The entrepreneurial engineering minor is designed for the technology-minded entrepreneur who seeks to understand disciplinary fundamentals, assess market needs, create technologies, and determine how to manufacture solutions sustainably and economically. The course requirements for the minor are designed to incorporate both engineering elements (product development and prototyping) and creative elements (product design), along with market and societal considerations (customer discovery and needs assessment). The elective option provides an opportunity to specialize in one of three areas: manufacturing, design, or venture creation. Versions of this minor are available for both engineering and nonengineering majors. Sign up for the minor by contacting your academic advisor.

**Minor Requirements**
Complete all courses listed below unless otherwise indicated. Also complete any corequisite labs, recitations, clinicals, or tools courses where specified.

### Required Core Courses

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>GE 5010</td>
<td>Customer-Driven Technical Innovation for Engineers</td>
<td>4</td>
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<tr>
<td>GE 5020</td>
<td>Engineering Product Design Methodology</td>
<td>4</td>
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<tr>
<td>GE 5030</td>
<td>Iterative Product Prototyping for Engineers</td>
<td>4</td>
</tr>
<tr>
<td>GE 5100</td>
<td>Product Development for Engineers</td>
<td>4</td>
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**For Undergraduates outside the College of Engineering**

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<tr>
<td>GE 1110</td>
<td>Engineering Design</td>
<td>4</td>
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</table>

Complete three of the following:

- GE 5010 Customer-Driven Technical Innovation for Engineers (4 hours)
- GE 5020 Engineering Product Design Methodology (4 hours)
- GE 5030 Iterative Product Prototyping for Engineers (4 hours)
- GE 5100 Product Development for Engineers (4 hours)

### Elective

Complete one of the following:

- **Venture Creation**
  - ENTR 2303 Marketing Strategies for Startups (4 hours)
  - ENTR 3305 Business Model Design and Innovation
  - ENTR 3306 Global Entrepreneurship
  - ENTR 3330 Design Thinking for Startups
  - ENTR 4501 Integrated Studies in Entrepreneurial Startups
  - ENTR 4510 Management Consulting Abroad

- **Design**
  - ARTE 3901 Art and Design Special Topics
  - ARTF 1122 Color and Composition and Color and Composition Tools
  - ARTF 1124 Form and Structure and Form and Structure Tools
  - ARTG 1250 Design Process Context and Systems
  - ARTG 3462 Experience Design Principles
  - ARTG 3463 Experience Design 2

- **Manufacturing**
  - IE 2310 Introduction to Industrial Engineering
  - IE 4512 Engineering Economy
  - IE 4525 Logistics and Supply Chain Management
  - IE 4530 Manufacturing Systems and Techniques
Entrepreneurial Engineering, Minor

GPA Requirement
2.000 GPA required in the minor