

21 September University – for Medical and Applied Science



Anesthesia Technician

Program Specifications

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2024 م - 1445 هـ

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1. Program Identification and General Information:

1	Scientific name of the program:	Anesthesia Technician
2	Total credit hours required to award the degree	139 Credit Hours
3	Number of years needed for completion of the program:	4 Years [8 Academic semesters] + [1 semesters (Summer Training)]
4	The body responsible for granting the degree:	21 September University - for Medical and Applied Sciences
5	The body responsible for the program:	Department of Anesthesia Technician Faculty of Applied Medical Science
6	Award granted on completion of the program:	Technical bachelor of anesthesia (Secondary Specialist),
7	Study system:	Regular attendance (Semester based System)
8	Study Language of the Program:	English
9	Entry requirements:	Secondary School Certificate (Scientific)
10	Departments participating in the program:	Department of Nursing Department of Medicine Department of Laboratory
11	Starting year of the program:	1446 هـ – 2024/2025 م
12	Study methods in the program:	Full time
13	Location of Delivery:	21 September University - for medical and Applied Sciences campus
14	The program resources:	21 September University - for Medical and Applied Sciences
15	Minimum grade requirements:	Following the Admission Rules made by Ministry of Higher Education and Scientific Research- Republic of Yemen.
16	Other admission requirements:	21 September University Admission and Regulations Rules.
17	Date of current development of the program:	Aug 2023 – 1445 محرم
18	Prepared by:	1- Prof. Mujahed Masear 2- Prof. Abdulsallam Dallaq 3- Dr. Adnan Al athwari 4- Dr. Abdullah Al. Najar 5- Dr. Fares Mahdi
19	Program coordinator:	Dr. Adnan AlAthori

2. Introduction:

Anesthesia technology is an allied health profession specifically focused on fundamental and advanced clinical procedures which assist the anesthesia provider in the safe and efficient care of patient's under anesthesia. The Bachelor of Anesthesia technology program is designed in a graduate level to prepare skilled technical providers able to assist anesthesiologist in all basic and essential anesthetic care. The Anesthesia Technologist works under the direction of an anesthesia doctors who lead anesthesia team in accredited medical care centers.

The program prepares, trains, and equips students to practice better and safer anesthesia, in order to reduce morbidity and mortality in community, related to surgery and anesthesia. These graduates also play an important role in critical care.

The teaching method in the anesthesia and intensive care departments is comprised of a combination of theoretical and practical coursework which are conducted with specimens and manikins, directly followed by clinical management of patients.

After graduation, the anesthesia technologist provides essential anesthetic care to the community under supervision of anesthesiologists.

A candidate might pursue some career profiles after completing B.Sc. Anesthesia Technology.

- Anesthesiologist Assistant
- Anesthesia Technician
- Partner Consultant

3. University Vision, Mission, Values, Objectives, and Goals:

University vision:

A Contemporary University with National Responsibility and Faith Identity

University Mission:

Leadership of transformation headway in managing and providing the health care with all partners via having the distinction standard in education and applied and medical researches that meet the needs of Yemeni people and regional influence.

University Core values:

- Leadership and Influence
- Work effectively with a time
- Excellence and Innovation

Special University Goals:

- 1- Ensuring the application of quality standards and having the distinction standards in

medical and applied sciences, scientific research and community service.

- 2- Adopting student-cantered learning, the partnership with them for life, consolidating the principles of national responsibility and faith identity, looking after them and developing their capabilities after graduation and during work.
- 3- Attracting and Employing scientists, cadres and talents to gain minds and put an end for the “brain drain” in a way that promotes and ensures the availability of thinkers, businessmen and good citizens.
- 4- Developing the distinguished academic infrastructure continuously and establishing modern research and service centres with high efficiency that can give a real effect locally and regionally.
- 5- Enhancing the university status as a preferred partner for local, regional and international partnership through implementing creative styles of education, exchanging researches and knowledge, and providing real and effective outcomes for developing professional practices to benefit from them locally and regionally.

4. Faculty Vision, Mission, Values, and Objectives:

Faculty Vision:

A contemporary college in the field of applied medical sciences and scientific research with national responsibility and faith identity

كلية معاصرة في مجال العلوم الطبية التطبيقية والبحث العلمي بمسئولية وطنية وهوية إيمانية

Faculty Mission:

Participate in leading the transformation for the better in providing high-quality diagnostic and health care services according to the latest techniques and contemporary technology through excellence in research and applied medical education to meet the needs of Yemeni society with its specificity and regional influence.

