

# BIOTECHNOLOGY - AS



## ROXBURY COMMUNITY COLLEGE

ENROLLMENT CENTER

1234 Columbus Avenue, Roxbury, MA 02120 • Room 102

Admissions: (617) 541-5310 • Registrar: (617) 541-5320

Fax: (617) 427-5316

## Biotechnology

### Associate in Science

[www.rcc.mass.edu](http://www.rcc.mass.edu)

The purpose of the Associate in Science Degree Program in biotechnology is two-fold. All students will obtain a broad-based science background focusing on courses in the life and chemical sciences. In addition, students will develop specific laboratory skills applicable to procedures commonly performed in research hospital and research industrial laboratories all over the United States. Students successfully completing the program will be able to transfer to a four-year university to further their studies in the sciences at the baccalaureate level, or, if they prefer, join the workforce as entry-level research or laboratory assistants.

# Biotechnology

## Associate in Science

### FIRST SEMESTER

ENG 101	English Composition I	3
MAT 101	College Mathematics	3
SCI 103	Biology I	4
SCI 123	Principles of Chemistry I	4
ACS 100	College Survival Seminar	1
	(or ACS 102 The College Experience	3)

*Credits* 15 (with ACS100) or 17 (with ACS102)

### SECOND SEMESTER

ENG 102	English Composition II	3
SCI 104	Biology II	4
SCI 124	Principles of Chemistry II	4
CIS 141	Microcomputer Applications	3

*Credits* 14

**Total:**     **66** (with ACS 100)  
                   **or 68** (with ACS 102)

### THIRD SEMESTER

SCI 204	Microbiology	4
SCI 206	Introduction to Biomanufacturing I	4
MAT 111	Mathematics for Technology	3
SSI 123	Introduction to Sociology	3

*Credits* 14

### FOURTH SEMESTER

SCI 207	Introduction to Biomanufacturing II	4
SSI 103	US History I	3
SSI/HUM	Elective*	3
SSI/HUM	Elective*	3

*Credits* 13

### FIFTH SEMESTER

SCI 208	Techniques in Molecular Biology	4
SCI 298	Internship in Biotechnology	3
SSI/HUM	Elective*	3

*Credits* 10

*\*NOTE: Students planning on transferring to a four year college will be advised that many schools require two semesters of foreign language study and should select appropriate Humanities electives.*

The Biotechnology Associate in Science (AS) Degree Program, like all other AS programs at RCC, parallels the first two years of study in most public and private four-year colleges and institutions. This makes the Biotechnology AS Program useful for both students wishing to transfer to a four-year college as well as those who desire to directly enter the job market. The Program is specifically designed for the student who wishes to learn more about the field of biotechnology, or who may already have a scientific background but would like to study the details of this burgeoning field in the hope of gaining an entry-level position at one of the many biotechnology companies, hospitals, or research institutions in the Boston area.

There are ten required courses in the sciences and mathematics in the Biotechnology AS Program, which account for over half of the total credits required for the degree. The courses include two semesters each of college biology and chemistry; a semester of microbiology; a mathematics course with a lab-based perspective, designed specifically with the math calculations biotechnologists will be called upon frequently to use; and a microcomputer applications course as almost all laboratories have entered the age of electronic data acquisition, manipulation and storage. There are three laboratory-based biotechnology courses: Introduction to Biomanufacturing I and II as well as Techniques in Molecular Biology, which will form the core of the biotechnology principles and practices. The final science course, Internship in Biotechnology, will provide students with the opportunity to showcase skills learned in the classroom laboratories in a real-world, practical environment off-campus.