



PROGRAM SPECIFICATIONS

Program Title:

Master Degree of Anesthesia,
Intensive care and Pain
management

Code:

ANAN



Program Specifications

A- Basic Information

- 1- Program Title: **Master Degree of Anesthesia, Intensive care and Pain management.**
- 2- Program Type: **Single** **Double** **Multiple**
- 3- Department (s): **Anesthesia and Intensive care Department**
- 4- Coordinator: **Dr. Aiman Ahmad Hamed Al-Touny**
- 5- External Evaluator(s) : **Prof.**
- 6- Last date of program specifications approval: **The bylaws of the Master program in Anesthesia, Intensive care and Pain management in the Faculty of Medicine, Suez Canal University were approved by the Supreme Council of Universities in 2016**
- 7-Date of specification revision approval: **2016**
- 8- **Number of credit points for this degree: 120 CP**

B- Professional Information

1- Program Aims

The overall goals of the program are to develop an anesthesiologist who is able to:

- Exhibit efficiency at doing assessment of, consultation for and preparation of patients for anesthesia.
- Employ safely unresponsiveness to surgical, obstetrical, therapeutic and diagnostic procedures, and the management of patients so affected.
- Perform adequately the monitoring and restoration of homeostasis during the perioperative period, as well as homeostasis in the critically ill, injured, or otherwise seriously ill patient.
- Diagnose and perform basic treatment of painful syndromes.
- Do effectively clinical management and teaching of cardiac and pulmonary resuscitation.
- Evaluate, respiratory function and be able to apply most common methods of respiratory support.
- Understand the basics of research at the clinical level.

2- Intended Learning Outcomes (ILOs)

At the end of the Master program of anesthesia and critical care, the candidate should be able to:

a- Knowledge and Understanding:

- a1. Describe the anatomical data relevant to anesthesia, intensive care and pain management.
- a2. Illustrate the basic physiological data relevant to anesthesia, intensive care and pain management.



- a3. Illustrate the basic pharmacological data relevant to anesthesia, intensive care and pain management.
- a4. Illustrate the basic physics and clinical measurements knowledge relevant to anesthesia, intensive care and pain management.
- a5. Recognize of the general perioperative medicine knowledge with particular reference to the cardiovascular, respiratory, renal, hepatic, endocrine, hematologic and neurologic systems.
- a6. Describe the principles and practice of anesthesia as they apply to patient support during surgery or obstetrics.
- a7. Describe the background knowledge necessary for the basics of resuscitation and life support as practiced in critical care facilities.
- a8. Describe the updated principles of managing patients with acute and chronic pain.
- a9. Recognize the concepts necessary to general internal medicine and basic intensive care including the ability to investigate, diagnose, and manage appropriately factors that influence a patient's medical and surgical care.
- a10. Demonstrate understanding of basic legal matters encountered in anesthetic practice including informed consent.
- a11. Recognize the basis and principles of quality assurance in professional practice related to the specialty
- a12. Recognize the basis of research ethics, research methodology and biostatistics

b- Intellectual Skills

- b1- Assess critically the scientific literature.
- b2- Apply principles of EBM in practice to defend management decisions, judge evidence-based information and determine levels of evidence in medicine and their translation into evidence-based practice.
- b3- Use multiple sources, including information technology, to optimize lifelong learning of medical students and other residents and support patient care decisions.
- b4- Develop personally effective strategies for the identification and remediation of gaps in medical knowledge needed for effective practice.
- b5- Apply the knowledge necessary to the independent practice of anesthesia, including preoperative assessment, intraoperative support and postoperative management of patients of any physical status, all ages and for all commonly performed surgical and obstetrical procedures.
- b6- Demonstrate the ability to write an articulate, legible, and comprehensive yet concise consultation note. Provide a clear and informative report, including a precise diagnosis whenever possible, a differential diagnosis when appropriate, and recommended follow-up or additional studies as appropriate.
- b7- Demonstrate the ability to provide direct communication to the referring physician or appropriate clinical personnel when interpretation of a laboratory assay reveals an urgent, critical, or unexpected finding and document this communication in an appropriate fashion.