المشاركة في قيادة التحول نحو الأفضل في تقديم خدمات التشخيص والرعاية الصحية عالية الجودة وفق أحدث التقنيات والتكنولوجيا المعاصرة من خلال التميز في البحوث والتعليم الطبي التطبيقي لتلبية احتياجات المجتمع اليمني بخصائصه والتأثير الإقليمي.

Faculty Values:

- | | |
|------------------------------------|------------------------|
| 1-Respect and Appreciation | 1. الاحترام والتقدير |
| 2. Commitment and professionalism | 2. الالتزام والمهنية |
| 3. Loyalty | 3. الإخلاص |
| 4. Transparency and Accountability | 4. الشفافية والمساءلة |
| 5. Social Responsibility | 5. المسؤولية المجتمعية |
| 6. National Identity | 6. الهوية الوطنية |

Faculty Goals:

1. Preparing a graduate who is able to interact positively with the problems of society.
2. Providing the student with modern skills and providing him with a culture of self-reliance in renewal, development and innovation.
3. Attracting and retaining distinguished faculty members.
4. Providing a stimulating environment for teaching and learning.
5. Ensuring a high-quality educational and training level through which the graduate gains basic academic knowledge and scientific and clinical applications in line with the needs of the labor market.
6. Creating postgraduate programs, enhancing scientific research and working to develop the capabilities of faculty members to be familiar with everything new in the educational process.

1. إعداد خريج قادر على التفاعل بإيجابية مع مشكلات المجتمع .
2. تزويد الطالب بمهارات حديثة وتزويده بثقافة الاعتماد على النفس في التجديد والتطوير والابتكار .
3. استقطاب أعضاء هيئة تدريس متميزين والمحافظة عليهم.
4. توفير بيئة محفزة للتعليم والتعلم.
5. ضمان مستوى تعليمي وتربوي بجودة عالية يكسب الخريج من خلاله المعرفة الأكاديمية الأساسية والتطبيقات العلمية والإكلينيكية بما يتناسب مع احتياجات سوق العمل .
6. استحداث برامج دراسات عليا وتعزيز البحث العلمي والعمل على تنمية قدرات أعضاء هيئة التدريس للإلمام بكل ما هو حديث في العملية التعليمية .

5. Department Vision, Mission, and Objectives :

Department Vision:

"To lead in educating and training anesthesia professionals, committed to national responsibility and faith-based values, providing exceptional medical services that align with advancements in applied medical sciences and scientific research."

Department Mission:

Qualifying specialized and highly qualified cadres in the field of anesthesia, capable of providing distinguished health care, committed to national responsibility and faith values, and keeping pace with modern developments in applied medical sciences and scientific research.

Department Objectives:

- 1- **Providing students with the essential knowledge and skills to enhance employment opportunities in hospitals and anesthesia academies.**
- 2- **Training Specialized Personnel: Preparing highly qualified anesthesia specialists with advanced scientific knowledge capable of delivering exceptional healthcare services.**
- 3- **Commitment to National and Ethical Values: Instilling national responsibility and ethical values in the professional practices of graduates.**
- 4- **Keeping Abreast of Modern Developments: Continuously updating curricula and educational programs to align with the latest advancements in applied medical sciences and research.**
- 5- **Enhancing Scientific Research: Encouraging and supporting scientific research in the field of anesthesia to improve healthcare quality and advance medical knowledge.**
- 6- **Community Service: Providing medical and educational services to the community and contributing to raising health awareness.**
- 7- **Continuous Education: Offering continuous education and training opportunities for medical personnel to ensure their skills and knowledge remain current.**
- 8- **Collaboration with Health Institutions: Building effective partnerships with hospitals and medical centers to provide practical training environments for students.**
- 9- **Quality Assurance: Implementing quality standards in education and training to ensure the graduation of qualified personnel who meet labor market needs**

6. Anesthesia Technology Program Mission and Objectives:

Program Mission:

The mission of the Anesthesia Program is to provide exceptional education and training in the field of anesthesia, preparing medically qualified professionals both academically and practically. These professionals are capable of delivering safe and effective healthcare, committed to national responsibility and faith-based values, while staying abreast of the latest developments in applied medical sciences and research.

تقديم تعليم وتدريب متميز في مجال التخدير، لإعداد كوادر طبية مؤهلة علميًا وعمليًا، قادرة على تقديم رعاية صحية آمنة وفعالة، مع الالتزام بالمسؤولية الوطنية والقيم الإيمانية، ومواكبة التطورات الحديثة في العلوم الطبية التطبيقية والبحث العلمي

Program Objectives:

1-Providing students with the essential knowledge and skills to enhance employment opportunities in hospitals and anesthesia academies.

Training Specialized Personnel: Preparing highly qualified anesthesia specialists with advanced scientific knowledge capable of delivering exceptional healthcare services.

2-Commitment to National and Ethical Values: Instilling national responsibility and ethical values in the professional practices of graduates.

3-Keeping Abreast of Modern Developments: Continuously updating curricula and educational programs to align with the latest advancements in applied medical sciences and research.

4-Enhancing Scientific Research: Encouraging and supporting scientific research in the field of anesthesia to improve healthcare quality and advance medical knowledge.

5-Community Service: Providing medical and educational services to the community and contributing to raising health awareness.

6-Continuous Education: Offering continuous education and training opportunities for medical personnel to ensure their skills and knowledge remain current.

7-Collaboration with Health Institutions: Building effective partnerships with hospitals and medical centers to provide practical training environments for students.

8-Demonstrate critical thinking skills in making decisions in all situations to provide quality care.

9-Quality Assurance: Implementing quality standards in education and training to ensure the graduation of qualified personnel who meet labor market needs

7. Program Standards & Benchmarks:

Academic Standards:

1- Academic Standards:

Head of Department

Quality Unit

Dean of the Faculty

Center of Development
& Quality Assurance

Rector

Dr. Adnan AlAthori

Dr. Fadl Shujaa Al-deen

prof. Abdulsalam Dallaq

Dr.Mohammed Alshamahy

Prof. Mojahed Measar

2- National Academic Reference Standards (NARS) for Undergraduate Medical Education Programs Yemen.

B. Strategies :-

1- Strategy 21 September University- for Medical and Applied Sciences.

2-Faculty Strategy .

C. Governmental Rules and Regulation :-

1-Act No. 13/2005 of the Law of private universities, higher institutes and colleges, Yemen.

2-The executive regulations of Act No. 13/2005 of the Law of private universities, higher institutes and colleges, Yemen.

خطأ! لم يتم العثور على مصدر المرجع.

خطأ! لم يتم العثور على مصدر المرجع.

Program Benchmarks:

1. sana'a University, B.Sc. (Bachelor of Anesthesia Technology), Faculty of Applied Medical Sciences, Department of Anesthesia / Yemen
<https://su.edu.ye/cams/en/bachelor/radiology-medical-diagnostic-imaging/>
2. Tehran University of Medical Sciences. School of Allied Medical Sciences
<https://en.tums.ac.ir/en>
3. Mekelle University College of health sciences Addis Ababa- Ethiopia.
https://iphce.org/acadp_listings/mekelle-university-college-of-health-science
4. King Saud bin Abdulaziz University for Health Sciences (KSAU-HS)- KSA.
<https://www.ksau-hs.edu.sa/english/pages/default.aspx>
5. Rahman College of Allied sciences - Pakistan.
<https://rcahs.rmi.edu.pk/>
Umm Al-Qura University – KSA <https://uqu.edu.sa/>
- 6- <https://hiuc.edu.iq/view-goals-anesthesia-dep>
- 7- [https://lbu.edu.ly/mt/anesthesia-and-intensive-care-department /](https://lbu.edu.ly/mt/anesthesia-and-intensive-care-department/)
- 8- <https://med.alraziuni.edu.ye/posts/>
- 9- <https://amskh.kku.edu.sa/ar/node/186>
- 10- <https://cams.ksau-hs.edu.sa/index.php/ar/academics-ar/anesthesia-technology-ar>
- 11- <https://su.edu.ye/chm/>
- 12- <https://www.aaup.edu/ar/Academics/Graduate-Studies/Faculty-Graduate-Studies/Health-Sciences-Department/Master-Nurse-Anesthesia>
- 13- https://www.ksau-hs.edu.sa/English/Colleges/COAMS/Riyadh/Pages/Academics/Undergraduate%20Programs/Anesthesia%20Technology/Learning-Outcomes.aspx?utm_source=chatgpt.com

- 14- <https://skylinecollege.edu/anesthesiatech/assets/Skyline%20Anesthesia%20Student%20Handbook%202018>
- 15- https://anesthesiology.hopkinsmedicine.org/simulation-curriculum/?utm_source=chatgpt.com
- 16- https://pubs.asahq.org/anesthesiology/article/112/4/773/10670/Anesthesia-How-to-Organize-and-Train-Our-Teachers?utm_source=chatgpt.com

8. Graduate Attributes:

After successfully completing the program, the graduate should be able to:

1. Clinical Competence: Apply discipline-related knowledge and clinical skills to provide patient-centered healthcare.
2. Critical Thinking and Problem-Solving: Utilize critical thinking and problem-solving abilities in delivering anesthesia care.
3. Communication and Teamwork: Communicate effectively and work collaboratively within healthcare teams.
4. Professionalism and Ethical Practice: Uphold high standards of professionalism and adhere to ethical and legal standards in anesthesia technology.
5. Leadership and Initiative: Demonstrate leadership skills and take initiative in healthcare settings to improve systems and processes.
6. Lifelong Learning: Engage in continuous learning and professional development to stay current with advancements in the field.
7. Community Engagement: Participate in community service and research activities to address health disparities and promote social justice.

