

## Computer Engineering: Software Systems for Ubiquitous Computing (Option B)

September 2019 (for students who entered first year in September 2016 or 2017)

<p><b>Year 2</b></p> <p><b>Term A</b></p> <p>AM 2270A Applied Mathematics for Engineering II          CS 1037A Computer Science Fundamentals II          ECE 2205A Electric Circuits I          ECE 2277A Digital Logic Systems          Math 2151A Discrete Structures for Engineering          SE 2203A Software Design</p> <p><b>Term B</b></p> <p>AM 2276B Applied Mathematics for Elec. &amp; Mech. Engineering III          ECE 3375B Microprocessors and Microcomputers          ECE 3380B Advanced Digital Systems          MSE 2233B Circuits and Systems          SE 2205B Algorithms and Data Structures for Object-Oriented Design          SS 2143B Applied Statistics and Data Analysis for Engineers</p> <p><b>Year 3</b></p> <p><b>Term A</b></p> <p>ECE 3330A Control Systems          ECE 3389A Computer System Design          ECE 4436A Networking: Principles, Protocols &amp; Architecture          SE 3313A Operating Systems for Software Engineering          SE 3316A Web Technologies          SE 3352A Software Requirements and Analysis</p> <p><b>Term B</b></p> <p>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          Writ 2130G Building Better (Communication) Bridges: Rhetoric &amp; Professional Communication for Engineers</p> <p><b>Year 4</b></p> <p><b>Term A</b></p> <p>ECE 4415 Computer Engineering Design Project          ECE 4437A Communications Theory          SE 4452A Software Verification and Validation          One 0.5-credit non-technical elective from approved list          Two 0.5-credit technical electives</p> <p><b>Term B</b></p> <p>ECE 4415 Computer Engineering Design Project          ES 4498G Engineering Ethics, Sustainable Development &amp; the Law          SE 4455B Cloud Computing: Concepts, Technologies and Applications          One 0.5-credit technical elective          Two 0.5-credit non-technical electives from approved list</p>	<p><b>NOTES:</b></p> <p><b>Non-technical electives:</b>          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.</p> <p><b>Technical Electives</b>          Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing.</p> <table border="1" style="width: 100%;"> <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> </tr> <tr> <td colspan="2" style="text-align: center;"><b>Maximum one of:</b></td> </tr> <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> </tr> </table>	ECE 4429A/B	Advanced Digital Signal Processing	ECE 4438A/B	Advanced Image Processing and Analysis	ECE 4445A/B	Introduction to Digital Image Processing	ECE 4455A/B	Biomedical Systems Analysis	ECE 4469A/B	Applied Control Systems	<b>Maximum one of:</b>		SE 3309A/B	Database Management Systems	SE 3310A/B	Theoretical Foundations of Software Engineering	SE 3351A/B	Software Project and Process Management	SE 4472A/B	Information Security
ECE 4429A/B	Advanced Digital Signal Processing																				
ECE 4438A/B	Advanced Image Processing and Analysis																				
ECE 4445A/B	Introduction to Digital Image Processing																				
ECE 4455A/B	Biomedical Systems Analysis																				
ECE 4469A/B	Applied Control Systems																				
<b>Maximum one of:</b>																					
SE 3309A/B	Database Management Systems																				
SE 3310A/B	Theoretical Foundations of Software Engineering																				
SE 3351A/B	Software Project and Process Management																				
SE 4472A/B	Information Security																				