# MANUFACTURING AND DESIGN 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 & PHYSICS 135-3 & PHYSICS 136-2 & PHYSICS 136-3
  - CHEM 131-0 & CHEM 141-0 or CHEM 151-0 & CHEM 161-0 or CHEM 171-0 & CHEM 181-0

### 3 design and communications courses (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)

### 5 basic engineering courses:

- MECH_ENG 233-0
- CIV_ENV 216-0
- MAT_SCI 201-0
- CIV_ENV 205-0
- 1 additional course from any McCormick basic engineering category except Probability, Statistics & Quality Control (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)

### 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)

9 core courses:

- DSGN 308-0
- MECH_ENG 315-0
- IEMS 201-0
- IEMS 307-0
- IEMS 310-0
- 1 additional course from any McCormick basic engineering category except Probability, Statistics & Quality Control (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)
- IEMS 382-0
- MAT_SCI 318-0
- MECH_ENG 240-0
- MECH_ENG 340-1
- MECH_ENG 340-2
- MECH_ENG 340-3

3 project courses:

- DSGN 384-1 & DSGN 384-2
- DSGN 386-0

4 technical electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>DSGN 384-1 &amp; DSGN 384-2</td>
<td>Interdisciplinary Design Projects I &amp; Interdisciplinary Design Projects II</td>
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<tr>
<td>DSGN 386-0</td>
<td>Manufacturing Engineering Design (must be taken in the final spring quarter before graduation)</td>
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2 200-level or 300-level engineering courses.

2 300-level engineering courses.

Courses numbered 395 will need a petition.

Students may only count up to two 399 course towards their tech electives.

1 See general requirements (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext) for details.

2 IEMS 303-0 Statistics may be substituted if an additional math course, such as IEMS 202-0 Probability, is also taken.