9. Program Intended Learning Outcomes (PILOs):

A. Knowledge and Understanding:

Upon successful completion of the undergraduate Medical Imaging Technology Program, the graduates will be able to:

- A1. Describe Basic Sciences:** Understand the fundamental concepts of basic sciences, including anatomy, physiology, and pharmacology, as they relate to anesthesia technology
- A2. Define Professional Responsibilities:** Recognize the roles and responsibilities of an anesthesia technologist within interventional, diagnostic, and surgical procedures
- A3. Identify Types of Anesthesia:** Distinguish between various types of anesthesia and comprehend the necessary skills and assessments required for different procedures

B. Cognitive/ Intellectual Skills:

Upon successful completion of the undergraduate Medical Imaging Technology Program, the graduates will be able to:

- B1. Critical Thinking and Problem-Solving:** Develop the ability to analyze complex clinical situations, make informed decisions, and effectively solve problems related to anesthesia

B2. Application of Knowledge: Integrate theoretical knowledge with practical skills to assess patient needs and implement appropriate anesthesia techniques.

B3. Adaptability: Demonstrate flexibility and adaptability in responding to rapidly changing clinical environments and patient conditions.

B4. Ethical Reasoning: Apply ethical principles and professional standards in decision-making processes within the anesthesia care setting

C. Practical and Professional Skills:

Upon successful completion of the undergraduate Medical Imaging Technology Program, the graduates will be able to:

C1. Clinical Competence: Demonstrate proficiency in anesthesia technology principles and clinical skills equivalent to an entry-level Anesthesia Technologist

C2. Professional Behavior: Exhibit behavior appropriate for an entry-level Anesthesia Technologist, including adherence to ethical principles and professional standards .

C3. Team Collaboration: Collaborate effectively with the multi-disciplinary anesthesia care team in developing and implementing anesthesia care plans for patients

C4. Patient Care: Provide patient care skills, including psychological support and clear communication of procedures to patients

C5. Critical Thinking: Demonstrate critical thinking skills by prioritizing, analyzing, anticipating, resolving problems, and acting instinctively and decisively in the anesthesia healthcare environment

D. General and Transferable Skills:

Upon successful completion of the undergraduate Medical Imaging Technology Program, the graduates will be able to:

The Program Intended Learning Outcomes (PILOs) for the Anesthesia Technology Program in the domain of **General and Transferable Skillsare:

D1. Effective Communication: Demonstrate proficiency in both written and oral communication within the healthcare environment .

D2. Teamwork and Collaboration: Exhibit the ability to work effectively within multidisciplinary teams, fostering a collaborative approach to patient care .

D3. Critical Thinking and Problem-Solving: Apply critical thinking skills to analyze situations,

anticipate challenges, and develop appropriate solutions in clinical settings .

D4. Professionalism and Ethical Practice: Uphold professional conduct and adhere to ethical standards in all aspects of anesthesia technology practice .

D5. Lifelong Learning: Engage in continuous learning and professional development to stay current with advancements in the field of anesthesia technology .

s.

Program PILOs	Program Objectives								
	PObj1	PObj2	PObj3	PObj4	PObj5	PObj6	PObj7	PObj8	PObj9
A1	√								
A2		√			√				
A3	√								
B1			√					√	
B2	√							√	
B3				√				√	
B4			√						
C1	√							√	
C2		√					√		
C3				√		√			
C4					√	√			
D1						√			√
D2						√			√
D3			√						√
D4					√				

Teaching and Learning Strategies:

- Active Lectures (supported with discussions),
- Case studies and Problem-based learning,
- Seminars, tutorials and Journal clubs,
- Laboratory training,
- Laboratory classes and Fieldwork
- Computer and web-based learning,
- Use of communication and information technology,
- Self-directed study and research.
- Field Visits.

