Minnesota State University Moorhead

BCBT 220: Survey of BCBT Research and Methodology

A. COURSE DESCRIPTION

Credits: 1

Lecture Hours/Week: 1

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Introduction to research approaches in areas of biochemistry and biotechnology research. Seminar topics include: application of the scientific method in BCBT research fields; breadth and depth of background/training to be successful in research; reading scientific literature; and introduction to ethics in research. Seminars will relate to current research by MSUM affiliated faculty that students may work with later in their program.

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

C. OUTLINE OF MAJOR CONTENT AREAS

1. Research approaches in BCBT research fields - application of the scientific method to biochemistry and biotechnology
2. Establishing the breadth and depth of background/training to be successful in BCBT research according to different career levels (e.g., primary investigator, laboratory technician, project manager, etc.) and type of research (e.g., biomedical, academic, environmental, other industry)
3. Introduction to critically reading scientific literature - identifying hypotheses and interpreting results
4. Introduction to ethics in research - considering risks and benefits of research. Rights and responsibilities of research scientists
5. Exploration of existing research by MSUM affiliated faculty that students may work with in their future research

D. LEARNING OUTCOMES (General)

1. Compare and contrast the difference between basic and applied research.
2. Develop basic skills for reading scientific literature.
3. Identify existing research projects with MSUM affiliated faculty.
4. Outline individual educational plan for future research in the BCBT program.
5. Understand what BCBT research entails including application of the scientific method, regulated laboratories, and necessary preparation/training for different sub-fields of BCBT research.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted