

# Computer Engineering

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## 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/) (<http://catalog.ndsu.edu/undergraduate/program-curriculum/computer-engineering/>)

## Sample Program Guide

IMPORTANT DISCLAIMER: A Sample Program Guide provides an unofficial guide of program requirements and should be used by prospective students who are considering attending NDSU in the future. It is NOT an official curriculum and should NOT be used by current NDSU students for official degree planning purposes. Note that the official curriculum used by current NDSU students can vary from the Sample Program Guide due to a variety of factors such as, but not limited to, start year, education goals, transfer credit, and course availability.

To ensure proper program completion, enrolled students should utilize Degree Map (<https://www.ndsu.edu/registrar/degreemap/>) and Schedule Planner (<https://www.ndsu.edu/onestop/degree-map-and-planning/>) in Campus Connection and consult regularly with their academic advisor to ensure requirements are being met.

Freshman			
Fall	Credits	Spring	Credits
MATH 165 <sup>1</sup>		4 MATH 166 <sup>1</sup>	4
ENGL 110		3 CHEM 121	3
CSCI 160		4 ENGL 120	3
ECE 111		3 CSCI 161	4
GEN ED Humanities/Fine Arts		3 GEN ED Science Lab (CHEM 121L or PHYS 251L)	1
		GEN ED Wellness	2
		<b>17</b>	<b>17</b>
Sophomore			
Fall	Credits	Spring	Credits
MATH 265 <sup>1</sup>		4 MATH 266 <sup>1</sup>	3
EE 206 <sup>1</sup>		4 COMM 110	3
ECE 275 <sup>1</sup>		4 ECE 375	3
MATH 129 <sup>1</sup>		3 ECE 311	4
		PHYS 251	4
		<b>15</b>	<b>17</b>
Junior			
Fall	Credits	Spring	Credits
ECE 341		3 ECE 343	4
ENGR 327 (Fulfills Gen Ed Humanities & Fine Arts (A))		3 ECE 376	4
ECE 374		4 ECE 401	1
ECE 320		3 CPE Core <sup>4</sup>	3
CSCI 222		3	
		<b>16</b>	<b>12</b>

<b>Senior</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
ECE 403		2 ECE 405	3
ENGL/Upper Level Writing <sup>2</sup>		3 ECE Elective	3
ECE Elective		3 CPE Core <sup>4</sup>	3
Tech Elective <sup>3</sup>		3 CPE Core <sup>4</sup>	3
GEN ED Social/Behavioral Science and Global Perspectives		3 CPE Core <sup>4</sup>	4
		GEN ED Social/Behavioral Science and Cultural Diversity	3
		<b>14</b>	<b>19</b>

**Total Credits: 127**

1

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

2

Choose from ENGL 320, 321, 324 or 459

3

Choose from the approved Tech Elective list

4

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)