Assessment Methods:

- Coursework Activities
- Written tests and exams (Midterm and final exams)
- Written assessments such as multiple-choice questions and Quizzes
- Report/Project/Practical Lab Sessions
- Case studies
- Home works and assignments.
- Presentations

10. Alignment of Program Intended Learning Outcomes (PILOs) to Teaching Strategies and Assessment Methods:

PILOs	Teaching Strategy	Assessment Methods
Knowledge and Understanding A1. Describe Basic Sciences: Understand the fundamental concepts of basic sciences, including anatomy, physiology, and pharmacology, as they relate to anesthesia technology A2. Define Professional Responsibilities: Recognize the roles and responsibilities of an anesthesia technologist within interventional, diagnostic, and surgical procedures A3. Identify Types of Anesthesia: Distinguish between various types of anesthesia and comprehend the necessary skills and assessments required for different procedures	Lectures, Interactive class discussions, Tutorials.	Written exams, Assignment work, Quizzes, Submission of reports.
Intellectual Skills B1. integrate Critical Thinking and Problem-Solving: Develop the ability to analyze complex clinical situations, make informed decisions, and effectively solve problems related to anesthesia	Lectures, Tutorial, Interactive class discussions, Group work, Presentation.	Written exams, Project, Case studies Assignment work.

PILOs	Teaching Strategy	Assessment Methods
B1. Application of Knowledge: Integrate theoretical knowledge with practical skills to assess patient needs and implement appropriate anesthesia techniques. B2. Synthesize knowledge derived from, medical, anesthesia, basic sciences and humanities courses into the practice of anesthesia B3. Adaptability: Demonstrate flexibility and adaptability in responding to rapidly changing clinical environments and patient conditions B4. Ethical Reasoning: Apply ethical principles and professional standards in decision-making processes within the anesthesia care setting		
Professional & practical skills C1. Clinical Competence: Demonstrate proficiency in anesthesia technology principles and clinical skills equivalent to an entry-level Anesthesia Technologist C2. Professional Behavior: Exhibit behavior appropriate for an entry-level Anesthesia Technologist, including adherence to ethical principles and professional	Short lectures, Case study, Laboratory experiments, Project, Group work, Field training, Drawing sessions.	Written exams, Quizzes, Practical exam assignment , Report submission.

PILOs	Teaching Strategy	Assessment Methods
standards . C3. TeamCollaboration: Collaborate effectively with the multi-disciplinary anesthesia care team in developing and implementing anesthesia care plans for patients C4. Patient Care: Provide patient care skills, including psychological support and clear communication of procedures to patients		
General & Transferable Skills D1 .Effective Communication: Demonstrate proficiency in both written and oral communication within the healthcare environment . D2. Teamwork and Collaboration: Exhibit the ability to work effectively within multidisciplinary teams, fostering a collaborative approach to patient care . D3.Critical Thinking and Problem-Solving: Apply critical thinking skills to analyze situations,	Group work, Self-study, Interactive class discussions, Tutorials, Seminar/ project/presentation, Laboratory experiments, Project, Art Gallery	Project presentation, Laboratory exam, Report/Project

11. Project Assessment:	
Each project will be assessed by a committee of three members as follows:	
Item	Marks Distribution
Project supervisor.	50%
Internal examiner: a member of the department staff.	25%
External or faculty examiner: a qualified external examiner from other departments of the faculty or from another university.	25%
Total	100%

12. Training Course Assessment:

One year internship training period in an approved and related hospital : governmental, private . This internship provides real-life experience and exposure and provides the students with real opportunity to get connected and develop their professional network and connection.

The training course will be assessed through:

- Evaluation by the program chair during at least two field visits **(30%)**
- Evaluation by the external supervisor from the field **(30%)**
- Reports presented by students groups related to different training branches **(40%).**

13. Intended Learning Outcomes Mapping:

See below Annex:

[Annex- 2, Survey of PILOs for Similar Accredited Programs at National and International Universities](#)

14. Program Structure:

#	Themes	No. of Courses	Credit Hours	Percentage of Cr. Hrs.
0	University Requirements	7	14	0.1%
1	Faculty Requirements	24	53	0.38%
2	Department Courses			%
3	General Courses (Program Courses)	19	71	0.51%
4	Electives Courses (Program Courses)			%
5	Graduation Project Courses*	1	3	0.02%
6	Field Training			
		51	139	100%

14.1. University Requirements

Compulsory Courses

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1.	1/1	06.11.801	Arabic 101	لغة عربية 101	2			2	
2.	1/2	06.11.802	Arabic 102	لغة عربية 102	2			2	
3.	1/1	06.11.803	English 101	لغة انجليزية 101	2			2	
4.	1/2	06.11.804	English 102	لغة انجليزية 102	2			2	
5.	1/1	06.11.805	Islamic Culture	ثقافة اسلامية	2			2	
6	1/2	06.11.806	National Culture	ثقافة وطنية	2			2	
7	1/2	06.11.807	Arabic Israeli Conflict	الصراع العربي الإسرائيلي	2			2	
Total					14	0	0	14	

