

Master Syllabus

BTN 2210 - Protein Purification & Analysis

Division: Science, Mathematics and Engineering

Department: Biotechnology

Credit Hour Total: 4.0

Lecture Hrs: 2.0 **Lab Hrs:** 4.0

Prerequisite(s): BIO 1111 AND BTN 1130 AND CHE 1111

Other Prerequisite(s): AND Restricted to Majors

Date Revised: July 2014

Course Description:

Introduction to protein purification, isolation quantification and analysis. Two classroom, four lab hours per week.

General Education Outcomes:

- Written Communication Competency
- Critical Thinking/Problem Solving Competency
- Values/Citizenship/Community Competency
- Computer Literacy Competency
- Information Literacy Competency

Course Outcomes:

Experimental manipulation of proteins

Explain and demonstrate agarose gel electrophoresis, Bradford Assays, and protein purification procedures.

Assessment Method: Locally developed exams

Performance Criteria: 60% or higher of available exam points

Functions of proteins.

Understanding the functions of proteins with emphasis on structure versus function.

Assessment Method: Locally developed exams

Performance Criteria: 60% or higher of available exam points

Structure of proteins and other macromolecules

Understand the comparison and contrasting of DNA to RNA; describe the interactions between nucleic acids and proteins; analyze three dimensional structures of various proteins.

Assessment Method: Locally developed exams

Performance Criteria: 60% or highrt of available exam points

Outline:

Molarity
Chemical Formulas
Record Keeping Procedures
Purification Strategy
High Pressure Liquid Chromatography
Protein Activity
Separation Techniques