

## East Central College

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www.eastcentral.edu

## Admissions Office

ECC Campus  
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## Division

Science and Engineering  
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## Program Faculty

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East Central College is accredited by the Higher  
Learning Commission and a participant in the  
Academic Quality Improvement Program (AQIP)  
30 N. LaSalle St., Suite 2400  
Chicago, Illinois 60602-2504  
1 (800) 621-7440

## THE CAREER

Biotechnology combines the study of biology with technology. Working at cellular and the molecular level, biotechnologists develop products that benefit human beings as well as the environment we live in.

Biotechnologists are involved in improving crops, designing vaccines, inventing cancer & AIDS treatment, improving soil & water quality, forensic analysis, conservation, and in developing renewable energy options. The possibilities are endless, in this field.

## THE PROGRAM

The Associate of Applied Science degree in Biotechnology at East Central College is a 64-credit-hour program and depending on the preparation level of the student, it is designed to be completed in two years. The program prepares individuals for a career in forensics, pharmaceuticals, biomedical sciences, bioengineering, environmental science, and academic research work.

An AAS in Biotechnology student will learn fundamental laboratory techniques used in biotechnology labs, such as, DNA extraction, purification and sequencing; protein isolation and identification; immunological techniques; microbial, plant and animal cell cultures techniques; as well as workplace skills. Students will receive a well-rounded learning experience through academic instruction as well as real world experience through externship in academic or industry setting.

## PROFESSIONAL TRAITS

Those pursuing a career in this field should:

- Be creative
- Have solid problem-solving skills
- Effectively communicate ideas visually, verbally and in writing
- Have an eye for details
- Be open to new ideas and influences
- Have the ability to work independently and under pressure

## EMPLOYMENT AND SALARY INFORMATION

In Missouri, the annual salary for a technician with an AAS in Biotechnology may range from \$28,000 - \$45,000. In Missouri, an agricultural & food science technician can earn about \$41,600 and a chemical technician can earn almost \$46,000 a year. Individuals who attain a bachelor's degree may earn higher salaries.

## CAREER OPTIONS

An AAS degree in biotechnology, prepares students for entry level jobs assisting biological and medical scientists in laboratories.

As of May 2015, biological technicians held about 72,900 jobs, with a projected increase in employment of 14% in this sector by 2020.

## ADMISSIONS REQUIREMENTS

Students must have completed:

- ✓ High school diploma or the equivalent  
(documentation must be sent to the registration office)
- ✓ Application for admission
- ✓ A placement test as specified by the college  
(some coursework requires minimum placement results)

## TRANSFER OPTIONS

The AAS degree is designed for students seeking employment immediately upon graduation. However, many of the credits, particularly the general education electives received with this degree, may qualify as transfer credit at four-year schools.

These decisions are made solely by the bachelor degree-granting institution, not East Central. Students seeking to transfer are advised to contact the institution of their choice before beginning a program or reviewing other degrees and coursework offered through ECC.

# BIOTECHNOLOGY

## ASSOCIATE OF APPLIED SCIENCE

### PROGRAM OF STUDY

AAS Program: 67 credit hours

This program of study is for a full-time student; part-time study is also available. Please contact an academic advisor for full course options. All academic schedules are subject to change. For the most current schedule visit [www.eastcentral.edu](http://www.eastcentral.edu).

## YEAR 1

### FALL SEMESTER

COURSE	HOURS
FS 1000 Campus Orientation/ FS 1001 Foundation Seminar	1
EN 1223 English Comp I or EN 1233 Honors English Comp I	3
MT 1403 College Algebra	3
SC 1000 Laboratory Safety for Students	0
BY 1103 Intro to Biotechnology Lecture/Lab	3
BI 1325 Principles of Biology I Lecture/Lab	5
<b>Total Hours</b>	<b>15</b>

### SPRING SEMESTER

COURSE	HOURS
BY 2105 Biotechnology I Lecture/Lab	5
BI 1415 Principles of Biology II Lecture/Lab	5
CH 1305 General Chemistry I Lecture/Lab	5
<b>Total Hours</b>	<b>15</b>

### SUMMER SEMESTER

COURSE	HOURS
BI 2404 Microbiology Lecture/Lab	4
EN 1403 Technical Writing	3
<b>Total Hours</b>	<b>7</b>

## YEAR 2

### FALL SEMESTER

COURSE	HOURS
BY 2205 Biotechnology II Lecture/Lab	5
CH 1405 General Chemistry II Lecture/Lab	5
PHL 2103 Ethics	3
HI 1000/ PS 1000 Constitutional Study Module	0
U.S. History Requirement	3
<b>Total Hours</b>	<b>16</b>

### SPRING SEMESTER

COURSE	HOURS
BY 2305 S.T. Biotechnology Lecture/Lab	5
BY 2403 Biotechnology Externship	3
BY 2601 Biotechnology Capstone	1
Program Elective*	5
<b>Total Hours</b>	<b>14</b>

### \*PROGRAM ELECTIVE OPTIONS:

CH 2305 Organic Chemistry I Lecture/Lab	5
CH 2415 Organic Chemistry II Lecture/Lab	5
BI 2005 Genetics Lecture/Lab	5
BI 2045 Cellular Biology Lecture/Lab	5