

Minnesota State University Moorhead

BCBT 462: Cell Culture and Immunochemistry

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites:

This course requires both of these prerequisites

BIOL 111 - Cell Biology

CHEM 360 - Organic Chemistry II

Corequisites: None

MnTC Goals: None

An introduction to animal cell culture and immunochemical staining techniques. Students will learn the basic theory of cell culture and the use of antibodies and epitope tagged proteins to evaluate cellular functions. Students will work with mammalian cell cultures, transfect cells, insert epitope tagged proteins as functional markers in cells, and apply antibody staining techniques, culture and learn techniques involved in maintaining and manipulating cell cultures.

B. COURSE EFFECTIVE DATES: 02/27/2014 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Transfection
2. Epitope tagged proteins
3. Biochemistry and Biotechnology
4. Cell Culture
5. Immunohistochemistry

D. LEARNING OUTCOMES (General)

1. Apply transient and stable transfection techniques to research problems in biochemistry and biotechnology.
2. Become proficient with basic mammalian cell culture techniques related to growing and maintaining cells.
3. Learn to appraise protein functions at the cellular level using immunohistochemical techniques and epitope tagged proteins.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted