



अखिल भारतीय आयुर्विज्ञान संस्थान, नागपुर  
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सत्यमेव जयते

**Department of Anaesthesiology**

**UG Curriculum Template**

1. Goals:

- 1.1. The purpose of training in Anaesthesia for medical students is to introduce them to the basic concepts in Anaesthesia. The Indian Medical Graduate must have a comprehensive understanding of the tasks and responsibilities of an Anaesthesiologist.
- 1.2. They should understand the importance of a good preoperative evaluation.
- 1.3. They must know what to anticipate when a patient is receiving any form of anaesthesia.
- 1.4. The learner must observe and comprehend the physiological changes during anaesthesia.
- 1.5. Students should learn the basic techniques of maintaining a clear airway and giving assisted or artificial ventilation. Besides, identifying and studying adverse events, associated complications, toxic effects must be taught.
- 1.6. It should include training in Basic life support (BLS) and Advanced Cardiac Life Support (ACLS). These skills will stand them in good stead broadly in their medical practice.

2. Outcomes (objectives at the end of the course):

- 2.1. The student must be able to understand the importance of starting CPR promptly and how to perform good quality CPR.
- 2.2. The student shall be able to comprehend the roles and responsibilities of an Anaesthesiologist as a perioperative physician.

3. Syllabus

Name of system/section	List of topics
1. Anaesthesiology as a Speciality	1. History and Evolution of Anaesthesia. 2. Roles of Anaesthesiologist in medical practice. 3. Enumerate the Career Prospects as an Anaesthesiologist.
2. Cardiopulmonary Resuscitation	1. Understand the importance of performing timely CPR 2. Identify when to start CPR 3. Demonstrate how to provide good quality CPR in a simulated environment 4. Demonstrate how to perform rescue breathing 5. Demonstrate the use of an AED/ manual Defibrillator

3. Preoperative Evaluation & Medication	<ol style="list-style-type: none"> <li>1. Understand the principles of pre-anaesthesia evaluation</li> <li>2. Document history, perform examination and interpret investigations relevant to the management of Anaesthesia.</li> <li>3. Describe role of premedication prior to surgery.</li> </ol>
4. General Anaesthesia	<ol style="list-style-type: none"> <li>1. Describe pharmacology of Anaesthetic drugs</li> <li>2. Describe anatomy of Airway</li> <li>3. Describe airway Management</li> <li>4. Discuss principles of induction and maintenance of anaesthesia</li> <li>5. Describe maintenance of vital organ function</li> <li>6. Record and interpret perioperative monitoring</li> <li>7. Identify various equipments used for airway management</li> <li>8. Observe the management of a patient receiving general anaesthesia</li> </ol>
5. Regional Anaesthesia	<ol style="list-style-type: none"> <li>1. Describe Spinal and Epidural Anaesthesia</li> <li>2. Describe Peripheral Nerve Blocks</li> <li>3. Understand the relevant anatomy, indications and techniques of regional anaesthesia</li> <li>4. Enumerate commonly used drugs &amp; adjuvants in regional anaesthesia</li> <li>5. Observe various regional anaesthesia techniques</li> <li>6. Identify instruments used in regional anaesthesia</li> </ol>
6. Post Anaesthesia Recovery	<ol style="list-style-type: none"> <li>1. Discuss post op complications &amp; their management</li> <li>2. Describe the importance of a crash cart and understand the role of its contents</li> </ol>
7. Intensive Care Management	<ol style="list-style-type: none"> <li>1. Visit and understand the functions of an ICU</li> <li>2. Understand and observe care of patient on ventilator</li> <li>3. Describe monitoring in ICU</li> <li>4. Discuss Principles of admission into &amp; discharge from ICU</li> </ol>
8. Pain Management	<ol style="list-style-type: none"> <li>1. Describe anatomy and Pathophysiology of pain</li> <li>2. Enlist drugs used for pain management</li> <li>3. Discuss Acute Pain Management</li> <li>4. Describe Chronic Pain Management</li> </ol>
9. Patient Safety & Ethics	<ol style="list-style-type: none"> <li>1. Discuss ethical considerations during patient care</li> <li>2. Describe drug errors in Anaesthesia and implications</li> <li>3. Understand the importance of positioning</li> <li>4. Discuss the role of adequate doctor patient communication</li> </ol>
10. Fluids	<ol style="list-style-type: none"> <li>1. Describe principles of Fluid therapy</li> <li>2. Describe principles of use of blood and blood products in the perioperative period</li> <li>3. Observe establishing an intravenous and central venous access.</li> </ol>

