وصف مقررات المرحلة الثالثة

قسم تقنيات التخدير

العام الدراسي 2025-2026

الكورس الأول

اللغة الأنجليزية

1. Course Name: **Anesthesia (1)**

2. Course Code: **MTAN310 (1)**

3. Semester / Year: **Semester (1) / 3rd level/ 2025-2026**

4. Description Preparation Date: **11/10/2025**

5. Available Attendance Forms: **Full attendance in university halls and labs.**

6. Number of Credit Hours **(2th + 5 pract)** / Number of Units **(4)**

7. Course administrator's name

Name: Lecture Dr. Majid Fakhir Mutar

Email: majid.mutar@alayen.edu.iq

8. Course Objectives

General Objective:	**Specific Objective:**
At the end of this course, students should be able to apply theoretical knowledge and essential anesthesia techniques to safely manage patients undergoing surgical and diagnostic procedures, with a clear understanding of perioperative physiology, anesthesia methods, and postoperative care.	By the end of the course, the student will be able to: 1. Giving the student the information about preparation of patient for anesthesia 2. learning and explaining for the student about the drugs used in anesthesia. 3. learning and explaining for the student how to resuscitate the patient 4. learning and explaining for the student how to manage the patient in case of emergency. 5. learning and explaining for the student about anesthesia in special disease condition

9. Teaching and Learning Strategies

Strategy	1- Simulation-based learning: Using anesthetic machine simulators and virtual clinical monitoring to train students in realistic clinical situations in a safe environment. 2- Problem-based learning: Presenting various clinical scenarios for students to analyze, enhancing critical thinking and decision-making. 3- Live clinical education: Engaging students in practical training in virtual anesthe and operation scenarios.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1+2	14	Different Anesthesia Anesthesia techniques including: spinal, epiduraland caudal blocks	Clinical monitoring In ICU (respiratory monitoring, cardiovascular monitoring, hemodynamic and cranial monitoring)	Theoretical and practical lecture using PowerPoint	General questions and discussion, theoretical tests
3+4	14	Recovery room Monitoring after GA Aldrete Score	Post Anesthesia Recovery	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
5+6	14	Awareness during anesthesia, laryngospasm and bronchospasm	Common Perioperative Complication	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
7+8	14	Assessment before anesthesia, acute renal failure and anesthetic considerations	Renal Disease and Anesthesia	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
9+10	14	Assessment before anesthesia, liver functions	Liver Disease And Anesthesia	Theoretical and practical lecture	Pop-up exam +

		evaluation		using PowerPoint	live question + attendance + midterm and final exam
11	7	Anemia and anesthesia, polycythemia and anesthesia	Hematological Disease and Anesthesia	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
12	7	Patient assessment Before anesthesia	Anesthesia for Laparoscopic Surgery	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
13	7	Definition of anesthesia plan for 13 7 hours commonly used surgeries	Anesthesia for Day Case surgery	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
14+15	14	Assessment And preparations	Out of Operating Room Anesthesia	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam

11. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

1- 40 points for effort (daily exam + attendance + participation + reports).

2- 60 points for final exam (35 points for theory + 25 points for practical).

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Non
Main references (sources)	1.Clinical anesthesiology ----- Morgan and Mikhail----6th edition

	2. Anesthesia for medical students----Oster and Bryce--Smith 3. Clinical anesthesiology----4th edition---
Recommended books and references (scientific journals, reports...)	Clinical anesthesiology--4th edition-
Electronic References, Websites	University educational platform

1. Course Name:

Basic of intensive care (1)

2. Course Code:

MTAN3102 (1)

3. Semester / Year:

Semester (1) / 3rd level/ 2025-2026

4. Description Preparation Date:

11/10/2025

5. Available Attendance Forms:**.**

Full attendance in university halls and labs

6. Number of Credit Hours

30 th + 60 pract / Number of Units**(4)**

7. Course administrator's name

Name: Lecture Hussein Ali Hussein

Email: hussein.hussein@alayen.edu.iq

8. Course Objectives

General Objective:

To enable students to gain a comprehensive understanding of the principles of the most important devices and systems available in intensive care units, such as monitoring devices, and basic emergency management practices for the care of critically ill patients in the intensive care unit.

Specific Objective:

By the end of the course, the student will be able to:

1- Develop proficiency in clinical monitoring of critically ill patients, including accurate measurement and interpretation of vital signs.

2- Understand the pathophysiology of common emergency and pathological conditions admitted to the intensive care unit and the basics of their treatment.

3- Perform effective cardiopulmonary resuscitation and emergency interventions according to standardized international guidelines, ensuring rapid recognition and response to cardiac arrest and other life-threatening ICU conditions.

4- Apply evidence-based principles of fl therapy, including types of intraven

	fluids, treatment indications, treatm modalities, and management of acid-b disturbances in critically ill patients.

9. Teaching and Learning Strategies

Strategy	1- Simulation-based learning: Using mechanical ventilation simulators and virtual clinical monitoring to train students in realistic clinical situations in a safe environment. 2- Problem-based learning: Presenting various clinical scenarios for students to analyze, enhancing critical thinking and decision-making. 3- Live clinical education: Engaging students in practical training in virtual intens care laboratories.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1+2	4 theory +8 practical	Basics of clinical monitoring in ICU	Clinical monitoring in ICU (respiratory monitoring, cardiovascular monitoring, hemodynamic and cranial monitoring)	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
3+4	4 theory +8 practical	Common respiratory disease in ICU	Asthma and COPD in ICU	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
5+6	4 theory +8 practical	Common respiratory disease in ICU	ARDS and TRIALI	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and

					final exam
7-9	6 theory +12 practical	Cardiopulmonary resuscitation	Cardiac arrest (CPR, BLS, ACLS, post resuscitation care	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
0+11	4 theory +8 practical	Fluid therapy	IV Fluids and blood transfusion	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
12	2 theory +4 practical	Common neurologic disease	Status epilepticus	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
13	2 theory +4 practical	Common neurologic disease	Head injury and management of increased ICP	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam
4+15	4 theory +8 practical	Acid-base balance, analysis and disorders	Acid-base balance and disorders	Theoretical and practical lecture using PowerPoint	Pop-up exam + live question + attendance + midterm and final exam

11.Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

1- 60 points for effort (daily exam + attendance + participation + reports).

