

# BIOTECHNOLOGY (BIOMANUFACTURING)



Pathway: Applied Sciences  
Office: Cedar Hall/K - Room 405  
Email: [Science@lattc.edu](mailto:Science@lattc.edu)  
Phone: (213) 763-7295

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Biotechnology	T033682C	A.S.	21	33	-	33
Biotechnology	T033225D	C		33	-	33

At least 60 degree applicable units are required to earn an Associate degree.  
These programs are Financial Aid Eligible.

## PROGRAM OVERVIEW

The LATTC Biotechnology Certificate/AS Degree Program is designed to meet the needs of students who wish to acquire the necessary skills in a biotechnology career with an emphasis in biomanufacturing. This program also suits the needs of transfer students who wish to complete their first two years of education in a community college.

Biotechnology is a changing industry that applies science and technologies to living organisms through the process of discovering, developing, manufacturing, and regulating quality of new products. Biotechnology applies to agriculture, human health and medicine, energy and environment. Biotechnology workers are employed in many industries, including, pharmaceutical and medical manufacturing; instrument, equipment and supplies manufacturing; scientific and technical consulting services; scientific and research development services; education; laboratories and government.

Our Biotechnology AS Degree Program focuses on biomanufacturing which directly serves pharmaceutical and medical manufacturing, but also other sectors such as food and agricultural sciences, green technology, and various science-related industries.

The Biotechnology program prepares students to find employment as entry-level lab technicians in fields that may include:

- Biomanufacturing
- Biotechnology
- Environmental Sciences
- Food Science Technicians
- Pharmaceuticals

## PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Apply basic biological principles to biomanufacturing.
- Explain and apply the processes in the biomanufacturing industry.
- Recognize and perform industrial regulatory processes.

## USEFUL LATTC LINKS:

College Catalog: <http://college.lattc.edu/catalog/>  
Financial Aid Office: <http://college.lattc.edu/financialaid/>  
Counseling Department: <http://college.lattc.edu/counseling/>  
General Education Information: <http://college.lattc.edu/catalog>  
Applied Sciences Pathway: <http://pathways.lattc.edu/catalog-programs/as/>

## BIOTECHNOLOGY

### Associate in Science Degree

Major Units: 33

Requirements for the Associate in Science degree in Biotechnology may be met by completing 33 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

### REQUIRED COURSES

SEMESTER I		UNITS
BIOLOGY 003	Introduction to Biology	4
CHEM 051	Fundamentals of Chemistry I	5
	- or CHEM T 111 <i>Applied Chemistry I (5)</i>	
SEMESTER II		UNITS
MICRO 020	General Microbiology	4
PRPLTEK 104	Introduction to Applied Sciences	4
SEMESTER III		UNITS
BIOTECH 010	Introduction to Biomanufacturing I	4
PRPLTEK 103	Process Plant Equipment	3
SEMESTER IV		UNITS
BIOTECH 012	Introduction to Biomanufacturing II	4
PRPLTEK 102	Process Measurement and Control Fundamentals	3
PRPLTEK 214	Industry Trends: Employment and Regulations	3

## BIOTECHNOLOGY

### Certificate of Achievement

Major Units: 33

A Certificate of Achievement in Biotechnology may be earned by completing 33 units of Required Courses listed under the Associate degree in Biotechnology with a grade of "C" or better in each course.

To register: <http://college.lattc.edu/student/new-students/register-now/>

For additional information consult a LATTC college counselor.