

Bemidji State University

CHEM 3076: Biochemical Techniques

A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course is one of two options for completion of the techniques core requirement for the BCMB major. Includes some basic biochemical techniques, but introduces more advanced biochemical laboratory experiments. Prerequisite(s): CHEM 4471 or BCMB 3074 or BIOL 3074.

B. COURSE EFFECTIVE DATES: 08/27/2018 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. More advanced laboratory concepts of biochemistry and biotechnology.

D. LEARNING OUTCOMES (General)

1. learn or review the basics of enzyme kinetics.
2. learn or review electrophoresis of proteins.
3. learn or review emission spectroscopy.
4. learn or review nuclear magnetic resonance.
5. learn or review the basics of protein-ligand binding.
6. perform a one-dimensional NMR analysis of a macromolecule.
7. perform an analysis of ligand binding using spectrophotometric methods.
8. perform an enzyme kinetics assay using chromatographic methods.
9. perform an enzyme kinetics assay using spectrophotometric methods.
10. perform an experiment utilizing fluorescence resonance energy transfer.
11. perform protein analysis via two-dimensional electrophoresis.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted