COMPUTER ENGINEERING 2024-2025

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
MATH 1131Q – *Calculus* I	4	MATH 1132Q – Calculus II	4
CHEM 1127Q – Gen. Chem. I	4	PHYS 1501Q[1] – Engineering Physics I[1]	4
CSE 1010 – Intro. to Computing for Engr.	3	CSE 2050 – Data Structures & OO Design	3
ENGL 1010 or 1011 – Academic Writing	4	Arts and Humanities course[2]	3
ENGR 1000 – Orientation to Engineering	1	Social Sciences course[2]	3
	16		17

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
MATH 2110Q – Multivariable Calculus	4	MATH 2410Q – Differential Equations	3
PHYS 1502Q – Engineering Physics II[1]	4	ECE 2001 – Electric Circuits	4
CSE 3100 – Systems Programming	3	CSE 2500 – Intro to Discrete Systems	3
CSE 2301 – Logic Design	4	PHIL 1104 – Philosophy and Social Ethics	3
	15	Social Sciences course[2]	3
			16

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
ECE 3101 – Signals and Systems	3	ECE 3401 – Digital Systems Design[3]	3
ECE 3201 – Electronic Circuit Design and Analysis	4	ECE 3411 – Microprocessor App. Lab or CSE 4903 – Microprocessor Lab	3
CSE 3150 C++ Essentials or CSE 3160 Func. Program. Fundam	3	CSE 4302 – Advanced Computer Architecture[3]	3
CSE 3666 – Intro. to Computer Architecture	3	STAT 3345Q – Probability Models Engineers[4]	3
MATH 2210Q – Linear Algebra	3	Diversity and Multiculturalism course[2]	3
	16		15

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
ECE 4901 – E&CE Design I[5]	2	ECE 4902 – E&CE Design II	3
ECE 4900W – Communicating Engineering Solutions in a Societal Context[6]	1	ECE 3421 – VLSI Design & Simulation	4
CSE 4300 – Operating Systems	3	Professional Requirement[7]	3
Professional Requirement[7]	3	Professional Requirement[7]	3
Design Laboratory[8]	3	Diversity and Multiculturalism course[2]	3
Elective	3		16
	15		

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[1] Either the two-semester sequence of PHYS 1401Q-1402Q or the three-semester sequence of PHYS 1201Q-1202Q followed by PHYS 1230 or 1530 may be taken instead to satisfy this requirement. However, only eight credits of PHYS 1201-1202-1230/1530 can be used toward the required 126 credits for the Engineering degree

[2] The courses from content areas one (Arts and Humanities) and two (Social Sciences) must be from four different departments. One course from either content area one (Arts and Humanities) or content area two (Social Sciences) may also be used to fulfill one of the requirements from content area four (Diversity and Multiculturalism). One course from content area four must be an international course.

[3] ECE 3401 can be substituted with ECE 5401; ECE 4302 can be substituted with ECE 5402/CSE 5302.

[4] STAT3345 can be replaced with MATH3160, though STAT3345 is recommended.

[5] Prerequisites: Senior standing; ECE 3201; C+ or better in ECE 2001 and ECE 3101.

[6] **One additional W course must be taken**, typically as one of the content area courses.

[7] Choose three (3) from: ECE 3111, ECE 3431/CSE 3802, ECE 3221, ECE 4112, ECE 4121, ECE 4131, ECE 4451, CSE 2102, CSE 3300, CSE 3500, CSE 3504, CSE 4707, and CSE 4709. **At least one of the three must be ECE 4112 or CSE 3504.**

[8] Choose one (1) from: CSE 3350/ECE 4401, CSE 4901/ECE 4402, ECE 4114, and ECE 4132