

## General Education

### Foundations: (12 Credits)

#### Oral Communication (3 Credits)

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#### Written Communication (3 Credits)

ENGL 1200 College Composition

#### Quantitative Reasoning (3 Credits)

MATH 1410 Pre-Calculus

#### Technological Literacy (3 Credits)

ENGT 1100 Introduction to Engineering Technology

### Discoveries: (Credits 29)

#### Art/Humanities (9 Credits)

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#### Social Sciences (9 Credits)

ECON 1000 Elements of Economics OR ECON 2100 Principles of Microeconomics

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#### Natural Sciences & Technology (11 Credits)

MATH 2410 Calculus I

MATH 2420 Calculus II

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### Program Elective: (3 Credits)

CMSC 1200 Problem Solving and Programming Constructs

### Competencies:

#### Quantitative Applications

MATH 2420 Calculus II

#### Applied Methodologies

ECET 2160 Electric Circuits II

#### Intercultural Fluency

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#### Ethical Reasoning

ECET 4900 Senior Project Proposal

#### Information Literacy

ECET 4900 Senior Project Proposal

#### Writing Intensive

ECET 3560 Microprocessor Engineering

ECET 4910 Senior Project

#### Keystone Experience

ECET 4910 Senior Project

## Program Requirements

### Required Major Courses: (46 Credits)

ECET 1110 Electric Circuits I

ECET 2160 Electric Circuits II

ECET 2535 Digital Electronics Design

ECET 2570 Intro to Microprocessor Design

ECET 3535 Microprocessor Interfacing

ECET 3560 Microprocessor Engineering

ECET 4640 Computer Networking

ECET 4900 Senior Project Proposal

ECET 4910 Senior Project

CMSC 1240 Computer Programming I

PHYS 2500 & PHYS 2510 University Physics I Lecture and Lab

PHYS 2600 & PHYS 2610 University Physics II Lecture and Lab

ENGL 3230 Technical Writing

### Required Concentration Courses: (24 Credits)

ECET 2215 Introduction to Instrumentation

CMSC 2040 Object-Oriented Programming

CMSC 3040 Data Structures

CMSC 3240 Computer Architecture

CMSC 3320 Technical Computing using JAVA

CMSC 4000 Operating Systems

MATH 1510 Discrete Structures

MATH 3210 Linear Algebra I

### Major Electives: (6 Credits)

Choose two of the below courses:

ECET 4950 ECET Internship, ECET 3990 Special Topics in ECET, CMSC 1380 Introduction to Programming in Python, CMSC 3360 Fortran, CMSC 3140 Analysis of Algorithms, CMSC 4200 Artificial Intelligence, CMSC 4080 Structures of Programming Languages, Any ITE course, Any CMSC course over 1240 not listed above, Any MATH course in statistics or above Calculus II

## Suggested Four Year Course Sequence

### Year 1

#### Fall Semester

CMSC 1200 – Problem Solving and Prog. Concepts  
ENGL 1200 – College Composition  
ENGT 1100 – Introduction to Engineering Technology  
Discoveries: Arts and Humanities  
Discoveries: Social Sciences

#### Spring Semester

CMSC 1240 - Computer Programming I  
MATH 1510 - Discrete Structures  
ECET 1110 – Electric Circuits I  
MATH 1410 – Pre-Calculus  
Foundations: Oral Communication

### Year 3

#### Fall Semester

CMSC 3240 - Computer Architecture  
ECET 3535 - Microprocessor Interfacing  
PHYS 2500 – University Physics I  
PHYS 2510 – University Physics I Lab  
Discoveries: Arts and Humanities  
or Intercultural Fluency

#### Spring Semester

CMSC 4000 - Operating Systems  
ECET 3560 - Microprocessor Engineering  
MATH 3210 - Linear Algebra I  
PHYS 2600 – University Physics II  
PHYS 2610 – University Physics II Lab

### Year 2

#### Fall Semester

CMSC 2040 - Object-Oriented Programming  
ECET 2160 – Electric Circuits II  
ECET 2535 – Digital Electronics Design  
MATH 2410 - Calculus I

#### Spring Semester

CMSC 3040 - Data Structures  
ECET 2215 - Introduction to Instrumentation  
ECET 2570 - Intro to Microprocessor Design  
ENGL 3230 – Technical Writing  
MATH 2420 - Calculus II

### Year 4

#### Fall Semester

ECET 4640 - Computer Networking  
ECET 4900 - Senior Project Proposal  
ECON 1000 - Elements of Economics  
or ECON 2100 – Principles of Microeconomics  
Major Elective  
Discoveries: Arts and Humanities

#### Spring Semester

CMSC 3320 - Technical Computing Using JAVA  
ECET 4910 - Senior Project  
Major Elective  
Discoveries: Social Sciences  
Discoveries: Natural Sciences and Technology

