



Faculty of Medicine
Suez Canal University

Neurosurgery Department
Program Specifications, MSc

PROGRAM SPECIFICATIONS

Program Title:

Master Degree of
Neurosurgery

Code:

NSNS



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Program Specification

A- Basic Information

- 1- Program Title: Master degree in Neurosurgery
- 2- Program Type: Single Double Multiple
- 3- Department: Neurosurgery Department
- 4- Coordinator: Dr. Tariq Elemam Elshafey Awad
- 5- External Evaluator(s): Prof. Ahmed Gaber Marei
- 6- Last date of program specifications approval: the bylaws of the Master program in Neurosurgery in the Faculty of Medicine, Suez Canal University were approved by the Supreme Council of Universities on 2016.
- 7- Date of program specification revision approval:

B- Professional Information

1- Program Aims

The overall goals of the program are to develop fully trained neurosurgery specialist. He should be clinically competent with:

- (i) technical competence,
- (ii) judgment,
- (iii) thorough knowledge of related disciplines, including basic neuroscience, neurology, neuropathology and neuroradiology.

2- Intended Learning Outcomes (ILOs)

By the end of the program, students should be able to:

a- Knowledge and Understanding:

- a.1 Demonstrate knowledge for basic and clinical sciences (Anatomy, Pathology, Intensive care, neurology, radiology and neurosurgery) necessary for effective consultation in neurosurgery.
- a.2 Demonstrate knowledge to determine clinically optimal yet cost-effective management of neurosurgical patients.
- a.3 Describe the various therapeutic methods/alternatives used for neurosurgical diseases.
- a.4 Demonstrate most up-to-date knowledge related to diagnostic tools of neurosurgical patients
- a.5 Enumerate Methods of promoting normal function and structure of the central and peripheral nervous system and preventing their illness.
- a.6 Demonstrate basic knowledge of research ethics
- a.7 Demonstrate basic knowledge of biostatistics
- a.8 Recognize quality control measures related to neurosurgery.
- a.9 Develop proficiency programs to improve neurosurgery practices.
- a.10 Recognize basic of ethics and medico legal aspects of professional practice, related to neurosurgery



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b- Intellectual Skills

- b1. Interpret data acquired through history taking to reach a provisional diagnosis for neurosurgical problems.
- b2. Integrate information from different resources to solve problems
- b3. Select from different diagnostic alternatives the ones that help reaching a final diagnosis for neurosurgical problems.
- b4. Conduct research studies and/or write a scientific study on a research problem.
- b5. Formulate scientific papers in the area of neurosurgery.
- b6. Assess risk in professional practices in the field of neurosurgery
- b7. Make decisions in relation to neurosurgery professional practice
- b8. Apply the principles of scientific research and critical appraisal

c- Professional and Practical Skills

- c.1 Demonstrate essential practical skills related to Neurosurgery
- c.2 Write and evaluate professional reports
- c.3 Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning and writing skills
- c.4 Use and evaluate different tools and methods related to neurosurgery

d- General and Transferable Skills

- d.1 Communicate effectively by all types of effective communication.
- d.2 Argue different ideas effectively
- d.3 Work effectively with others as a member or leader of a health care team or other professional group.
- d.4 Use information technology to manage information, access online medical information, and support their own education
- d.5 Practice presentation skills
- d.6 Assess himself and identify personal learning needs.
- d.7 Manage scientific meetings administration timely
- d.8 Evaluate subordinates, peers & program
- d.9 Manage time and resources and set priorities
- d.10 Practice effective teaching and mentor to others
- d.11 Practice working effectively within a team.
- d.12 Practice continuous self-learning skills.
- d.13 Practice their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice

3- Academic Standards

3a External References for Standards (Benchmarks)