14.2. Faculty Requirements

Compulsory Courses

No.	Level/Sem.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	1/1	01 01 8011	Anatomy and histology(1)	تشريح والانسجه 1	2	2		3	
2	1/1	04 01 813	Fundamental of Nursing(1)	اساسيات تمريض 1	2	2		3	
3	1/1	05 01814	Medical ethics	اخلاقيات المهن الطبية	2			2	
4	1/1	04 01815	Medical terminology	مصطلحات طبية	2			2	
5	1/1	03 01 812	Biochemistry	كيمياء حيوية	2			2	
6	1/2	01 01 818	Anatomy and histology2	تشريح وانسجة 2	2	2		3	
7	1/2	01 01 819	physiology	علم وظائف الأعضاء	2			2	
8	1/2	05 01 817	communications skills	مهارات اتصال	2			2	
9	1/2	07 01 816	Computer Skills	مهارات حاسوب	2	2		3	
10	1/2	04 01 820	Fundamental of Nursing 2	اساسيات تمريض 2	2	2		3	
11	2/1	04 01 821	Fundamental of Infection Control	أساسيات التحكم بالعدوى	2			2	
12	2/1	02 01 822	Basic Pharmacology	اساسيات علم الادوية	2			2	
13	2/1	03 01 823	Microbiology and Parasitology	أحياء دقيقة وطفيليات	2			2	
14	2/2	01 01 825	Pathology	علم الأمراض	2			2	
15	2/2	02 01 827	Applied Pharmacology	ادوية تطبيقية	2			2	
16	2/2	05 01 826	Psychology	علم النفس	2			2	
17	3/1	01 02 842	Internal medicine	طب باطنة	2			2	
18	3/1	01 02 844	Electrocardiographic	تخطيط القلب الكهربائي	2			2	

19	3/1	05 02 833	Biostatistics	الإحصاء الحيوي	2			2	
20	3/2	01 02 846	Medical Surgery	طب جراحي	2			2	
21	3/2	01 02 847	Critical Medicine	طب العناية المركزة	2			2	
22	3/1	05 01 837	Scientific Research methodology	طرق البحث العلمي	2			2	
23	4/1	05 01 838	Health Administration and Quality Management	الإدارة الصحية وإدارة الجودة	2			2	
24	4/2	05 01 849	Medical emergency services	الخدمات الطبية الطارئة	2			2	
Total					48	10		53	

Elective Courses: None

14.3. Department Requirements

Elective Courses: None

Program Requirements

14.4. Major Requirements

Compulsory Courses

No .	Level-Sem.	Course Code	Course Name	اسم المقرر	L	T	p	Cr. Hrs .	Prerequisites, Co-requisites
1	1/1	08 02 821	Introduction of Anesthesia	مقدمه في تكنولوجيا التخدير	2			2	
2	2/1	08 02 822	Health Assessment for Anesthesia	التقييم الصحي للتخدير (تقييم ما قبل الجراحة واساسيات الفحص)	2	2		3	
3	2/1	08 03 840	Physics and measurements 1	فيزياء وقياسات 1	2			2	
4	2/1	08 02 823	Technology Anesthesia Equipment	أدوات ومواد تقنية التخدير	2	0		2	
5	2/1	08 02 824	Clinical Anesthesiology	التخدير السريري 1			18	6	
6	2/2	08 03 841	Physics and measurements 2	فيزياء وقياسات 2	2			2	
7	2/2	08 02 825	Problem Solving and decision Making in anthology	حل المشكلات واتخاذ القرار في التخدير	2			2	
8	2/2	08 02 826	Clinical Anesthesia	تخدير سريري 2			18	6	
9	3/1	08 05 843	Essential of Critical care Medicine	اساسيات التعامل مع الحالات الحرجة	2			2	
10	3/1	08 02 827	Clinical Anesthesia 3	تخدير سريري 3			18	6	
11	3/1	08 05 845	Principle of Airway Management and Mechanical Ventilator	اساسيات المعالجة التنفسية والتنفس الاصطناعي	2	4		4	
12	3/2	08 02 828	Clinical Anesthesiology 4	التخدير السريري 4			18	6	
13	4/1	01 02 829	Directed Studies in Anesthesiology	دراسات مباشرة في علم التخدير	2			2	
14	4/1	08 04 848	Postoperative Pain management	علاج الألم بعد العمليات	2			2	

