


Biotechnology

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Our Biotechnology program is internationally renowned and offers exciting, hands-on, and research-based study in this rapidly expanding scientific area. Through participation in national research collaborations, students are trained in the scientific disciplines most in demand by the biotechnology industry and government laboratories, including recombinant DNA technology, mammalian cell culture, and chromatography with special emphasis on High Performance Liquid Chromatography. Biotechnology students intern at some of the most prestigious research institutions in the world, such as Dana Farber (Boston), Boston Medical Center, The University of Edinburgh (Scotland), Moscow State University (Russia), University of the Amazon (Brazil), and the University of Quebec at Trois-Rivières (Canada).

Upon successful completion, the Associate in Science Degree in Biotechnology is awarded.

PROGRAM FOOTNOTES

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

A grade of C or higher is required for all Biotechnology (BT) courses.

Competency in mathematics is a MassBay graduation requirement.

Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

*Pre-Calculus Mathematics (MA 104) may be substituted.

**In order to fulfill the critical thinking graduation competency, students must pass the Critical Thinking Challenge Exam or complete CT100.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>		<i>Semester 1</i>
BI 110	Principles of Biology I	4
BT 101	Introduction to Biotechnology	3
CH 110	Principles of Chemistry I	4
EN 101	Freshman English I	3
MA 102 *	College Algebra	3
	credits:	17
<i>First Year</i>		<i>Semester 2</i>
BI 120	Principles of Biology II	4
	or	
BI 240	Forensic Microbiology	4
BT 201	Cell Culture	3
CH 120	Principles of Chemistry II	4
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
	credits:	17
<i>First Year</i>		<i>Summer</i>
	Social Science Elective	3
	credits:	3
<i>Second Year</i>		<i>Semester 1</i>
BI 210	Molecular Biology	4
BT 215	Gene Expression Laboratory Course	3
CH 201	Organic Chemistry I	4
	Humanities Elective	3
	credits:	14
<i>Second Year</i>		<i>Semester 2</i>
BI 220	Immunology	4
CH 202	Organic Chemistry II	4
CH 210	Biochemistry I	4
	Humanities Elective	3
	or	
	Social Sciences Elective	3
	credits:	15
<i>Second Year</i>		<i>Summer</i>
BT 240	Biotechnology Internship	4
	Total Credits:	70