



SAMPLE CAREERS

- *Laboratory Technician*
- *Quality Control Technician*
- *Research Associate*
- *Quality Assurance Associate*
- *Manufacturing Associate*
- *Process Development Associate*
- *Calibration Technician*
- *Documentation Technician*
- *Inspector*
- *Production Technician,*
- *Regulatory Affairs Clerk*
- *Regulatory Affairs Technician*
- *Quality Investigator*

OVERVIEW

Biotechnology encompasses a wide range of industries that use living organisms to make beneficial products for humanity. Various natural sciences including cell and molecular biology, microbiology, genetics, physiology, and biochemistry, as well as medicine, engineering, and computer science are interdisciplinary areas of biotechnology. In the last two decades we have seen remarkable advances in many aspects of biotechnology; new diagnostic procedures for diseases such as cancer, genetic alterations of plants and animals, and production of bacteria that clean up toxic waste.

In the 21st century, we have tremendous potential to advance the field of biotechnology in order to improve the quality of all life. Rapid expansion of the biotechnology industry in central Indiana demands a highly-trained workforce and the biotechnology program at Ivy Tech Bloomington has partnered with local employers to ensure a competent workforce by using its state of the art labs for hands on training and industry-tailored curricula.

A recommended path to the AAS degree in biotechnology is to complete one of the three certificates while working toward the degree. The certificates are designed to provide gateways toward entry level biotechnology careers existing in the local industry.

CERTIFICATES*

Regulatory Affairs

This 18 credit certificate prepares students for entry level careers associated with regulatory affairs.

Biopharmaceutical Manufacturing

This 18 credit certificate prepares students for entry level careers associated with bioprocessing.

Medical Device Quality

This 18 credit certificate prepares students for entry level careers associated with the medical device industry.

**Certificates lead to an Associate of Applied Science degree in biotechnology. Certificate courses leading to the associate degree are listed on the back of this page.*

DEGREE

Associate of Applied Science (AAS) Degree

The Associate of Applied Science degree program concentrates on technical and professional development courses that are directly applicable to the various careers in the field of biotechnology.

Biotechnology, AAS

COMM 101 or 102	Fund. of Public Speaking or Intro. to Interpersonal Communication
ENGL 111	English Composition
CHEM 105	General Chemistry I
MATH 136	College Algebra
IVYT 113	Student Success in Technology
BIOT 101	Intro. to Biotechnology
BIOL 105	Biology I
BIOT 103	Safety and Regulatory Compliance
BIOT 211	Analytical Methods I
BIOT 212	Analytical Methods II
XXX*	Humanities/ Social Science
BIOT 201	Cell Culture
BIOT 279	Biotechnology Capstone
BIOT 280 or BIOT 281	Biotechnology Internship or Independent Research and Development
BIOT XXX	Biotechnology Elective Courses from a Certificate
CHEM 106	General Chemistry 2
TOTAL CREDIT HOURS = 60	



CERTIFICATES

Regulatory Affairs

ENGL 111	English Composition
ENGL 211	Technical Writing
BIOT 214	Food and Drug Law
BIOT 215	Clinical Trials
BIOT 216	Risk Management
BIOT 218	Product Life Cycle
TOTAL CREDIT HOURS = 18	

Biopharmaceutical Manufacturing

BIOT 100	Survey of Biotechnology
BIOT 102	Survey of Good Manufacturing Practices
BIOT 103	Safety and Regulatory Compliance
BIOT 104	Quality Practices
BIOT 105	Survey of Regulatory Affairs
BIOT 110	Pharmaceutical Product Manufacturing
TOTAL CREDIT HOURS = 18	

Medical Device Quality

BIOT 100	Survey of Biotechnology
BIOT 102	Survey of Good Manufacturing Practices
BIOT 103	Safety and Regulatory Compliance
BIOT 104	Quality Practices
DESN 101	Introduction to Design Technology
INDT 108	Metrology
TOTAL CREDIT HOURS = 18	

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* XXX indicates an elective course chosen by the student