



### **Core Course Requirements: Certificates in Biotechnology**

#### **Biotechnology Lab Assistant Certificate (Certificate of Proficiency/Skill Certificate)**

- Introduction to Biotechnology (lecture- 3 units) Bio 190
- Introduction to Biotechnology (lab- 1 unit)— Bio 190-L  
C-ID biotech 101 aligned when lecture with lab
- Biotechnology A: Basic Laboratory skills (3 lecture/ 1 lab units) Bio191
- Introduction to Chemistry (lecture/lab (3 lecture/ 1 or 2 lab units) Chem 209

#### **Biotechnology Biomanufacturing Technician Certificate**

- Biotechnology B: Proteins (3 lecture/ 1 lab units) Bio 192
- Quality and Regulatory Compliance in the Biosciences (2 unit lecture) Bio 194
- General Chemistry -1<sup>st</sup> semester majors; (3 lecture/ 2 lab units) Chem 200 A

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23/24 unit certificate of achievement

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#### **Biotechnology Technician Certificate**

(6 units required coursework and 7-8 units chosen from options in boxes below)

- Biotechnology C: Nucleic Acids (lecture/lab 4 units) Bio 193
- Tissue Culture Methods (2 units- C-ID aligned) Bio 202

#### **Food Safety emphasis**

- General Microbiology (lecture/lab 5 units) Bio 229  
or
- Health microbiology (lecture/lab 4 units) Bio 139
- Food safety & microbiology (lecture/lab 2 units) Bio 196
- Internship - (1 unit) Bio197

#### **General emphasis:7-8 units**

- Human Genetics (3 unit lecture) Bio 177
- Cellular and Molecular Biology (lecture/ lab 5 units) Bio 211
- Biochemistry & Molecular Biology (lecture/lab 5 units) Bio 290
- Microbiology (lecture/lab 5 units) Bio 229
- Health Microbiology (lecture/lab 4 units) Bio 139
- General Chemistry/ Quant analysis (2<sup>nd</sup> semester Gen Chem)  
(lecture/lab 5 units) Chem 200 B
- Internship (1-4 units) Bio 197