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/)

Sample Program Guide

IMPORTANT DISCLAIMER: This guide is not an official curriculum. This guide is a sample four-year degree plan of how students might plan this major with other degree requirements to complete their education in four years.Student plans will vary from this sample due to a variety of factors, such as, but not limited to, start year, education goals, transfer credit, and course availability. To ensure proper degree 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 academic advisors to ensure graduation requirements are being met.

Freshman				
Fall	**Credits**		**Spring**	**Credits**
MATH 165[1]		4	MATH 166[1]	4
ENGL 110		3	CHEM 121	3
CSCI 160[5]		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
		17		**17**
Sophomore				
Fall	**Credits**		**Spring**	**Credits**
MATH 265[1]		4	MATH 266[1]	3
EE 206[1]		4	COMM 110	3
ECE 275[1]		4	ECE 375	3
MATH 129[1]		3	ECE 311	4
			PHYS 251	4
		15		**17**
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[4]	3
CSCI 222		3		
		16		**12**
Senior				
Fall	**Credits**		**Spring**	**Credits**
ECE 403		2	ECE 405	3

ENGL/Upper Level Writing[2]	3	ECE Elective	3
ECE Elective	3	CPE Core[4]	3
Tech Elective[3]	3	CPE Core[4]	3
GEN ED Social/Behavioral Science and Global Perspectives	3	CPE Core[4]	4
		GEN ED Social/Behavioral Science and Cultural Diversity	3
	14		**19**

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)

5

ECE 173 is also an approved course for this requirement.