



Model (No 12)
Course Specification : Medical Biochemistry

Farabi Quality Management of Education and Learning - 27/2/2018

University : جامعة أسوان

Faculty : كلية الطب

Department : الكيمياء الحيوية الطبية

1- Course data :-

Code:	14	Course name:	Medical Biochemistry	Study year:	الاولى
Specialization:	• Medical Bachelor of medicine and surgery				
Teaching Hours:					
	Lecture:	75	Tutorial:	Practical: 60	
Number of units:					

2- Course aims :-

1. Fundamental understanding of chemistry of bio-molecules and metabolic processes with correlation to medical diseases
2. Integrated basic knowledge of molecular biology and biochemistry
3. Advanced information and technology concerning the human genome and bio-molecules as regard their role in diagnostic and therapeutic medicine

3- Intended learning outcomes of course (ILOS) :-

a- Knowledge and understanding

1. [a10] Fundamental understanding of chemistry of bio-molecules and metabolic processes with correlation to medical diseases
2. [a11] Integrated basic knowledge of molecular biology and biochemistry
3. [a12] Advanced information and technology concerning the human genome and bio-molecules as regard their role in diagnostic and therapeutic medicine

b- Intellectual skills

1. [b18] Interpret the structural changes in cells to understand the underlying cause of different diseases
2. [b19] Solve problems related to structural dysfunction

c- Professional and practical skills

No data found.

d- General and transferable skills

1. [d1] Communicate effectively with patients and their families
2. [d7] Conduct reliable and responsible behaviors among colleagues and health care providers
3. [d10] Adopt the principles of life long learning
4. [d16] 6) Communicate ideas and arguments effectively
5. [d17] 7) Be prepared for the lifelong learning needs of the medical profession
6. [d19] 9) Practice self and peer evaluation

4- Course contents :-

No	Topics	Week	Basic knowledge	Intellectual skills	Professional skills	General skills
1	Physical chemistry					
2	Chemistry of Amino Acids and Protein Structure					
3	Enzymes					
4	Chemistry of Carbohydrate					
5	Chemistry of Lipids					
6	Biological Membranes					
7	Extracellular Matrix					
8	Heme and Iron Metabolism					
9	Hemoglobin And Myoglobin					
10	Plasma Proteins and Immunoglobulins (Igs)					
11	The Molecular Mechanism of Blood Coagulation, Anticoagulation and Fibrinolysis, Role of Vitamin K					
12	Nucleotides and Nucleic Acid Chemistry					

13	DNA Structure And Replication					
14	DNA Repair					
15	RNA Structure and Synthesis					
16	Genetic Code and Protein Synthesis					
17	Metabolism of Nucleic Acids					
18	The Molecular Biology of Cancer					
19	DNA Amplification Techniques					
20	Bioinformatics					

5- Teaching and learning methods :-

S	Method	Basic knowledge	Intellectual skills	Professional skills	General skills
1	Lectures				
2	Tutorials/ small group discussion				
3	Practical Classes				
4	E-learning Classes				
5	Directed Self Learning				

6- Teaching and learning methods of disables :-

1. Identification of students with learning difficulties by formative quizzes and continuous assessments quizzes
2. Organization of meetings with these students to discuss their problems
3. Organize extra lectures outside the schedule to support them
4. Organize extra quizzes to evaluate their needs
5. Close follow up of these students

7- Activities and sources of teaching and learning :-

S	Activities and resources	Basic knowledge	Intellectual skills	Professional skills	General skills
1	Halls for tutorials				
2	Computer laboratory for e-learning classes and e-exams				
3	Audiovisuals				

8- Student assessment :-

a- Student assessment methods

No	Method	Basic knowledge	Intellectual skills	Professional skills	General skills
1	Weekly Assessments in Tutorials and lectures				
2	Online Quizes (MCQs)				
3	Home Assignments				
4	Continuous Assessment				
5	Midyear				
6	Final				

b- Assessment schedule

No	Method	Week
1	Weekly Assessments in Tutorials and lectures	Continuous
2	Continuous Assessment	Continuous
3	Online Quizes (MCQs)	All through the year
4	Final	END of YEAR

c- Weighting of assessments

No	Method	Weight
1	Mid_term examination	10%
2	Final_term examination	50 %
3	Oral examination	10%
4	Practical examination	20%
5	Semester work	10%
6	Other types of assessment	0
Total		100%

9- List of references

S	Item	Type
1	Harper's Biochemistry (28th edition) Robert K. Murray , Daryl K. Granner , Peter A. Mayes , Victor W. Rodwell	Books
2	Textbook of Biochemistry with Clinical Correlations (8th edition) Thomas M. Devlin	Books
3	Lehninger Principles of Biochemistry (6th edition) David L. Nelson, Michael M. Cox	Books
4	Lippincott's Illustrated Reviews: Biochemistry (5th edition) Richard A. Harvey, Denise R. Ferrier	

10- Matrix of knowledge and skills of the course

S	Items	Details	Basic knowledge	Intellectual skills	Professional skills	General skills
1	Course contents	Physical chemistry				
		Chemistry of Amino Acids and Protein Structure				
		Enzymes				
		Chemistry of Carbohydrate				
		Chemistry of Lipids				
		Biological Membranes				
		Extracellular Matrix				
		Heme and Iron Metabolism				
		Hemoglobin And Myoglobin				
		Plasma Proteins and Immunoglobulins (Igs)				
		The Molecular Mechanism of Blood Coagulation, Anticoagulation and Fibrinolysis, Role of Vitamin K				
		Nucleotides and Nucleic Acid Chemistry				
		DNA Structure And Replication				
		DNA Repair				
		RNA Structure and Synthesis				

		Genetic Code and Protein Synthesis				
		Metabolism of Nucleic Acids				
		The Molecular Biology of Cancer				
		DNA Amplification Techniques				
		Bioinformatics				
2	Teaching and learning methods	Lectures				
		Tutorials/ small group discussion				
		Practical Classes				
		E-learning Classes				
		Directed Self Learning				
3	Activities and sources of teaching and learning	Halls for tutorials				
		Computer laboratory for e-learning classes and e-exams				
		Audiovisuals				
4	Student assessment	Weekly Assessments in Tutorials and lectures				
		Online Quizes (MCQs)				
		Home Assignments				
		Continuous Assessment				
		Midyear				
		Final				

Course Coordinator(s): -

عبد الله محمود عبدالله علي

Head of department: -

عبد الله محمود عبدالله علي