



Medicine

:Faculty الكلية 21 September University for  
Medical and Applied  
Sciences

الجامعة  
:University

## Program Specifications of MD Program in General Surgery

### Introduction

This specification provides the main features of the program and the learning outcomes that a typical student might be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided and completed the program. This specification provides a source of information for students and used by the College and concerned bodies for review purposes and sent to external examiners and for students' transfer or training abroad. It reflects the level of the students at graduation for licensing and recruitment purposes. Information contained in this document is reviewed and approved regularly by the faculty council based on the continuous program evaluation process.

### Program Identification and General Information

1	Scientific name of the program:	Medical Doctorate (MD) in General Surgery
2	The body responsible for granting the degree:	21 September University for Medical and Applied Sciences
3	The body responsible for the program:	department of General Surgery
4	Departments participating in the program:	All medical department
5	Study Language of the Program:	English – Arabic
6	Starting year of the program:	2023
7	Study methods in the program:	Full time
8	Program Type	Single
9	Location of Delivery:	University campus and Hospital
10	Study system:	Semesters
11	Number of years needed for completion of the program:	5 years
12	Total credit hours	120 credit hours
13	Targeted qualification level(s) in the program	Medical Doctorate (MD)
14	The profession(s) of graduates:	<ul style="list-style-type: none"> <li>- Specialist General Surgery</li> <li>- Good Academic staff</li> <li>- Researchers</li> </ul>

15	<b>Required qualification for admission to the program:</b>	MBBS degree, academic master degree
16	<b>Minimum grade requirements:</b>	Good
17	<b>Other admission requirements:</b>	None
18	<b>Prepared by:</b>	Assoc prof. Abdulfatah Al-tam Dr. Fares al-hyjeni
19	<b>year of the program Accreditation:</b>	

<b>University Vision, Mission and Aims</b>	
<b>University Vision</b> ■	
A Contemporary University with National Responsibility and Faith Identity	
<b>University Mission</b> ■	
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.	
<b>University Values</b> ■	
<ul style="list-style-type: none"> <li>■ Leadership and Influence</li> <li>■ Work effectively with a time</li> <li>■ Excellence and Innovation</li> </ul>	
<b>University Objectives</b>	
<ul style="list-style-type: none"> <li>• Ensuring the application of quality standards and having the distinction standards in medical and applied sciences, scientific research and community service.</li> <li>• Adopting student-centered 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.</li> <li>• Attracting and Eemploying 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.</li> </ul>	

- Developing the distinguished academic infrastructure continuously and establishing modern research and service centers with high efficiency that can give a real effect locally and regionally.
- 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.

### Postgraduate studies and scientific research Mission and Aims

Contemporary in presenting programs of postgraduate studies and scientific research locally and regionally.

#### Postgraduate studies and scientific research Mission

Postgraduate Studies and Scientific Research seeks to prepare and implement a qualitative and un applied scientific programs, in order to, prepare excellent research-leaders, able to solve community problems.

#### Postgraduate studies and scientific research Aims

1. Create qualitative and attractive programs for graduates from local and regional universities.
2. Continuous development and updating of postgraduate programs according to comprehensive quality standards .
3. Prepare distinctive researchers through continuous education programs and develop research skills.
4. Participate with similar scientific organizations in scientific research
5. Develop the infrastructure, financial and human resources for programs of postgraduate and scientific research, according to academic accreditation standards .
6. Automate the system of postgraduate and scientific research and activate electronic contents.
7. Attract the experts of academic and researchers from internal and external environment.

### Faculty Vision, Mission and Aims

#### Faculty Vision

A distinguished Medical Faculty capable of competing locally and regionally.

#### Faculty Mission

That the Faculty of Medicine be contemporary in providing a distinguished educational level based on creativity and innovation and a true partner in facing the main national health challenges and in treating patients with high quality based on research to solve problems that leads to integrated health care in an ethical context

#### Aims of the Faculty ■

- Professional
- Continuing Education
- Appreciation of science and scientists
- Transparency
- Accountability
- Team Work

#### Department Mission and Aims

##### Department Mission ■

The mission of the department is to: Provide high-quality education, train the next generation of surgeons and scientists, perform innovative research, highest-quality patient-centered surgical care, and engage in community outreach programs.