2- 40 points for final exam (35 points for theory + 25 points for practical).

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Non
Main references (sources)	1. Handbook of ICU Therapy, Third edition 2019.

	2. Marino's The ICU Book 4th edition. 3. Textbook of critical care – jean-l Vincent; fredrerick moore (7th edition)
Recommended books and references (scientific journals, reports...)	Intensive care medicine
Electronic References, Websites	University educational platform

1. Course Name:
Anesthetic equipment technologies 1
2. Course Code:
MTAN3103
3. Semester / Year:
2025-2026
4. Description Preparation Date:
10\10\2025
5. Available Attendance Forms:
Attendance lectures
6. Number of Credit Hours (Total) / Number of Units (Total)
(90 h) / 4 units
7. Course administrator's name (mention all, if more than one name)
Name: MSc .Mushtaq twayess abdulhussein Email: mushtaqtwayess2@gmail.com
8. Course Objectives

Specific Objectives:	**General Objective:**
1. Use all different anesthesia equipment. **2. maintain all anesthesia equipment.** **3. Identify all parts of medical equipment used in anesthesia and their techniques.**	**1. Identify all devices used in anesthesia.** **2. Identify all locations of anesthesia devices, including the intensive care unit and the recovery unit.** **3. Empower the student to understand the physical and engineering principles underlying anesthesia devices.**

4. Explain the components of an anesthesia machine (gas mixtures, vaporizers, breathing system, safety valves, and pressure). **5. Explain the function of the ventilator used in the anesthesia cart.** **6. Explain the mechanism of gas delivery and monitoring of gas flow and pressure.** **7. Document and monitor vital signs during surgery using monitoring devices.**	**4. Train the student on the safe and correct use of anesthesia devices and patient monitoring during operations.** **5. Understand how to operate and use the devices.**

9. Teaching and Learning Strategies

Strategy	Active learning: Group discussions: Encouraging students to participate in interactive discussions on academic topics, which enhances critical thinking and expression of opinions Project-based education: Group projects: Assigning students to projects that require research and cooperation, such as preparing reports or giving presentations. Individual projects: Encouraging students to conduct independent research on topics of interest to them, which enhances writing skills about their specializations

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	2 hours theoretical&4 hours practical	Explaining the supra glottis airway device and insertion technique it.	**supra glottis airway device**	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Exam in the last 10 minutes
2	2 hours theoretical&4 hours practical	Explain the all types of Classification of laryngeal mask	**Classification of laryngeal mask airway i-gel ,cobra and Pro seal LMA**	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Explanation of reports by students
3	2 hours theoretical&4	How to uses the Endotracheal tubes and what is		Theoretical lectures using	**Brainstorming questions at**

	hours practical	thecomponent it .	**Endotracheal tubes for special purpose**	PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	**the end of the lecture**
4&5	4 hours theoretical&8 hours practical	How to identified Types of endotracheal tube ?	**Types of endotracheal tube**	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	**Distributing students into groups and applying the application to devices**
6	2 hours theoretical&4 hours practical	What is an Double lumen tube And insertion technique that uses in one lung ventilation?	**Double lumen tube**	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are	**viva voce**

				played and displayed on Data Show.	
7–8	4 hours theoretical&8 hours practical	Explain Types of emergency airway devices	**emergency airway devices**	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	**Working on operating the devices**
9	2 hours theoretical&4 hours practical	How to use the Laryngoscope for intubation	**Laryngoscope & aids to intubation**	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Exam in the last 10 minutes
10&11	4 hours theoretical&8 hours practical	How to identified the Types of Laryngoscope	**Types of Laryngoscope**	Theoretical lectures using PowerPoint, practical applications	We ask oral questions

				on anesthesia machines, and educational videos are played and displayed on Data Show.	
12–13	4 hours theoretical&8 hours practical	Explaining what a humidifier is and what a vaporizer is used for asthma patients.	**Humidifier and nebulizer: definition, importance of humidification Classification and examples of humidifier and nebulizer**	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Dialogue questions during the lecture Dialogue questions during the lecture
14	2 hours theoretical&4 hours practical	Explaining what equipment is required CPR	**Defibrillator**	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	direct questions

15	2 hours theoretical&4 hours practical	Explain what a Medical suction apparatus and how remove the fluid from patient mouth	**Medical suction apparatus, component, choice, standard and testing**	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Asking students some questions about the lectures

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

Mid 40 (25 theoretical & 10 practical & 5 attendance and daily exams)

Final 60 (35 theoretical & 25 practical)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Anesthesia equipment, principle application, Jan Ehrenwerth, MD, edition 2. The MGH Textbook of Anesth Equipment, Warren S. Sandberg, MD, 2nd edition
Main references (sources)	Fundamentals of Anaesthesia Fourth Edit
Recommended books and references (scientific journals, reports…)	Elsevier & Anesthesia and analgesia
Electronic References, Websites	Google scholar , pumped and web of science

1. Course Name:

internal medicine (1)

2. Course Code:

MTAN3104

3. Semester / Year:

semester 1 2025-2026

4. Description Preparation Date:

11/10/2025

5. Available Attendance Forms:

Full-time and official attendance hours

6. Number of Credit Hours

(90) / Number of Units (4)

7. Course administrator's name (mention all, if more than one name)

Name: Ass. Lec. Douaa Ameer Hashim

Email: alshwailyduaa112@gmail.com

8. Course Objectives

Specific Objectives:

1. Understand the principles and fundamentals of internal medicine.

2. Be able to recognize diseases of the respiratory system, gastrointestinal system, kidneys, liver, and endocrine glands.

