## Computer Engineering: Electronic Devices for Ubiquitous Computing (Option A)

### September 2021 (for students who entered first year in September 2018)

### Year 2

#### Term A
- AM 2270A  Applied Mathematics for Engineering II
- CS 1037A  Computer Science Fundamentals II
- ECE 2205A  Electric Circuits I
- ECE 2240A  Electrical Laboratory
- ECE 2277A  Digital Logic Systems
- Writ 2130F  Building Better (Communication) Bridges: Rhetoric & Professional Communication for Engineers

#### Term B
- AM 2276B  Applied Mathematics for Elec. & Mech. Engineering II
- ECE 2231B  Introduction to Electronics
- ECE 2233B  Circuits and Systems
- ECE 2242B  Principles of Design in Electrical Engineering
- ECE 3375B  Microprocessors and Microcomputers
- ECE 3380B  Advanced Digital Systems

### Year 3

#### Term A
- CS 2211A  Software Tools and Systems Programming
- Math 2151A  Discrete Structures for Engineering
- ECE 3330A  Control Systems
- ECE 3349A  Introduction of VLSI
- ECE 3389A  Computer System Design
- One 0.5 non-technical elective

#### Term B
- CS 2210B  Data Structures and Algorithms
- ECE 2236B  Magnetic Circuits and Transmission Lines
- ECE 3331B  Introduction to Signal Processing
- ECE 3390B  Hardware/Software Co-Design
- SE 2203b  Software Design
- SS 2143B  Applied Statistics and Data Analysis for Engineers

### Year 4

#### Term A
- ECE 4415  Computer Engineering Design Project
- ECE 4436A  Networking: Principles, Protocols & Architecture
- ECE 4437A  Communications Theory
- SE 3313A  Operating Systems for Software Engineering
- One 0.5-credit non-technical elective from approved list
- One 0.5-credit technical elective

#### Term B
- ECE 4415  Computer Engineering Design Project
- ECE 4460B  Real-Time and Embedded Systems
- ELI 4110G  Engineering Ethics, Sustainable Development & the Law
- SE 3314B  Computer Networks Applications
- One 0.5-credit technical elective
- One 0.5-credit non-technical elective from approved list

### NOTES:

#### Non-technical electives:
Please choose 1.0 credits (one 1.0-credit or two 0.5-credit courses) from the 1000 level and one 0.5-credit course from the 2000 (or higher) level.

### Technical Electives
Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>ECE 3322A/B</td>
<td>Electric Machines</td>
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<tr>
<td>ECE 3333A/B</td>
<td>Electric Power Systems I</td>
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<tr>
<td>ECE 3337A/B</td>
<td>Electronic Circuits</td>
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<tr>
<td>ECE 3370A/B</td>
<td>Communication Electronics I</td>
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<tr>
<td>ECE 4429A/B</td>
<td>Advanced Digital Signal Processing</td>
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<tr>
<td>ECE 4438A/B</td>
<td>Advanced Image Processing and Analysis</td>
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<tr>
<td>ECE 4445A/B</td>
<td>Introduction to Digital Image Processing</td>
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<tr>
<td>ECE 4455A/B</td>
<td>Biomedical Systems Analysis</td>
</tr>
<tr>
<td>ECE 4469A/B</td>
<td>Applied Control Systems</td>
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<tr>
<td>ECE 4460A/B</td>
<td>Machine Learning &amp; Design</td>
</tr>
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**Maximum one of:**

- CS 3319A/B  Databases I
- CS 3340A/B  Analysis of Algorithms I
- CS 3346A/B  Artificial Intelligence I