



Program Specification for MSc Degree in Clinical Neurophysiology

Program type: Single

Department offering the program: The department of Neurology and Clinical Neurophysiology (Neurology Department in bylaw 2009)

Course code: NPHY 800

Total Credit points: 169

Academic year: 2014-2015 (according to the 2009 bylaw)

Program Director: Prof. Ann Ali Abdel Kader

Program coordinator: Prof. Saly Hassan ElKholly/ Prof. Hala Rashad El-Habashy

External Evaluator: Prof. Ahmad Abdel Aziz Abo Hagar. Chairman of Neurology

Department- Suez Canal Faculty of Medecine.

I. Aim of the Program

The program is an academic degree that enables candidates to initiate training and research in the area of clinical neurophysiology and neurodiagnosis. The candidates should practice clinical and diagnostic skills in all functional aspects of clinical neurology, interact with community problems, and respect ethical values according to community culture. The candidate should acquire the scientific knowledge and skills that enables them to know the basics of scientific medical research.

II. Intended Learning Outcomes of the Program (ILOs)

- A. Knowledge and Understanding: By the end of the program the candidate should be able to:
- 1) Demonstrate basic electrodiagnostic procedures.
 - 2) Predict the basics of common clinical neurophysiologic findings.
 - 3) Describe different electrodiagnostic strategies for common Neurological problems.
 - 4) Recognize the basic scientific knowledge related to clinical neurological disorders and their electrodiagnostic respective findings.
- B. Intellectual Skills: By the end of the program the candidate should be able to:
- 1) Point out symptoms and signs in common neurological complaints.

- 2) Deduce a differential diagnosis for common neurological complaints.
 - 3) Apply a relevant clinical neurophysiologic and neurodiagnostic plan for evaluation of common neurological complaints.
 - 4) Appraise diagnostic plans for common neurological problems.
 - 5) Outline innovative solutions to different clinical neurophysiologic and neurodiagnostic problems.
 - 6) Develop initial experience in one of the clinical neurophysiologic and neurodiagnostic modalities (chosen by the candidate).
- C. Professional and Practical Skills: By the end of the program the candidate should be able to:
- 1) Collect clinical data for different neurological disorders and their different clinical neurophysiologic and neurodiagnostic findings.
 - 2) Perform new clinical neurophysiologic and neurodiagnostic procedures related to clinical neurology.
 - 3) Practice common clinical neurophysiologic and neurodiagnostic techniques and procedures related to basic research in the field of clinical neurophysiology and neurodiagnosis.
 - 4) Apply proper diagnostic modalities for different neurologic disorders.
 - 5) Choose specific skill in one of the clinical neurophysiologic and neurodiagnostic modalities.
- D. General and Transferable Skills: By the end of the program the candidate should be able to:
- 1) Communicate with the patients to gain their confidence.
 - 2) Respond effectively to a patient's emotional and psychosocial concerns.
 - 3) Communicate with other health care providers.
 - 4) Appreciate team working and coordinate with other specialties.
 - 5) Achieve Computer skills necessary to make use of medical data bases and use the internet for communication.
 - 6) Show administrative skills that enable him to fulfill the paper work needed.
 - 7) Follow different scientific methodologies and have critical reading abilities.
 - 8) Write scientific article according to the basics of scientific research.

III. Academic standards

1. Academic reference standards: The academic standards of anatomy program is adopted and accredited by the departmental council
2. External references for standards:
 - American academy of Neurology, Clinical Neurophysiology- Fellowship core curriculum
 - Specialty training curriculum for Neurology set by the Joint Royal Colleges of Physicians- Training Board – United Kingdom.
 - Union Européenne des Médecins spécialistes

IV. Program Admission Requirements

According to the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009), applicants should have MBChB or equivalent degree. According to Cairo University requirements, all applicants for postgraduate studies should fulfill preliminary courses on the following subjects; Medical statistics I – English language (TOEFL or equivalent degree) – Computer skills (ISDL). Admission to the program is open during January and July. Training prior to registration may be accredited according to departmental and hospital evaluation.

