

BIOMANUFACTURING TECHNOLOGY, ASSOCIATE OF APPLIED SCIENCE



Overview

With the new Biomanufacturing Technology Associate of Applied Science (AAS) degree, San Jacinto College offers students the chance to receive hands-on, real-world experience in a pilot-scale bioprocessing center that includes upstream, downstream, and fill-finish training and cutting-edge equipment. The program is located on the South campus.

Career Information

Biological Technicians: \$50,978¹

¹ Source: www.texaswages.com, median salary Gulf Coast region, 2022

Campus

South Campus

Information

The Biomanufacturing Technology AAS curriculum includes cell and gene therapy and other innovative, developing industry sectors. Afterward, student can transfer the skills they learn to most advanced biomanufacturing operations today.

Plan of Study (Degree Plan)

3BIO-MFG

First Year

First Term	Credits
Select one of the following:	3
MATH 1314 College Algebra	
MATH 1316 Plane Trigonometry	
MATH 1324 Mathematics for Business and Social Sciences	
MATH 1325 Calculus for Business and Social Sciences	
MATH 1342 Elementary Statistical Methods (Statistics)	
MATH 1350 Mathematics for Teachers I (Fundamentals of Mathematics I)	
BITC 1411 Introduction to Biotechnology	4
Select one of the following:	4

BIOL 1306 & BIOL 1106	Biology for Science Majors I (lecture) and Biology for Science Majors I (lab)	
BIOL 2301 & BIOL 2101	Anatomy and Physiology I (Lecture) and Anatomy and Physiology I (Lab)	
BITC 1191	Special Topics in Biological Technology/Technician	1

Credits 12

Second Term

Select one of the following: 4

CHEM 1305 & CHEM 1105	Introductory Chemistry I (lecture) and Introductory Chemistry I (lab)	
CHEM 1311 & CHEM 1111	General Chemistry I (lecture) and General Chemistry I (lab)	

Select one of the following: 4

BIOL 2320 & BIOL 2120	Microbiology for Health Science Majors (lecture) and Microbiology for Health Science Majors (lab)	
BIOL 2321 & BIOL 2121	Microbiology for Science Majors (lecture) and Microbiology for Science Majors (lab)	

BITC 1302	Biotechnology Laboratory Methods and Techniques	3
-----------	---	---

BITC 1340	Quality Assurance for the Biosciences	3
-----------	---------------------------------------	---

Credits 14

Summer Year One Term

ENGL 1301	Composition I	3
BCIS 1305	Business Computer Applications	3

Credits 6

Second Year

First Term

BITC 2411	Biotechnology Laboratory Instrumentation	4
BITC 2377	Product Development to Commercialization	3

Select one of the following: 3

Language, Philosophy and Culture (Humanities)		
Creative Arts (Fine Arts)		
Social and Behavioral Sciences		3

Credits 13

Second Term

BITC 2431	Cell Culture Techniques	4
BITC 1403	Principles of Biochemistry	4
BITC 2386	Internship - Biology Technician/ Biotechnology Laboratory Technician	3

Select one of the following: 4

BITC 2475	Upstream and Downstream Manufacturing of Biologics	
BITC 2441	Molecular Biology Techniques	
BITC 2445	Medical Biotechnology	

Credits 15

Total Credits 60

Work-based Learning Experience: BITC 2386 Internship - Biology Technician/Biotechnology Laboratory Technician