- b8- Conduct both individual consultations and presentations at multidisciplinary conferences that are focused, clear, and concise.
- b9- Relate knowledge of age related variables in medicine as they apply to neonatal, pediatric, adult and geriatric patient care.
- b10- Use practical problems and clinical inquiries to identify process improvements to increase patient safety.
- b11- Use proficiency programs to improve anesthetic practices.
- b12- Demonstrate problem solving skills in solving Anesthetic problems
- b13- Appraise available information objectively and recognizing its limitations
- b14- Evaluate and present findings from appropriate peer-reviewed journals.
- b15- Apply principles of clinical research design, implementation, and interpretation.
- b16- Assume responsibility and skills in obtaining informed consent, including effective communication to patients about procedures, alternative approaches, and possible complications of patient care diagnostic and therapeutic activities.
- b17- Design a study that can be used to validate methodologies and parameters of clinical utility for the implementation and continuing use of new evidence-based analyses in the local setting.
- b18- Evaluate critically to recognize the impact of their own value judgments and those of patients.
- b19- Prioritize information, and recognize its limitations.
- b20- Assess risk in relation to their own work and profession.

c- Professional and Practical Skills

- c.1 Perform with competence common technical procedures commonly employed in anesthetic practice, including airway management, cardiovascular resuscitation, patient monitoring and life support, general and regional anesthetic and analgesic techniques and postoperative care.
- c.2 Perform competently all practical skills required as indicated in the course specifications
- c.3 Choose effective modes of communication (listening, nonverbal, explanatory, questioning) and mechanisms of communication (face-to-face, telephone, e-mail, written), as appropriate.
- c.4 Demonstrate compassion: be understanding and respectful of patients, their families, and the staff and physicians caring for them and demonstrate a responsiveness to the needs of patients and society that supersedes self-interest
- c.5 Interact with others without discriminating on the basis of religious, ethnic, sexual, or educational differences.
- c.6 Demonstrate positive work habits, including punctuality, dependability, and professional appearance.
- c.7 Evaluate and use different methods and tools available related to anesthesia and pain management.



- c.8 Demonstrate principles of confidentiality with all information transmitted both during and outside of a patient encounter.
- c.9 Demonstrate skills in educating junior colleagues**
- d- General and Transferable Skills**
- d.1 Demonstrate presentation skills
- d.2 Evaluate subordinates, peers & program
- d.3 Communicate ideas and arguments effectively;
- d.4 Manage time and resources and set priorities;
- d.5 Work within a changing environment;
- d.6 Teach effectively and act as a mentor to others
- d.7 Work effectively within a team.
- d.8 Use computers efficiently and use different resources to obtain knowledge
- d.9 Demonstrate Lifelong learning skills
- d.10 Treat patients in a manner consistent with the most up-to-date information on diagnostic and therapeutic effectiveness.
- d.11 Perform self-evaluations of clinical practice patterns and practice-based improvement activities using a systematic methodology.
- d.12 Use the medical library and electronically mediated resources to discover pertinent medical information.

3- Academic Standards

3a - External References for Standards (Benchmarks)

- The standards of the National Authority of Quality Assurance and Accreditation in Education (NAQAAE). Academic Reference Standards for postgraduates. Website: www.naqaae.org

3b - Comparison of Provision to External References (attached)

4- Curriculum Structure and Contents

4a- Program duration: the program lasts for a minimum of 2 academic years and maximum 5 years, as specified in the internal bylaws for postgraduate studies based on credit points system in the Faculty of Medicine, Suez Canal University approved on February 7th, 2016.

4b- Program structure:

Master Program Credit points (CP) structure:

Total needed credit points for getting master degree 120 CP

The program consists of **First part 30 CP, Thesis 30 CP, and Second part 60 CP**

1. The first part of the program: 30 CP, its duration (15 weeks) for one academic semester. It includes
 - a. A course in Research Methodology planned and held in the Community Medicine Department of the Faculty of Medicine, Suez Canal University. This part includes 4 CP.



