

Careers

Biological technicians assist biologists and other scientists who study living organisms and conduct medical research. Entry-level workers in the biotechnology field perform laboratory work, such as DNA isolation or sequencing, cell culture, toxicology, or vaccine sterility testing, antibody production and development of diagnostic and therapeutic agents. Most work in research and testing firms, drug manufacturing firms, or for federal, state, or local governments.

Salary

In 2005, the average annual salary for biological science technicians in the federal government was \$38,443.

Job Outlook

Continued growth of scientific and medical research, combined with stronger competition among drug companies and an aging population are expected to increase the need for biological technicians through 2014. Employers will continue to seek individuals who are well-trained on equipment used in laboratories and production facilities, as well as individuals with highly developed technical and communication skills.

Education & Training Options

Montgomery College offers an associate of applied science degree (A.A.S.) and a certificate option in biotechnology. (See reverse for *biotechnology curricula*.)

■ Degree

The biotechnology program is designed to prepare students for both academic achievement and employment in biotechnology. The program emphasizes applied laboratory skills relevant to the biotechnology industry. Core introductory courses in biotechnology, biology, chemistry, and mathematics prepare students for rigorous upper-level second-year applied course work.

Optional biotechnology practicums are available for off-campus training at local partner biotechnology companies for students who qualify.

Students who complete the A.A.S. in biotechnology may transfer to another institution and earn a B.S. or M.S. in a biological science.

■ Certificate

A biotechnology certificate program is offered for students who want to prepare for immediate employment in the biotechnology field.

■ Workforce Training

The College's Workforce Development & Continuing Education Department offers noncredit courses in biotechnology and related areas. For more information, call 240-567-5188.

■ Skills Upgrade

The biotechnology A.A.S. curriculum is suitable for students currently working in the biotechnology or medical technology field who want to upgrade their skills or for those who have a bachelor's degree in the life sciences and want additional training.

Contact @ MC

Germantown Campus240-567-1910
www.montgomerycollege.edu/Departments/biotechnology

Biotechnology Curricula

Biotechnology A.A.S. (G): 334 Statewide Program

General Education and Other Requirements (23 credit hours)

BI 107	Principles of Biology I	4
EN 101	Techniques of Reading and Writing I	3
	English foundation	3
	Health foundation	1
	Mathematics foundation	3
	Speech foundation	3
	Arts or humanities distribution	3
	Behavioral and social sciences distribution	3

Biotechnology Core Requirements (33–34 credit hours)

BI 203	Microbiology	4
BI 209	General Genetics	4
BT 101	Introduction to Biotechnology	2
BT 117	Cell Culture and Cell Function	3
BT 200	Protein Biotechnology	4
BT 204	Basic Immunology and Immunological Methods	4
BT 213	Nucleic Acid Methods	4
CH 101	Principles of Chemistry I	4
CH 120	Essentials of Organic and Biochemistry	
	or	
CH 203	Organic Chemistry I	4(5)

Electives (select a minimum of 5 credit hours)

BT 115	Instrumentation for the Biotechnology Laboratory	3
BT 221	Biotechnology Practicum	1–3
CA 120	Introduction to Computer Applications	3
CH 102	Principles of Chemistry II	4
CH 204	Organic Chemistry II	5
	MA elective	3

Total credit hours 61(62)

Biotechnology Certificate (G): 219

BT 101	Introduction to Biotechnology	2
BT 115	Instrumentation for the Biotechnology Laboratory	3
BT 117	Cell Culture and Cell Function	3
BT 200	Protein Biotechnology	4
BT 204	Basic Immunology and Immunological Methods	4
BT 213	Nucleic Acid Methods	4

Total credit hours 20

Degrees, Certificates, and Letters of Recognition

Montgomery College is authorized by the Maryland Higher Education Commission (MHEC) to offer four degrees (associate of arts, associate of science, associate of applied science, and associate of arts in teaching) and certificates. In addition, the College recognizes students who satisfactorily complete certain course sequences with letters of recognition.

Some curricula are offered at all campuses, whereas others are limited to one or two. When a curriculum is offered at a specific campus, it is indicated by G for Germantown, R for Rockville, or TP for Takoma Park/Silver Spring.

Admission to Montgomery College is open to all.

Math, English, and reading assessment tests are required prior to registering. (Some students may be exempt from assessment. Consult the *Montgomery College Catalog* for criteria.) Financial aid and scholarships are available to qualified candidates.

Take the next step.

Complete an Application for Admission form (online @ www.montgomerycollege.edu/admissions/mcadmiss.htm) or call 240-567-5000 for information.