MECHANICAL ENGINEERING DEGREE

Students must also complete the Undergraduate Registration Requirement (https://catalogs.northwestern.edu/undergraduate/requirements-policies/undergraduate-registration-requirement) and the degree requirements of their home school.

Course Requirements (48 units)

Core Courses (32 units)

4 advanced study courses, including 1 from each group:

- MECH_ENG 398-2
- MECH_ENG 398-1

2 capstone courses:

- MECH_ENG 390-0
- MECH_ENG 377-0

7 required courses:

- Major Program (16 units)
- 5 unrestricted electives
- 7 social sciences/humanities courses
- 4 units of basic science

Advanced Study Courses

Dynamics/Controls

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>MECH_ENG 314-0</td>
<td>Machine Dynamics</td>
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<tr>
<td>MECH_ENG 363-0</td>
<td>Mechanical Vibrations</td>
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<tr>
<td>ELEC_ENG 360-0</td>
<td>Introduction to Feedback Systems</td>
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Mechanics

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<tbody>
<tr>
<td>MECH_ENG 327-0</td>
<td>Finite Elements for Stress Analysis</td>
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<tr>
<td>MECH_ENG 362-0</td>
<td>Stress Analysis</td>
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Thermofluid Science

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<tr>
<td>MECH_ENG 322-0</td>
<td>Thermodynamics &amp; Statistical Mechanics - II</td>
</tr>
<tr>
<td>MECH_ENG 373-0</td>
<td>Engineering Fluid Mechanics</td>
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Electives Requirements

- 4 electives:
  - All technical electives must be 300 level or above.
  - 1 technical elective must be a mathematics or basic science course.
  - 2 technical electives must be mechanical engineering courses.
  - 1 technical elective may be in mathematics, basic science, or engineering
  - Students are encouraged to concentrate electives in areas of interest. A list of nine areas of concentration, including appropriate courses and descriptions, is available on the department website.
  - No more than 2 units of MECH_ENG 399-0 Projects are allowed.
  - DSGN 360-0 Design Competition carries 1 unit of credit only if taken over 2 consecutive quarters. If repeated for credit, only 1 unit may be used as a technical elective, and no more than 2 units total may count toward the degree.
  - DSGN 245-0 Introduction to Computer Aided Design I: NX may not be counted toward the degree even as an unrestricted elective.

See Electives Requirements below

1. See Core Courses Requirements (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext) for details.
2. PHYSICS 140-2 Fundamentals of Physics may be substituted for PHYSICS 135-2 General Physics. PHYSICS 140-3 Fundamentals of Physics may be substituted for PHYSICS 135-3 General Physics. Associated labs are PHYSICS 136-2 General Physics Laboratory and PHYSICS 136-3 General Physics Laboratory.
3. Students planning to take advanced ELEC_ENG courses may petition to substitute ELEC_ENG 221-0 Fundamentals of Circuits.
4. May not be taken with CHEM 342-1 Thermodynamics or CHEM_ENG 211-0 Thermodynamics.