

## Master Syllabus

### BTN 2220 - Microbiology & Fermentation Methods

**Division:** Science, Mathematics and Engineering

**Department:** Biotechnology

**Credit Hour Total:** 3.0

**Lecture Hrs:** 2.0 **Lab Hrs:** 3.0

**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 fermentation and microbial metabolism. Two classroom, three 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:

#### Microbial Processes in Human Life

Understand and describe the significance of microbial processes in human life, with emphasis on the intestinal tract.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 60% or more of available exam points

#### Metabolism of Microorganisms

Describe and understand the metabolism of microorganisms.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 60% or more of available exam points

#### Fermentation in the Industrial World

Describe and understand the process of fermentation in industrial settings, with emphasis on beer and wine production.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 60% or higher of available exam points

### Outline:

Microbiology  
Fermentation  
Record Keeping Procedures  
Purification Strategy  
Bioreactors  
Microorganisms  
Identification Techniques