# *COMPUTER ENGINEERING 2015-16*

## 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 | 4 |
| CSE 1010 – Intro. to Computing for Engr. | 3 | CSE 1102 – Object Oriented Design | 3 |
| ENGL 1010 or 1011 – Academic Writing | 4 | Arts and Humanities course[2] | 3 |
| ENGR 1000 – Orientation to Engineering | 1 | ECE 1101 – Computer Tools | 1 |
| | 16 | Elective | 2 |
| | | | 17 |

## SOPHOMORE YEAR

| First Semester | Credits | Second Semester | Credits |
|---|---|---|---|
| MATH 2110Q – Multivariable Calculus | 4 | MATH 2410Q – Differential Equations | 3 |
| PHYS 1502Q[1] – Engineering Physics II | 4 | ECE 2001 – Electric Circuits | 4 |
| CSE 2100 – Data Structures & Algorithms | 3 | CSE 2500 – Intro to Discrete Systems | 3 |
| CSE 2300W – 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 |
| ECE 3201 – Electronic Circuit Design and Analysis | 4 | ECE 3411 – Microprocessor App. Lab or CSE 4903 – Microprocessor Lab | 3 |
| CSE 3666 – Intro. to Computer Architecture | 3 | CSE 2102 – Intro. to Software Engineering | 3 |
| MATH 2210Q – Linear Algebra | 3 | STAT 3345Q – Probability Models Engineers | 3 |
| Social Sciences course[2] | 3 | Diversity and Multiculturalism course[2] | 3 |
| | 16 | | 15 |

## SENIOR YEAR

| First Semester | Credits | Second Semester | Credits |
|---|---|---|---|
| ECE 4901 – E&CE Design I | 2 | ECE 4902 – E&CE Design II | 3 |
| ECE 4099W – Independent Study | 1 | ECE 3421 – VLSI Design & Simulation | 4 |
| ECE 3221 – Digital Integrated Circuits | 3 | Professional Requirement[3] | 3 |
| CSE 4300 – Operating Systems | 3 | Professional Requirement[3] | 3 |
| Professional Requirement[3] | 3 | Diversity and Multiculturalism course[2] | 3 |
| Design Laboratory[4] | 3 | | 16 |
| | 15 | | |

[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] Choose three (3) from: ECE 3111, ECE 3431/CSE 3802, ECE 4111, ECE 4112, ECE 4121, ECE 4131, ECE 4243, CSE 3300, CSE 3504, and CSE 4302. At least one of the three must be ECE 4111, ECE 4112, or CSE 3504.

[4] Choose one (1) from: CSE 3350/ECE 4401, CSE 4901/ECE 4402, ECE 4132, ECE 4242, and ECE 4244.