3. Identify the clinical signs, laboratory investigations, and diagnostic methods of these diseases.

4. Apply appropriate treatments for these diseases and differentiate between similar clinical conditions.

5. Acquire the ability to diagnose diseases, manage them effectively, and understand methods of protection and prevention.

9. Teaching and Learning Strategies

Strategy **Blended learning**

- Lectures (Interactive)
  Online Lectures (Interactive)

  Role play

  Team-based learning (group dissuasion, presentation)

	Discussion Problem solving

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1+2	12	Yellow skin/eyes from high bilirubin; treat underlying cause.	Jaundice: classification, causes, clinical features, diagnosis	Theoretical lecture using a program **PowerPoint**	Midterm exam Final exams evaluations
3	6	Stomach/duodenal sore from H. pylori or NSAIDs; treated with antibiotics and acid suppression.	Peptic ulcer disease : Duodenal ulcer, Gastric ulcer	Theoretical lecture using a program **PowerPoint**	Midterm exam Final exams evaluations
4	6	Brain damage from blocked/ruptured vessels; treated with clot therapy and rehab.	Cerbrovascular accident	Theoretical lecture using a program **PowerPoint**	Midterm exam Final exams evaluations
5+6	12	Kidneys fail to balance fluids/waste; treated wi medications or dialysis	Renal failure: acute renal failure, chronic renal failure: clinical features, investigations and treatment.	Theoretical lecture using a program **PowerPoint**	Midterm exam Final exams evaluations

7	6	Heart cannot pump properly; treated with drugs, devices, or surgery.	Ischemic heart diseases: clinical features, diagnosis, treatment.	Theoretical lecture using a program **PowerPoint**	Midterm exam Final exams evaluations
8+9	12	High blood pressure; treated with lifestyle changes and medicatio	Arrhythmias: cardiac arrest.	Theoretical lecture using a program **PowerPoint**	Midterm exam Final exams evaluations
10+11	12	Heart Failure: Inability pump blood; caused by heart damage; treated with medications and lifestyle changes.	Heart failure: definition, classification, causes, precipitating factors, investigations, treatment.	Theoretical lecture using a program **PowerPoint**	Midterm exam Final exams evaluations
12+13	12	Hypertension: High blood pressure; treated with lifestyle changes and medications.	Hypertension: definition, types: primary and secondary hypertension. complications, investigations/ treatment.	Theoretical lecture using a program **PowerPoint**	Midterm exam Final exams evaluations
14+15	12	Respiratory Diseases: Lung/airway infections disorders; treated with drugs and supportive ca	Infections of the respiratory tract: upper respiratory tract infections. Lower respiratory tract infections: pneumonia.	Theoretical lecture using a program **PowerPoint**	Midterm exam Final exams evaluations

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

Assessment and Grading (Total: 100 Marks)

- **Continuous Assessment (60 marks):**
- Daily preparation

• Quizzes and monthly exams • Written assignments • Reports • Attendance and participation • **Final Examination (40 marks):** • Written/Theoretical exam: 35 marks • Practical exam: 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Non
Main references (sources)	**Oxford hand book of clinical medicine, sixth edition, Longmore, Murray,2004** **Harrisons principle of internal medicine 2th edition 2018**
Recommended books and references (scientific journals, reports...)	**Davidson's Principles and Practice of Medicine**
Electronic References, Websites	University educational platform

1. Course Name:

Surgery 1

2. Course Code:

MTAN3105

3. Semester Year:

First Semester 2025-2026

4. Date of preparation of this description:

10/11/2025

5. Available Attendance Formats:

Fully in-person at the university

6. Number of class hours – Number of units

90 hours / 4 units

7. Name of course administrator

MSC Marwah Khalaf Saad

Email: marwshali739@gmail.com

8. Course Objectives:

To raise scientific competence and expand medical awareness of the importance of the close link between anesthesia and surgery, work as a single medical team, and fill knowledge gaps with the aim of reducing medical errors at all stages of patient treatment.

- **General Objective**:

1. To familiarize the student with the various body systems and the impact of injuries on them from an anatomical and physiological perspectives, as well as the resulting complications and sequelae. Also, to teach the student the symptoms and signs of these conditions and the basic frameworks for dealing with them.

2. To familiarize the student with the cases that require surgical intervention and to clarify the nature of this intervention based on what they may encounter during their work in operations and intensive care, with a focus on emergency cases. At this stage, the digestive, urinary, respiratory, and vascular (cardiac) systems are studied**.**

- **Specific Objective:**

At the end of the semester, the student will be able to:

- ✓ Identify the types of diseases that require surgical intervention and how to choose anesthesia methods and safe surgery, using the least risky treatment methods for the patient, appropriate to the stage of the disease, and at the lowest cost, by working with the available capabilities within the healthcare institution.

- ✓ Identify the limits of their scientific and surgical capabilities, and those of the healthcare institution in which they work, and follow correct and safe methods when referring patients to specialized centers as needed, to ensure their safety.

9. Teaching and Learning Strategies

	Strategy
Active Learning, I Group Discussions: Encouraging students to participate in interactive discussions on lecture topics, which enhances critical thinking and the expression of opinions. **Project-Based Learning** Group Projects: Assigning students projects that require research and collaboration, such as preparing reports or giving presentations. **Individual Projects:** Encouraging students to conduct independent research on topics of interest to them that link surgery and anesthesia, which enhances writing skills about their specialty	

10. Course Structure

Assessment method	Learning method	topic	Intendence learning outcomes	hours	week
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Digestive Tract (GIT) General Review & Surgical Approaches	Diction And the discussion Presenting the problem and solution (by explaining medical problems that occurred in GIT)	4	1
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Salivary glands	Recovery room Monitoring after GA Aldrete Score	4	2
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Tongue & oral cavity	Awareness during anesthesia, laryngospasm and bronchospasm	4	3
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Oesophagus	Assessment of esophagus disorders and surgical solutions	4	4
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Stomach & duodenum	Knowledge about anatomy of stomach and duodenum &disorders surgical interventions	4	5
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Liver	liver functions evaluation and possible surgical intervention for disorder	4	6
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Gall bladder & bile ducts	Knowledge of gall blad disorder and Surgical solutions	4	7
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Spleen & pancreas	Knowledge of anatomy of spleen and pancreas and disorder and possible surgical intervention	4	8

Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Small & large intestine	Knowledge of anatomy of spleen and small & large intestine and disorder and possible surgical intervention	4	9
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Intestinal obstruction & fistula	Knowledge of anatomy of spleen and Intestinal obstruction & fistula and disorder and possible surgical intervention	4	10
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Vermiform appendix, peritoneum	Assessment of appendix and surgical intervention, appendectomy	4	11
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Rectum & anus	Knowledge of anatomy of Rectum & anus and disorder and possible surgical intervention	4	12
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Abdominal wall & Hernia	Knowledge of anatomy of Abdominal wall & Hernia and disorder and possible surgical intervention	4	13
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Breast	Knowledge of anatomy of Breast and disorder and possible surgical intervention	4	14
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Urinary tract: surgical anatomy, Congenital anomalies, Investigations	Knowledge of Urinary tract: surgical anatomy, Congenital anomalies, Investigations and disorder and possible surgical intervention	4	15

11. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, and monthly exams

written work, reports, etc.

40 marks for daily exam (attendance + participation + reports)

60 marks for final exam (theoretical 35 marks + practical 25)

12. Learning and Teaching Resources	
Schwartz's Principles of Surgery	Required Textbooks (methodology if any)
1-Required prescribed books Baiely and Loves short practices of surgery Main references (sources) 28th ed	Main References (Sources)
Oxford Handbook of Clinical Surgery	Recommended Mainstream Books and References (Scientific Journals Reports…)
Google scholar, pumped and web of science	Electronic References, Internet Sites

1. Course Title:
computer APP.1
2. Course Code:
MTAN 3106
3. Semester/Year:
First Semester 2025-2026
4. Date this description was created:
10/11/2025
5. Available Forms of Attendance:
Fully in-person within the university halls
6. Number of Academic Hours: (**45**) / Number of Units: (**2**)
7. Course administrator name (if more than one name mentioned)
Name: Eng. Mustafa Abdel Ghani Nasser Email: mustafmustaf952@gmail.com
8. Course Objectives
Course Objectives General Objective: 1. Accurate and correct understanding of the subject of computer applications and correct knowledge of how to use other medical applications and teaching courses in the second and third educational stages in anesthesia techniques , for which computer is a basic requirement. 2. Interact with recent developments in technology 3. Commitment to updating knowledge and skills through participation in training courses and scientific conferences

Special Objective:

1. The amount of the student's understanding of the material

2. The ability to analyze and apply what you have learned practically to the calculator

3. The evaluation should be done by presenting the material among the students in the laboratory and then it should be applied by them. required.

9. Teaching and Learning Strategies

Linking with Specialization 1. Patient monitoring and anesthesia devices. 2. Electronic Medical Records Management. 3. Analysis of biological and physiological data. 4. Clinical decision support	Strategy

10. Course Structure

Evaluation Method	Learning method	Unit Name or Subject	Required Learning Outcomes	Hours	Week
& Testing Application	Interactive	Excel	Getting to know Excel, its benefits, specifications, concept, operation method Recognize the home screen, its components, its tools, and the menu bar	3	1
& Testing Application	Interactive	Cell Handling	Cell Concept, Basic Data Types and How to Insert Them HOW TO SAVE THE WORK BOOK FILE CLOSE THE FILE AND CLOSE THE PROGRAM.	3	2

Test and Application	Interactive	File Handling	Open a saved file Enter data and perform simple calculations and cell formatting methods	3	3
Test and Application	Interactive	Use of Functions	Identify methods of data collection or group of cells in their different forms and sort data	3	4
Test and Application	Interactive	Cell Coordination	Use some common functions Count , Sqrt, Average, Sum, Min, Max	3	5
Test and Application	Interactive	Format Tables	Cell Retouching Process Copy data, move it, copy absolute and relative cell calculations	3	6
Test and Application	Interactive	Format Tables	Control cell width Change its pattern through formatting tools	3	7
Test and Application	Interactive	Cell Handling	Dealing with charts , their different components and elements, and learning about their types.	3	8
Test and Application	Interactive	Statistical Program	Methods of creating diagrams and choosing different types of diagrams and their concept	3	9

Test and Application	Interactive	Statistical Program	How to Add or Delete Rows or Columns How to Print a Page	3	10
Test and Application	Interactive	File and Data Handling	Acting as data and charts.	3	11
Test and Application	Interactive	Application of Analysis Descriptive	The statistical software SPSS is a concept that runs the steps of data analysis.	3	12
Test and Application	Interactive	Apply Averages and Comparisons	Main screen components data entry, save and retrieve file data types directly and calculated.	3	13
Test and Application	Interactive	Application of statistical packages	Sort and switch data, select a variable insertion statistical procedure or merge status files.	3	14
Test and Application	Interactive	Dealing with Charts	Meta-analysis Statistical data summary, data exploration reports by row or column	3	15

11. Course Evaluation

The score is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports... etc

12. Learning and Teaching Resources

Fundamentals of Computers and its Office Applications - Higher Education and Scientific Research Department - Research and Development Department	Required Textbooks (Methodology, if any

,Fundamentals of Computer and Internet Office"Yusr Al-Mustafa Science Dr. Ziad Muhammad Abboud, Dar Al-Dr. for Publishing and Distribution, Baghdad 0202	Main Reference(s)
1. Encryption a text using affine cipher and hiding it in the colored image by using the Quantization stage, Nada Abdul Aziz Mustafa ,Iraq, Baghdad, University of Baghdad, College of Languages **2.** The Effect of the Smoothing Filter on an Image Encrypted By the Blowfish Algorithm Then Hiding It in A BMP Image Nada Abdul Aziz Mustafa, Iraq, Baghdad, University of Baghdad, College of Languages **3.** Computer literacy BASICS 2012, LeBlanc, Brandon." A closer look at the, windows 7. 2009 **4.** Computing Fundamentals, Innovative training works USA, Inc, 2006	Recommended books and references (…scientific journals, reports)
. Word 2010 Digital Classroom Book https://www.agitraining.com/books/microsoft-office-books/word-2010-digital-classroom-book	References, Websites