##### Department Aims ■

- 1- Provide the best quality of medical education
- 2- Deliver superior academic and clinical training to graduate surgeons who are competent in all aspects of modern surgery
- 3- Provide exemplary, compassionate and effective patient care.
- 4- Develop more effective medical, surgical and physical treatments and ways of preventing diseases and injuries
- 5- Advance knowledge of the structure, function, diseases, injuries and restoration of the limbs and spine and the tissues, cells and molecules that form them
- 6- Create an environment that fosters belonging, respect, and value for all

#### Program Mission and Aims

##### Program Mission ■

- **Program Mission** is to graduate future academic leaders in Surgery and excellent clinical surgeons, through an outstanding clinical training in a strong academic environment, in addition, developing research and community service activities.

##### Program Aims ■

The program aims to supply the community with highly competent surgeons who possess advanced knowledge and problem-solving abilities, capable of generating real solutions for surgical issues in a safe, ethical, and professional manner. Graduates must demonstrate superior surgical skills. Most candidates are expected to undertake academic duties (teaching and scientific research) alongside clinical duties as consultants in general surgery or its subspecialties.

The program focuses on:

1. Providing advanced surgical knowledge and skills according to international standards.
2. Developing abilities for accurate diagnosis, management, decision-making, and surgical techniques.
3. Instilling sound ethical principles in surgical practice.
4. Encouraging effective community needs assessment.
5. Promoting lifelong learning and continuous medical education.
6. Enhancing research interests and capabilities.

## **Graduates' attributes**

### **Scientific and Knowledge Qualifications**

1. In-depth Medical and Surgical Knowledge:
  - Comprehensive understanding of human anatomy and various surgical diseases.
2. Staying Updated with Latest Theories and Methods:
  - Ability to apply the latest surgical theories and techniques in practice.
3. Research Training:
  - Capability to conduct medical research and present it according to scientific standards.
4. Comprehensive Care Experience:
  - Ability to manage a wide range of surgical cases, from simple to complex.

### **Practical and Technical Skills**

1. Proficiency in Surgical Instruments:
  - High skill level in using various surgical instruments with precision.
2. Excellent Manual Dexterity:
  - Superior hand-eye coordination and fine motor skills.
3. Ability to Perform Complex Procedures:
  - Qualified to handle a wide range of surgical procedures.

### **Personal and Leadership Skills**

1. Excellent Communication Skills:
  - Ability to communicate effectively with patients, families, and medical teams.
2. Decision-Making Skills:
  - High ability to make quick and accurate decisions in fast-paced environments.
3. Working Under Pressure:
  - Ability to maintain high performance in stressful work environments.
4. Leadership and Team Management:
  - Leadership skills to manage multidisciplinary medical teams.

#### 5. Attention to Detail:

- Ability to analyze minute details to ensure accurate diagnosis and treatment.

#### Professional Attributes

##### 1. Physical Fitness:

- Physical stamina to stand for long periods and handle demanding tasks.

##### 2. Adaptability and Passion:

- Flexibility and enthusiasm for continuous learning and professional development.

##### 3. Empathy and Compassion:

- Ability to show empathy and compassion towards patients.

##### 4. Responsibility and Integrity:

- Commitment to ethical and professional standards in providing care.

#### Program Benchmarks

#### Egyptian NRS

#### Program Benchmarks:

##### 1- Minia University

<https://med.minia.edu.eg/Ehome.aspx/>

##### 2- Aswan University

<https://med.aswu.edu.eg/specification-of-the-postgraduate-courses/>

##### 3- Australian National University

<https://programsandcourses.anu.edu.au/program/8950XMCHD>

##### 4- UNIVERSITY OF COLOMBO

<https://cmb.ac.lk/>

**ملحق (1)** المعايير الأكاديمية للمحتوى لهيئة الاعتماد.  
**ملحق (2)** مسح أسماء البرامج المماثلة للبرنامج الحالي.  
**ملحق (3)** مسح مخرجات التعلم في البرامج المماثلة للبرنامج الحالي.  
**ملحق (4)** مسح الساعات المعتمدة للبرامج المماثلة للبرنامج الحالي.  
**ملحق (5)** مسح المقررات الدراسية في البرامج المماثلة للبرنامج الحالي.

