COURSE SPECIFICATION

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Post graduate M D Neurosurgery
(2) Department offering the programme:	Neurosurgery
Department responsible for teaching the course:	Neurosurgery Human physiology
Part of the programme:	First part
Date of approval by the Department`s council	4-5-2016
Date of last approval of programme specification by Faculty council	9/8/2016
(3) Course title:	Neurophysiology
(4) Course code:	NSUR 603 NSUR 632 PH
(5) Total teaching hours:	15
(6) Credit hours	1 hour

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows: (either to be written in items or as a paragraph)

1- Provide the candidate with the physiologic mechanisms required for processing of various normal neurological functions.
2- Prepare the candidate to Identify the pathophysiology underlying various neurological/neurosurgical problems.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1- Explain the underlying mechanisms, control and regulation of normal neurophysiological functions (blood brain barrier, CSF dynamics, cerebral blood flow, intracranial pressure, micturition, neural transmission and neuroendocrinology.

A2- Review the physiology of pyramidal, extrapyramidal, cerebellar and special senses function.

A3- Describe electrophysiological studies in normal and neurological diseases.

2- Intellectual activities (I)

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities:

B- Intellectual skills

B1 Interpret the underlying pathophysiology of neurological diseases (pain, cerebral oedema, intracranial hypertension, cerebral ischemia and vasospasm). B 2 Differentiate between physiological functions like speech, memory, behavior and sleep in health and disease.

C- Communication & Transferable skills

C 1 Enhance tutorial and research capabilities

(3) Course content:

الفصل الدراسى الأول

Neurophysiology

محاضرة كل منها ساعة أسبوعيا لمدة فصل دراسى (١٥ أسبوع)

(Credit hours = 1)

Lecture topics:

1- Blood brain barrier and cerebral oedema.
2- Cerebral blood flow.
3- Cerebrospinal fluid.
4- Intracranial pressure.
5- Micturition and neuro-urology.
6- Pain.
7- Neurotransmitters and synaptic transmission.
8- Neuro-endocrinology.
9- Motor system, muscle tone and deep reflexes.
10- Thalamus and hypothalamus.
11- Equilibrium (cerebellar and vestibular).
12- Special senses.
13- Speech, memory, behavior and wakefullness.
14- Nerve action potential and neuromuscular transmission.
15- Electrophysiological studies.

(4) Teaching methods:

4.1: Power point presentation

4.2: Microteaching and self learning.

(5) Assessment methods:

5.1: Written exam. for assessment of A1, A2, B1, B2.

5.2: MCQ exam. for assessment of A1, A2, B1, B2.

Assessment schedule:

Assessment 1: Final exam. week/month:6 months

Assessment schedule:

Written exam: 80 marks

MCQ exam. 20 marks

(6) References of the course:

6.1: Hand books: Guyon's human Physiology

6.2: Text books: Wilkin's Neurosurgery and Youman's Neurosurgery.

6.3: Journals: Journal of neurosurgery, Neurosurgery and Neurophysiology

6.1: Websites: www.neurosurgery on line .com

(7) Facilities and resources mandatory for course completion:

- Lectures
- Library
- Internet

Course coordinator: PROF. DR. Nabil Mansour Ali

PROF .DR Mohamed Ali KASSEM

Head of the department: PROF. DR. Nabil Mansour Ali

Date: 4-5-2016