- b. A course in Research ethics planned and held in the Forensic and Toxicology Department of the Faculty of Medicine, Suez Canal University. This part includes 2 CP.
 - c. A course in applied physiology planned and held in the Physiology Department of the Faculty of Medicine, Suez Canal University. This part includes 3 CP.
 - d. A course in applied pharmacology planned and held in the pharmacology Department of the Faculty of Medicine, Suez Canal University. This part includes 3 CP.
 - e. The specialized course in physics and measurements , planned and held in the Anesthesia Department. It includes 7 CP.
 - f. The specialized course in perioperative and critical care medicine , planned and held in the Anesthesia Department. It includes 6 CP.
 - g. The specialized course in Public health and biostatistics , planned and held in the Community Medicine Department. It includes 3 CP.
 - h. One elective course, the students should select one elective among six courses. This part includes 2 CP.
2. Master thesis: 30 CP, not included in the total marks for master degree, the candidate has the right to register the thesis protocol after 6 months from the degree registration. The thesis defense is allowed after 6 months from the date of the faculty council approval on the thesis protocol and passing the first part exam.
 3. The second part of the program: 60 CP, its duration (45 weeks) for 3 consecutive academic semesters. The second part comprises the specialized courses in Anesthesia, Intensive care and Pain management, planned and held in the Anesthesia Department. This part lasts for 1.5 years ending by written and practical exams.

4bi- No. of hours per week: 2 CP / week which equivalent 50 hours/ week, including lectures, tutorials, self-learning and hands-on training.

4bii- No. of credit Points: the Master program is 120 Credit Points

Every credit point include 25 working hour (30% = 7 hours for face to face learning activities, and 70% =18 hours for self-learning activities).



5-Program Courses

5.1- Level/Year of Program: 1st part MSc

a. Compulsory

Courses			Assessment				
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam
			No of Papers	Durati on	Marks		
RB	Research methodology and Biostatistics	4	1	2 hours	80		
RE	Research Ethics	2	1	1 hour	40		
ANAN01	physiology	3	1	1 hour	45	15	
ANAN02	Pharmacology	3	1	1 hour	45	15	
ANAN03	Physices and Measurements	7	1	3 hour	100	40	
ANAN04	Perioperative medicine and critical care	6	1	3 hour	90	30	
ANAN05	Public Heath and biostatistics	3	1	1 hour	45	15	
E	Elective Course*	2	1	1 hour	40		
Total		30 credit points			600 marks**		

*E: Student should select one course of the following as an elective course:

One elective course has 2 CP. The students should select one elective in first part of the Master degree

E01	Evidence Based medicine	(Community Department)
E02	Scientific Writing	(Medical Education Department)
E03	Quality in Medical Education	(Medical Education Department)
E04	Infection Control	(Microbiology Department)
E05	Critical Appraisal	(Community Department)
E06	Communication Skills	(Medical Education Department)

**Every credit point equal 20 marks



5.2- Level/Year of Programme: 2nd part MSc
a. Compulsory

Courses			Assessment					
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam	Continues assessment *(Portfolio)
			No of Papers	Durati on	Marks			
ANAN06	• Advanced Course in Anesthesia,I CU and pain Management	15	2	3 hours For each paper	165 for each paper	110	330	330
	• Practical training in Anesthesia,I CU and pain Management	40						
	***Scientific activities	5 (not included in the total marks)						
Total		60 credit points			**1100 score			

*Portfolio scores distributed in the different parts of the portfolio and its total score included among the total mark of the second part

**Every credit point equal 20 marks

***Scientific activities are not included in the total marks

5.3- Thesis: A faculty senior & junior supervisor from the staff members are nominated by the department council to prepare a proposal of the thesis protocol after the selection of a subject that is complementary to the research plans of the department. Data collection, methodologies, study question, time table, ethical considerations and budget are formulated by the candidate under guidance of his supervisors into a research project. The research protocol is then peer reviewed by two different staff members nominated by the Head of the department who share their ideas and comments with the supervisors to reach to the final form. The research protocol is discussed then openly in one of the department councils to be approved and diverted to the Faculty research committee where it is subjected to a critical appraisal to meet the research basic standards set by the committee. The final approvals of the research protocol are then issued by the committee of post graduate studies, the Faculty and University Council to be registered. The candidate has the right to register his/her thesis protocol after 6 months from the degree



registration. The first time for thesis defense after 6 months from the date of the faculty council approval on the thesis protocol and passing the first part exam.

N.B. Thesis represents 30 credit points not included in the total mark for master degree.