The National Academic Reference Standards (ARS) of NAQAAE

3b Comparison of Provision to External References: Attached

4- 4- Curriculum Structure and Contents



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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 and biostatistics planned and held in the Community Medicine Department of the Faculty of Medicine, Suez Canal University. This part includes 4 CP.
 - b. A courses 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. One elective course, the students should select one elective among six courses. This part includes 2 CP.
 - d. Course in essentials of neurosurgery It includes 6 CP.
 - e. Course in Intensive care. It includes 4 CP
 - f. Course in Anatomy. It includes 3 CP
 - g. Course in Surgical Pathology. It includes 3 CP
 - h. Course in Neuropsychiatry. It includes 3 CP
 - i. Course in Radiology. It includes 3 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 Neurosurgery, planned and held in the Neurosurgery 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:



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

a. Compulsory

Courses			Assessment				
Code No.	Course Title	No. of CP	Written Exam			Oral exam	Practical or clinical Exam
			No of Papers	Duration	Marks		
RB	Research methodology and Biostatistics	4	1	2 hours	80		
RE	Research Ethics	2	1	1 hour	40		
NSNS 01	Essentials of Neurosurgery	6	1	2 hours	55	15	50
NSNS 02	Intensive care	4	1	2 hours	35	10	35
NSNS 03	Anatomy	3	1	1 hour	40	20	
NSNS 04	Pathology	3	1	1 hour	40	20	
NSNS 05	Neuropsychiatry	3	1	1 hour	25	10	25
NSNS 06	Radiology	3	1	1 hour	25	10	25
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)

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

Courses			Assessment					
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam	Continues assessment *(Portfolio)
			No of papers	Duration	Marks			
NSNS 07	Advanced Course in Neurosurgery	15	2	3 hours For each paper	165 for each paper	110	330	330



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	Practical training in Advances of Neurosurgery	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**

*****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.

6- Programme Admission Requirements

- Bachelor of Medicine & surgery with minimum good grade
- 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.

7.4 Observations

to assess practical and presentation skills.

7.5 Portfolio

to assess the cognitive, psychomotor and the affective domains.

8- Weighting of Assessments



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Total marks for master degree 1700

Type of exam	
First part (30 credit points= 600 mark)	
• Written exam	380
• Oral exam	85
• practical	135
• <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

9- Regulations for Progression and Programme Completion

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 Programme Intended Learning Outcomes

Evaluator	Tool	Sample
1- Senior students	Questionnaires	Random sample of participants
2- Alumni	Questionnaires	Comprehensive sample
3- Stakeholders (Employers)	Interviews	Random sample
4-External Evaluator(s) (External Examiner(s))	Attending exam (using checklist and/or rating scale)	
5- Other		

Attached Courses' Specifications



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A comparison of Neurosurgery intended learning outcomes of Master program to the Generic Academic Reference Standards (ARS) for postgraduate programs

Benchmark	Program Covered (By No.)	ILOs
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 a3	
2.1.02 exchangeable effect of professional practice and its reflection on the environment	a2	
2.1.03 most up-to-date information related to his specialty	a4	
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	a8	
2.1.06 basis and ethics of scientific researches	a6	
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	b1	
2.2.02 solve specific problems with insufficient data	b1, b2	
2.2.03 Integrate different information to solve professional problems	b2	
2.2.04 Perform scientific research or write scientific background for a research problem	b4, b5	
2.2.05 Risk assessment in professional practices	b6	
2.2.06 Plan to improve performance related to specialty	a9	
2.2.07 professional decision making in relation to different professional sequences	b7	
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	
2.3.02 Write and evaluate professional reports	c2	
2.3.03 Evaluate different methods and tools available related to specialty	c4	
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	d1, d2	
2.4.02 Use information technology to serve in the development of professional practice	d4	
2.4.03 perform self evaluation and specify his own educational needs	d4, d6	
2.4.04 Use different resources to obtain knowledge and information.	d9	
2.4.05 state regulations and outcomes for evaluation of others	d8	
2.4.06 Work effectively within team and lead a team effectively in different professional situations	d3, d11	
2.4.07 Manage time effectively	d9	
2.4.08 Adopt the principles of self and lifelong learning	d10, d12	

Head of the department:
Prof. Ali Mohmed Ali Abou-Madawi