

# BIOTECHNOLOGY (BTEC)

## **BTEC 10210 INTRODUCTION TO BIOTECHNOLOGY 3 Credit Hours**

Basic principles and applications of modern biotechnology, including recombinant DNA technology, microbial technology, fermentation, genetic engineering, plant and animal tissue culture and medical biotechnology.

Lecture three hours weekly.

**Prerequisite:** BSCI 10120.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

## **BTEC 40191 SEMINAR: RECENT DEVELOPMENTS IN BIOTECHNOLOGY 1 Credit Hour**

Recent developments in biotechnology explored through the presentation and discussion of research articles and reviews in the biotechnology literature.

**Prerequisite:** BTEC 10210; BSCI 30140, 30171, 30156; CHEM 30284.

**Schedule Type:** Seminar

**Contact Hours:** 1 other

**Grade Mode:** Standard Letter

## **BTEC 40192 INTERNSHIP IN BIOTECHNOLOGY (ELR) 2-9 Credit Hours**

(Repeatable for credit) Work experience in a biotechnology laboratory. Registration requires approval of program director and is dependent on availability of internship sites. Written report of activities required.

**Prerequisite:** Biotechnology major.

**Schedule Type:** Practical Experience

**Contact Hours:** 2-9 other

**Grade Mode:** Satisfactory/Unsatisfactory-IP

**Attributes:** Experiential Learning Requirement

## **BTEC 40196 INDIVIDUAL INVESTIGATION IN BIOTECHNOLOGY (ELR) 2-9 Credit Hours**

(Repeatable for credit) Research experience in biotechnology. Registration requires approval of program director and research director. Written report required.

**Prerequisite:** Biotechnology major.

**Schedule Type:** Individual Investigation

**Contact Hours:** 2-9 other

**Grade Mode:** Satisfactory/Unsatisfactory-IP

**Attributes:** Experiential Learning Requirement

## **BTEC 40210 CASE STUDIES IN BIOTECHNOLOGY (WIC) 3 Credit Hours**

Case studies used to explore biotechnology practice and the application of various technologies in industry and medicine. Emphasis placed on developing problem solving, information gathering, inductive reasoning and technical communication skills.

**Prerequisite:** BSCI 30140 and BSCI 30156 and BSCI 30171 and BSCI 40158 and BTEC 10210 and CHEM 30284.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**Attributes:** Writing Intensive Course

## **BTEC 40220 BIOINFORMATICS 3 Credit Hours**

(Cross-listed with BSCI 40220, BSCI 50220 and BSCI 70220) Analysis of biological databases, including nucleic acid and protein sequence searching, multiple sequence alignment, protein classification, phylogenetic analysis, comparative genomics, proteomics, protein structure analysis.

**Prerequisite:** BSCI 30140 and BSCI 30156 and BSCI 40158.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

## **BTEC 40463 MEDICAL BIOTECHNOLOGY 3 Credit Hours**

(Cross-listed with BSCI 40463, BSCI 50463 and BSCI 70463) Medical Biotechnology provides a basic understanding of how living cells and cellular materials can be used for medical applications, particularly in the diagnosis and therapy of human diseases.

**Prerequisite:** BSCI 30140.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter