



COURSE SPECIFICATION

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course.	MSc degree of clinical pharmacology
(2) Department offering the programme.	Clinical pharmacology department
(3) Department responsible for teaching the course.	Medical Biochemistry Department
(4) Part of the programme.	First part
(5) Date of approval by the Department's council	10/7/2016
(6) Date of last approval of programme specification by Faculty council	9-8-2016
(7) Course title.	Biochemistry
(8) Course code.	CPHARM 504
(9) Credit hours	1
(10) Total teaching hours.	15

B) Professional information

(1) Course Aims:

The broad aims of the course are to:

Provide candidate with a basic knowledge in modern biochemistry and molecular biology necessary for an understanding of the life sciences at the molecular level in addition to the principles of biochemistry and molecular biology techniques

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

1. Define the structure, function and metabolic pathways of carbohydrates , lipids, proteins, nucleotides and their micro-molecules and their regulatory mechanisms.
2. Outline the related metabolic disorders and their clinical prints on biochemical and molecular basis
3. Recognize functions of hormones and micronutrients, their biochemical, clinical and laboratory importance and deficiency manifestations of each
4. Identify the mode of action and kinetics of enzymes and their role in the diagnosis of diseases.
5. Identify the basics of molecular biology (structure, function & synthenesis).

B- Intellectual skills

1. Distinguish clinical and biochemical laboratory findings of vitamins deficiency diseases
2. Interpret the clinical significance of determination of different laboratory markers as plasma levels of glucose, total proteins, liver function tests, lipid profile and uric acid level.

(3) Course content.

Subjects	Lectures
Carbohydrate chemistry & metabolism.	1
Lipid chemistry & metabolism	1
Physical chemistry	1
Protein chemistry & general metabolism	1
Individual amino acid Metabolism	1
Principles of Heme metabolism	1
Purine & pyrimidine chemistry & metabolism	1
Metabolic interrelation & minerals	1
Mechanism of hormonal action	1
Body Fluids	1
Basic function of Cell organelles & structure of biological membrane	1
Vitamins & enzymes	1
Basic knowledge of Cell cycle & apoptosis.	1
Molecular biology & recombinant DNA	1
Biological oxidation & Xenobiotic metabolism	1
Total teaching hours	15

(2) Teaching methods.

4.1. Lectures

(3) Assessment methods.

5.1. **written exam** for assessment of knowledge & intellectual ILOs

5.2. - **MCQ exam** for assessment of knowledge & intellectual ILOs

Assessment schedule.

إجمالي	الدرجة			الاختبار	المقرر
	عملي	شفهي	تفريدي		
٥٠			٤٠	إختبار تحريري مدته ساعة	المقرر الاختياري
			١٠	اختبار MCQ	

(4) References of the course.

Text books:

- Medical biochemistry department (student book)
- Harper's Illustrated Biochemistry: 28th edition by Murray RK, Granner DK, Mayes PA, Rodwell VW, McGraw-Hill companies New York, 2009.
- Lippincott's Reviews of Biochemistry, 4th edition by Champe PC, Harvey RA, Ferrier DR, Lippincott William & Wilkins London, 2008.
- Textbooks of Medical Biochemistry, 7th edition by Chatterjea MN. and Shinde R. JAYPEE BROTHERS. New Delhi, India, 2007.
- 6.2. Journals:
- ANNUAL REVIEW OF BIOCHEMISTRY
- NATURE STRUCTURAL & MOLECULAR BIOLOGY

(5) Facilities and resources mandatory for course completion.

- Computer labs with open access to medical research databases
- Induction course introducing study skills.
- Candidate's logbook.
- Internet with a wide range of learning support material.

Course coordinators:

- Prof. Dr. Hussein el beltagy
- Prof. Dr. Ali Gaballa
- Prof. Dr. Mohamed-Hesham Daba
- Ass. Lecturer. Dr. Amira El Adl
- Ass. Lecturer. Rania al Qatary

Head of the department:

Prof. Dr. Hussein el beltagy