 50 | 100 |
| AOT2403 | Program Elective - I Essentials of Post-Anaesthesia Care Unit | 1 | 1 | 2 | - | 3 | 50 | 50 | 100 |
| AOT2404 | Program Elective - I Advanced cardiac Life Support | | | | | | | | |
| | **Total** | 12 | 1 | 4 | 15 | 20 | 240 | 360 | 600 |

Note:
- ESE for BST3401, PHC2403 and GPY2401 will be conducted for 50 marks and normalized to 70 marks for grading.
- AOT2401 will be conducted for 100marks and normalized to 50 marks for grading.
- AOT2402 will be conducting for 50marks.
- Program electives are credited, and choice based. Students make a choice from the pool of electives offered by the department. The ESE is conducted for 50 marks.

## SEMESTER-V

| Course Code | Course Title | Credit Distribution (hours/week) | | | | | Marks Distribution | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | T | P | CL | CR | IAC | ESE | Total |
| AOT3301 | Basics of Surgical Procedures | 2 | 1 | 2 | - | 4 | 50 | 50 | 100 |
| AOT3302 | Advanced Anaesthesia Techniques | 2 | - | 2 | - | 3 | 50 | 50 | 100 |
| AOT3303 | Basic Intensive Care | 2 | 1 | - | - | 3 | 50 | 50 | 100 |
| AOT3304 | Applied Anaesthesia | 2 | 1 | - | - | 3 | 50 | 50 | 100 |
| AOT3305 | Comprehensive Clinical Skills - V | - | - | - | 12 | 4 | 100 | - | 100 |
| ******** | Open Elective- II | - | - | - | - | 3 | S/NS | | |
| | Total | 8 | 3 | 4 | 12 | 20 | 300 | 200 | 500 |

Note:
- ESE for AOT3301, AOT3303 and AOT3304 will be conducted for 100 marks and normalized to 50 marks for grading.
- ESE for AOT3302 will be conducting 50 marks

## SEMESTER-VI

| Course Code | Course Title | Credit Distribution (hours/week) | | | | | Marks Distribution | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | T | P | CL | CR | IAC | ESE | Total |
| AOT3401 | Specialized Surgical procedures | 2 | 2 | - | - | 4 | 50 | 50 | 100 |
| AOT3402 | Specialty Anaesthesia | 2 | 2 | - | - | 4 | 50 | 50 | 100 |
| AOT3403 | Comprehensive Clinical Skills- VI | - | - | - | 27 | 9 | 50 | 50 | 100 |
| AOT3404 | Program Elective- II Casualty and Trauma Management | 1 | 1 | 2 | - | 3 | 50 | 50 | 100 |
| AOT3405 | Program Elective- II Pain Management | | | | | | | | |
| | Total | 5 | 5 | 2 | 27 | 20 | 200 | 200 | 400 |

Note:
- ESE for AOT3401 and AOT3402 will be conducted for 100 marks and normalized to 50 marks for grading.
- AOT3403 will be conducted for 50 marks
- Program electives are credited, and choice based. Students make a choice from the pool of electives offered by the department. The ESE is conducted for 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.

## Semester - VII and VIII

Internship (1 year, 48 hours/week)

| Semester VII | Internship - I | Duration 6 months<br>48 hours in a week / 8 hours in a day |
|---|---|---|
| Semester VIII | Internship - II | Duration 6 months<br>48 hours in a week / 8 hours in a day |
| Note: It is mandatory to submit research project at the end of the internship<br>Students should complete the MAHE BLS program at the end of the internship | | |

## OVERALL TOTAL CREDIT DISTRIBUTION

| Semester | Credit Distribution (hours/week) | | | | | Marks Distribution | | |
|---|---|---|---|---|---|---|---|---|
| | L | T | P | CL | Total Credits | IAC | ESE | Total |
| Semester - I | 12 | 2 | 6 | 9 | 20 | 610 | 190 | 800 |
| Semester - II | 13 | - | 8 | 9 | 20 | 540 | 260 | 800 |
| Semester - III | 11 | 3 | 0 | 9 | 20 | 260 | 240 | 500 |
| Semester - IV | 12 | 1 | 4 | 15 | 20 | 240 | 360 | 600 |
| Semester - V | 8 | 3 | 4 | 12 | 20 | 300 | 200 | 500 |
| Semester - VI | 5 | 5 | 2 | 27 | 20 | 200 | 200 | 400 |
| Semester - VII | - | - | - | 48 | NA | - | - | - |
| Semester - VIII | - | - | - | 48 | NA | - | - | - |
| Total | 61 | 14 | 24 | 177 | 120 | 2150 | 1450 | 3600 |

Manipal College of Health Professions, MAHE