### Survey of Similar Accredited Programs at National and International Universities (Benchmarks)

Current program	Similar Accredited Programs			Data Required	
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
Program Name	MD in General Surgery	MD in General Surgery	MD in General Surgery	MD in General Surgery	MD in General Surgery
Faculty/Department	College of Medicine	College of Medicine	College of Medicine	College of Medicine	College of Medicine

University	Minia University	Aswan University	Australian National University	University of Colombo	21 September University
Country	Egypt	Egypt	Australia	Sri Lanka	Yemen
Study Type	Full-time	Full-time	Full-time	Full-time	Full-time
Study Mode	Course-work+ Clinicals	Course-work+ Clinicals	Course-work+ Clinicals	Course-work+ Clinicals	Course-work+ Clinicals
Number of Semesters	14 semesters	14 semesters	12 semesters	12 semesters	10 semesters
Total Credits (Without Thesis)	75 credit hours	75 credit hours	N/A	N/A	120 credit hours
Core Course Credits	40	40	N/A	N/A	57
Elective Course Credits	5	5	N/A	N/A	N/A
Number of Core Courses	18	18	N/A	N/A	19
Number of Elective Courses	2	2	N/A	N/A	N/A
Clinical training	30	30	N/A	N/A	63
Thesis Credits	15 credit hours	15 credit hours	N/A	N/A	20 credit hours
Total Credits (Courses + Thesis)	90 credit hours	90 credit hours	N/A	N/A	140 credit hours
Thesis Duration	1.8 years	2 years	N/A	N/A	2 years
Minimum Program Duration	Egyptian Medical Syndicate	Egyptian Ministry of Health	N/A	N/A	Yemeni Medical Council
Maximum Program Duration	7 years	7 years	6 years	6 years	5 years

### Intended Learning Outcomes (ILOs)

Knowledge and Understanding (A)	
Upon successful completion of the undergraduate MD in Neurosurgery Program, the graduates will be able to:	
A1	Understand the principles of inflammation, repair, and wound healing.
A2	Describe cellular response to injury, aging, and related pathology.
A3	Explain circulatory disorders and their surgical implications.
A4	Understand immunity, hypersensitivity, and related surgical risks.
A5	Identify bacterial, viral, fungal, and parasitic infections.
A6	Differentiate various benign and malignant tumors.
A7	Explain genetic diseases and their relevance in surgery.
A8	Understand pathologies of the digestive system and hepatobiliary system.
A9	Explain endocrine system diseases relevant to surgical practice.
A10	Discuss hematopoietic and lymphatic diseases, including lymphomas.
A11	Understand surgical anatomy and physiology essential for operations.
A12	Recognize principles of surgical oncology and trauma surgery.
A13	Understand emergency surgical conditions and critical care.
A14	Explain ethical and medico-legal considerations in surgical practice.
A15	Understand principles of infection control, surgical sterilization, and patient safety.

### Intellectual Skills (B)

Upon successful completion of the undergraduate MD in Neurosurgery Program, the graduates will be able to:	
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B1	Analyze clinical data to establish a differential diagnosis.
B2	Interpret laboratory and imaging results accurately.
B3	Formulate effective treatment plans based on evidence-based guidelines.
B4	Prioritize emergency surgical cases effectively.
B5	Critically appraise scientific literature relevant to surgery.
B6	Solve clinical and surgical problems innovatively.
B7	Make sound clinical judgments in complex surgical scenarios.
B8	Develop surgical research proposals and interpret results.
B9	Evaluate outcomes of surgical interventions.
B10	Integrate clinical research findings into practice.

