COURSE SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate **MD** Programme of Neurology
(2) Department offering the programme:	Neurology department
(3) Department responsible for teaching the course:	Neurology department
(4) Part of the programme:	Second part
(5) Date of approval by the Department`s council	**27/4/2016**
(6) Date of last approval of programme specification by Faculty council	**9/8/2016**
(7) Course title:	(Elective course) Advances molecular neurology
(8) Course code:	NRL 612 AMN
(9) Total credit hours:	1
(10) Teaching hours	15 hours

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1- Provide the candidate with an appropriate knowledge about the basis of molecular genetics.

2- Provide the candidate with detailed genetic basis of the different neurological disorders.

3- Educate the candidate about the role of gene therapy in treatment of neurological disorders.

4- Educate the candidate about the importance of genetic counseling in patient with hereditary neurological disorders.

5- Provide the candidate with competency in applying the principles, methodology and various tools of scientific research in neurology.

6- Teach the candidate how to make continuous self-development and how to transfer knowledge and skills to others.

7- Educate the candidate how to act in integrity, honesty and respecting medical ethics.

(2) Intended Learning Outcomes (ILOs):

A- Knowledge and Understanding

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

A1- Discuss the basis of molecular genetics.

A2- Discuss the genetic basis of the different neurological diseases.

A3- Identify the role of gene therapy.

A4- Identify the relations between neurology and genomic medicine.

A5- Define the mitochondrial function and dysfunction in the nervous system.

A6- Discuss the Neuronal Channels and Receptors.

A7- Discuss the process of Protein Misfolding.

A8- Define the different patterns of inheritance in hereditary neurological disorders.

A9- Discuss the Metabolic Diseases of the Nervous System.

B- Intellectual skills:

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

B1Incorporating medical knowledge and best available evidence to give a useful genetic counseling for patient's families with hereditary neurological disorders

B2- Predict the indications and value of genetic studies.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory/ Practical	Total Teaching Hours
Genetics as a Tool in Neurology	2			2
Neurology and Genomic Medicine	2			2
Mitochondrial Function and Dysfunction in the Nervous System	2			2
Neuronal Channels and Receptors	1			1
Molecular pharmacology of Transmitter transporters	1			1
Protein Misfolding, Chaperone Networks, and the Heat Shock Response in the Nervous System	1			1
Metabolic Biopsy of the Brain	1			1
Gene Therapy Approaches in Neurology	1			1
Programmed Cell Death and Its Role in Neurological Disease	1			1
Developmental Neurology: A Molecular Perspective	1			1
Metabolic Diseases of the Nervous System	1			1
Genetic Disorders of Neuromuscular Development	1			1
Total Teaching Hours	15			

(4) Teaching methods:

4.1: Lectures & Seminars, power point aided.

4.2: Conferences

4.3: Interactive bedside teaching with clinical case presentations of difficult and interesting cases and group discussion.

4.4: Training on examination of neurologic patients in grand rounds

4.5: Training in neurophysiology Unit

4.6: Attendance of department activities (Thesis Discussion, invasive procedures with senior staffs, outpatient clinic, workshops and training courses…)

4.7: problem solving case scenario (Commentary)

5) Assessment method:

Final written exam after 6 semesters from admission to MD degree with total of 25 marks
MCQ continuous assessment: at the end of the semester

6) Assessment Marks

Written Exam: 20 Marks
MCQ exam: 5 MArks

Other assessment without marks:

1- Presentation and open discussion seminars.

2- Presentation and open discussion of MD thesis

3- Log book for assessment of the attendance and activities throughout the course (Minimum acceptance attendance is 75 %), it should be fulfilled and signed by Head of the department.

(6) References of the course:

6.1: **Hand books:** Book authorized by department of Neurology,Handbook of Epilepsy treatment, Handbook of neurology (series), Neurological examination: made easy.

6.2: **Text books:** Neurology in clinical practice, Textbook of clinical neurology, Adams and Victor`s principles of neurology, neurology and neurosurgery illustrated, Essential neurology, and Stroke practical management.

6.3: **Journals:** Clinical Neurology, Journal of neurology, Archives of Neurology, CONTINUUM: Lifelong Learning in Neurology, Current Opinion in Neurology, Nature Clinical Practice Neurology, Neurology, The Neurologist, Practical Neurology, Stroke

6.4: **Websites:** http://emedicine.medscape.com/
http://neuromuscular.wustl.edu/
http://www.neuroland.com/
http://www.aan.com/
http://www.wfneurology.org/

(7) Facilities and resources mandatory for course completion:

Candidates and their learning are supported in a number of ways:

- □ Candidates logbook
- □ Programme Specification and Handbooks
- □ Lecture hall, extensive library and other learning resources
- □ Computer laboratories with a wide range of software
- □Internet with a wide range of learning support material

Course coordinator: Dr. Ahmed Hamdy

Head of the department: Prof. Dr. Ahmed Gamal Azab.

Date: