



University of Benghazi
Faculty of Medicine
Biochemistry II



Overview:

The biochemistry II course is one of the basic requirements of the human medicine program . It is taught in the second year. The number of study hours is 120 hours. The course aims to:

1. Acquire comprehensive knowledge on basic concepts of metabolism of proteins, carbohydrate, and lipids, nucleotides and bioenergetics.
2. Acquire comprehensive knowledge, on molecular biology, gene-expression, formation of proteins, and bio-signaling along with their clinical significance.
3. Acquire basic skills on handling chemicals and performing various biochemical procedures in safe manner
4. Acquire comprehensive knowledge, on metabolism of heme and xenobiotics.
5. Demonstrate an understanding on biotechnology methods and their clinical implications.
6. Acquire critical thinking and problems solving skills for self and lifelong learning
7. Acquire communication, and team working skills that are essential for them to become active members in society

Learning outcomes:

Knowledge and understanding:

- Discuss the metabolism of proteins, carbohydrates and lipids, nucleotides and their regulatory mechanisms
- Explain the principles of molecular biology, gene-expression, and bio-signaling (hormones)
- Describe nucleotide, heme metabolism and xenobiotics.

Intellectual skills:

- Interpret the results of biochemical tests
- Integrate proteins, carbohydrates and lipid's metabolism with their clinical correlation
- Evaluate the clinical significance of bio-signaling, and heme metabolism

Practical and professional skills:

- Handle chemicals and various body fluids sample in safe manner
- Perform standard biochemistry laboratory procedures
- Estimate different biochemical substance in the blood
- Write lab reports

General and transferable skills:

- Communicate effectively with their colleagues and teachers.
- Be an influential part of a teamwork and aware of team dynamics
- Manage time appropriately

Teaching and learning methods:

- Illustrated lectures
- Lab demonstrations

Evaluation methods:

- Written Exam
- Practical Exam
- Oral Exam