BIOLOGICAL AND CHEMICAL TECHNOLOGIES

This curriculum prepares individuals to apply scientific principles and technical skills in support of biologists and biotechnologists in research, industrial, and government settings.

Coursework, most of which is hands-on, includes topics such as fermentation technology, cell culturing, protein purification, biologic synthesis, assaying and testing, quality control, industrial microbiology, bioprocessing, chromatography and bioseparation, genetic technology, laboratory and hazardous materials safety, and computer applications

Course	Title	Hours
First Year		
Fall		
ACA-122	College Transfer Success	1
BIO-110 or BIO-111	Principles of Biology or General Biology I	4
ENG-111	Writing and Inquiry	3
BPM-110	Bioprocess Practices	5
PTC-110	Industrial Environment	3
*Note: BioWork certificate equates to Credit by Experience for BPM-110 and PTC-110		
	Hours	**16**
Spring		
BPM-111	Bioprocess Measurements	4
CHM-131 & 131A or CHM-151	Introduction to Chemistry or General Chemistry I	4
MAT-110 or MAT-121	Mathematical Measurement and Literacy or Algebra/Trigonometry I	3
ENG-112	Writing and Research in the Disciplines	3
CIS-110	Introduction to Computers	3
	Hours	**17**
Second Year		
Fall		
BPM-112	Upstream Processing	5
BPM-113	Downstream Bioprocessing	4
OMT-181	Industry Reporting Skills	3
ATR-112	Introduction to Automation	3
ISC-278	cGMP Quality Systems	2
	Hours	**17**
Spring		
PTC-210	Pharmaceutical Industrial Processes	4
ISC-280	Validation Fundamentals	2
BTC-275	Industrial Microbiology	4
ECO-251 or PSY-118 or PSY-150 or SOC-210	Principles of Microeconomics or Interpersonal Psychology or General Psychology or Introduction to Sociology	3
HUM-110 or HUM-115 or PHI-240	Technology and Society or Critical Thinking or Introduction to Ethics	3
WBL-111 or PTC-228	Work-Based Learning I or Pharmaceutical Issues	1
	Hours	**17**
	Total Hours	**67**

Programs of Study