

Module description

-Module title: Experiments in Biophysical Biochemistry.

-Module code: BCH 333

-Year: 1447 H (2026) – Second semester.

-Module objectives:

This course is intended as an introduction to physical methods in biochemistry and aims to provide an understanding of the techniques of spectroscopy, electrophoresis, chromatography and other basic and common methods for purification and characterization of biomolecules. The other goal of this course is to prepare students to apply these methods themselves to their own research projects.

-Mark distribution:

Total mark is 100:

- 4 quizzes each 2.5 marks.
- 5 report each 3 marks.
- 2 analysis sheet each 2.5 marks.
- 7 marks for lab performance and activity.
- 3 marks for weekly assessment.
- 20 marks for midterm.
- 40 marks for final exam.

-Module experiments:

	Experiment title	Date		Quiz	Report
1	Scanning Spectrophotometry and Spectrophotometric Determination of Concentration	28 Jan	29 Jan		✓
2	Protein Extraction and Fractionation by Salt and Dialysis	4 Feb	5 Feb	Lab 1	✓
3	Spectrophotometric Methods for Determination of Proteins Concentration	11 Feb	12 Feb		
Midterm Exam: 18 Feb					
4	Paper and Thin Layer Chromatography (TLC)	25 Feb	26 Feb	Lab 2&3	✓
5	Gel Filtration Chromatography	4 Mar	5 Mar		✓
6	Ion Exchange Chromatography	1 Apr	2 Apr		✓
7	Agarose Gel Electrophoresis	8 Apr	9 Apr	Lab 4-6	Analysis sheet
8	Sodium Dodecyl Sulfate -Polyacrylamide Gel Electrophoresis (SDS-PAGE)	15 Apr	16 Apr		Analysis sheet
9	Revision	22 Apr	23 Apr	Lab 7&8	
Final Exam: 30 April					