

Biotechnology (Certificate)

Certificate of Mastery

Minimum of 20-21 Credits

A Certificate of Mastery program is designed to meet the needs of an individual who wants to enter the job market following the completion of the certificate.

The Certificate of Mastery 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. Please note that the certificate program courses have prerequisites of BIO 2125, CHEM 1115 and 1215, College Biology, MATH 1513 or MATH 2013 and BIO 2243 or the equivalent.

Course #	Course Name	Credits	Type	Prerequisites
<i>Suggested Freshman Year Fall Semester</i>				
BIOT 2843	* ADVANCED NUCLEIC ACID LABORATORY	3	Major	(W) BIOT 2823
BINFO 1011	INTRODUCTION TO BIOINFORMATICS	1	Major	(R) (W) (M)
<i>Suggested Freshman Year Spring or Fall</i>				
BIOT 1011	SURVEY OF BIOTECHNOLOGY	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.
<i>Suggested Freshman Year Fall Semester</i>				
BIOT 2843	* ADVANCED NUCLEIC ACID LABORATORY	3	Major	(W) BIOT 2823
BINFO 1011	INTRODUCTION TO BIOINFORMATICS	1	Major	(R) (W) (M)
<i>Suggested Sophomore Year Spring Semester</i>				
BIOT 2933	BIOTECHNOLOGY LABORATORY II	3	Major	(W) (M), BIOT 2823
BIOT 2921	CELL CULTURE METHODS	1	Major	(W) (M), BIO 2125.
BIOT 2352	IMMUNOLOGY	2	Major	(W) (M), BIO 2125
BIOT 2942	* BIOMANUFACTURING	2	Major	(W) (M) BIOT 2823 and BIOT 2933.
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.
<i>Suggested Sophomore Year Summer Semester</i>				
BIOT 2993	BIOTECHNOLOGY INTERNSHIP	3	Major	(W) (M), BIOT 2933, BIOT 2921.

*Major Courses: (33-34 credit hours) Biology: BIO 2125; BIO 2234; BIO 2343; BINFO 1011; Biotechnology: BIOT 1011; BIOT 1022; BIOT 2352; BIOT 2823; BIOT 2933; BIOT 2921; BIOT 2993; * Pick 2 of the following 3: BIO 2203, BIOT 2843, BIOT 2942*

General Education Courses: (20 credit hours) Chemistry: CHEM 1115; Communications: ENGL 1113 and one of the following: ENGL 1213; COM 1123; COM 2213; History: HIST 1483 or HIST 1493; Political Science: POLSC 1113; Mathematics: MATH 2013

Life Skills Courses: (1 credit hour) Life Skills: SCL 1001

Support Courses: (13 credit hours) Chemistry: CHEM 1215; CHEM 2114; MATH 1513

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