

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			
Fall	Credits	Spring	Credits
MATH 103 ¹		3 MATH 105 ¹	3
CHEM 121		3 ECE 111	3
ENGL 110		3 ENGL 120	3
COMM 110		3 GEN ED Social/Behavioral Science and Global Perspective	3
GEN ED Wellness		2 GEN ED Science Lab (CHEM 121L or PHYS 251L)	1
		14	13
Second Year			
Fall	Credits	Spring	Credits
MATH 165 ¹		4 MATH 166 ¹	4
MATH 129 ¹		3 EE 206 ¹	4
CSCI 160 ^{1,4}		4 CSCI 161	4
ECE 275 ¹		4 ECE 375	3
CSCI 222		3 GEN ED Humanities/Fine Arts and Cultural Diversity	3
		18	18
Third Year			
Fall	Credits	Spring	Credits
MATH 265 ¹		4 ECE 401	1
PHYS 251		4 MATH 266	3
ECE 311		4 ECE 320	3
Tech Elective ²		3 ECE 343	4
GEN ED Upper Level English		3 GEN ED Social/Behavioral Science	3
		18	14
Fourth Year			
Fall	Credits	Spring	Credits
ECE 403		2 ECE 405	3
ECE 376		4 ECE 341	3
ECE 374		4 CpE Core ³	3
ENGR 327		3 CpE Core ³	3
ECE Elective		3 CpE Core ³	3

CpE Core ³	3 ECE Elective	3
	19	18

Total Credits: 132

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

2
Choose from the approved Technical 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)

4
ECE 173 is also an approved course for this requirement.