الكورس الثاني-المرحلة الثالثة

قسم تقنيات التخدير-كلية التقنيات الصحية والطبية

وصف المقررات الدراسية باللغة الأنجليزية

العام الدراسي 2025-2026

1. Course Name:

Anesthesia 2

2. Course Code:

MTAN3201

3. Semester / Year:

Semester (2) / 3d level/ 2025-2026

4. Description Preparation Date:

27/02/2026

5. Available Attendance Forms:

Full attendance in university halls and labs.

6. Number of Credit Hours

(7 hours – 2 theoretical + 5 practical) / Number of Units **(4)**

7. Course administrator's name

Name: Dr. Majid Fakhir Mutar

Email: Majid.mutar@alayen.edu.iq

8. Course Objectives

General Objective:	**Specific Objective:**
Enable students to acquire a comprehensive understanding of the principles of anesthetic techniques for different surgical procedures	By the end of the course, the student will be able to: **By the end of the semester, the student will be able to:** 1. **Understand the essentials of anesthesia requirements for each operation** 2. **Differentiate different** anesthesia applications 3. **Through understanding for patient support during surgery** 4. **Managing all emergencies**

9. Teaching and Learning Strategies

Strategy	1. Lecture with Audiovisual Aids Provide structured teaching on types of anesthesia, preoperative assessment,

	intraoperative monitoring, and postoperative care. Use charts, algorithms, and videos to explain anesthesia considerations for different surgeries (e.g., cardiac, obstetric, orthopedic). 2. Case-Based & Problem-Based Learning 1. Use real or simulated surgical cases to help students develop anesthesia plans, identify risks, and manage complications. This improves critical thinking and clinical decision-making skills. 3. Simulation-Based Training Practice airway management, intubation, spinal/epidural anesthesia, and emergency management (e.g., hypotension, anaphylaxis) using simulation models to enhance technical skills and patient safety. 4. Clinical/Operating Room Teaching Provide supervised hands-on experience in preoperative assessment, anesthesia administration, patient monitoring, and postoperative recovery care to build practical competence. 5. Assessment and Reflective Learning Use OSCEs, skill checklists, case presentations, and reflective discussions to evaluate understanding and encourage continuous improvement in anesthesia practical supervised emergency department rotations and hands-on skills labs to apply theoretical knowledge in real or simulated clinical settings.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 hrs. theory 5 hrs. practical	Perform comprehensive preoperative evaluation	Preoperative assessment	Theoretical and practical lecture using Power Point	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case

2+3	4 hrs. theory 10 hrs. practical	Explain pregnancy physiological changes	Anesthesia for obstetrics and gynecology	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case
4	2 hrs. theory 5 hrs. practical	Describe pediatric airway differences	Anesthesia for pediatrics	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case
5	2 hrs. theory 5 hrs. practical	Recognize age-related physiological changes	Anesthesia for geriatrics	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case
6	2 hrs. theory 5 hrs. practical	Assess difficult airway risk and Apply ramped positioning correctly	Anesthesia for obes patient	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case
7	2 hrs. theory 5 hrs. practical	Understand one-lung ventilation principles and Use	Anesthesia for thoracic surgery	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station

		double-lumen tube appropriately			2. Case-based discussion & Clinical long case
8	2 hrs. theory 5 hrs. practical	Maintain stable intraocular pressure and Recognize oculocardiac reflex	Anesthesia for Ophthalmic surgery	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case
9+10	4 hrs. theory 10 hrs. practical	Explain bone cement syndrome and Recognize fat embolism syndrome	Anesthesia for Orthopedic surgery	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case
11	2 hrs. theory 5 hrs. practical	Identify TURP syndrome early and Manage lithotomy position complications	Anesthesia for Urologic patients	Theoretical and practical lecture using PowerPoi	. 1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case
12+13	4 hrs. theory 10 hrs. practical	Maintain adequate cerebral perfusion and Control intracranial pressure	Anesthesia for Neurosurgery	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case

14	2 hrs. theory 5 hrs. practical	Manage shared airway safely and Prevent perioperative laryngospasm	Anesthesia for ENT	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case
15	2 hrs. theory 5 hrs. practical	Common anesthe techniques	Controlled Hypotensive Anesthesia	Theoretical and practical lecture using PowerPoi	1. Written MCQ exam & OSCE airway station 2. Case-based discussion & Clinical long case

11.Course Evaluation

Assessment includes written examinations, MCQs, OSCE stations, clinical case discussions, simulation performance, logbook review, attendance, participation, and structured oral viva examinations.

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Non
Main references (sources)	1.Clinical anesthesiology ----- Morgan and Mikhail----6th edition 2. Anesthesia for medical students---- Oster and Bryce--Smith 3. Clinical anesthesiology----4th edition
Recommended books and references (scientific journals, reports...)	Scientific journals, periodicals and resea within the specialty the quarterly annual reports
Electronic References, Websites	University educational platform

1. Course Name:

Basics of Intensive Care 2

2. Course Code:

MTAN3202

3. Semester / Year:

Semester (2) / 3d level/ 2025-2026

4. Description Preparation Date:

02/02/2026

5. Available Attendance Forms:

Full attendance in university halls and labs.

6. Number of Credit Hours

(6 hours – 2 theoretical + 4 practical) / Number of Units **(4)**

7. Course administrator's name

Name: Dr. Hussein Ali Hussein

Email: hussein.hussein@alayen.edu.iq

8. Course Objectives

General Objective:

Enable students to acquire a comprehensive understanding of the principles of intensive care and the key equipment and systems available in the ICU, such as monitoring devices, as well as essential emergency management practices for the care of critically ill patients in the Intensive Care Unit.