### Professional and Practical Skills (C)

Upon successful completion of the undergraduate MD in Neurosurgery Program, the graduates will be able to:

C1	Perform complete clinical examinations and history-taking.
C2	Apply basic and advanced surgical techniques competently.
C3	Manage preoperative and postoperative care effectively.
C4	Handle surgical emergencies appropriately.
C5	Demonstrate proficiency in operating room protocols and aseptic techniques.
C6	Perform minor surgical procedures independently.
C7	Assist and perform major surgeries under supervision.
C8	Maintain accurate patient records and operative notes.
C9	Demonstrate effective communication within a surgical team.
C10	Apply principles of anesthesia, pain management, and critical care.

### General Skills (D)

Upon successful completion of the undergraduate MD in Neurosurgery Program, the graduates will be able to:

D1	Communicate effectively with patients and healthcare teams.
D2	Apply critical thinking in clinical decision-making.
D3	Demonstrate ethical behavior and professionalism
D4	Lead and work collaboratively in multidisciplinary teams.
D5	Manage time and resources efficiently.
D6	Utilize information technology in surgical practice and research.
D7	Engage in lifelong learning and professional development.
D8	Contribute to community health education and public awareness.

ملحق (6) موازنة أهداف البرنامج مع مخرجات التعلم.  
ملحق (7) موازنة مخرجات التعلم المقصودة للبرنامج مع المعايير الوطنية.  
ملحق (8) موازنة مخرجات التعلم للبرنامج مع المعايير المرجعية للمحتوى العلمي.

## Program Structure:

Requirements	No. of Courses	Credit Hours	Rational Weight %
Supplementary courses	-	-	-
Core Courses		57	40%
Elective Courses	-		-
Clinical training	continues	63	45%

Thesis	-	20	14%
<b>Total:</b>	<b>19</b>	<b>140</b>	<b>100%</b>

### Study Plan:

اسم المقرر Course Title	رمز المقرر Code/ NO.	الساعات المعتمدة Credit Hours				عدد الايام الدراسية للمقرر	اجمالي الساعات المعتمدة للمقرر	المتطلبات القبليّة Pre- Requisites
		Theoretical	Clinical	Operative	الاجمالي Total C.H			
<b>Part 1</b>								
<b>Semester 1</b>								
1	General Pathology I	3	0	0	3			None
2	Cellular Response to Injury & Aging	3	0	0	3			None
3	Circulatory Disorders & Immunity	3	0	0	3			None
4	Bacterial, Viral, Fungal Infections	3	0	0	3			None
5	Genetic Diseases and Tumor Pathology	3	0	0	3			None
	<b>Total</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>15</b>			
<b>Semester 2</b>								
1	Digestive System Diseases	3	0	0	3			None
2	Hepatobiliary and Pancreatic Diseases	3	0	0	3			None
3	Endocrine System Diseases	3	0	0	3			None
4	Hematopoietic and Lymphatic Diseases	3	0	0	3			None
	<b>Total credit hours</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>			
<b>Semester 3 (Clinical Training)</b>								

اسم المقرر Course Title	رمز المقرر Code/ NO.	الساعات المعتمدة Credit Hours				عدد الايام الدراسية للمقرر	اجمالي الساعات المعتمدة للمقرر	المتطلبات القبليّة Pre- Requisites
		Theoretical	Clinical	Operative	الاجمالي Total C.H			
1	Basic Surgical Skills Training	0	9	0	3			
2	General Surgery Rotation I	0	9	0	3			
3	ICU and Trauma Rotation	0	12	0	4			
	<b>Total Clinical hours</b>	0	30	0	10			
<b>Semester 4 (Clinical Training)</b>								
1	Emergency Surgery Rotation	0	9	0	3			
2	General Surgery Rotation II	0	36	0	12			
	<b>Total Clinical hours</b>	0	45	0	15			
<b>Part 2</b>								
<b>Semester 5</b>								
1	Surgical Oncology	3	0	0	3			
2	Advanced GI Surgery	3	0	0	3			
3	Endocrine Surgery	3	0	0	3			
4	Hepato-Pancreato-Biliary Surgery	3	0	0	3			
	<b>Total Clinical hours</b>	12	0	0	12			
<b>Semester 6</b>								
1	Trauma and Emergency Surgery	3	0	0	3			

