# Computer Engineering

## Department Information

- **Department Web Site:**
  [www.ndsu.edu/ece/](http://www.ndsu.edu/ece/)
- **Credential Offered:**
  B.S.Cpr.E.
- **Official Program Curriculum:**
  [catalog.ndsu.edu/undergraduate/program-curriculum/computer-engineering/](http://catalog.ndsu.edu/undergraduate/program-curriculum/computer-engineering/)

## First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>MATH 105(^1)</td>
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<td>MATH 165(^1)</td>
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</tr>
<tr>
<td>CSCI 160(^1)</td>
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<td>MATH 129(^1)</td>
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<td>CHEM 121</td>
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<td>CSCI 161</td>
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<tr>
<td>COMM 110</td>
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<td>ECE 111</td>
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<tr>
<td>ENGL 110</td>
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<td>ENGL 120</td>
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## Second Year

<table>
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<tr>
<th>Fall</th>
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<th>Spring</th>
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<tbody>
<tr>
<td>MATH 166(^1)</td>
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<td>MATH 265(^1)</td>
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<td>EE 296(^1)</td>
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<td>PHYS 251</td>
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<td>ECE 275(^1)</td>
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<td>CSCI 222</td>
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<td>GEN ED Wellness</td>
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<td>ECE 311</td>
<td>4</td>
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<tr>
<td>GEN ED Science Lab (CHEM 121L or PHYS 251L)</td>
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<td>GEN ED Social/Behavioral Science and Global Perspective</td>
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## Third Year

<table>
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<tbody>
<tr>
<td>MATH 266(^1)</td>
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<td>ECE 401</td>
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<td>ECE 320</td>
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<td>ECE 374</td>
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<td>ECE 376</td>
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<td>ECE 343</td>
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<tr>
<td>ECE 375</td>
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<td>GEN ED Humanities/Fine Arts and Cultural Diversity</td>
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<td>Tech Elective(^2)</td>
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## Fourth Year

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<td>CpE Core(^3)</td>
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<tr>
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<td>ECE Elective</td>
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<tr>
<td>ECE Elective</td>
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<td>GEN ED Social/Behavioral Science</td>
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Total Credits: 129

1
This course requires a student to earn a "C" or better, in order to take upper level ECE courses.

2
Choose from the approved Tech Elective List.

3
CpE Core Options:
1. ECE 474 Computer Architecture (prereq: ECE 374)
2. ECE 477 Hardware design for Machine Learning (prereqs: ECE 374 and ECE 375)
3. ECE 423 VLSI Design (prereqs: ECE 311 and ECE 321)
4. ECE 425 Intro to Semiconductors (prereqs: ECE 320)
5. CSCI 474 Operating System Concepts (prereqs: CSCI 374)
6. CSCI 467 Algorithm Analysis (prereqs MATH 166, CSCI 161 and CSCI 222 or MATH 270)