2022 – 2023 Computer Engineering Course Flow Chart
Embedded Systems Focus Area – Model 4 Year Program

Year 1
- Fall Term
  - PHYS 1050 Physics 1: Mechanics (3)
  - MATH 1510 Applied Calculus 1 (3)
  - MATH 1210 Classical and Linear Algebra (3)
  - CHEM 1100 Introduction to University Chemistry 1 (3)
  - CHEM 1122 Introduction to Chemical Techniques for Engineering 1 (1.5)
  - COMP 1012 Computer Programming for Scientists and Engineers (3)
  - ENG 1440 Introduction to Statics (3)
  - ENG 1450 Introduction to Electrical and Computer Engineering (3)
  - ECE 2220 Digital Logic Systems (3)
  - ECE 2262 Electric Circuits (4)

- Winter Term
  - MATH 2130 Engineering Mathematical Analysis 1 (3)
  - MATH 2132 Engineering Mathematical Analysis 2 (3)
  - MATH 2150 Engineering Mathematical Analysis 3 (3)
  - ECE 2160 Electronics 1E (4)
  - ECE 3610 Microprocessor Interfacing (4)
  - COMP 2140 Data Structures and Algorithms (4)
  - ECE 3760 Digital Systems Design 1 (4)

Year 2
- Fall Term
  - PHYS 2150 Modern Physics for Engineers (3)
  - MATH 3132 Engineering Mathematical Analysis 3 (3)
  - STAT 2220 Statistics for Engineers (3)
  - ECE 3740 Systems Engineering Principles 1 (4)
  - ECE 3780 Signal Processing 1 (4)

- Winter Term
  - ECE 4150 Control Systems (4)
  - ECE 4830 Signal Processing 2 (4)
  - MATH 3120 Applied Discrete Mathematics (3)
  - ANTH 2430 Ecology, Technology and Society (3)
  - ECE 3760 Digital Systems Design 1 (4)
  - ECE 4240 Microprocessor Interfacing (4)
  - COMP 3430 Digital Systems Design 1 (4)

Year 3
- Fall Term
  - MATH 1210 Classical and Linear Algebra (3)
  - MATH 2130 Engineering Mathematical Analysis 1 (3)
  - ECE 3700 Telecomm. Network Engineering (4)
  - ECE 3770 Telecomm. Network Engineering (4)

- Winter Term
  - ENG 1460 Introduction to Thermal Sciences (3)
  - EN 2040 Introduction to Engineering Communication (3)
  - ECE 3790 Engineering Algorithms (4)
  - ECE 3700 Digital Systems Design 1 (4)

Year 4
- Fall Term
  - MATH 1510 Applied Calculus 1 (3)
  - MATH 1710 Applied Calculus 2 (3)
  - ECE 4600 Group Design Project (8)

Additional required elective courses which may be completed in any term.

1. The written English requirement is satisfied by completing three (3) credit hours from the list of approved Written English Courses for Engineering Students listed in the Academic Calendar (see Price Faculty of Engineering, Faculty Academic Regulations).

2. Students must take either of:
   - ENG 2030 Engineering Communication: Strategies for the Profession
   - ENG 2040 Engineering Communication: Strategies, Practice, and Design

3. Technical Electives:
   - Five (5) technical electives are required to complete the program. Three (3) form part of the Focus Area.
   - At most two (2) of these electives may be selected from the list of approved Electrical Engineering courses.
   - Technical electives may be taken at anytime, subject to prerequisites.

This flow chart is intended as a guide, and only applies for the current academic year. It should not be used as a guide for subsequent years. Errors may be present in this document. Students should refer to information in the Academic Calendar.
Computer Engineering Focus Areas

Students wishing to pursue more focused studies in a Computer Engineering subject/research area have the choice of doing so through a recognized Focus Area. Courses taken towards a Focus Area take the place of some of the Technical Electives required in the Computer Engineering program.

**EMBEDDED SYSTEMS FOCUS AREA**

Requirements:
To complete the Embedded Systems Focus the prescribed course must be taken. Three (3) of the nine Embedded Systems Technical Elective courses must also be taken. To complete the program requirements, two (2) additional courses must be selected from the elective courses listed in the Computer Engineering Standard Program.

**Prescribed Embedded Systems Course** (required)
- ECE 4150 Control Systems

**Embedded Systems Technical Elective Courses** (3 required)
- ECE 3770 Digital Systems Design 2
- ECE 4180 Introduction to Robotics
- ECE 4440 Computer Vision
- ECE 4560 Modern Computing Systems
- ECE 4610 Biomedical Instrumentation and Signal Processing
- ECE 4740 Digital System Implementation
- COMP 3020 Human-Computer Interaction 1
- COMP 4580 Computer Security