

COMPUTER SCIENCE & ENGINEERING

Department of Electrical and Computer Engineering

IOWA

Color highlighting: Courses highlighted in the same color may be taken in either of the two semesters shown, with one course taken each semester. For example, students may take CS:2230 in the 4th semester and ECE:2400 in the 5th semester, or vice versa.

Sample Four-Year Plan

First Year

1st Semester	sh	2nd Semester	sh
F/S MATH:1550 Engineering Calculus I (P: ALEKS score ≥ 75 or MPT Level 3 score ≥ 9)	4	ALL RHET:1030 Rhetoric: Writing and Communication	4
ALL CHEM:1110 Principles of Chemistry I (P: ALEKS score ≥ 55 or MPT Level 3 score ≥ 9)	4	F/S PHYS:1611 Introductory Physics I (C: MATH:1550)	4
F ENGR:1100 Intro to Engineering Problem Solving	3	F/S MATH 1560 Engineering Calculus II (P: MATH:1550)	4
F/S ENGR:1300 Intro to Engineering Computing (C: MATH:1550)	3	F/S MATH:2550 Engineering Matrix Algebra (P: MATH:1550)	2
		F/S CS:1210 Computer Science I, Fundamentals (C: MATH:1550)	4
	14		18

Second Year

3rd Semester	sh	4th Semester	sh
F/S MATH:2560 Engineering Differential Equations (P: MATH:1560 & MATH:2550)	3	ALL CS:2210 Discrete Structures	3
ALL PHYS:1612 Introductory Physics II (P: PHYS:1611; C: MATH:1560)	4	F/S CS:2230 Computer Science II, Data Structures (P: ENGR:2730 minimum C- or CS:1210 minimum C-)	4 OR
ALL ENGR:2120 Electrical Circuits (C: MATH:2560)	3	F/S ECE:2400 Linear Systems I (P: ENGR:2120 & MATH:2560)	3
F/S ENGR:2730 Computers in Engineering (P: ENGR:1300)	3	F/S ECE:3330 Introduction to Software Design (P: ENGR:2730)	3 OR
F ECE:3320 Introduction to Digital Design (Sophomore Status)	3	ALL Elective: CS	3
	16	S ECE:3350 Computer Architecture and Organization (P: ECE:3320 & ENGR:2730)	3
		F/S STAT:2020 Probability & Statistics For Engr & Phys Sci (P: MATH:1560)	3 OR
		F/S ECE:2410 Principles of Electronic Instrumentation (P: PHYS:1612, ENGR:2120, & MATH:2560)	4
			15 to 17

Third Year

5th Semester	sh	6th Semester	sh
ALL General Education Course	3	ALL CS:3330 Algorithms (P: CS:2230 minimum C-, CS:2210, minimum C-, & MATH:1550)	3
F/S CS:2230 Computer Science II, Data Structures (P: ENGR:2730 minimum C- or CS:1210 minimum C-)	4 OR	F/S CS:3820 Programming Language Concepts (P: CS:2210 minimum C-, CS:2230 minimum C-, & ECE:3330)	3 OR
F/S ECE:2400 Linear Systems I (P: ENGR:2120 & MATH:2560)	3	ALL Elective: Focus Area	3
F/S ECE:2410 Principles of Electronic Instrumentation (P: PHYS:1612, ENGR:2120, & MATH:2560)	4 OR	F/S ECE:3360 Embedded Systems (P: ENGR:2730 & ECE:3320; C: ECE:2410)	3 OR
F/S STAT:2020 Probability & Statistics For Engr & Phys Sci (P: MATH:1560)	3	ALL Elective: ECE	3
F/S ECE:3330 Introduction to Software Design (P: ENGR:2730)	3 OR	F/S CS:3620 Operating Systems (P: CS:2210 minimum C-, CS:2230 minimum C-, & ECE:3350 minimum C-)	3 OR
ALL Elective: CS	3	F/S General Education Course	3
F ECE:3000 Professional Seminar (Junior Status)	1	F/S General Education Course	3
	16 to 18		15

Fourth Year

7th Semester	sh	8th Semester	sh
F/S CS:3620 Operating Systems (P: CS:2210 minimum C-, CS:2230 minimum C-, & ECE:3350 minimum C-)	3 OR	ALL General Education Course	3
F/S General Education Course	3		
F ECE:3540 Communication Networks (C: STAT:2020)	3	F/S ECE:4890 ECE Senior Design II (P: ECE:4880 and 3 of: ECE:3330, ECE:3350, ECE:3360, ECE:3400, ECE:3410, ECE:3500, ECE:3600, CS:3330)	3
F/S ECE:4880 ECE Senior Design I (P: Senior Status; ECE:2410, & ENGR:2730)	3	ALL Required Theory Selection (See list of approved courses on ECE/CSE Website)	3
F/S ECE:3360 Embedded Systems (P: ENGR:2730 & ECE:3320; C: ECE:2410)	3 OR	ALL Elective: Advanced, CS	3
ALL Elective: ECE	3		
F/S CS:3820 Programming Language Concepts (P: CS:2100, CS:2230, & ECE:3330)	3		
ALL Elective: Focus Area	3	ALL Elective: Advanced, ECE	3
	15		15