Specific Objective:
By the end of the course, the student will be able to:

By the end of the semester, the student will be able to:

5. **Understand the operations of the Intensive Care Unit (ICU)** and its safety procedures by recognizing its organizational structure, patient admission and discharge processes, and the safe transport of critically ill patients.
6. **Apply essential preventive and therapeutic measures**, including infection control procedures, preventive practices, anesthesia management, pain control, and nutritional support in the ICU.

	7. **Demonstrate proficiency in ventilation and respiratory support**, including oxygen therapy, non-invasive ventilation, and mechanical ventilation—covering its modes, weaning strategies, and potential complications. 8. **Utilize clinical monitoring systems effectively** by operating and interpreting data from respiratory, cardiovascular, hemodynamic, and neurological monitoring devices in the ICU.

9. Teaching and Learning Strategies

Strategy	1-Using high-fidelity mannequins and virtual emergency scenarios to practice airway management, resuscitation, and trauma care in a controlled, risk-free environment. 2-Case-based interactive learning: Presenting real clinical cases (e.g., sepsis, dysrhythmias, toxicology) for analysis and discussion to develop diagnostic reasoning and emergency decision-making skills. 3-Supervised clinical immersion: Involving student's in supervised emergency department rotations and hands-on skills labs to apply theoretical knowledge in real or simulated clinical settings.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1-2	4 theory +8 practical	Definition ICU, its types, and the main admission and discharge criteria	ICU organization, design, admission and discharge criteria's	Theoretical and practical lecture using PowerPoi	Pop-up exam live question + attendance + midterm and final exam
3	2 theory +4 practical	Basics of the transportation of critical ill patient	transport of criticall ill patients	Theoretical and practical lecture using PowerPoi	Pop-up exam live question + attendance + midterm and final exam
4-5	4 theory +8 practical	Common strategies in ICU to reduce the most common complications	preventive practices (occupational exposures, alimentary and venous thromboembolism prophylaxis)	Theoretical and practical lecture using PowerPoi	Pop-up exam live question + attendance + midterm and final exam
6	2 theory +4 practical	The main roles and basics of prolonged sedation and analgesia in ICU	sedation and analgesia in the ICU	Theoretical and practical lecture using PowerPoi	Pop-up exam live question + attendance + midterm and final exam
7-8	4 theory +8 practical	Non-invasive O2 therapy and its fundamentals, devices, advantages and disadvantages	Oxygen therapy and non-invasive ventilation	Theoretical and practical lecture using PowerPoi	Pop-up exam live question + attendance + midterm and final exam
9-11	6 theory +12 practical	Basics of Invasive mechanical ventilation, modes and conditions	mechanical ventilation (indications, modes of ventilation, weaning and complications)	Theoretical and practical lecture using PowerPoi	Pop-up exam live question + attendance + midterm and final exam

12-13	4 theory +8 practical	Common nutrition methods in ICU	nutrition in the ICU	Theoretical and practical lecture using PowerPoi	Pop-up exam + live question + attendance + midterm and final exam
14-15	4 theory +8 practical	Basics of clinical monitoring in ICU	clinical monitoring in ICU (respiratory monitoring, cardiovascular monitoring, hemodynamic and cranial monitoring)	Theoretical and practical lecture using PowerPoi	Pop-up exam + live question + attendance + midterm and final exam

11.Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

1- 40 points for effort (daily exam + attendance + participation + reports).

2- 60 points for final exam (35 points for theory + 25 points for practical).

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Non
Main references (sources)	1. Handbook of ICU Therapy, Third edition 2019. 2. Marino's The ICU Book 4th edition. 3. Textbook of critical care – jean-l Vincent; fredrerick moore (7th edition)
Recommended books and references (scientific journals, reports...)	Intensive care medicine
Electronic References, Websites	University educational platform

1. Course Name:

Anaesthetic Equipments Technology (2)

2. Course Code:

MTAN3203

3. Semester / Year:

Second semester 2025-2026

4. Description Preparation Date:

6\2\2026

5. Available Attendance Forms:

Attendance lectures

6. Number of Credit Hours (Total) / Number of Units (Total)

(90 h) / 4 units

7. Course administrator's name (mention all, if more than one name)

Name: MSc .Mushtaq twayess abdulhussein

Email: mushtaqtwayess2@gmail.com

8. Course Objectives

Specific Objectives:	General Objective:
1. Use all different anesthesia equipment. 2. maintain all anesthesia equipment. 3. Identify all parts of medical equipment used in anesthesia and their techniques. 4. Explain the components of an anesthesia machine (gas mixtures, vaporizers, breathing system, safety valves, and pressure). 5. Explain the function of the ventilator used in the anesthesia cart. 6. Explain the mechanism of gas delivery and monitoring of gas flow and pressure.	1. Identify all devices used in anesthesia. 2. Identify all locations of anesthesia devices, including the intensive care unit and the recovery unit. 3. Empower the student to understand the physical and engineering principles underlying anesthesia devices. 4. Train the student on the safe and correct use of anesthesia devices and patient monitoring during operations. 5. Understand how to operate and use the devices.

