

Course Contract 1st year 1st term

-Name of the course: Medical Biochemistry

-Academic year : 1st year – 1st term

-Course title and Code : (BIC -111)

**-Contact hours (Credit hours) : Lecture : (3 credit hours), Practical (1 credit hour),
Total : (4 credit hours)**

-Course aims:

- This course ensures that students gained the basic knowledge and skills relevant to the chemical nature, structure and function of different biomolecules present in the human body.
- It trains the students on the laboratory experimental identification and analysis of these biomolecules.
- It allows the student to demonstrate and explain on biochemical basis some metabolic disorders and how he can solve some medical cases.
- The course also trains the student how to use electronic learning facilities and the university library to prepare a medical essay and present it.

-ILOS:

a1. - illustrates the structure of different types of changes of PH , proteins ,hemoglobin and carbohydrates present in the body, their biological roles and biomedical importance

a2. - Describe *the* structure of some connective tissue proteins *including collagen, elastin, fibronectin, integrin, aggrecans and their role in the body*

b1. Correlate between signs and symptoms of some diseases with the presence of certain biochemical defects.

b 2- Apply his biochemical knowledge to solve medical cases and suggest treatment.

c1. Detect the presence of different types of carbohydrates and discriminate between them in an unknown sample depending on their biochemical structure.

c 5-Detect the presence of certain amino acid depending on specific group present in their structure and discriminate between protein samples.

d1. Get medical information through computer websites and e-learning facilities and through University library

d2- Conduct research tasks, prepare scientific research and present it in student conference

Student assessment:

quizzes, essays ,researches ,practical and oral exams.

Course Contract 1st year 2nd term

-Name of the course: Medical Biochemistry

-Academic year : 1st year – 2nd term

-Course title and Code : (BIC -112)

**-Contact hours (Credit hours) : Lecture : (3 credit hours), Practical (1 credit hour),
Total : (4 credit hours)**

-Course aims:

- This course ensures that students gained the basic knowledge and skills relevant to the chemical structure and function of different lipids present in the human body.
- It gives comprehensive knowledge about DNA and RNA structure and functions, DNA replication, transcription of RNA and protein synthesis and regulation of gene expression.
- It allows the student to demonstrate and reason the biochemical basis of some genetic disorders, gene mutation, oncogene and diagnostic importance of tumor markers.
- It describes some molecular biology techniques as PCR and cloning.

-ILOS:

- a1. - Demonstrate the structure of different types of *lipids* and the structure of *cell membrane*, its components present in the body, their biological roles and biomedical importance
- a2. Describe the structure of *nucleic acids, DNA* and different types of *RNA*. Also, illustrate the mechanisms of *cell cycle, apoptosis, replication, transcription, translation(transfer of genetic information), regulation of gene expression, gene mutation* and its causes, *oncogene* and the diagnostic role of *tumor markers and some molecular biology techniques*,
- b1. Correlate between signs and symptoms of some diseases with the presence of certain biochemical disorder
- b 2-** Apply biochemical knowledge to solve medical cases and suggest treatment
- c1 Interpret the results of laboratory tests
- c2-** *Interpret, select and describe some molecular biology techniques (cloning &PCR)* and their medical applications
- d1 Self learner able to get medical information through computer websites and e-learning facilities and through University library.
- d2-** Evaluate their work and work of others using constructive feedback

Student assessment:

quizzes, essays ,researches ,practical and oral exams.

