



COURSE SPECIFICATION

(Elective course: Molecular basis of diseases)

Faculty of Medicine- Mansoura University

A:Administrative information

(1) Programme offering the course.	Postgraduate Master degree of
	Pathology
(2) Department offering the programme.	Pathology department
(3) Department responsible for teaching the	Pathology department
course:	
(4) Part of the programme.	Second part
(5) Date of approval by the Department's	26/7/2016
council	
(6) Date of last approval of programme	9/8/2016
specification by Faculty council	
(7) Course title.	Elective course
(8) Course code:	PATH 505 MB

(9) Total hours.	2credit hours
(10) Total teaching hours.	30 hours

(B): Professional information

Course Aims

1- To clarify molecular pathogenesis of different disease processes

2- To help identification of of molecular alterations assosciated with tumor development
3- To build basic knowledge about different molecular diagnostic techniques, their princ
and applications

4-To support relating morphologic features to molecular alterations

5-To establish molecular background for utilization of immunohistochemical markers

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. Identify molecular background for pathogenesis of different diseases and molecular derangments of tumors

A2. Recognize methods of molecular diagnosis

A3. Acquire knowledge about principles of proteomics, DNA, and tissue microarray

A4: Describe Comparative genomic hybridization

A5.Identify immunohistochemical biomarkers

B- Intellectual skills

B1. Correlate molecular alterations to disease pattern

B2: Analyze methods of molecular diagnosis

B3: Differentiate immunohistochemical markers of diagnostic importance

Course content teaching hours are required

content	Teaching hours
1-Molecular background for pathogenesis of different diseases 2-molecular background underlying development of different tumors	15
 3-Molecular diagnosis Direct gene diagnosis Linkage analysis 4-Principles of proteomics 	5
5-Principles of DNA and tissue microarray 6-Comparative genomic hybridization	5
7-Immunohistochemistry of biomarkers	5

(1) Teaching methods.

4.1. Lectures & Seminars

- 4.2: Conferences
- 4.3: Training on examination of pathologic slides
- **4.4:** Essay preparation & discussion.
- **4.5:** Teaching of the students on pathology lab. In Mansoura university medical centers.

Assessment schedule.

Written exam 60 marks

MCQ :15 marks

Other assessment without marks.

- 1-Attendance Criteria: Minimum acceptance attendance in each course is 75%
- 2- Log book should be fulfilled and signed by Head of the department

References of the course.

- 6.1: Hand books: Course notes: Book authorized by department
- 6.2: Text books: Rubbin's text book of pathology & Ackerman's surgical pathology
- 6.3: Websites:
- http://www.pathmax.com
- United States and Canadian Academy of Pathology (USCAP): <u>http://www.uscap.org/</u>
- The Royal Collage of pathologists: <u>http://www.rcpath.org/</u>

Facilities and resources mandatory for course completion.

- $\hfill\square$ Lecture halls and data show
- □ Pathology labs. in various Mansoura university medical centers□
- □ Pathology Archives of slides and tissue for problematic cases
- **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. Reham Nagib

Head of the department: Prof. Dr. Khaled Zalata