7. Document and monitor vital signs during surgery using monitoring devices.	

9. Teaching and Learning Strategies

Strategy	Active learning: Group discussions: Encouraging students to participate in interactive discussions on academic topics, which enhances critical thinking and expression of opinions Project-based education: Group projects: Assigning students to projects that require research and cooperation, such as preparing reports or giving presentations. Individual projects: Encouraging students to conduct independent research on topics of interest to them, which enhances writing skills about their specializations

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 hours theoretical&4 hours practical	Explaining the Anesthetic Breathing system and uses	Anesthetic Breathing system (breathing circuit)	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and	Exam in the last 10 minutes

				displayed on Data Show.	
2	2 hours theoretical&4 hours practical	Explain the all types of Classification of breathing system	The Humphrey ADE breathing system	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Explanation of reports by students
3	2 hours theoretical&4 hours practical	How to uses the Manual Resuscitators and component it .	Manual Resuscitators	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Brainstorming questions at the end of the lecture
4&5	4 hours theoretical&8 hours practical	How to identified Types of Mechanical ventilator.	Mechanical ventilator	Theoretical lectures using PowerPoint, practical applications on anesthesia machines,	Distributing students into groups and applying the application to devices

				and educational videos are played and displayed on Data Show.	
6	2 hours theoretical&4 hours practical	What is the Classification of anesthesia ventilators	Classification of anesthesia ventilators	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	viva voce
7-8	4 hours theoretical&8 hours practical	Explain Types of Spinal, Epidural, and Combined Spinal–Epidural Anesthesia	Spinal, Epidural, and Combined Spinal–Epidural Anesthesia	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Working on operating the devices
9	2 hours theoretical&4 hours practical	How to use the Nerve block needles.		Theoretical lectures using PowerPoint, practical	Exam in the last 10 minutes

			Nerve block needles	applications on anesthesia machines, and educational videos are played and displayed on Data Show.	
10&11	4 hours theoretical&8 hours practical	How to identified the Peripheral Nerve Stimulator	Peripheral Nerve Stimulator	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	We ask oral questions
12-13	4 hours theoretical&8 hours practical	Explaining what a Defibrillator	Defibrillator	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Dialogue questions during the lecture Dialogue questions during the lecture

14	2 hours theoretical&4 hours practical	Explaining what equipment is required Pacemaker	Pacemaker	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	direct questions
15	2 hours theoretical&4 hours practical	Explain what a Blood warmer	Blood warmer	Theoretical lectures using PowerPoint, practical applications on anesthesia machines, and educational videos are played and displayed on Data Show.	Asking students some questions about the lectures

11.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

Mid 40 (25 theoretical & 10 practical & 5 attendance and daily exams)

Final 60 (35 theoretical & 25 practical)

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Anesthesia equipment, principle and application, Ehrenwerth, MD, 2nd edition 2. The MGH Textb of Anesthetic Equipment, Warren S. Sandberg, M PhD 2nd edition
Main references (sources)	Fundamentals of Anaesthesia Fourth Edit
Recommended books and references (scientific journals, reports...)	Elsevier & Anesthesia and analgesia
Electronic References, Websites	Google scholar , pumped and web of science

1. Course Name:
internal medicine (2)
2. Course Code:
MTAN 3204
3. Semester / Year: Semester
Semester (2) / second level
4. Description Preparation Date:
20/2/2026
5. Available Attendance Forms:
Full-time and official attendance hours
6. Number of Credit Hours (Total) / Number of Units (Total)
Lecture: 2 , Practical: 4 , Total: 6 (2+4)/ 4 units
7. Course administrator's name (mention all, if more than one name)
Name: Ass. Lec. Ali el Hadi Email: qasimkani@gmail.com
8. Course Objectives
General goal: To familiarize students with all chronic diseases that affect the body's organs and blood. Special goals: At the end of the year, the student will be able to distinguish the signs of the symptoms that affect him. -1 Respiratory system. -2 Digestive system. -3 The renal and urinary system and the kidneys. -4 Or the land of the liver. -5 Mother of the endocrine glands.
9. Teaching and Learning Strategies

Strategy	**Blended learning** • Lectures (Interactive) Online Lectures (Interactive)

	Role play Team-based learning (group dissuasion, presentation) Discussion Problem solving

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6	Describe TB transmission mechanisms & Recognize pulmonary TB symptoms	**Pulmonary T.B..**	Lectures (Interactive) Online Lectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
2	6	Interpret sputum and imaging and Outline anti-tubercular therapy	**Pulmonary T.B.**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning	Midterm exams Final exams evaluations

				presentation) Discussion Problem solving	
3	6	Differentiate COPD and asthma Explain airflow obstruction pathophysiology	**Chronic obstructive pulmonary diseases: chronic bronchitis, emphysema, asthma**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
4	6	Identify lung cancer risk factors Classify lung tumor types Recognize clinical manifestations	**Chronic obstructive pulmonary diseases: chronic bronchitis, emphysema, asthma**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
5	6	Recognize pulmonary embolism symptoms Identify risk factors	**Tumors of the lung**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion	Midterm exams Final exams evaluations

				Problem solving	
6	6	Define respiratory failure Differentiate type I and II Interpret arterial blood gases	**Tumors of the lung.**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
7	6	Classify transudate and exudate Identify causes of effusion	**Vascular lung** **disease: pulmonary thrombo-embolism**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
8	6	Define diabetes mellitus Recognize clinical features	**Vascular lung** **disease: pulmonary thrombo-embolism.**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations

9	6	Recognize clinical features Interpret hormonal investigations Differentiate etiologies	**Respiratory failure: definition, types, management.**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
10	6	Recognize dehydration and overload Interpret sodium disorders Identify potassium abnormalities	**Respiratory failure: definition, types, management.**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
11	6	Classify transudate and exudate Identify causes of effusion	**Diseases of the** **pleura: pleural effusion: types,** **causes, investigation, treatment.**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
12	6	Define diabetes mellitus	**Diabetes mellitus: definition/clinical** **Features**	Lectures (Interactive) OnlineLectures (Interactive)	Midterm exams Final exams evaluations

		Recognize clinical features	**/ complications/ treatment.**	Role play Team-based learning presentation) Discussion Problem solving	
13	6	Define diabetes mellitus Recognize clinical features	**Diabetes mellitus: definition/clinical features/ complications/ treatment.**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
14	6	Recognize clinical features Interpret hormonal investigations	**Cushing syndrome: diagnosis, clinical features, Investigations and treatment**	Lectures (Interactive) OnlineLectures (Interactive) Role play Team-based learning presentation) Discussion Problem solving	Midterm exams Final exams evaluations
15	6	recognize dehydration and overload Interpret sodium disorders	**Disturbances of water and electrolytes.**	Lectures (Interactive) OnlineLectures (Interactive) Role play	Midterm exams Final exams evaluations

