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 mathematics courses (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)
- 4 engineering analysis and computer proficiency courses (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)
- 4 units of basic science:
  - PHYSICS 135-2: General Physics and General Physics Laboratory
  - PHYSICS 135-3: General Physics and General Physics Laboratory
  - CHEM 131-0: General Chemistry I
  - CHEM 131-1: General Chemistry and General Chemistry Laboratory
  - CHEM 135-2: General Physics
  - CHEM 136-2: General Physics Laboratory
  - CHEM 135-3: General Physics
  - CHEM 136-3: General Physics Laboratory
- 3 design and communications courses (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)
- 5 basic engineering courses:
  - MECH_ENG 233-0: Electronics Design
  - CIV_ENV 216-0: Mechanics of Materials I
  - MECH_ENG 241-0: Fluid Mechanics I
  - MAT_SCI 201-0: Introduction to Materials
  - MECH_ENG 224-0: Scientific and Embedded Programming in Python
- 7 social sciences/humanities courses (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)
- 5 unrestricted electives (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)

### Major Program (16 units)

- 8 required courses:
  - COMP_SCI 212-0: Mathematical Foundations of Comp Science
  - COMP_SCI 211-0: Organic Chemistry I
  - MECH_ENG 224-0: Scientific and Embedded Programming in Python
  - MECH_ENG 314-0: Machine Dynamics
  - MECH_ENG 240-0: Intro to Mechanical Design and Manufacturing
  - MECH_ENG 315-0: Theory of Machines: Design of Elements
  - MECH_ENG 340-1: Computer Integrated Manufacturing: Manufacturing Processes
  - MECH_ENG 377-0: Heat Transfer
  - MECH_ENG 390-0: Intro to Dynamic Systems
- 2 capstone courses:
  - MECH_ENG 398-1 & MECH_ENG 398-2: Engineering Design I and Engineering Design II (taken sequentially and counting toward the final 12 units taken before graduation)

6 concentration courses from one of the nine concentration areas: