Biomedical Engineering

Department Information

- **Department Web Site:**
  www.ndsu.edu/coe/future_students/biomedical_engineering/ (http://www.ndsu.edu/coe/future_students/biomedical_engineering/)

- **Credential Offered:**
  Minor

- **Program Overview:**
  catalog.ndsu.edu/programs-study/undergraduate/biomedical-engineering/ (http://catalog.ndsu.edu/programs-study/undergraduate/biomedical-engineering/)

Minor Requirements

**Minor: Biomedical Engineering**

*Required Credits: 21*

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 150 &amp; 150L</td>
<td>General Biology I and General Biology I Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BME 220</td>
<td>Introduction to Biomedical Engineering</td>
<td>2</td>
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<tr>
<td>BIOL 370</td>
<td>Cell Biology</td>
<td>3</td>
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<tr>
<td>or BIOL 460</td>
<td>Animal Physiology</td>
<td>3</td>
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**Elective Requirements (at least 6 of the 9 credits must be courses with an engineering prefix of CE, ECE, IME, ME)**

- BIOC 461: Foundations of Biochemistry and Molecular Biology II
- BIOL 220: Human Anatomy and Physiology I
- BIOL 220L: Human Anatomy and Physiology I Laboratory
- BIOL 221: Human Anatomy and Physiology II
- BIOL 221L: Human Anatomy and Physiology II Laboratory
- BIOL 370: Cell Biology (if not used in the core)
- BIOL 460: Animal Physiology (if not used in the core)
- CE 486: Nanotechnology and Nanomaterials
- ECE 483: Instrumentation for Engineers
- ECE 485: Biomedical Engineering
- ECE 486: Biosensing Technology
- ECE 487: Cardiovascular Engineering
- ECE 488: Cardiovascular Engineering II
- IME 411: Human Factors Engineering
- IME 453: Hospital Management Engineering
- ME 331: Materials Science and Engineering
- ME 468: Introduction to Biomechanics
- ME 480: Biofluid Mechanics
- ME 486: Nanotechnology and Nanomaterials
- MICR 445: Animal Cell Culture Techniques

Undergraduate Research or Individual Study (maximum 3 credits): ENGR/ME/ECE/CE/IME/ABEN 193, 293, 393, 493, 194, 294, 394 or 494

**Total Credits:** 21

**Minor Requirements and Notes**

- A minimum of 8 credits must be taken at NDSU.
- Course pre-requisites apply.
- At least 12 credits that apply to this minor must be unique from courses that apply to the student’s major.