Class Schedule - Spring 2015

Electrical and Computer Engineering

ECE 498  **Special Topics in ECE**  credit: 0 TO 4 hours.

Subject offerings of new and developing areas of knowledge in electrical and computer engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 0 to 4 undergraduate hours. 0 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

<table>
<thead>
<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>62440</td>
<td>Lecture</td>
<td>RC3</td>
<td>03:00 PM - 04:20 PM</td>
<td>MW</td>
<td>3017 - Electrical &amp; Computer Eng Bldg</td>
<td>Roy Choudhury, R</td>
</tr>
</tbody>
</table>

Credit Hours: 3 hours

Smartphone Computing and Application
Not intended for Graduate - Urbana-Champaign.
Topic: Smartphone Computing and Applications. Prerequisites: One of ECE 391 (Comp. Sys. Eng.), ECE 241 (Sys. Programming), ECE 310 (Digital Signal Processing) or consent of instructor. This course will introduce cross-disciplinary ideas, techniques, and algorithms in mobile computing, with an emphasis on how they can be composed to build complete systems and applications on the platform of smartphones, tablets, and wearable devices such as glasses, watches, etc. Topics of interest include smartphone sensing, energy efficiency, indoor localization, context-awareness, gesture recognition, CPU-offloading, and data analytics. As an example, students will consider problems in indoor navigation, understand how ?signal correlation? may be an effective technique to solve the problem, and later utilize the same technique for a different application, say health monitoring. The course will require students to learn a variety of these techniques and ways in which they can be inter-woven with each other (through existing case studies). In the second half of the semester, students will use some of these techniques to work on an open-ended project that results in a functional mobile system. Credit: 3 undergrad; 4 graduate

| 62441| Lecture  | RC4     | 03:00 PM - 04:20 PM   | MW   | 3017 - Electrical & Computer Eng Bldg | Roy Choudhury, R     |

Credit Hours: 4 hours

Smartphone Computing and Application
Restricted to Graduate - Urbana-Champaign.
Topic: Smartphone Computing and Applications. Prerequisites: One of ECE 391 (Comp. Sys. Eng.), ECE 241 (Sys. Programming), ECE 310 (Digital Signal Processing) or consent of instructor. This course will introduce cross-disciplinary ideas, techniques, and algorithms in mobile computing, with an emphasis on how they can be composed to build complete systems and applications on the platform of smartphones, tablets, and wearable devices such as glasses, watches, etc. Topics of interest include smartphone sensing, energy efficiency, indoor localization, context-awareness, gesture recognition, CPU-offloading, and data analytics. As an example, students will consider problems in indoor navigation, understand how ?signal correlation? may be an effective technique to solve the problem, and later utilize the same technique for a different application, say health monitoring. The course will require students to learn a variety of these techniques and ways in which they can be inter-woven with each other (through existing case studies). In the second half of the semester, students will use some of these techniques to work on an open-ended project that results in a functional mobile system. Credit: 3 undergrad; 4 graduate