

APPLIED ENGINEERING & TECHNOLOGIES

BIOTECHNOLOGY TECHNOLOGY

Biotechnology Technology Degree - A20100

The Biotechnology curriculum, which has emerged from molecular biology and chemical engineering, is designed to meet the increasing demands for skilled laboratory technicians in various fields of biological and chemical technology.

Course work emphasizes biology, chemistry, mathematics, and technical communications. The curriculum objectives are designed to prepare graduates to serve in three distinct capacities: research assistant to a biologist or chemist, laboratory technician/instrumentation technician, and quality control/quality assurance technician.

Graduates should be qualified for employment in various areas of industry and government, including research and development, manufacturing, sales and customer service.

The Biotechnology AAS degree focuses on the application of the biological sciences, biochemistry, and genetics to the preparation of new and enhanced agricultural, environmental, clinical, and industrial products, including the commercial exploitation of microbes, plants, and animals. Potential course work includes instruction in general biology, general and organic chemistry, physics, biochemistry, molecular biology, immunology, microbiology, genetics, and cellular biology.

Program Sequence

First Semester

BIO 111	General Biology I	4
BTC 181	Basic Laboratory Techniques	4
ENG 111	Writing and Inquiry	3
ISC 121	Environmental Health & Safety	3
MAT 171	Precalculus Algebra	4

Second Semester

BIO 112	General Biology II	4
BTC 281	Bioprocess Techniques	4
CHM 151	General Chemistry I	4
CIS 110	Introduction to Computers	3

Third Semester

Major Elective	2
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Fourth Semester

BIO 250	Genetics	4
BTC 275	Industrial Microbiology	4
CHM 132	Organic and Biochemistry	4
ENG 112	Writing and Research in the Disciplines	3

Fifth Semester

BTC 150	Bioethics	3
BTC 270	Recombinant DNA Technology	4
BTC 285	Cell Culture	3
HUM 110	Technology and Society	3
PSY 150	General Psychology	3

Major Electives

(Select 2 hours from the following courses):

ISC 278	cGMP Quality Systems	2
WBL 112	Work-Based Learning I	2

Graduation Requirements 66 Credit Hours