15	4/1	08 01 830	Special Anesthesia	التخدير التخصصي	2	2		3	
16	4/1	08 01 831	Clinical Practice I	تدريب ميداني 1			18	6	
17	4/2	08 01 832	Advanced Technology Anesthesiology	تقنيات التخدير المتقدمة	2	2		3	
18	4/2	08 02 833	Graduate Research Project	مشروع بحث التخرج			9	3	
19	4/2	08 02 834	Clinical Practice II	تدريب ميداني 2			18	6	
20	4/2	08 02 835	Practicum Seminar in Anesthesia Practices	حلقات دراسية عملية في التخدير	2	4		4	
Total					26	14	117	72	

Project Work Courses									
No	Level-Sem.	Course Code	Course Name		L	T	P	Cr. Hr s.	Prerequ isites, Co-requisit es
	Level 4/ semester 2		Graduate project				9	3	
Total						0	0	2	

Field Attachments and Training Courses (One year)									
No	Level-Sem.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hr s.	Prerequ isites, Co-requisite s
	5 th Year		Internship	تدريب ميداني			18	6	
Total							18	6	

15. Study Plan:

Level 1

Term 1								
No.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	06 11801	Arabic language101	لغة عربية 1	2			2	
2	06 11 803	English language 101	لغة انجليزي 2	2			2	
3	01 01 8011	Anatomy and histology(1)	تشريح وانسجة 1	2		2	3	
4	06 11 805	Islamic culture	ثقافة إسلامية	2			2	
5	04 01 813	Fundamental of Nursing(1)	اساسيات تمريض 1	2		2	3	
6	05 01814	Medical ethics	اخلاقيات المهن الطبية	2			2	
7	04 01815	Medical terminology	مصطلحات طبية	2			2	
8	03 01 812		كيمياء حيوية	2			2	
Total				14		4	18	

Term 2								
No.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	06 11 804	Arabic Language 102	لغة عربية 102	2			2	
2	06 11 804	English language 102	لغة انجليزيه 102	2			2	
3	01 01 818	Anatomy and histology2	تشريح وانسجة 2	2	2		3	
4	01 01 819	physiology	علم وظائف الأعضاء	2	2		3	
5	06 11 806	National culture	ثقافة وطنية	2			2	
6	06 11 807	Arabic Israeli	الصراع العربي الإسرائيلي	2			2	

		Conflict						
7	08 02 821	Introduction of Anesthesia	مقدمه في تكنولوجيا التخدير	2			2	
8	05 01 817	communications skills	مهارات اتصال	2			2	
9	07 01 816	Computer Skills	مهارات حاسوب	2	2		3	
10	04 01 820	Fundamintal of Nursing 2	اساسيات تمرير 2	2	2		3	
Total				20			24	

Level 2

Term 1

No.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	04 01 821	Fundamental of Infection Control	أساسيات التحكم بالعدوى	2			2	
2	02 01 822	Basic Pharmacology	اساسيات علم الادوية	2			2	
3	03 01 823	Microbiology and Parasitology	أحياء دقيقة وطفيليات	2	2		3	
4	08 02 822	Health Assessment for Anesthesia	التقييم الصحي للتخدير (تقييم ما قبل الجراحة واساسيات الفحص)	2	2		3	
5	08 03 840	Physics and measurmens 1	فيزياء وقياسات 1	2			2	
6	08 02 823	Technology Anesthesia Equipment	أدوات ومواد تقنية التخدير	2	2		3	
7	08 02 824	Clinical Anesthesiology	التخدير السريري 1	-		18	6	
Total				12	6		21	

Term 2								
No.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	01 01 825	Pathology	علم الأمراض	2			2	
2	02 01 827	Applied Pharmacology	ادوية تطبيقية	2			2	
3	05 01 826	Psychology	علم النفس	2			2	
4	08 03 841	Physics and measurmens 2	فيزياء وقياسات 2	2			2	
5	08 02 825	Problem Solving and decision Making in anesthesiology	حل المشكلات واتخاذ القرار في التخدير	2			2	
6	08 02 826	Clinical Anesthesia	تخدير سريري 2	-		18	6	
Total				12	0		16	

Level 3								
Term 1								
No.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	01 02 842	Internal medicine	طب باطنة	2			2	
2	08 05 843	Essential of Critical care Medicine	اساسيات التعامل مع الحالات الحرجة	2			2	
3	08 02 827	Clinical Anesthesia 3	تخدير سريري 3	-		18	6	
4	01 02 844	Electrocardiographic	تخطيط القلب الكهربائي	2			2	

5	08 05 845	Principle of Airway Management and Machanical Ventilator	اساسيات المعالجة التنفسية والتتنفس الاصطناعي	2			2	
6	05 02 833	Biostatistics	الإحصاء الحيوي	2			2	
Total							16	

