Computer Engineering – Electronic Devices for Ubiquitous Computing
For Students Entering 2nd or 3rd Year in Fall 2016

**Year 2:**

**Term A**
- AM 2270a Applied Mathematics for Engineering II
- CS 1037a Computer Science Fundamentals II
- ECE 2205a Electric Circuits 1
- ECE 2277a Digital Logic Systems
- ECE 2240a Electrical Laboratory
- ES 2211F Engineering Communications

**Term B**
- AM 2276b Applied Mathematics for Elec & Mech Eng III
- ECE 2233b Circuits and Systems
- ECE 2231b Introduction to Electronics
- ECE 2241b Electrical Laboratory II
- ECE 3375b Microprocessors and Microcomputers
- ECE 3380b Advanced Digital Systems

**Year 3:**

**Term A**
- Math 21S1a Discrete Structures for Engineering
- ECE 3330a Control Systems
- ECE 3349a Introduction of VLSI
- ECE 3389a Computer System Design
- CS 2211a Software Tools and Systems Programming
- SE 2203a Software Design

**Term B**
- CS 2210b Data Structures and Algorithms
- ECE 3331b Introduction to Signal Processing
- ECE 2236b Magnetic Circuits and Transmission Lines
- ECE 3390b Hardware/Software Co-Design
- SS 2143b Applied Probability and Statistics
- 0.5 non-technical elective taken from the approved list

**Year 4:**

**Term A**
- Bus 2299E Business for Engineers
- ECE 4415 Computer Engineering Design Project
- SE 3313a Operating Systems for Software Engineering
- ECE 4436a Networking
- ECE 4437a Communications Theory
- One 0.5 technical elective

**Term B**
- Bus 2299E Business for Engineers
- ECE 4415 Computer Engineering Design Project
- SE 3314b Computer Networks Applications
- ECE 4460b Real-Time and Embedded Systems
- ES 4498G Engineering Ethics, Sustainable Development and the Law
- One 0.5 technical elective

*Maximum of one Computer Science 0.5 course from the following: Computer Science 3319a/b, 3340a/b, 3346a/b.*

**NOTES:**

**Technical Elective List:**

Some technical electives may not be offered in a given academic year. Consult the department for accurate listing.

<table>
<thead>
<tr>
<th>Technical Elective</th>
<th>Course Code</th>
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<tbody>
<tr>
<td>Electric Machines</td>
<td>ECE 3332a/b</td>
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<tr>
<td>Electric Power Systems 1</td>
<td>ECE 3333a/b</td>
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<tr>
<td>Electronic Circuits</td>
<td>ECE 3370a/b</td>
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<tr>
<td>Communication Electronics 1</td>
<td>ECE 4429a/b</td>
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<tr>
<td>Advanced Digital Signal Processing</td>
<td>ECE 4438a/b</td>
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<tr>
<td>Advanced Image Processing &amp; Analysis</td>
<td>ECE 4445a/b</td>
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<tr>
<td>Introduction to Digital Image Processing</td>
<td>ECE 4455a/b</td>
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<tr>
<td>Biomedical Systems Analysis</td>
<td>ECE 4469a/b</td>
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<td>Applied Control Systems</td>
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<td><strong>Maximum one of:</strong></td>
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<tr>
<td>Databases 1</td>
<td>CS 3319a/b</td>
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<tr>
<td>Analysis of Algorithms 1</td>
<td>CS 3340a/b</td>
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<tr>
<td>Artificial Intelligence 1</td>
<td>CS 3346a/b</td>
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