

BIOC 330: Principles of Protein Structure

The goal of this course is to present and discuss popular structural biology techniques and data, and to teach students to analyze and evaluate their own and others' data with a critical eye. Major topics of discussion will include nuclear magnetic resonance, X-ray crystallography, and cryo-electron microscopy. In addition, other biophysical techniques, used to assist in the determination of protein structure, will be covered, as directed by student interest. Assessments will include evaluation of in-class discussions, a presentation or paper, and various active learning assessments.

Learning Objectives

- Read and discuss primary literature concerning structural biology and biophysical techniques
- Describe principles used to determine structures from major structural biology techniques
- Interpret and evaluate the quality of macromolecular structures
- Compare different techniques used to determine biomolecule structure, kinetics, and thermodynamics

Credits: 2

Class Type: Graduate Course

Prerequisites:

previous coursework in biology and chemistry is required or permission of the instructor.

Program: Biochemistry, Chemistry, Pharmacology, and Toxicology