

# Biotechnology (AAS)

## Associate in Applied Science

Minimum of 67-68 Credits

This program is designed to train students to be skilled biotechnology technicians. Students will be educated in the fundamentals of biology and chemistry with special emphasis on molecular biology and its utilization in separation techniques, gene splicing, recombinant DNA, fermentation and cell development and production processes used in many areas of human health, plant and animal agriculture, pharmaceuticals, food processing, cosmetic and household products, environmental technology, and bioremediation.

Course #	Course Name	Credits	Type	Prerequisites
<i>Suggested Freshman 1st Semester</i>				
SCL 1001	SUCCESS IN COLLEGE AND LIFE	1	Life Skills	None
ENGL 1113	ENGLISH COMPOSITION I	3	Gen Ed	(R) (W), Adequate reading and writing assessment scores or LS 0033 College Writing II, either taken within the last year, with strong encouragement for immediate continuation.
MATH 1513	COLLEGE ALGEBRA	3	Gen Ed	(R), MATH 0123 or adequate Math Placement Test Score, either within the last year.
CHEM 1115	GENERAL CHEMISTRY I	5	Gen Ed	(R) (W), MATH 1513 or MATH 1533 or both MATH 0123 and High School Chemistry or CHEM 0123 or CHEM 1123
BIO 2343	GENETICS AND MAN	3	Major	(R) (W) (M)
BIOT 1011	SURVEY OF BIOTECHNOLOGY	1	Major	(R) (W) (M)
<i>Suggested Freshman 2nd Semester</i>				
MATH 2013	INTRODUCTION TO STATISTICS	3	Gen Ed	(R), MATH 0123 or equivalent or adequate Math Placement Test Score, either within the last year.
ENGL 1213	ENGLISH COMPOSITION II --OR--		Gen Ed	(R) (W), ENGL 1113 English Composition I taken within the last year, with strong encouragement for immediate continuation.
COM 1123	INTERPERSONAL COMMUNICATIONS --OR--		Gen Ed	(R) (W)
COM 2213	INTRO TO PUBLIC SPEAKING	3	Gen Ed	(R)
CHEM 1215	GENERAL CHEMISTRY II	5	Support	(R) (W), CHEM 1115 and either MATH 1513 or MATH 1533. A grade of "C" or better in CHEM 1115 is strongly recommended.
BIO 2125	MICROBIOLOGY	5	Major	(R) (W) (M), Four credits of college biological science and any college-level chemistry course
BIOT 1022	MEDIA AND SOLUTION PREPARATION	2	Major	(W) (M), College biology, CHEM 1115; Corequisite: BIO 2125
<i>Suggested Sophomore 1st Semester</i>				
POLSC 1113	AMERICAN FEDERAL GOVERNMENT	3	Gen Ed	(R) (W)
CHEM 2114	ORGANIC CHEMISTRY I	4	Support	(R) (W), CHEM 1215. A grade of "C" or better in CHEM 1215 is strongly recommended.
BIOT 2843	* ADVANCED NUCLEIC ACID LABORATORY	3	Major	(W) BIOT 2823
BINFO 1011	INTRODUCTION TO BIOINFORMATICS	1	Major	(R) (W) (M)
BIO 2203	* CELL BIOLOGY	3	Major	(R) (W) (M), Four credit hours of General Biology or higher biology course, and any college level chemistry course.
BIOT 2823	BIOTECHNOLOGY LABORATORY I	3	Major	(W), MATH 2013 or MATH 1513, BIOT 1022; Corequisite: BIO 2343, CHEM 1215
<i>Suggested Sophomore 2nd Semester</i>				
BIO 2234	HUMAN PHYSIOLOGY	4	Major	(R) (W) (M), One biology and one chemistry course each with a laboratory included
HIST 1483	U.S. HISTORY TO THE CIVIL WAR --OR--		Gen Ed	(R) (W)
HIST 1493	U.S. HISTORY SINCE THE CIVIL WAR	3	Gen Ed	(R) (W)
BIOT 2352	IMMUNOLOGY	2	Major	(W) (M), BIO 2125
BIOT 2933	BIOTECHNOLOGY LABORATORY II	3	Major	(W) (M), BIOT 2823
BIOT 2921	CELL CULTURE METHODS	1	Major	(W) (M), BIO 2125.
BIOT 2942	* BIOMANUFACTURING	2	Major	(W) (M) BIOT 2823 and BIOT 2933.
<i>Suggested Sophomore Summer Semester</i>				
BIOT 2993	BIOTECHNOLOGY INTERNSHIP	3	Major	(W) (M), BIOT 2933, BIOT 2921.

Major Courses: (20-21 credit hours) Biotechnology: BIOT 1011; BIOT 1022; BIOT 2352; BIOT 2823; BIOT 2933; BIOT 2921; BIOT 2993 and \* choose 2 of the following 3: BIOT 2843, BIO 2203, BIOT 2942.  
Notes: This technical/occupational program is designed to prepare students to enter the job force following completion. See Technical/Occupational Programs in the general information section of the catalog.