## Class Schedule - Fall 2013

### 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. 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>61406</td>
<td>Lecture</td>
<td>MH</td>
<td>10:00 AM - 11:50 AM</td>
<td>F</td>
<td>203 - Transportation Building</td>
<td>Hasegawa-Johnson, M</td>
</tr>
<tr>
<td></td>
<td>Lecture</td>
<td>MH</td>
<td>10:00 AM - 10:50 AM</td>
<td>MW</td>
<td>1111 - Siebel Center for Comp Sci</td>
<td>Hasegawa-Johnson, M</td>
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</tbody>
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Credit Hours: 4 hours
Signal and Image Analysis
Topic: Signal and Image Analysis. Prerequisites: Integral and differential calculus; introductory probability or statistics course; some familiarity with linear algebra; graduate standing in biological, physical, social, engineering or computer sciences. An introduction to signal analysis and processing methods for advanced undergraduates or graduate students in the biological, physical, and social, engineering and computer sciences. The course will develop an understanding of signal analysis methods and their capabilities, weaknesses, and artifacts with an emphasis on their practical application. Significant hands-on processing and interpretation of real data will be performed using Matlab. Students may not receive credit for both ECE 310 and ECE 498MH. "Credit in this course can not be used to satisfy requirements for an ECE graduate degree."

| 61466 | Lecture| RC3     | 10:00 AM - 11:20 AM | MW   | 203 - Transportation Building  | Roy Choudhury, R    |

Credit Hours: 3 hours
Smartphone Computing & Appl.
Not intended for Graduate - Urbana-Champaign.
Prerequisites: One of ECE391, ECE241, or CS225, 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 systems and applications. Topics of interest include multi-modal sensing, energy efficiency, 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 end with a discussion of the longer-term challenges in mobile computing, and how techniques from different disciplines may need to come together to eventually solve them.

| 61467 | Lecture| RC4     | 10:00 AM - 11:20 AM | MW   | 203 - Transportation Building  | Roy Choudhury, R    |

Credit Hours: 4 hours
Smartphone Computing & Appl.
Restricted to Graduate - Urbana-Champaign.
Prerequisites: One of ECE391, ECE241, or CS225, 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 systems and applications. Topics of interest include multi-modal sensing, energy efficiency, 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 end with a discussion of the longer-term challenges in mobile computing, and how techniques from different disciplines may need to come together to eventually solve them.