



University of Benghazi
Faculty of Medicine
Biochemistry I



Overview:

The biochemistry I course is one of the basic requirements of the human medicine program . It is taught in the first year. The number of study hours is 113 hours. The course aims to:

1. Acquire comprehensive knowledge of basic biochemical structures of macromolecules inside the body and its biological significance
2. Acquire the basic knowledge related to body fluid composition and their clinical significance
3. Acquire basic skills on handling chemicals and performing various biochemical procedures in safe manner
4. Recognize the molecular architecture of eukaryotic cells and organelles, including membrane structure and dynamics
5. Acquire critical thinking to relate daily dietary requirements and their clinical correlation
6. Acquire 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:

- Describe the features of the different biochemical molecules related to body fluids including blood and CSF and mosaic model of the cell membrane
- Discuss nucleic acid chemistry, and biological oxidation
- Discuss amino acids and proteins, carbohydrates and lipid's structure, function and their clinical correlation
- Explain the structure, function and clinical significance of heme, antibodies vitamins, minerals and enzymes

Intellectual skills:

- Interpret abnormal biochemical tests result
- Distinguish between different types of vitamins, and minerals along with their clinical significance
- Analyze significance of enzymes in medicine.

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