Term 2								
No	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	01 02 846	Medical Surgery	طب جراحي	2			2	
2	08 02 828	Clinical Anesthesiology 4	التخدير السريري 4	-		18	6	
3	01 02 847	Critical Medicine	طب العناية المركزة	2			2	
4	01 01 836	Scientific Research methodology	طرق البحث العلمي	2			2	
Total							12	

Level 4								
Term 1								
No.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	01 02 829	Directed Studies in Anesthesiology	دراسات مباشرة في علم التخدير	2			2	
2	08 04 848	Postoperative Pain mangment	علاج الألم بعد العمليات	2			2	
3	05 01 838	Health Administration and Quality Mangment	الإدارة الصحية وإدارة الجودة	2			2	

4	08 01 830	Special Anesthesia	التخدير التخصصي	2			2	
5	08 01 831	Clinical Practice I	تدريب ميداني 1	-		18	6	
Total							14	

Term 2								
No.	Course Code	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	08 01 832	Advanced Technology Anesthesiology	تقنيات التخدير المتقدمة	2	2		3	
2	05 01 849	Medical emergency services	الخدمات الطبية الطارئة	2			2	
3	08 02 833	Graduate Research Project	مشروع بحث التخرج			9	3	
4	08 02 834	Clinical Pracice II	تدريب ميداني 2	-		18	6	
5	08 02 835	Practicum Seminer in Anesthesia Practices	حلقات دراسية عملية في التخدير	2	4		4	
Total							18	

5th Year								
No.	1de	Course Name	اسم المقرر	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1		Internship	التدريب الداخلي			18	6	
Total						18	6	

16. Admission/Selection/Transfer Requirements:

1. Admissions to the program shall be made as per the admission rules set by the Ministry of Higher Education and Scientific Research as well as 21 September university for medical and Applied Sciences admission guidelines.
2. General Secondary school certificate (Science Section) or any equivalent certificate with grade as specified in the admission rules made by Ministry of Higher Education and Scientific Research.
3. Pass the aptitude test and personal interview if any.
4. Any necessary requirement for specialization, decided by the faculty.

17. Attendance and Graduation Requirements:

1. Student attendance should not be less than 75%.
2. Student will graduate after successfully passing all program requirements.
3. Total credit hours for the program are **146** credit hours.
4. Minimum score for any student to pass any credit hours course is 50% marks.

18. Grading System:

From 90% to 100% of total marks	Excellent
From 80% to less than 90%	Very Good
From 70% to less than 80%	Good
From 65% to less than 70%	Pass
Less than 65%	Poor/Fail

19. Facilities Required for Running the Program:

1. Sufficient Classrooms furnished with all necessary pieces and equipment.
2. Drawing halls.
3. Labs .. as per the courses specifications
4. Computer Labs.
5. Academic and administrative staff offices.

20. Program Assessment:

Type of the Sample who Assess the program		Instruments used	Sample
1	Final Year students	Written Exam & Questionnaire	20
2	Graduates from the program	Questionnaire	20
3	Employer	Questionnaire	15
4	Quality assurance Unite	Standards	20
5	External evaluators	Checklist	15

6	External examiner	Notes	10
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21. Program Policies:

Based on University Regulations

1.	(Class Attendance): A student should attend not less than 75 % of total hours of the subject; otherwise, he/she will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring a proof statement from university Clinic. If the absent is more than 25% of a course total contact hour, student will be required to retake the entire course again.
2.	(Tardy) : For late in attending the class, the student will be initially notified. If he repeated lateness in attending class, he/she will be considered as absent.
3.	(Exam Attendance/Punctuality) : A student should attend the exam on time. He/she is permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam.
4.	(Assignments & Projects) : Assignments and projects are given as per course specification; the student has to submit all the assignments for checking on time, mostly one week after given the assignment.
5.	(Cheating) : For cheating in exam, a student will be considered as fail. In case the cheating is repeated three times during his/her study the student will be disengaged from the Faculty.
6.	(Plagiarism) : Plagiarism is the attending of a student the exam of a course instead of another student. If the examination committee proofed a plagiarism of a student, he/she will be disengaged from the Faculty. The final disengagement of the student from the Faculty should be confirmed from the Student Council Affair of the university or according to the university roles.
7.	(Other policies) : - Mobile phones are not allowed to use during a class lecture. It must be closed; otherwise the student will be asked to leave the lecture room. - Mobile phones are not allowed in class during the examination. - Lecture notes and assignments might be given directly to students using soft or hard copy.

Annex- 7, CVs for the Preparation Committee

