

**Mutah University**

**Department of Anaesthesia**

# COURSE TITLE : Anaesthesia, Critical care and emergency

**CREDIT HOURS : 4.25 credit hours**

**SEQUANCE : YEAR 4 / 4 WEEKS**

**COURS COORDINATOR: Dr. Mohammed Malkawi**

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Course Describtion:

This 4-week course is offered to the fourth-year medical students. During this clinical rotation, students will spend their morning hours in the operating theater of the Karak hospital, Prince Ali hospital and Albasheer hospital learning basic principles of anesthesia, ICU and emergency including airway management, fluid management, induction and maintenance of anesthesia, patient’s monitoring, pain management, and recovery. Students will be given daily seminars that cover important aspects of anesthesia. Each of the course topics is incorporated into an integrated system of lectures covering anesthesia-related -anatomy, physiology, physics, pharmacology, pathology. Also, Clinical implications for this information will be addressed by specialists in the department. These subjects will be addressed by Clinical anesthetists. The goals of this course will be achieved via lectures, seminars or small group discussions, and clinical attendance in the operating theaters.

More specifically, pre-operative preparation of the surgical patients will be covered at first to provide basic knowledge and understanding of the conduct of anesthesia, as well as the implementation of patient's co-morbidities on the process of anesthesia. Fundamental principles of pharmacology will be explained to extend the knowledge of students towards the drugs used in anesthesia, and their effects on the diverse pathological states of the patients. Afterward, the anatomy and physiology of the airway will be discussed thoroughly in preparation for the clinical airway management section.

The different modes of monitoring patients will be discussed including standard and invasive ways and how they are tailored to the patients. The physiology of bodily fluids is discussed to pave the way into both intraoperative IV fluids management and blood transfusion.

A separate session will be appointed to discuss neuro-axial anesthesia, and it`s used as a cornerstone in anesthesia

During the course and whenever relevant the students are exposed to clinical scenario problems to emphasize the explanations of symptoms, signs, investigations, and forms of management.

Practical sessions are planned through operating theaters attendance to allow the students to express their knowledge and confirm concepts learned in lectures and learn clinical skills related to the practice of anesthesia.

**Course Learning Outcomes**

**General objectives:**

**Academic:**

1. To demonstrate an understanding of the anesthetic considerations for a variety of medical conditions and perform the appropriate/necessary preoperative assessment/preparation of the patient.
2. To acquire the knowledge necessary to conduct appropriate fluid and blood component therapy
3. To recognize and describe the main drug classes frequently used in the perioperative period
4. To review and describe the principles of pain management
5. To acquire basic skills in airway management

## Clinical:

1. **Airway management skills**
2. **Mask ventilation and tracheal intubation,**
3. **securing intravenous access**
4. **Preoperative assessment of the Airways.**
5. **The appropriate use of local anesthetic Agents**
6. **ICU monitoring**
7. **ICU patients**
8. **Emergency patients**

**Program of teaching undergraduate fourth-year medical students during the rotation in Anaesthesia, ICU, and Emergency.**

**Lectures:**

1. O2 therapy and anesthesia gases
2. ICU monitoring
3. ECG
4. Cpr
5. Anesthesia assessment
6. I.v Anesthesia
7. Local anesthesia
8. Muscle relaxant
9. Inhalation
10. Spinal anatomy
11. Acute pain and opioid
12. Spinal and epidural

# seminars

1. Head inj.
2. Brain death
3. Introduction to ICU
4. Introduction to anesthesia
5. Complications of anesthesia
6. Airway anatomy
7. Blood transfusion
8. Anesthesia machine
9. I.v fluid and electrolyte body compartments
10. Shock

**Recommended Textbooks and Atlases:**

1. **Miller's anesthesia**
2. **Clinical anesthesia by morgan and mikhail's 3- Toronto notes (anesthesia chapter).**

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| **Assessment** | | |
| **Assessment Type** | **Expected Due Date** | **Weight** |
| First Exam |  | **--** |
| Second Exam |  | **--** |
| Midterm Exam (Theory) |  | **40** |
| Evaluation |  | **20** |
| Quizzes |  | **--** |
| Research activity |  | **--** |
| OSCE |  | **--** |
| Mini-OSCE |  | **--** |
| **Final Exam (Practical)** |  | **40** |
| Final Exam(Oral) |  | **--** |
| **Total** |  | **100** |