# Computer Engineering – Software Systems for Ubiquitous Computing

## For Students Entering 2nd Year in Fall 2014

### Year 2:

#### Term A
- AM 2415 Applied Mathematical Methods
- Math 2151a Discrete Structures for Engineering
- CS 1037a Computer Science Fundamentals II
- ECE 2205a Electric Circuits 1
- ECE 2277a Digital Logic Systems
- SS 2141a Applied Probability and Statistics for Engineers

#### Term B
- AM 2415 Applied Mathematical Methods
- ECE 3375b Microprocessors and Microcomputers
- ECE 3380b Advanced Digital Systems
- MSE 2233b Circuits and Systems
- SE 2203b Software Design
- SE 2205b Algorithms and Data Structures for Object-Oriented Des.

### Year 3:

#### Term A
- ECE 3330a Control Systems
- ECE 3389a Computer System Design
- ECE 4436a Networking: Principles, Protocols, and Architecture
- SE 3313a Operating Systems for Software Engineering
- SE 3316a Web Technologies
- SE 3352a Software Requirements and Analysis

#### Term B
- ECE 3331b Introduction to Signal Processing
- ECE 3390b Hardware/Software Co-Design
- ECE 4460b Real-Time and Embedded Systems
- SE 3314b Design and Implementation of Computer Networks
- SE 3353b Human-Computer Interface Design
- ES 2211G Engineering Communications

### Year 4:

#### Term A
- Bus 2299E Business for Engineers
- ECE 4415 Computer Engineering Design Project
- ECE 4437a Communications Theory
- SE 4452a Software Verification and Validation
- Two 0.5 technical electives

#### Term B
- Bus 2299E Business for Engineers
- ECE 4415 Computer Engineering Design Project
- SE 4453b Software Quality, Reliability and Maintenance
- ES 4498G Engineering Ethics, Sustainable Development and the Law
- One 0.5 technical elective
- 0.5 non-technical elective taken from the approved list

### 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>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>ECE 4429a/b</td>
<td>Advanced Digital Signal Processing</td>
</tr>
<tr>
<td>ECE 4438a/b</td>
<td>Advanced Image Processing and Analysis</td>
</tr>
<tr>
<td>ECE 4445a/b</td>
<td>Introduction to Digital Image Processing</td>
</tr>
<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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**Maximum one of:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>SE 3309a/b</td>
<td>Database Management Systems</td>
</tr>
<tr>
<td>SE 3310a/b</td>
<td>Theoretical Foundations of Software Engineering</td>
</tr>
<tr>
<td>SE 3351a/b</td>
<td>Software Project and Process Management</td>
</tr>
<tr>
<td>SE 4472a/b</td>
<td>Information Security</td>
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