

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 105 ¹		3 MATH 165 ¹	4
CSCI 160 ^{1,4}		4 MATH 129 ¹	3
CHEM 121		3 CSCI 161	4
COMM 110		3 ECE 111	3
ENGL 110		3 ENGL 120	3
		16	17
Second Year			
Fall	Credits	Spring	Credits
MATH 166 ¹		4 MATH 265 ¹	4
EE 206 ¹		4 PHYS 251	4
ECE 275 ¹		4 CSCI 222	3
GEN ED Wellness		2 ECE 311	4
GEN ED Science Lab (CHEM 121L or PHYS 251L)		1 GEN ED Social/Behavioral Science and Global Perspective	3
		15	18
Third Year			
Fall	Credits	Spring	Credits
MATH 266 ¹		3 ECE 401	1
ECE 320		3 ECE 374	4
ECE 376		4 ECE 343	4
ECE 375		3 CpE Core ³	3
GEN ED Humanities/Fine Arts and Cultural Diversity		3 Tech Elective ²	3
		16	15
Fourth Year			
Fall	Credits	Spring	Credits
ECE 403		2 ECE 405	3
ECE 341		3 CpE Core ³	3
ENGR 327		3 CpE Core ³	3
CpE Core ³		3 ECE Elective	3
ECE Elective		3 GEN ED Social/Behavioral Science	3

GEN ED Upper Level English	3	
	17	15

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)

4

ECE 173 is also an approved course for this requirement.