6-Program Admission Requirements

- The program accepts candidates with Bachelor degree in Medicine and Surgery with minimum good grade & very good.
- Registration for the program opens 2 times/year, according to the internal bylaws for postgraduate studies of the Faculty of Medicine, Suez Canal University.

7- Student Assessment Methods

- 7.1 Written (MEQ) to assess the cognitive domain.
- 7.2 MCQs to assess the cognitive domain
- 7.3 Oral Viva Cards to assess higher cognitive and attitude domains.
- 7.3 Observations to assess practical and presentation skills.
- 7.4 Portfolio to assess the cognitive, psychomotor and the affective domains.

8- Weighting of Assessments

Total marks for master degree 1700

Type of exam	
First part (30 credit points= 600 mark)	
• Written exam	485
• Oral and practical exam	115
• <u>Total</u>	600
Second part (60 credit points including 5 credit points not included in the total marks =1100 mark)	
• Oral exam	110
• Practical exam	330
• Written exam	330
• Portfolio	330
<u>Total</u>	1100
<u>Total</u> of the Master degree	1700



9- Regulations for Progression and Program Completion

The regulations for program completion follow the regulations of Master degree of medical education in the Faculty of Medicine, Suez Canal University approved by the Supreme Council of Universities.

First part

Passing level 60% of total marks of the exam

At least 50% passing level of the total written exam marks

Second part

Passing level 60% of total marks of the exam

Passing level 60% is prerequisite for MSC degree

Thesis/Assay

Passing thesis defense is prerequisite for getting MSc. Degree

10-Evaluation of Program Intended Learning Outcomes (ILOs)

Evaluator	Tool	Sample
1- Postgraduate students	Needs assessment questionnaires	Random sample of participants
2- Alumni	Self-administered questionnaires	Comprehensive sample
3- Stakeholders	Self-administered questionnaires	Random sample
4-External Evaluator(s) (External Examiner(s))	External audit of the program specifications	



A comparison of Anesthesia, Intensive care and Pain management ILOs of Master program to the Generic Academic Reference Standards (ARS) for postgraduate programs

	Program ILOs covered (By No.)
2.1: Knowledge and understanding	
By the end of the postgraduate master program the candidate should be able to know and understand the following:	
2.1.01 Theories, basic and specific knowledge related to his specialty as well as basic sciences related to practice in his field	a1 to a9
2.1.02 exchangeable effect of professional practice and its reflection on the environment	a10
2.1.03 most up-to-date information related to his specialty	a8
2.1.04: Basic of ethics and medico legal aspects of professional practice, related to the specialty	a10
2.1.05 basis and principles of quality assurance in professional practice related to the specialty	a11
2.1.06 basis and ethics of scientific researches	a12
2.2- Intellectual Skills	
By the end of the postgraduate master program the candidate should be able to:	
2.2.01 Analyze and evaluate knowledge to solve problems related to his specialty	b5, b12
2.2.02 solve specific problems with insufficient data	b2, b5, b12
2.2.03 Integrate different information to solve professional problems	b5, b12
2.2.04 Perform scientific research or write scientific background for a research problem	b15, b17
2.2.05 Risk assessment in professional practices	b20
2.2.06 Plan to improve performance related to specialty	b4
2.2.07 professional decision making in relation to different professional sequences	b18
2.3- Practical and Clinical Skills	
By the end of the postgraduate master program the candidate should be able to:	
2.3.01 Demonstrate essential practical skills related to his specialty	c1, c2
2.3.02 Write and evaluate professional reports	b6
2.3.03 Evaluate different methods and tools available related to specialty	c7
2.4 General and transferable skills	
By the end of the postgraduate master program the candidate should be able to	
2.4.01 Communicate ideas and arguments effectively	d3
2.4.02 Use information technology to serve in the development of professional practice	d8
2.4.03 perform self evaluation and specify his own educational needs	d11, b4
2.4.04 Use different resources to obtain knowledge and information.	d8
2.4.05 state regulations and outcomes for evaluation of others	d2
2.4.06 Work effectively within team and lead a team effectively indifferent professional situations	d7
2.4.07 Manage time effectively	d4
2.4.08 Adopt the principles of self and lifelong learning	d9

Head of Anesthesia and intensive care Department

Prof. Mohammed Emad Abdelghaffar