# BIOTECHNOLOGY MINOR

## Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO/CHEM 202</td>
<td>Orientation to Biotechnology</td>
<td>2</td>
</tr>
<tr>
<td>BIO 161</td>
<td>Introduction to Cell and Molecular Biology</td>
<td>4-5</td>
</tr>
<tr>
<td>BOT 121</td>
<td>General Botany</td>
<td></td>
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<tr>
<td>MCRO 221</td>
<td>Microbiology</td>
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<tr>
<td>MCRO 224</td>
<td>General Microbiology I</td>
<td></td>
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Select from the following:  
BIO 303 Survey of Genetics  
BIO 351 Principles of Genetics  
CHEM 373 Molecular Biology  
CHEM 313 Survey of Biochemistry and Biotechnology  
CHEM 371 Biochemical Principles

Laboratory elective- select from the following:  
ASCI 403 Applied Biotechnology in Animal Science  
BIO/CHEM 475 Molecular Biology Laboratory  
CHEM 474 Protein Techniques Laboratory

## Select from the following:  
CHEM 377 Chemistry of Drugs and Poisons  
CHEM 477 Biochemical Pharmacology

## Approved Electives

Select from the following:  
Animal Biotechnology  
ASCI 403 Applied Biotechnology in Animal Science  
ASCI 406 Applied Animal Embryology and Assisted Reproduction  
ASCI 407 Assisted Reproduction Technologies of Gametes and Embryos Laboratory  
ASCI 440 Immunology and Diseases of Animals  
DSCI 330 Artificial Insemination and Embryo Biotechnology

Bioinformatics  
BIO/CHEM 441 Bioinformatics Applications  
CSC 448 Bioinformatics Algorithms

Cell and Molecular Biology/Microbial Biotechnology  
BIO 426 Immunology  
BIO 452 Cell Biology  
BIO/CHEM 475 Molecular Biology Laboratory  
BIO 476 Gene Expression Laboratory  
CHEM 474 Protein Techniques Laboratory  
CHEM 428 Nutritional Biochemistry  
MCRO 225 General Microbiology II  
MCRO 320 Emerging Infectious Diseases  
MCRO 402 General Virology  
MCRO 433 Microbial Biotechnology

Engineering-related Biotechnology  
BRAE 448 Bioconversion  
ENGR 581 Biochemical Engineering

## Total units  
28