

**Computer Engineering – Software Systems for Ubiquitous Computing (Option B)**

**September 2018** (students who entered first year *prior to September 2016*)

**Year 2:**

**Term A**

|            |                                     |
|------------|-------------------------------------|
| AM 2270a   | Applied Mathematical Methods        |
| CS 1037a   | Computer Science Fundamentals II    |
| ECE 2205a  | Electric Circuits 1                 |
| ECE 2277a  | Digital Logic Systems               |
| Math 2151a | Discrete Structures for Engineering |
| SE 2203a   | Software Design                     |

**Term B**

|           |   |
|-----------|---|
| AM 2276b  | Applied Mathematical Methods                            |
| ECE 3375b | Microprocessors and Microcomputers                      |
| ECE 3380b | Advanced Digital Systems                                |
| MSE 2233b | Circuits and Systems                                    |
| SE 2205b  | Algorithms and Data Structures for Object-Oriented Des. |
| SS 2143b  | Applied Statistics and Data Analysis for Engineers      |

**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  |
| Writing 2130g | Building Better (Communication) Bridges, Rhetoric & Professional Communication for Engineers |

**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 4455b  | Cloud Computing: Concepts, Technologies and Applications |
| ES 4498G  | Engineering Ethics, Sustainable Development and the Law  |
| One 0.5 technical elective                              |  |
| 0.5 non-technical elective taken from the approved list |  |

**NOTES:**

**Technical Elective List:**

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

|                        |   |
|------------------------|---|
| 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                            |