				Team-based learning presentation) Discussion Problem solving	

11.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Non
Main references (sources)	**Oxford hand book of clinical medicine, sixth edition, Longmore, Murray,2004** **Harrisons principle of internal medicine 2th edition 2018**
Recommended books and references (scientific journals, reports...)	**Davidson's Principles and Practice of Medicine**
Electronic References, Websites	University educational platform

1. Course Name:
Surgery 2
2. Course Code:
MTAN3205
3. Semester Year
Second Semester 2025-2026
4. Date of preparation of this description:
1/2/2026
5. Available Attendance Formats:
Fully in-person at the university
6. Number of class hours
4hours (1 theoretucal + 3 practical) – Number of units 2
7. Name of course administrator MSC Marwah Khalaf Saad Email: marwshali739@gmail.com
Course Objectives
8.
Course Objectives **General Objective**: To raise scientific competence and expand medical awareness of the importance of the close link between anesthesia and surgery, work as a single medical team, and fill knowledge gaps with the aim of reducing medical errors at all stages of patient treatment**.** 1. To familiarize the student with the various body systems and the impact of injuries on them from an anatomical and physiological perspectives, as well as the resulting complications and sequelae. Also, to

teach the student the symptoms and signs of these conditions and the basic frameworks for dealing with them.

2. To familiarize the student with the cases that require surgical intervention and to clarify the nature of this intervention based on what they may encounter during their work in operations and intensive care, with a focus on emergency cases. At this stage, the digestive, urinary, respiratory, and vascular (cardiac) systems are studied**.**

Specific Objective

At the end of the semester, the student will be able to:

Identify the types of diseases that require surgical intervention and how to choose anesthesia methods

and safe surgery, using the least risky treatment methods for the patient, appropriate to the stage of the disease, and at the lowest cost, by working with the available capabilities within the healthcare institution.

Identify the limits of their scientific and surgical capabilities, and those of the healthcare institution in which they work, and follow correct and safe methods when referring patients to specialized centers as needed, to ensure their safety.

9. Teaching and Learning Strategies

	Strategy
Active Learning Group Discussions: Encouraging students to participate in interactive discussions on lecture topics, which enhances critical thinking and the expression of opinions. Project-Based Learning Group Projects: Assigning students projects that require research and collaboration, such as preparing reports or giving presentations.	

Individual Projects: Encouraging students to conduct independent research on topics of interest to them that link surgery and anesthesia, which enhances writing skills about their specialty	

10. Course Structure

Assessment method	Learning method	Topic	Intendence learning outcomes	hours	Week
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Trauma to the: Kidneys, Ureter, Bladder, Urethra	Describe mechanisms and types of genitourinary trauma Identify clinical signs and symptoms of injury Interpret relevant investigations (urinalysis, ultrasound, CT)	4	1
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Hydronephrosis , Urinary stones	Define hydronephrosis and explain its causes Describe pathophysiology and grading Identify clinical presentation and diagnostic methods	4	2
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Urinary Tract Infections (UTI)	Define and classify UTIs Identify causative organisms and risk factors	4	3

			Recognize clinical features in different age groups Interpret laboratory investigations Outline prevention and treatment strategies		
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Urination Disorders,	Define common disorders (retention, incontinence, dysuria) Explain underlying causes and mechanisms Describe diagnostic approaches Outline management principles	4	4
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Urinary tumors	Classify urinary tract tumors Identify risk factors and warning signs Describe diagnostic methods Outline principles of treatment and prognosis	4	5
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Urogenital Tract in Males: Prostate, Testis, Penis	Describe normal anatomy and function Identify common diseases and disorders	4	6

			Recognize clinical presentation of malignancies Outline diagnostic and management approaches		
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Thorax surgery: Respiratory Pathophysiology & General review	Explain normal respiratory physiology Describe pathophysiological changes in disease Relate physiological changes to clinical manifestations	4	7
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Trauma to thorax: Rib Fractures, Flail Chest	Describe mechanisms of injury Recognize clinical features and complications Outline emergency management and supportive care	4	8
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Pneumothorax, Haem othorax	Define and classify types Identify causes and clinical presentation Interpret radiological findings Outline emergency and definitive management	4	9
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Pleural Effusion, Empy ema	Define and differentiate pleural conditions	4	10

			Explain causes and pathophysiology Describe diagnostic procedures Outline management strategies		
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Chest tube: Applications & Management	Identify indications for chest tube insertion Describe insertion technique principles Outline post-insertion care and complications	4	11
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Lung tumours, Mediastina masses	Classify lung tumors and mediastinal masses Identify risk factors and symptoms Describe diagnostic investigations Outline treatment options	4	12
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Types of Thoracic operations	Identify common thoracic surgical procedures Describe indications and basic principles Recognize post-operative complications	4	13

Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Congenital heart diseases, Acquired heart diseases	Differentiate congenital and acquired heart diseases Describe common types and pathophysiology Recognize clinical signs and diagnostic tools Outline management principles	4	14
Pop quiz, live question + midterm and final exam	Theoretical lecture using PowerPoint	Cardiopulmonary resuscitation	Define CPR and its indications Describe the steps of basic and advanced life support Demonstrate understanding of airway, breathing, and circulation Recognize outcomes and complications	4	15

11. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, and monthly exams

written work, reports, etc.

40 marks for daily exam (attendance + participation + reports)

60 marks for final exam (theoretical 35 marks + practical 25)

12. Learning and Teaching Resources

Schwartz's Principles of Surgery	Required Textbooks (methodology if any)

1-Required prescribed books Baiely and Loves short practices of surgery Main references (sources) 28th ed	Main References (Sources)
Oxford Handbook of Clinical Surgery	Recommended Mainstream Books and References (Scientific Journals Reports…)
Google scholar, pumped and web of science	Electronic References, Internet Sites