*Note: any additional information can be given as annexure*

#### 4. Teaching programme

##### 4.1. Semester wise teaching hours

Semester	Lectures (hrs)	Seminar, Demonstration, integrated Teaching, Tutorial (hrs)	SDL (hrs)	Practicals/Clinical (hrs)
6 <sup>th</sup> semester	04	04	01	Nil
7 <sup>th</sup> semester	04	04	01	Nil
8 <sup>th</sup> semester				15 hrs
Total	08	08	02	15 hrs

##### 4.2. Teaching Learning Method

S.No	List of topics	Lecture (Hours)	Tutorial (Hours)	Integrated teaching (Hours)	Practical/Clinics (Hours)
1.	Role of Anaesthesiologist as a peri-operative physician & prospects of Anaesthesiology as a career.	01	-	-	-
2.	Basic Life support & Advanced Life support.	01	02	-	-
3.	Preoperative evaluation	01	-	-	-
4.	Induction and maintenance of General Anaesthesia. Maintenance of vital organ function during general anaesthesia.	01	-	-	-
5.	Spinal and Epidural Anaesthesia	01	-	-	-
6.	Peripheral nerve blocks	01	-	-	-
7.	Post Anaesthesia Recovery	01	01	-	-
8.	Pain management	01	-	-	-
9.	Enumerate and describe the principle of ethics as it relates to Anaesthesiology. Describe the role of communication in patient	-	-	01	-

	safety.				
10	Demonstrate and document an appropriate clinical examination in a patient undergoing General Surgery.	-	-	01	-
11	Enumerate and describe the criteria for admission and discharge of a patient to an ICU. Observe and describe the management of an unconscious patient.	-	-	01	-
12	Enumerate blood products and describe the use of blood products in the preoperative period.	-	-	01	-
13	<b>Operation Theatre</b> Intra-operative patient monitoring Demonstration airway management Demonstration of sub-arachnoid block Demonstration of fluid therapy Demonstration of induction & maintenance of anaesthesia Use of blood / blood products in OT Common medication errors (OT) OT etiquettes & maintaining sterility Caudal anaesthesia Peripheral nerve block Hazards of improper patient positioning	-	02	-	09
14	<b>PAC OPD</b> Relevant history taking Airway examination	-	01	-	06

	Choosing and interpreting appropriate testing prior to surgery Preoperative evaluation Communication of perioperative risk				
15	<b>PACU</b> Patient monitoring Fluid therapy Pain assessment Acute pain management Post anaesthesia care Breaking bad news in simulated environment	-	02	-	06

## 5. Assessment plan

### 5.1. List certifiable competencies - Nil

### 5.2. Internal Assessment -

IA number	Theory (question types & marks)	Theory Timing (semester)	Practical (Pattern & marks)	Practical Timing (semester)
IA 1	With General Surgery		MCQ pattern (05 marks)	At end of each clinical posting
IA 2				
IA3				
Pre professional	To be conducted with General Surgery (IX Semester).			

#### Note

1. Eligibility criteria to appear in final professional exam: Students must score minimum 35% marks in theory and practicals separately
2. A minimum attendance of 75% in clinical posting is mandatory to appear for Internal Assessment Practical exam (End posting examination)
3. A minimum of 75% attendance is mandatory in both theory and practical for appearing in Final Professional Exam
4. Internal Assessment marks will not be added in the final professional exam

5.3. Summative Assessment - the marks shall be submitted to the Department of Surgery for inclusion in final assessment.

5.4. Topic distribution for theory papers (wherever applicable) - Nil

## 6. Recommended Reading List

### 6.1. Textbooks

1. "The book of Anaesthesia" edited by Alan R. Aitkenhead, David J. Rowbotham, Graham Smith published by Churchill Livingstone.

2. Basics of Anaesthesia - Stoelting RK, Miller Rd,

6.2 Medical Media Ltd. Reference books - Nil