

# Biotechnology, AS

The greater Kansas City area and specifically Johnson County have numerous biological-, pharmaceutical- and chemical-related formulating, manufacturing, research and testing companies. Many of these facilities employ scientific technicians to support the endeavors of their professional scientists and engineers.

JCCC's science technology program is designed to develop scientific support personnel for the metropolitan area.

This program offers specific knowledge and training designed to provide you with entry-level skills for employment as a technician. It also provides the breadth of background sufficient to encourage change and flexibility.

The biotechnology associate of science degree program will prepare students who wish to pursue a baccalaureate degree in the biological sciences. Upon completion of this 63-65-hour degree, students will be able to find entry-level or higher positions in the diverse field of biotechnology. Along with basic and more advanced science courses, students will take specialized courses in subjects such as laboratory safety and biotechnology methods.

**Important:** Students graduating with an associate of science degree must complete an **approved cultural diversity** course. Some of the approved courses are able to meet both the cultural diversity requirement and a general education requirement. A list of **approved cultural diversity courses** can be found in the list of AS general education electives (<http://catalog.jccc.edu/degreerequirements/associate-science>).

(Major Code 2130; State CIP Code 41.0101)

- Biotechnology (<http://www.jccc.edu/academics/health/biotechnology>)

## Associate of Science Degree

### First Semester

MATH 181	Statistics*	3
BIOL 135	Principles of Cell and Molecular Biology	4
CHEM 124	General Chemistry I Lecture*	4
CHEM 125	General Chemistry I Lab*	1
Students who withdraw from GENERAL CHEMISTRY I LECTURE must also withdraw from the corresponding laboratory GENERAL CHEMISTRY I LABORATORY		
Students may not withdraw from the laboratory course GENERAL CHEMISTRY I LABORATORY without withdrawing from CHEMISTRY I LECTURE.		
ENGL 121	Composition I*	3

**Total Hours** **15**

### Second Semester

BIOT 160	Introduction to Biotechnology*	2
BIOT 165	Laboratory Safety*	1
CHEM 131	General Chemistry II Lecture*	4
CHEM 132	General Chemistry II Lab*	1
Students who withdraw from GENERAL CHEMISTRY II LECTURE must also withdraw from the corresponding laboratory GENERAL CHEMISTRY II LABORATORY.		
Students may not withdraw from the laboratory course GENERAL CHEMISTRY II LABORATORY without withdrawing from CHEMISTRY II LECTURE.		
ENGL 123	Technical Writing I*	3

Humanities Elective <sup>^</sup> 3

Social Science/Economics Elective <sup>^</sup> 3

**Total Hours** **17**

<sup>^</sup> See all AS general education electives (<http://catalog.jccc.edu/degreerequirements/associate-science>)

### Third Semester

BIOT 230	Microbiology for Biotechnology*	5
SPD 121	Public Speaking	3
BIOL 205	General Genetics*	4-5

or BIOL 150	Biology of Organisms*	
Humanities Elective ^		3
<b>Total Hours</b>		<b>15-16</b>

^ See all AS general education electives (<http://catalog.jccc.edu/degreerequirements/associate-science>)

### Fourth Semester

BIOT 260	Biotechnology Methods*	5
PHYS 130	College Physics I*	5
BIOL 124	Oceanus: Essentials of Oceanography	3-4
or BIOL 134	Principles of Sustainability	
or BIOL 155	Bioethics*	
or BIOT 265	Biotechnology Internship*	
Social Science/Economic Elective		3
<b>Total Hours</b>		<b>16-17</b>

^ See all AS general education electives (<http://catalog.jccc.edu/degreerequirements/associate-science>)

**Total Program Hours: 63-65**