The Exploratory and Pre-Professional Advising Center.

be admitted to pre-engineering status in the Exploratory and Pre-
admitted based on ACT scores, high school rank and credits, or may
equivalent SAT). Students who lack entrance requirements may be
Students must have an ACT (enhanced) score of 24 or greater (or
A total of 16 units is required for admission.

Students must have high school credit for (one unit is equal to one high
school year):
1. Mathematics – 4 units: 2 of algebra, 1 of geometry, and 1 of
precalculus and trigonometry
2. English – 4 units
3. Natural sciences – 3 units that must include 1 unit of physics and
1 unit of chemistry (chemistry requirement waived for students in
construction management)
4. Foreign language – 2 units of a single foreign language
5. Social studies – 3 units
6. Students having a composite ACT score of 28 or greater (or
equivalent SAT score) will be admitted to the College of Engineering
even if they lack any one of the following: trigonometry, chemistry, or
physics.
7. Students having an ACT score of 19 or less in English (or equivalent
SAT score) must take ENGL 150 Writing and Inquiry or ENGL 151
Writing and Argument.

A total of 16 units is required for admission.

Students for whom English is not their language of nurture must meet the
minimum English proficiency requirements of the University.

Students who lack entrance units may complete precollege training by
Independent Study through the University of Nebraska–Lincoln Office of
On-line and Distance Education, in summer courses, or as a part of their
first or second semester course loads while in the Exploratory and Pre-
Professional Advising Center or other Colleges at Nebraska.

Students should consult their advisor, their department chair, or
Engineering Student Services if they have questions on current policies.

Other Admission Requirements
Students who transfer to the University of Nebraska–Lincoln from other
accredited colleges or universities and wish to be admitted to the College
of Engineering (COE) must meet COE freshman entrance requirements
and have a minimum cumulative GPA of 2.5 and be calculus-ready.
Students not meeting either of these requirements must enroll in
the Explore Center or another University college until they meet COE
admission requirements. Students transferring from UNQ, UNL, or UNK to
the College of Engineering must be in good academic standing with their
institution.

The COE accepts courses for transfer for which a C or better grade
was received. Although the University of Nebraska–Lincoln accepts D
grades from the University of Nebraska at Kearney and at Omaha, not all
majors in the COE accept such low grades. Students must conform to
the requirements of their intended major and, in any case, are strongly
encouraged to repeat courses with a grade of C- or less.

All transfer students must adopt the curricular requirements of the
undergraduate catalog current at the time of transfer to the COE—not
that in use when they entered the University of Nebraska–Lincoln. Upon
admission to Nebraska, students wishing to pursue degree programs
in the COE will be classified and subject to the policies defined in the
subsequent section.

Students who were previously admitted to COE and are returning to the
College of Engineering must demonstrate a cumulative GPA of 2.5 in
order to be readmitted to COE.

College Degree Requirements
Grade Rules
Grade Appeals
In the event of a dispute involving any college policies or grades, the
student should appeal to his/her instructor and appropriate department
chair or school director (in that order). If a satisfactory solution is not
achieved, the student may appeal his/her case through the College
Academic Appeals Committee on his/her campus.

Catalog Rule
Students must fulfill the requirements stated in the catalog for the
academic year in which they are first admitted at the University of
Nebraska–Lincoln. In consultation with advisors, a student may choose
to follow a subsequent catalog for any academic year in which they are
admitted to and enrolled as a degree-seeking student at Nebraska in the
College of Engineering. Students must complete all degree requirements
from a single catalog year. The catalog which a student follows for
degree requirements may not be more than 10 years old at the time of
graduation.
## Requirements for Minor Offered by Department

A biomedical engineering minor coupled with a degree from the College of Engineering can lead to a wide variety of careers, including medical research in industry and government, academics, and professional medical practice. The biomedical engineering minor, with carefully chosen electives, can prepare students for many biomedical engineering applications including biomaterials, biomechanics, biosensors, ergonomics, medical imaging, rehabilitation, robotics, systems biology, and tissue engineering.

### Required Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIFE 120</td>
<td>Fundamentals of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>&amp; LIFE 120L</td>
<td>and Fundamentals of Biology I laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOS 213</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>&amp; BIOS 213L</td>
<td>and Human Physiology Laboratory</td>
<td></td>
</tr>
<tr>
<td>BSEN 317</td>
<td>Introduction to Biomedical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Prereqs: BIOS 101 &amp; BIOS 101L or LIFE 120 &amp; LIFE 120L or equivalent; parallel BIOS 213L.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Track Electives

- Select 9 hours of electives (courses must be from at least two tracks): 9

### Total Credit Hours

20

#### Track A: Biomaterials and Cellular Interactions

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSEN 416</td>
<td>Introduction to Biomaterials</td>
<td>3</td>
</tr>
<tr>
<td>BSEN 418</td>
<td>Tissue Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CHME 476</td>
<td>Micro/Nano systems for Engineering and Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>CHME 496</td>
<td>Advanced Topics in Chemical Engineering Computation</td>
<td>3</td>
</tr>
<tr>
<td>MECH 437</td>
<td>Biomedical Device Design</td>
<td>3</td>
</tr>
<tr>
<td>MECH 438</td>
<td>Mechanics of Biomaterials</td>
<td>3</td>
</tr>
<tr>
<td>MECH 498</td>
<td>Research (Advanced Biomaterials)</td>
<td>3</td>
</tr>
<tr>
<td>MECH 498</td>
<td>Research (Introduction to Cell Mechanics)</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Track B: Biomechanics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MECH 436</td>
<td>Introduction to Continuum Biomechanics</td>
<td>3</td>
</tr>
<tr>
<td>BSEN 412</td>
<td>Rehabilitation Engineering</td>
<td>3</td>
</tr>
<tr>
<td>BSEN 492</td>
<td>Special Topics (Ergonomics)</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Track C: Medical Imaging and Signal Processing (Imaging and Information)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSEN 311</td>
<td>Biomedical Signal and System Analysis</td>
<td>3</td>
</tr>
<tr>
<td>BSEN 414</td>
<td>Medical Imaging Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECEN 304</td>
<td>Signals and Systems I</td>
<td>3</td>
</tr>
<tr>
<td>ECEN 450</td>
<td>Bioinformatics</td>
<td>3</td>
</tr>
<tr>
<td>ECEN 453</td>
<td>Computational and Systems Biology</td>
<td>3</td>
</tr>
<tr>
<td>ECEN 463</td>
<td>Digital Signal Processing</td>
<td>3</td>
</tr>
</tbody>
</table>

To add courses to tracks, instructors should send their syllabus to the BME Oversight Committee who will make the recommendation to add courses to tracks. **NOTE:** Courses need to have a significant medical/biological component to be considered.

### Grade Rules

**Pass/No Pass**

No course taken Pass/No Pass will be counted toward the minor.