اسم المقرر Course Title	رمز المقرر Code/ NO.	الساعات المعتمدة Credit Hours				عدد الايام الدراسية للمقرر	اجمالي الساعات المعتمدة للمقرر	المتطلبات القبليّة Pre- Requisites
		Theoretical	Clinical	Operative	الاجمالي Total C.H			
2	Clinical Research Methodology	2	0	0	2			
3	Advanced Operative Techniques	2	0	0	2			
4	Vascular Surgery	3	0	0	3			
	<b>Total credit hours</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>10</b>			
<b>Semester 7 (Clinical Training)</b>								
1	Advanced Clinical Rotation I	0	36	0	12			
	<b>Total Clinical hours</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>12</b>			
<b>Semester 8</b>								
1	Specialized Surgical Elective	3	0	0	3			
2	Research Seminar	2	0	0	2			
	<b>Total Clinical hours</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>			
<b>Semester 9 (Clinical Training)</b>								
1	Advanced Clinical Rotation II	0	39	0	13			
	<b>Total Clinical hours</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>13</b>			
<b>Semester 10 (Clinical Training)</b>								
1	Advanced Clinical Rotation III	0	39	0	13			
	<b>Total Clinical hours</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>13</b>			
<b>Semester 11</b>								
1	Thesis Defense & Publication	20	-		20			
	<b>Total credit hours</b>	<b>20</b>	<b>-</b>		<b>20</b>			
<b>إجمالي الساعات المعتمدة</b>								









<b>Teaching Strategy</b>		
<b>N</b>	<b>Teaching Strategy</b>	<b>Description</b>
1	<b>Lectures</b>	To provide foundational and advanced theoretical knowledge.
2	<b>Clinical Rotations</b>	Real-life clinical exposure under supervision in cardiac and vascular units.
3	<b>Skills Labs</b>	Simulation-based training on models and advanced surgical instruments.
4	<b>Seminars &amp; Case Discussions</b>	Student-led or supervised analysis of cases to encourage critical thinking.
5	<b>Research Activities</b>	Guided research projects and thesis development aligned with local needs.

<b>Assessment Strategy</b>		
<b>N</b>	<b>Assessment Strategy</b>	<b>Description</b>
1	<b>Written Examinations</b>	MCQs, SAQs, and essay questions to assess theoretical understanding.
2	<b>Clinical Examinations</b>	OSCEs and structured clinical evaluations during rotations
3	<b>Logbooks and Portfolios</b>	Tracking practical procedures and reflective learning
4	<b>Thesis Evaluation</b>	Proposal defense, final thesis submission, and oral viva
5	<b>Continuous Assessment</b>	Class participation, presentations, and attendance tracking.
٦	<b>Case Report Presentations</b>	Evaluation of analytical and communication skills.
٧	<b>Peer and Supervisor Feedback</b>	Regular feedback to support learning and identify areas of improvement.

#### **Study methods and system in the program:**

**Study system:** Full time

**Study methods in the program:** semesters

Students cannot advance to **Part 2** without completing **100% of Part 1 credits**.

**Thesis Extension:** Max 2 additional years (total program duration: 5 years).

**Failures:** Dismissal after 3 failed courses or a CGPA <2.5 for 2 consecutive semesters.

**Number of years needed for completion of the program:** 5 Years

**Total credit hours required to award the degree** 90 Credit Hours

## Admission Requirements for the Program

Required qualification	Medical MBBS degree or equivalent.
Required language	Good in English
Required computer skills	Good
Other requirements	Submission of academic transcripts, letters of recommendation, and a personal statement.

