


Biotechnology: Marine 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

The goal of the Marine Biotechnology program is to train students to work as technicians in sophisticated field and laboratory marine settings where multiple molecular disciplines converge to solve complex marine problems. The emphasis of this program, however, is to provide extensive and novel research experiences, career mentoring and academic bridging networks for the individual whose career goal is to work in the marine sciences as an independent, doctoral-level investigator. Marine Biotechnology applies technology and molecular biology to marine biological systems, living organisms (e.g. algae, fish or plankton) or derivatives thereof, to make or modify products or processes for specific use such as pharmaceuticals and food. Hence, the program's training entails the integration of molecular biology and marine sciences.

Upon successful completion, the Associate in Science Degree in Biotechnology with a concentration in Marine Biotechnology is awarded.

PROGRAM FOOTNOTES:

Humanities Electives:

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

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 graduate competency, students must pass the Critical Thinking Challenge Exam or complete CT100.

COURSE	COURSE TITLE	CREDITS
<i>First Year 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 Semester 2</i>		
BI 120	Principles of Biology II	4
BT 108	Marine Biotechnology I	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 Summer 1</i>		
	Social Science Elective	3
	credits:	3
<i>Second Year Semester 1</i>		
BI 210	Molecular Biology	4
BT 206	Marine Biotechnology II	3
CH 201	Organic Chemistry I	4
	Humanities Elective	3
	credits:	14
<i>Second Year Semester 2</i>		
BI 220	Immunology	4
CH 202	Organic Chemistry II	4
CH 210	Biochemistry I	4
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	15
<i>Second Year Summer 2</i>		
BT 240	Biotechnology Internship	4
	Total Credits:	70