## SKILLS & LEARNING OUTCOMES

The Biomanufacturing Program at Laney College adopts a career ladders approach where students can obtain an entry-level job with a one-semester certificate. As they progress, they can continue to return to the program to enhance their skills and advance in their career. Below are skills and learning outcomes from the program.

- Set up and operate lab equipment, perform experimental procedures, and identify potential errors while adhering to lab safety guidelines.
- Use industry-standard documentation such as lab notebooks, SOPs, and batch records for communication.
- Clearly and accurately communicate science concepts verbally and in writing, relating them to everyday events in an interdisciplinary context.

# iEnroll@ Laney


1

### Admissions Application

- Apply at Laney.edu/enroll
- You will be emailed your 8-digit Peralta student ID number and password in 24-48 hours.

Visit the Welcome Center for assistance.

2

### Counseling

See a counselor to complete your Educational Plan and get English, Math and Chemistry classes cleared.
Online: Laney.edu/counseling
Phone: (510) 464-3152
*Counseling is located on the 3rd floor of the Tower Building.

### Enroll to Classes

Once you have completed orientation, Academic & Career Interest, and have created an Educational Plan, you are ready to enroll into your classes.

- Go to sa.peralta.edu
- Login to add your classes or visit the Welcome Center for assistance.

3

4

### Financial Aid & Photo ID

Go to Laney.edu/financial_aid for information on applying for Financial Aid, or fill-out your FAFSA directly at **fafsa.ed.gov**.
For the California Dream Act application, visit: dream.csac.ca.gov.
• Laney's school code is 001266

**Student ID:** Bring a valid picture ID and your current class schedule as proof of enrollment to the Welcome Center to get your student ID card.

### CONNECT WITH US

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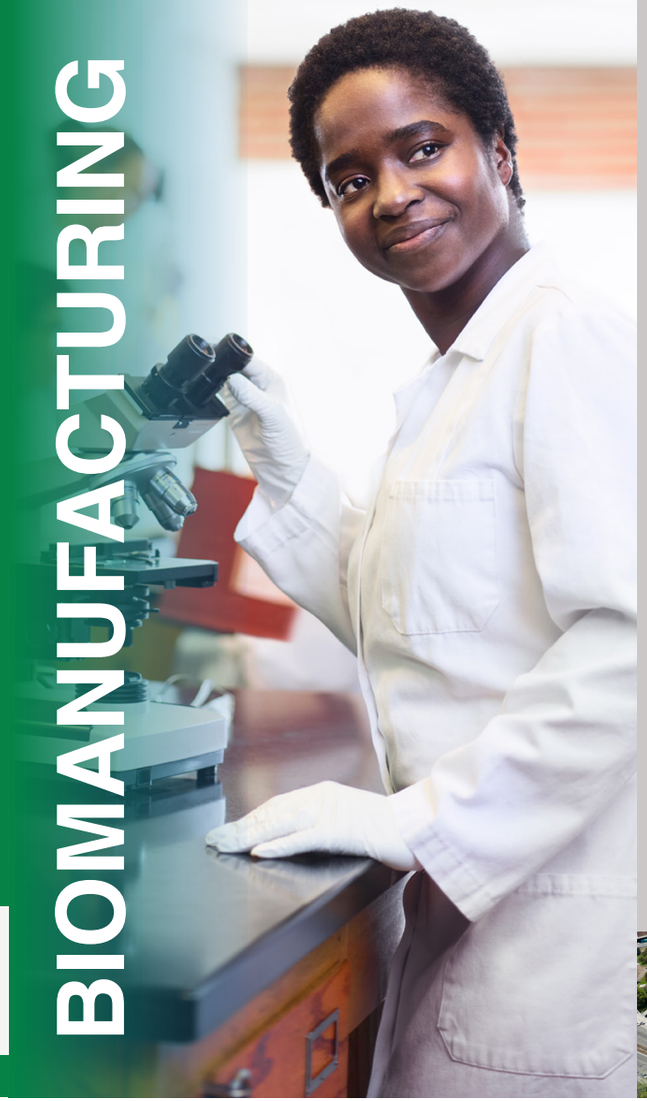
# LANEY COLLEGE

Career and Technical Education
WWW.LANEY.EDU/CTE
LANEY.EDU/BIOMANUFACTURING

BIOMANUFACTURING



## ABOUT LANEY COLLEGE BIOMANUFACTURING

Laney College's Biomanufacturing program is designed to prepare students for careers in the growing field of biotechnology. Biomanufacturing involves using living cells and biological processes to develop and produce a variety of products, including pharmaceuticals, vaccines, and diagnostic tests. This industry is rapidly expanding, with a strong demand for skilled workers who can help bring innovative biotech products to market.

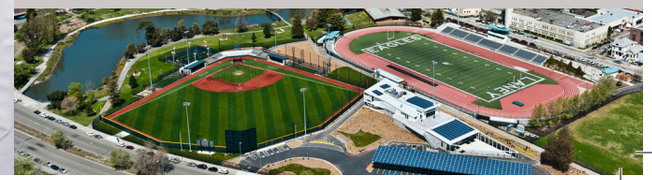
The Biomanufacturing program at Laney College offers a comprehensive curriculum that covers key topics in biotech manufacturing, including cell culture, protein purification, and quality control. Students learn about the use of bioreactors and other advanced technologies in biomanufacturing processes. The program also emphasizes the development of skills in laboratory techniques and equipment operation, as well as in the use of computer programs for data analysis and modeling.

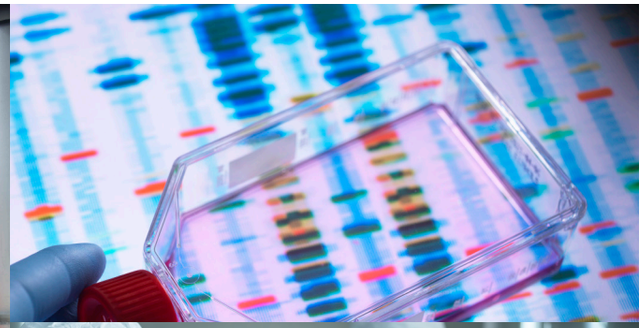
CALIFORNIA RESIDENTS CURRENTLY PAY

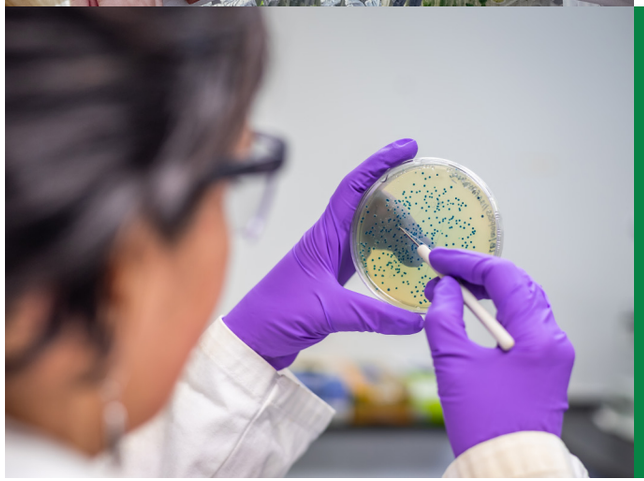
$46 PER UNIT

FOR COMMUNITY COLLEGE COURSES

**DREAM. FLOURISH.SUCCEED**







EXCELLENT

# CAREER

CHOICES

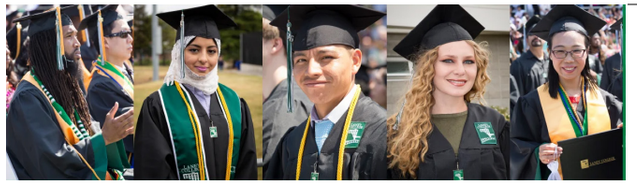
Biomanufacturing is an interdisciplinary field that involves the application of biological principles and techniques to the manufacturing of products. With the growing demand for biopharmaceuticals, biofuels, and other biotech products, there is an increasing need for skilled professionals in various areas of biomanufacturing.

- Biomanufacturing Technician
- Bioprocessing Specialist
- Quality Control Analyst
- Fermentation Scientist
- Cell Culture Scientist
- Bioreactor Engineer
- Upstream/Downstream Process Development Scientist
- Manufacturing Supervisor
- Research Associate
- Regulatory Affairs Specialist
- Validation Engineer
- Biomanufacturing Manager
- Bioprocess Development Engineer
- Technical Sales Representative
- Automation Engineer
- Biomanufacturing Consultant
- Quality Assurance Manager
- Purification Scientist
- Project Manager
- Formulation Scientist

... and more.

# CERTIFICATE & DEGREE

OPTIONS



**Associate of Arts (AA) Degree**

Biomanufacturing Production (60 units)

**Certificate of Achievement (CA)**

Biomanufacturing (13-15 units)

Biomedical Engineering Technology (22 units)

**Certificate of Proficiency (CP)**

Biomanufacturing Skills (9-10 units)

The Bay Area is home to over 200 companies in the field of Biotechnology and Biomanufacturing, which are experiencing significant growth and demand for new skill sets among workers. The Laney Biomanufacturing program is dedicated to equipping students with the necessary skills to excel in various areas such as medicine production, purification, quality control, and compliance with regulations, to help them build successful careers in this thriving industry.

## COURSE SEQUENCE

**Degree Requirements:**

**First Semester (4-7 units):**

| | | |
|---|---|---|
| BIOL 75 | Fundamentals of Biotechnology* | 2 |
| CHEM 30A | Introductory General Chemistry | 4 |
| | or | |
| CHEM 1A | General Chemistry | 5 |

**Second Semester (7-10 units):**

| | | |
|---|---|---|
| BIOL 3 | Microbiology* | 5 |
| | or | |
| BIOL 73 | Cell Culture Principles and Techniques | 4 |
| BIOL 76 | Principles of Biomanufacturing* | 3 |
| BIOL 78 | Applied Biomanufacturing Technology with Laboratory* | 5 |

**Third Semester (7 units):**

| | | |
|---|---|---|
| BIOL 72A | Biotech Instrumentation: Good Manufacturing Practices and Safe Chemical Handling | 1 |
| BIOL 72B | Biotech Instrumentation: Clean Room | 1 |
| BIOL 72C | Biotech Instrumentation: PCR | 1 |
| BIOL 72D | Biotech Instrumentation: Protein Purification and Quality Control | 1 |
| BIOL 74 | Scientific Communication | 3 |

**Fourth Semester (7 units)**

| | | |
|---|---|---|
| BIOL 77 | Business and Regulatory Practices in Biomanufacturing | 3 |
| BIOL 79 | Bioreactor Cell Culture and Protein Recovery | 4 |

**TOTAL MAJOR UNITS: 27-29**

HOW CAN I

## GET STARTED?

**VISIT US ONLINE:**

**Laney.edu/Biomanufacturing**

**APPLY at LANEY.EDU/ENROLL**