## Graduation Requirements:

### 1- Total Credit Hours Required

**Minimum Credits for Graduation: 90 Credits**

**Coursework:** 130 credits (Theoretical + Clinical + Practical).

**Thesis:** 30 credits (Original research with defense).

### 2- Minimum Passing Grades per Course

Course Type	Passing Grade	Grading Scale
Core Courses (Anatomy, Physiology, etc.)	<b>70% (C+)</b>	Excellent (90-100%), Very Good (80-89%), Good (70-79%), Fail (<70%)
Clinical Training Courses	<b>75% (B)</b>	Evaluated via OSCE (Objective Structured Clinical Exam)
Thesis Defense	<b>80% (B+)</b>	Assessed by committee (research quality, presentation, publication potential)

### 3. Cumulative Academic Requirements

**Minimum CGPA: 70% (Good).**

**No Failures Allowed:** Students must retake any failed course (max 2 attempts).

### 4. Clinical & Practical Competencies

**Successful Completion of:**

- **all required Hours** of supervised surgical procedures.

- all Logbook Cases required.
- all Clinical Rotation required (in the study plan).

## 5- Thesis & Research

### Mandatory:

Submission of an **original research thesis** (25 credits).

**Publication:** At least 3 conference presentation or journal submission.

## 6. Additional Requirements

**Licensing Exam:** Pass national exams

## المصادر والتجهيزات والامكانيات اللازمة لتنفيذ البرنامج:

### Resource and equipment's needed for Program Implementations

مثل: مصادر التعلم/ التجهيزات والأدوات والمواد التعليمية/ المعامل والمختبرات وغيرها...

### Resources and Equipment Needed for Program Implementation

#### 1. Learning Resources

- **Textbooks & References:**
  - Derma anatomy atlases.
  - Surgery textbooks.
  - Peer-reviewed journals (*Journal of surgery*).
- **Digital Databases:**
  - PubMed, Scopus, UpToDate (for evidence-based practice).
  - E-learning platforms (e.g., Moodle/Blackboard for course materials).
- **Simulation Software:**
  - Virtual dissection tools (e.g., *Complete Anatomy*).
  - Derma surgical simulators (e.g., *Surgical Theater*).

#### 2. Educational Tools & Equipment

- **Anatomy/Surgical Instruments:**
  - Brain/spine anatomical models.
  - Basic surgical kits (scalpels, forceps, bone drills).
  - Suture training kits.
- **Visualization & Recording:**
  - Surgical monitors for live demonstrations.
  - High-definition surgical cameras.
- **Diagnostic Tools:**
  - MRI/CT scan case libraries.
  - EEG simulators.

#### 3. Laboratories & Facilities

- **Anatomy Lab:**
  - Dissection tables with tools.
  - Preserved specimens.

- **Surgical Skills Lab:**
  - 3D derma surgery simulators.
  - Procedure-specific models (e.g., shunt placement).
- **Computer Lab:**
  - Radiology analysis software (e.g., *OsiriX*).
  - Electronic Medical Record (EMR) systems.
- 4. Clinical Facilities**
  - **Operating Rooms (ORs):**
    - Microsurgical equipment.
    - Intraoperative MRI/CT.
  - **Neuro-ICU:**
    - Intracranial pressure (ICP) monitors.
    - Ventilators for derma critical care.
  - **Outpatient Clinics:**
    - Specialty clinics (e.g., dermatology, venereology).
- 5. Human Resources**
  - **Faculty:**
    - Board-certified surgeons with teaching experience.
    - Anatomy/simulation lab technicians.

#### الكادر التدريسي:

أستاذ مساعد	أستاذ مشارك	Professor	
٣	١	١	الكادر المطلوب
٤	٢	١	الكادر المتوفر
			ملاحظة

#### Program evaluation and improvement

Targeted	Assessment method	Sample
students	Course feedback surveys	All enrolled students
Faculty Peer reviews,	Peer reviews, academic audits	All teaching staff
Alumni	Graduate tracer studies	Selected graduates from past 3 years
Employers	Structured feedback forms/interviews	Hospitals, health institutions
Curriculum Committee	Annual program review meetings	Committee members