Computer Engineering Options

- **Hardware Emphasis**
  
  ECE 338 – Intermediate Logic Design  \( \text{Prerequisite(s):} \ 238L \)
  
  ECE 438 – Design of Computers  \( \text{Prerequisite(s):} \ 338, 344L \)

- **Software Emphasis**
  
  ECE 335 – Integrated Software Systems  \( \text{Prerequisite(s):} \ 330 \)
  
  ECE 435 – Software Engineering  \( \text{Prerequisite(s):} \ 331, 335 \)

Electrical Engineering Options

- **Systems and Controls:**
  
  ME 481/581 – Digital Control of Mechanical Systems  \( \text{Prerequisite(s):} \ ME 380 \)
  
  ECE 446 – Design of Feedback Control Systems  \( \text{Prerequisite(s):} \ ECE 345 \)

- **Energy/Power Systems:**
  
  ECE 482/582 – Electric Drives and Transformers  \( \text{Prerequisite(s):} \ 213 \)
  
  ECE 483/583 – Power Electronics  \( \text{Prerequisite(s):} \ 321L, 371, 381 \)
  
  ECE 484/584 – Photovoltaics  \( \text{Prerequisite(s):} \ 381 \)
  
  ECE 488/588 – Smart Grid Technologies  \( \text{Prerequisite(s):} \ 482, 483, 484 \)

- **Signals and Communications:**
  
  ECE 439 – Intro to Digital Signal Processing  \( \text{Prerequisite(s):} \ 314 \)
  
  ECE 442 – Intro to Wireless Communications  \( \text{Prerequisite(s):} \ 314, 360 \)

- **Microelectronics:**
  
  ECE 471 – Materials and Devices II  \( \text{Prerequisite(s):} \ 360, 371 \)
  
  ECE 474L/574L/NSMS 574L – Microelectronics Proc  \( \text{Prerequisite(s):} \ 371 \)
  
  OR
  
  ECE 421/523 – Analog Electronics  \( \text{Prerequisite(s):} \ 322L \)
  
  ECE 424 – Digital VLSI Design  \( \text{Prerequisite(s):} \ 321L, 338 \)

- **Electromagnetics:**
  
  ECE 460/560 – Intro to Microwave Engineering  \( PR: 360 \)
  
  ECE 469/569 – Antennas for Wireless Com Sys  \( PR: 360 \)
  
  ECE 495 – Computational Methods for Electromagnetics
  
  ECE 495 – Plasma Physics I

- **Digital Systems:**
  
  ECE 338 – Intermediate Logic Design  \( PR \ 238L \)
  
  ECE 438 – Design of Computers  \( PR: 338, 344L \)
  
  OR
  
  ECE 231 – Intermediate Programming and Eng Prob Solving  \( PR: 131 \)
  
  ECE 331 – Data Structures and Algorithms  \( PR: 231, MATH 327 \)

- **OptoElectronics:**
  
  ECE 471 – Materials and Devices II  \( PR: 360, 371 \)
  
  ECE 475 – Intro to Electro-Optics and Opto-Electronics  \( PR: 371 \)

ECE Technical Electives

Technical Electives are approved 300-level and above courses developed in consultation with a student’s academic advisor. These can be taken from ECE, Computer Science, Math, Physics, or other engineering-related courses. ECE 231 - Intermediate Programming is the only 200-level exception allowed for the EE program only.

- Computer Engineering: 6 credits required
- Electrical Engineering: 3 credits required

_Last Revision 4/1/16_