BIOLOGICAL TECHNOLOGY (BIOT)

BIOT C100 **4 Units (54 lecture hours; 54 lab hours)**
Biological Technology Skills 1
Advisory: CHEM C110 or CHEM C180 and CHEM C180L.
Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU.
This course is a general examination of biology as it relates to the field of biotechnology. Topics include the fundamental chemical processes common in prokaryotic and eukaryotic biology, chemistry of bio-molecules (proteins, enzymes, nucleic acids and lipids), cellular and molecular biology, basic immunology, and classical and molecular genetics with an emphasis on gene expression and genetic engineering. The laboratory addresses basic skills and techniques common to the biotechnology industry. Topics include the measurement of activity and quantity of proteins, growth and manipulation of bacteria, genetic engineering and antibody methods. Graded or Pass/No Pass option. **C-ID:** BIOT 101 B X.

BIOT C105 **4 Units (54 lecture hours; 54 lab hours)**
Biological Technology Skills 2
Advisory: BIOT C100, or BIOL C100C and BIOL C194, or BIOL C100 and BIOL C100L and BIOL C194.
Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU.
This course prepares students for entry-level work in the biotechnology industry by emphasizing the core concepts needed to work effectively in a bioscience laboratory. Topics include laboratory math, basic chemistry of buffers, health and safety, metrology, quality control, biological molecules, gene expression, cell structure, and molecular biology techniques. This course introduces students to standard biotechnology laboratory skills including laboratory measurements, preparation of solutions, data collection and evaluation, basic separation methods, molecular techniques, aseptic technique, and documentation. Graded or Pass/No Pass option.

BIOT C110 **3 Units (54 lecture hours)**
Quality and Regulatory Compliance in Biotechnology
Advisory: BIOT C100, or BIOL C100C and BIOL C194, or BIOL C100 and BIOL C100L and BIOL C194.
Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU.
An overview of quality assurance and regulatory systems used in the biotechnology industry, emphasizing the importance of adequate lot control, process, product, and record keeping. Introduces concepts of quality control and validation as it relates to manufacturing in regulated industries, including Good Laboratory Practices (GLP), Good Manufacturing Practices (GMP), Quality Assurance, and Quality Control. Graded or Pass/No Pass option. **C-ID:** BIOT 210 X.