V. Program Structure and Contents

Program duration: Three years.

Program structure: Total Credit points 169

- First part: 1.5 years - (table 1) 59 credit points
 - Compulsory courses; one academic year (30 weeks)
 - Basic sciences courses 10 credit points
 - ❖ General physiology 3 credit points
 - ❖ Neurophysiology 4 credit points
 - ❖ Anatomy 3 credit points
 - Elective courses (2 courses only) 1 credit point
 - ❖ Critical reading 0.5 credit points
 - ❖ Scientific writing 0.5 credit points
 - ❖ Evidence based medicine 0.5 credit points
 - ❖ Medical statistics (2) 0.5 credit points
 - ❖ Medical ethics 0.5 credit points
 - ❖ Communication skills 0.5 credit points
 - Scientific activities 3 credit points
 - Residency training program 45 credit points

- Second part: 1.5 years - (table 2) 90 credit points
 - Clinical Neurophysiology 8 credit points
 - Neurology 8 credit points
 - Scientific activities 4 credit points
 - Residency training program 70 credit points

- Master Thesis: completed during second part 20 credit points.

Table 1: First part (total= 59 credit points)

Course (code)		Credit points		ILOs
		subtotal	total	
Compulsory courses (One academic year)				
Anatomy	•Anatomy of the central and peripheral nervous system (NPHY 801)	3	10	A2,4, B1,2
Physiology	•General Physiology (NPHY 804) •Physiology of the nervous system (NPHY 804 NEUR)	3 4		A2,4, B1,2
Elective Courses (MEDC) choose 2 courses				
	<ul style="list-style-type: none"> ○ Critical Reading (MEDC 1) ○ Scientific writing (MEDC 2) ○ EBM (MEDC 3) ○ Medical statistics II (MEDC 4) ○ Medical ethics (MEDC 5) ○ Communication Skills (MEDC 6) 	0.5 0.5 0.5 0.5 0.5 0.5	1	D1-8
Scientific activities			3	C1-5
Residency training program (NPHY 816 C1) (18months) :			45	A1-4 B1-6 C1-5 D1-8
<ul style="list-style-type: none"> - In Clinical Neurophysiology unit (15 months) - In Neurology department (3 months) 				

Table 2: Part 2 (total= 90 credit points)

Course (code)	Credit points	ILOs.
Neurology and neurophysiology course ○ Clinical Neurophysiology (NPHY 816 CNPS) ○ NeurologyNPHY (816 NEUR)	16	A1-4,B1-6
Scientific activities	4	D1-8
Master thesis	20	D1-8
Residency training program (NPHY 816 C2) (18 months): - In Clinical Neurophysiology unit (14 months) - In Neurology department (3 months) - In Ophthalmology department (1 month)	70	A1-4 B1-6 C1-5 D1-8

Residency Training Program

- Basic Training:

According to the new bylaws for postgraduate programs (effective since July 2009), all the students should have a basic training course for 18 months (15 months in Clinical Neurophysiology unit and 3 months in Neurology department). During this period the students will attend the basic Neurology courses; clinical and theoretical courses. They also should complete the elective courses.

- Specialized Training:

All students should complete the specialized part of the residency-training program in the clinical neurophysiology unit, where they should spend 14 months in addition to 3 months in Neurology department and 1 month in Ophthalmology department, in order to acquire the needed credit hours. The student is expected to attend the clinical neurophysiology unit, the Neurology weekly staff round to share in patients' electrodiagnosis and medical evaluation under the supervision of senior staff members. During this period the students will participate in the scientific activities of the unit and the other departments.

NB: The details of the training program are illustrated in separate document

Master Thesis

All master-degree students should prepare a thesis in clinical neurophysiology. The department and the ethical committees must approve the protocol of the research. The thesis should include a review part and a research part. The Thesis is supervised by

one or more senior staff members from the Clinical Neurophysiology unit and may include other specialties according to the nature of the research. The thesis should be evaluated and approved by a committee of three professors including one of the supervisors and an external professor.

