

## COMPUTER ENGINEERING 2026-2027

### 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 – Engineering Physics I <sup>1</sup>	4
CSE 1010 – Intro. to Computing for Engr.	3	CSE 2050 – Data Structures & OO Design	3
ENGL 1007/1010/1011 – Academic Writing	4	TOI course <sup>2</sup>	3
ENGR 1000 – Orientation to Engineering	<u>1</u>	TOI course <sup>2</sup>	<u>3</u>
	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 <sup>1</sup>	4	ECE 2001 – Electric Circuits	4
CSE 2500 – Intro to Discrete Systems	3	CSE 3100 – Systems Programming	3
CSE 2301 – Logic Design	<u>4</u>	CSE 3140 – Cybersecurity Lab	2
	15	TOI course <sup>2</sup>	<u>3</u>
			15

### JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
ECE 3101 – Signals and Systems	3	ECE 3402 – Computer Organization & Design <sup>3</sup>	3
ECE 3411 – Microprocessor App. Lab	3	ECE 3421 – VLSI Design & Simulation	4
CSE 3300 – Computer Networks	3	CSE 4300 – Operating Systems <sup>3</sup>	3
MATH 2210Q – Linear Algebra	3	STAT 3345Q – Prob. Models for Engineers <sup>4</sup>	3
Elective	<u>4</u>	TOI course <sup>2</sup>	<u>3</u>
	16		16

### SENIOR YEAR

First Semester	Credits	Second Semester	Credits
ECE 4901 – E&CE Design I	2	ECE 4902 – E&CE Design II	3
ECE 4900W – Communicating Engineering Solutions in a Societal Context <sup>5</sup>	1	Professional Requirement <sup>6</sup>	3
CSE 4302 – Computer Arch. & Organization <sup>3</sup>	3	Professional Requirement <sup>6</sup>	3
Professional Requirement <sup>6</sup>	3	TOI course <sup>2</sup>	3
Professional Requirement <sup>6</sup>	3	Elective	<u>4</u>
Design Laboratory <sup>7</sup>	<u>3</u>		16
	15		

<sup>1</sup> 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

<sup>2</sup> The five TOI courses must be taken from each of the topics of inquiry 1-5 (Creativity: Design, Expression, Innovation; Cultural Dimensions of Human Experiences; Diversity, Equity, and Social Justice; Environmental Literacy; and Individual Values and Social Institutions). One of the TOI courses can be used to fulfill two TOI areas thus reducing the count to four courses. The TOI-6 and Focus requirements are satisfied by CHEM1127, PHYS1501, and PHYS1502.

<sup>3</sup> CSE 4300 can be substituted with CSE 5305; CSE 4302 can be substituted with ECE 5402/CSE 5302.

<sup>4</sup> STAT3345 can be replaced with MATH3160, though STAT3345 is recommended.

<sup>5</sup> **One additional W course must be taken**, typically as one of the TOI courses.

<sup>6</sup> Choose four (4) from: courses listed on the next page. **At least one of the four must be ECE 4112 or CSE 3504 or CSE 4820.**

<sup>7</sup> Choose one (1) from: CSE 3350/ECE 4401, ECE 4114, ECE 4132, and ECE 4161

## Professional Requirements

Students must choose 12 credits from the following list or any of the concentration tracks listed below, including at least one of ECE 4112 or CSE 3504 or CSE 4820 or CSE 5819.

ECE 3431 or CSE 3802, ECE 4112, CSE 3500, CSE 3504, CSE 4820 or CSE 5819

Students may optionally choose a concentration by selecting nine of their professional requirement credits from one of the following tracks:

*Semiconductors:* ECE 3201, ECE 3221, ECE 4211, ECE 4225 or ECE 5225, ECE 4243, ECE 4261 or ECE 5261

*Systems:* ECE 3111, ECE 3161, ECE 3162, ECE 3163, ECE 4121, ECE 4131, CSE 4709 or CSE 5309, CSE 5300, CSE 5312

*Software:* CSE 2102, CSE 3150, CSE 3200, CSE 3250, CSE 4100, CSE 4102, CSE 5103

*Cybersecurity:* CSE 3400 or CSE 5850, CSE 3550, CSE 4400 or CSE 5400, CSE 4402, CSE 4412 or CSE 5512, CSE 4702 or CSE 5852, CSE 5854, CSE 5910

With prior approval by the program director, special topics courses (CSE 4095, ECE 4095, CSE 5095, or ECE 6095) and thesis (ECE 4097 or CSE 4997) courses may count towards design laboratory, professional requirement and concentration credits.