



## Related Biochemistry & Molecular Biology

### COURSE SPECIFICATION

#### MD Dermatology

#### Faculty of Medicine- Mansoura University

#### (A) Administrative information

(1) Programme offering the course:	MD Dermatology
(2) Department offering the programme:	Dermatology, Andrology and STDs
(3) Department responsible for teaching the course:	Dermatology, Andrology and STDs
(4) Part of the programme:	first part
(5) Date of approval by the Department's council	3/4/2016
(6) Date of last approval of programme specification by Faculty council	9/8/2016
(7) Course title:	Related Biochemistry & Molecular Biology
(8) Course code:	DERM 615 BM
(9) Total teaching hours:	15
(10) Number of credit hours	1

**(B) Professional information**

**(1) Course Aims:**

The broad aims of the course are as follows:

- 1- Provides the student with detailed and advanced knowledge about Biochemistry and molecular biology related to the field of Dermatology.

**(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:**

A 1- Recognize the following:

- a) Porphyrin metabolism.
- b) Oxidative stress & antioxidants.
- c) Biochemistry of trace elements & vitamins.

A 2- Describe Structure and function of DNA, its replication, repair and recombination.

A 3- Identify Cytoskeleton & Cell junctions and their disorders in Dermatology

A 4- Discuss Molecular structure & its disorders in Dermatology of the following:

- a) basement membrane zone
- b) collagen
- c) elastin
- d) Ground substance.

A 5- Recognize the Molecular biology of following:

- a) stem cells
- b) skin tumors

c) skin infections

A 6- Explain Principles of biotechnology and transdermal delivery of drugs.

A 7- Recognize the following:

a) Tissue engineering in Dermatology

b) Recombinant DNA technology and genetic engineering

c) Cloning.

**B-Intellectual skills:**

B1- Illustrate the following:

a) steps of Porphyrin metabolism

b) Cell junctions and their disorders in Dermatology

B2- Compare between types of antioxidants

**(3) Course content:**

Subjects	Total Teaching Hours
1. Porphyrin metabolism.	1
2. Oxidative stress & antioxidants.	1
3. Structure and function of DNA, its replication, repair and recombination.	1
4. Biochemistry of trace elements & vitamins.	1
5. Cytoskeleton & its	1

disorders in Dermatology.	
6. Cell junctions and their disorders in Dermatology & Molecular structure of basement membrane zone & its disorders.	1
7. Molecular structure of collagen & its disorders in Dermatology.	1
8. Molecular structure of elastin and its disorders in Dermatology.	1
9. Molecular structure of ground substance & its disorders in Dermatology.	1
10. Molecular biology of stem cells.	1

11.Tissue engineering in Dermatology.	<b>1</b>
12.Molecular biology of skin tumors.	<b>1</b>
13.Molecular biology of skin infections.	<b>1</b>
14.Principles of biotechnology and Principles of transdermal delivery of drugs.	<b>1</b>
15.Recombinant DNA technology, genetic engineering and Cloning.	<b>1</b>
Total	<b>15</b>

**(4) Teaching methods:**

**4.1: Lectures**

**(5) Assessment methods:**

**5.1: Written exams for assessment of knowledge and intellectual ILOS.**

**Assessment schedule:**

**MCQ Exam at the end of the semester**

**Final Written exam Assessment one semester after registration of MD degree**

**Percentage of each Assessment to the total mark:**

**MCQ Exam 20 % = 20 marks.**

**Final Written exam 80% = 80 marks.**

**(6) References of the course:**

**6.1: Hand books:** conferences and Department staff handouts

**6.2: Text books:** Rook's text book of Dermatology Blackwell USA, 2010, Bologna Dermatology, Elsevier Limited, 2012, Andrew's Disease of the skin 2006, Habif clinical dermatology, electronic text book of dermatology

**6.3: Journals:** British Journal of dermatology, Journal of the American Academy of Dermatology, Archives of Dermatology International Journal of Dermatology, Journal of skin surgery,

**6.1: Websites:** [WWW.eblue.org](http://WWW.eblue.org), [archderm.ama.org](http://archderm.ama.org), [www.wiley.com](http://www.wiley.com), [www.telemedicine.org](http://www.telemedicine.org), [www.amazon.com](http://www.amazon.com)

**6.1: Others:** MD Dermatology course of Cairo University

**(7) Facilities and resources mandatory for course completion:**

**1-Fully Equipped Lecture halls**

**2-Department library**

**3-Faculty library**

**Course coordinator:**

**Head of the department:**

**Prof. Ibraheem Abu-Bakr Abdel Hamid, MD**

**Date: 3/4/2016**