# Biotechnology Track Worksheet

**Student:**

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<table>
<thead>
<tr>
<th>BIOL Prerequisites:</th>
<th>Placement Exam Score</th>
<th>Course #</th>
<th>Semester</th>
<th>Grade</th>
<th>Place Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 101a or b</td>
<td></td>
<td>BIOL 101</td>
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<tr>
<td>BIOL 102a or b</td>
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<td>BIOL 103a or b</td>
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<tr>
<td>BIOL 104a or b</td>
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**GEN CHEM Prerequisites:**

- General Chemistry
  - (2 terms -161/165; or 163/167; or its equivalent)
- General Chemistry Labs
  - (2 terms - 134L/136L)

**ORG CHEM Prerequisites (BS & BS/INT only):**

- Organic Chemistry (1 term - 174; or 175; or 220)
- Organic Chemistry Lab (1 term - 222L; or 223L; or 226L)
  - (BS/BS INT only: Completion of the Freshman Organic Chemistry sequence 174/175 and 222L/223L satisfies all of the Chemistry prerequisites for the MCDB major)

**PHYSICS Prerequisites:**

- Physics (170/171; or180/181; or 200/201; or 260/261)
  - BS & BS INT: 2 terms

**MATH Prerequisites:**

- Math 115 or higher

**CORE COURSES: (BS & BS INT - Choose any 3):**

- MCDB 200b Molecular Biology
- MCDB 202a Genetics
- MCDB 205b Cell Biology
- MCDB 210a Developmental Biology

*EITHER:* MCDB 300a Biochemistry *OR:* MBB 300a Principles of Biochemistry I

**GENERAL ELECTIVES: (2 Total):**

**Required Track Course:** MCDB 370b Biotechnology

**AND Choose 1 additional elective below**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Semester</th>
<th>Grade</th>
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<tbody>
<tr>
<td>BENG 351a</td>
<td>Biomedical Engineering I</td>
<td>CENG 412b Chemical Engineering Laboratory</td>
</tr>
<tr>
<td>BENG 352b</td>
<td>Biomedical Engineering II</td>
<td>CPSC 437a Introduction to Databases</td>
</tr>
<tr>
<td>BENG 410a</td>
<td>Basis of Bioimaging &amp; Biosensing</td>
<td>CPSC 445b Introduction to Data Mining</td>
</tr>
<tr>
<td>BENG 435b</td>
<td>Biomaterial - Tissue Interactions</td>
<td>CPSC 470a Artificial Intelligence</td>
</tr>
<tr>
<td>BENG 457b</td>
<td>Biomechanics</td>
<td>CPSC 475b Comp. Vision &amp; Bio Perception</td>
</tr>
<tr>
<td>BENG 464b</td>
<td>Tissue Engineering</td>
<td>MBB 420a Macromolecular Structure</td>
</tr>
<tr>
<td>CENG 210a</td>
<td>Chem Eng &amp; Process Modeling</td>
<td>MBB 421b Macromolecular Dynamics</td>
</tr>
<tr>
<td>CENG 411a</td>
<td>Separation &amp; Purification Processes</td>
<td>MBB 443b Eukaryotic Molecular Biology</td>
</tr>
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</table>

**SPECIAL ELECTIVES:**

**BS & BS INT: Choose 1 from MCDB 350 or above**

**LABS:**

**BS & BS INT: Choose 2 labs (must be from MCDB)**

**SENIOR REQUIREMENT:**

**BS:** (2 terms of Senior Research)

- MCDB 475 a or b  | Senior Independent Research in MCDB |
- MCDB 485/486 | Senior Research MCDB BS Major |

*MCDB 485/486 is preferred - but 2 terms of MCDB 475 (+ summer) will satisfy this req

**BS INT:** (2 terms of Senior Research Intensive)

- MCDB 495/496  | Senior Research Intensive MCDB BS INT Major |

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