BIOTECHNOLOGY 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.

A program that 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.

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.

COURSE & HOUR REQUIREMENTS

Course Number & Name	Class Hours	Lab Hours	Credit Hours
FALL SEMESTER			
ACA 111 College Student Success	1	0	1
BIO 111 General Biology	3	3	4
BTC 181 Basic Lab Techniques	3	3	4
CHM 131 Intro to Chemistry AND CHM 131A Intro to Chemistry Lab **OR**	3 0	0 3	3 1
CHM 151 General Chemistry I	3	3	4
CIS 110 Introduction to Computers	2	2	3
Total	**12**	**11**	**16**
SPRING SEMESTER			
BIO 112 General Biology II	3	3	4
BTC 281 Bioprocess Techniques	2	6	4
CHM 132 Organic and Biochemistry OR CHM 152 General Chemistry II	3	3	4
**Math Elective	2/3	2	3/4
Total	**10/11**	**14**	**15/16**
SUMMER SEMESTER			
BIO 175 General Microbiology	2	2	3
*ENG 111 Writing and Inquiry	3	0	3
ISC 132 Manufacturing Quality Control	2	3	3
Total	**7**	**5**	**9**
FALL SEMESTER			
BIO 250 Genetics	3	3	4
BTC 150 Bioethics	3	0	3
BTC 285 Cell Culture	2	3	3
ISC 220 Lean Manufacturing	2	2	3
Total	**10**	**8**	**13**
SPRING SEMESTER			
BTC 288 Biotech Lab Experience	0	6	2
*ENG 114 Professional Research & Reporting	3	0	3
*HUM 115 Critical Thinking	3	0	3
ISC 278 cGMP Quality Systems	2	0	2
*PSY 150 General Psychology OR SOC 210 Introduction to Sociology	3	0	3
Total	**11**	**6**	**13**
TOTAL SEMESTER CREDIT HOURS FOR DEGREE			**66/67**
**MATH ELECTIVE - *Choose one (1) course from the following:*			
MAT 110 Math Measurements & Literacy	2	2	3
MAT 171 Precalculus Algebra	3	2	4

*This course is a component of the general education requirements needed for graduation.

NOTE: Students are required to take ACA 111 in their first semester.