

School of Engineering and Technology

BS Degree in Computer Engineering

(For Students Entering the Program in the 2016-2017 Academic Year)

Freshman Year – Fall Semester

CHEM-115 General Chemistry (4,3)	5
CSCI-105 Introduction to Computer Programming (2,2)	3
EGNR-101 Introduction to Engineering (1,2)	2
ENGL-110 First-Year Composition I (3,0)	3
MATH-151 Calculus I (4,0)	4
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Freshman Year – Spring Semester

CSCI-121 Principles of Programming (4,0)	4
EGEE-125 Digital Fundamentals (3,2)	4
EGNR-140 Linear Algebra and Num Methods for Engineers (1,3)	2
ENGL-111 First-Year Composition II (3,0)	3
MATH-152 Calculus II (4,0)	4
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Sophomore Year – Fall Semester

CSCI-2xx Computer Science Core Elective	4
EGEE-250 Microcontroller Fundamentals (3,2)	4
MATH-251 Calculus III (4,0)	4
PHYS-231 Applied Physics for Engineers and Scientists I (3,2)	4
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Sophomore Year – Spring Semester

EGEE-210 Circuit Analysis (3,2)	4
MATH-310 Differential Equations (3,0)	3
PHYS-232 Applied Physics for Engineers and Scientists II (3,2)	4
Communication Elective (3,0)	3
Social Science Elective (3,0)	3
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Junior Year – Fall Semester

[†] CSCI-341 Discrete Structures for Computer Science (4,0)	4
EGEE-280 Introduction to Signal Processing (4,0)	4
EGEE-370 Electronic Devices (3,3)	4
EGNR-340 Advanced Numerical Apps for Engineers (0,2)	1
Concentration/Technical Elective / Engineering Option	3
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Junior Year – Spring Semester

[†] EGEE-355 Microcontroller Systems (3,3)	4
Concentration/Technical Elective / Engineering Option	4
Humanities Elective (3 or 4 cr)	4
Social Science Elective (3,0)	3
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Senior Year – Fall Semester

[†] EGEE-320 Digital Design (3,3)	4
EGNR-491 Engineering Design Project I (2,3)	3
EGNR-346 Probability and Statistics Lab for Engineers (0,2)	1
MATH-308 Probability and Mathematical Statistics (3,0)	3
Concentration/Technical Elective / Engineering Option	4
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Senior Year – Spring Semester

[†] EGEE-425 Digital Signal Processing (2,2)	3
EGNR-495 Engineering Design Project II (1,6)	3
Concentration/Technical Elective / Engineering Option	3
Cultural Diversity Elective (3,0)	3
Humanities Elective (3,0)	3
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Total Credits: 128

Computer Science Core Elective Courses

CSCI-201 Data Structures and Algorithms (4,0) 4 (*Fall*) **CSCI-221** Computer Networks (2,2) 3 (*Spring*)

General Technical Electives (14 cr)

CSCI-281 or higher
EGEE-310 or higher
EGEM-220
EGME-275 or higher
EGET-310
EGRS-460 or higher
MATH-215 or higher
 Any course from concentrations

Renewable Energy Concentration (14 cr)

EGNR-261 Energy Systems (3,0)
[†]**EGNR-361** Energy Systems Lab (0,3)
[†]***EGEE-330** Electro-Mechanical systems (3,2)
[†]***EGEE-411** Power Distribution & Trans (3,0)
[†]***EGEE-475** Power Electronics (3,3)
[†]***EGNR-362** Vehicle Energy Systems (2,3)
 *= must take two of the four
 General Technical Elective

Robotics & Automation Concentration (14 cr)

EGRS-385 Robotics Engineering (3,3)
EGRS-430 Sys Integration and Machine Vision (3,3)
EGRS-435 Automated Manufacturing Systems (2,3)
 General Technical Elective

[†]=course offered only every other year