Scientific Activities:

The students should participate in the scientific activities of the departments such as:

- Journal club (presenting scientific articles).
- Seminars (including recent topics and controversial issues). Students are expected to participate in the discussions.
- Scientific meetings arranged by the department.

Each activity will be monitored and given credit points registered in a scientific activities logbook. The student should collect the required points before allowed to submit for final exam.

VI. Regulations for Progression and Program Completion

After finishing the basic part of resident training, attending the specified courses and collecting the required credit points for the respective courses, the student should pass the first part exam of the basic sciences before proceeding to the second part. In case the student fails to pass the exam, he may proceed in the clinical training and can resubmit for the next exam. After passing the first part exam, the student submits a protocol for master thesis at the beginning of second part. Before submitting to the final exam, he should finish the thesis and get approval, complete the specialized residency training program, and collect the required credit points. The candidate will receive his degree after passing this final exam. In case the student fails to pass the exam, he can resubmit for the next exam. The student should finish his master degree within a maximum of 5 years after registration date.

VII. Assessment

A: Assessment Tools

- Supervision and Monitoring of Training Program
 - According to the bylaws of the residency, professors carry continuous assessment during the program. A residency training logbook and scientific activities logbook will be kept for each student to document all his/he clinical and practical activities as well as his/her participation in different scientific activities. The head of the department should allow the students to undergo the final examination when they complete their training program and collect the credit points needed.

- End - of- program Assessment

According to the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009). Students should be assessed at the end of the program

*Final Exam Part I

Basic sciences

- General Physiology: Three-hour written exams (including short assay questions) + oral exam
- Neurophysiology: Three-hour written exams (including short assay questions) + oral exam
- Anatomy: Three -hours written exam (including short assay questions) + oral exam + practical exam.
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The written exam will be held in three days:

Day one: General Physiology (3 hours)

Day two: Neurophysiology (3 hours)

Day three: Anatomy (3 hours)

This will be followed by the oral exams in separate days

*Final Exam Part 2

- Clinical Neurophysiology: Two written exams including short assay questions, and MCQ + oral exam + clinical exam
- Neurology: Two written exams including short assay questions, and MCQ + oral exam + clinical exam

The written exam will be held in Four days:

Day one: Clinical Neurophysiology (3 hours)

Day two: Clinical Neurophysiology (3 hours)

Day Three: Neurology I (3 hours)

Day Four: Neurology II (3 hours)

This will be followed by the clinical, practical and oral exams in separate days.

Marks allocated to courses (Each credit point = 50 marks)

Course	Written	Oral	Clinical/practical	Total
First part				500
General Physiology	100	50		150
Neurophysiology	120	80		200
Anatomy	100	25	25	150
Second part				800
○ Clinical Neurophysiology	(80+80)	120	120	400
○ Neurology	(80+80)	120	120	400

Remarks

- Passing mark in a written exam is $\geq 60\%$.
- It is mandatory to pass all the papers of written exams separately.

C: Weighing Of Assessment (Marks allocated to courses):

First part:

- General Physiology 30%
- Neurophysiology 60 %
- Anatomy 30%

Second Part:

- Clinical Neurophysiology 50%
- Neurology 50%

VIII. Evaluation of Program Intended Learning Outcomes

Evaluator	Tool	Sample
1. Senior Students	Questionnaire at the end of the program	All the PG students
2. Alumni	The faculty is currently developing an Alumni office for postgraduates	Not yet determined
3. Stakeholders	A meeting will be arranged during annual conference of the department	Available representatives from: <ul style="list-style-type: none">- Army hospitals- National medical insurance- Medical syndicate- Ministry of health
4. External Evaluators	Review program and courses Attending the final exam	Once before implementation Bi-annual report
5. College Quality Assurance committee	Annual program reviewer	

Signatures

Head of Department

Prof. Sherief Hamdy

Program Director

Prof. Ann Ali Abdel Kader

Program coordinator:

Prof. Saly Hassan El-Kholy

Prof. Hala Rashad El-Habashy