



*Application Dates: Ongoing*  
*Start Date: Fall, Spring, or Summer Semester*  
*Length of Program: Five Semesters*  
*Application Criteria: PCC Acceptance*  
*Pre-requisites: None*

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, or quality control/quality assurance technician.

### Course and Hour Requirements

		Class	Lab	Clin/ WExp	Credit Hours
<b>General Ed Courses</b>					
ENG 111	Writing and Enquiry	3	0	0	3
ENG 112	Writing and Research in the Disciplines	3	0	0	3
MAT 152	Statistical Methods I	3	2	0	4
*	Humanities/Fine Arts Elective	3	0	0	3
*	Social/Behavioral Science Elective	3	0	0	3
<b>Major Hours</b>					
BIO 111	General Biology I	3	3	0	4
BIO 112	General Biology II	3	3	0	4
*	Chemistry Elective I	3	3	0	4
*	Chemistry Elective II	3	3	0	4
BTC 150	Bioethics	3	0	0	3
BTC 181	Basic Lab Techniques	3	3	0	4
*	Microbiology Elective	3	3	0	4
BTC 250	Principles of Genetics	3	0	0	3
BTC 285	Cell Culture	2	3	0	3
ACA 111	College Student Success	1	0	0	1
<b>OR</b>					
ACA 122	College Transfer Student Success	1	0	0	1
*	Major Hours Electives				16
<b>Total Credit for AAS Degree</b>					<b>66</b>

**\*Recommended Electives**

**Microbiology Elective (pick one):**

BIO 275 Microbiology

BTC 275 Industrial Microbiology

**Chemistry Elective I:**

CHM 131 Introduction to Chemistry *AND* CHM 131A Introduction to Chemistry Lab

**OR**

CHM 151 General Chemistry I

**Chemistry Elective II:**

CHM 132 Organic and Biochemistry

**OR**

CHM 152 General Chemistry II

**Humanities/Fine Arts Electives (pick one):**

ART 111 Art Appreciation

HUM 110 Technology and Society

HUM 115 Critical Thinking

HUM 120 Cultural Studies

HUM 130 Myth in Human Culture

HUM 140 History of Architecture

MUS 110 Music Appreciation

PHI 240 Introduction to Ethics

**Social/Behavioral Sciences Electives (pick one):**

PSY 150 General Psychology

POL 120 Political Science

SOC 210 Introduction to Sociology

SOC 213 Sociology of the Family

**Major Hours Electives (pick 16 credit hours):**

CHM 263 Analytical Chemistry

BTC 286 Immunological Techniques

BTC 270 Recombinant DNA Technology

BTC 287 Advanced Molecular Techniques

BTC 281 Bioprocessing Techniques

MAT 171 Precalculus Algebra

BTC 182 Pharma Lab Tech I

BTC 183 Pharma Lab Tech II

WBL 111/WBL 112 Work Based Learning I

## **Suggested Pathways for Major Hours Electives:**

### **\*\*Research/Forensics/University Transfer:**

BTC 270 Recombinant DNA Technology  
BTC 281 Bioprocess Techniques  
BTC 286 Immunological Techniques **OR**  
BTC 287 Advanced Molecular Techniques  
MAT 171 Precalculus Algebra

### **Pharmaceutical/QC Lab Tech:**

BTC 281 Bioprocess Techniques  
BTC 182 Pharma Tech I  
BTC 183 Pharma Tech II  
CHM 263 Analytical Chemistry

*\*\*NOTE: All courses in the Research/Forensic/University Transfer Pathway will transfer into the BS Biology or BSIT programs at ECU, and the BS Biotechnology program at UNC-Pembroke. Students interested in transferring to a 4-year school should also choose CHM 151 and CHM 152 as their Chemistry Electives.*