

## 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

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### 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