

# BIOTECHNOLOGY

Associate in Applied Science Degree • Certificate of Specialization



The Associate in Applied Science Degree in Biotechnology at St. Louis Community College- Florissant Valley is a 71-credit-hour program for students wishing to enter into careers in biomedical, forensic, pharmaceutical, bioengineering, microbiology, environmental and academic laboratory science.

Biotechnology is the science of using molecules such as proteins and DNA to make products for the benefit of humankind. In St. Louis, technicians in biotechnology companies are assisting in the development of new medicines, creating vaccines, exploring ways to grow healthier foods and reduce pollution, developing crops that resist pests and diseases, and searching for cures for disease.

## ABOUT THE PROGRAM

Students in the biotechnology degree program will learn about DNA sequencing, mammalian and plant cell culture, recombinant DNA technology, plant transformation, forensics, ELISA, and much more. Students will learn laboratory skills and develop the experience required to work as a biotechnology research technician. Fundamentals of Chemistry or high school chemistry with a grade of A or B within the past three years is required.

The certificate of specialization program prepares those currently in the laboratory technician workforce for biotechnology specialization. Students learn current methods and techniques used in biotechnology laboratories. Workforce laboratory experience and Principles of Biology I or Microbiology or an AAS (or Certificate of Proficiency) in Chemical Technology with the Microbiology elective completed, or consent of the Biotechnology Program Coordinator, is required.

Program-specific laboratory courses are taught at the new BRDG-Park laboratory facility centrally located in Creve Coeur, Missouri. The Florissant Valley campus houses the program, where students can get involved in different activities including intercollegiate athletics, student government, honorary societies, student publications, Biotechnology Club, and Science-Technology-Engineering-Math (STEM) Organization, providing networking opportunities, student fellowship and industry tours.

## OPPORTUNITIES IN THIS FIELD

Since the program's inception in 1999, more than 90% of STLCC biotech core course students have been hired by local biotechnology companies such as Millipore, Centocor, The Donald Danforth Plant Science Center, Microbe Inotech Labs, Monsanto, Pfizer, Sigma-Aldrich, Covidian, Divergence, and research labs at Washington University School of Medicine.

## JOB OUTLOOK

Technicians with an AAS degree in biotechnology can earn salaries ranging from \$28,000 to \$45,000 annually. You can earn even more if you go on to complete your bachelor's degree at any of the schools with which STLCC has articulation agreements for its biotech grads, including University of Missouri-St. Louis, University of Science and Technology-Rolla, University of Missouri-Columbia, Southeast Missouri State University and Lindenwood University.

## TUITION

District residents currently pay \$88 per credit hour. Additional fees may apply to some courses and programs.

## FOR MORE INFORMATION

For more information about the AAS Degree in Biotechnology or the Certificate of Specialization, contact: Rafael Hernandez, Program Coordinator 314-513-4879, [rhernandez18@stlcc.edu](mailto:rhernandez18@stlcc.edu) Theresa Hacker 314-513-4882, [thacker@stlcc.edu](mailto:thacker@stlcc.edu) Carla Jordan 314-513-4633, [cjordan55@stlcc.edu](mailto:cjordan55@stlcc.edu)

## YOU CAN EARN THIS DEGREE AT:

### Florissant Valley

You may take general education classes toward this degree at any of our campuses or education centers.



Expanding Minds • Changing Lives

# BIOTECHNOLOGY

Associate in Applied Science Degree • Certificate of Specialization

Florissant Valley



Forest Park



Meramec



Wildwood



## GETTING STARTED AT STLCC

### 1) Apply for Admission

Online, by mail/fax or in person at any campus

### 2) Apply for Financial Aid

Apply for grants, scholarships, loans or work-study.

### 3) Complete Assessment

You may need to complete an assessment for placement in the proper level courses.

### 4) Get Advised

Meet with an advisor or career counselor. Attend a College Registration/Enrollment Workshop (CREW)

### 5) Get Connected

Access your MySTLCC ID and set up a secure password. Activate your student e-mail and log in to Banner Self Service.

### 6) Register for Classes

Online, in person or via mail/fax

### 7) Pay for Classes

Payment plan option available

### 8) Prepare for Class

Purchase books, attend New Student Orientation, get your OneCard student ID

Visit [www.stlcc.edu/Get\\_Started](http://www.stlcc.edu/Get_Started) for details and important links.

#### Non-discrimination Statement

St. Louis Community College is committed to non-discrimination and equal opportunities in its admissions, educational programs, activities and employment regardless of race, color, creed, religion, sex, sexual orientation, national origin, ancestry, age, disability, genetic information or status as a disabled or Vietnam-era veteran and shall take action necessary to ensure non-discrimination.

#### Accommodations Statement

St. Louis Community College is committed to providing access and reasonable accommodations for individuals with disabilities. If you have accommodation needs, please call the Access office at the campus where you are registering at least six weeks prior to the start of class to request accommodations. Documentation of disability may be required.

## CURRICULUM

### SUGGESTED SEQUENCE

Course Number	Course Description	AAS Credit Hours	CP Credit Hours
<b>FIRST SEMESTER (Fall)</b>			
___ENG:101	College Composition I	3	
___MTH:160	College Algebra	4	
___CHM:105	General Chemistry I	5	
___BIO:104	Basic Laboratory Methods	3	3
	<b>Total credits:</b>	<b>15</b>	<b>3</b>
<b>SECOND SEMESTER (Spring)</b>			
___GE:101	Technical Computer Applications	3	
___CHM:106	General Chemistry II	5	
___BIO:140	Principles of Biology I	4	
___BIO:152	Quantitative Methods in Biotechnology	2	
___Physical Education Requirement		1	
	<b>Total credits:</b>	<b>15</b>	
<b>(Summer)</b>			
___Social Science Elective		3	
___Missouri History Requirement		3	
	<b>Total credits:</b>	<b>6</b>	
<b>THIRD SEMESTER (Fall)</b>			
___BIO:219	Biotechnology I	5	5
___BIO:218	Microbiology for Biotechnology (offered fall semester only)	4	
___PHL:109	Bio-Medical Ethics	3	
___Physical Education Requirement		1	
	<b>Total credits:</b>	<b>13</b>	<b>5</b>
<b>FOURTH SEMESTER (Spring)</b>			
___BIO:220	Biotechnology II	5	5
___BIO:226	*Advanced Topics in Biotechnology	6	6
___BIO:225	Genetics	5	
	<b>Total credits:</b>	<b>16</b>	<b>11</b>
<b>(Summer)</b>			
___COM:101	Oral Communications	3	
___BIO:221	Workplace Learning: Biotechnology	3	
	<b>Total credits:</b>	<b>6</b>	
	<b>Total Credits for Program</b>	<b>71</b>	<b>19</b>
<b>*BIO:226 Advanced Topics in Biotechnology (2 classes required):</b>			
	Plant Transformation	3	
	Bio Processing	3	
	Forensics	3	
	QPCR Techniques	3	
	Proteomics	3	
	RNA Interference	3	

See [www.stlcc.edu/Programs/biotechnology](http://www.stlcc.edu/Programs/biotechnology) for more information.