Class Schedule - Fall 2018

Electrical and Computer Engineering

ECE 586  **Topics in Decision and Control**  credit: 4 hours.
Lectures and discussions related to advanced topics and new areas of interest in decision and control theory: hybrid, sampled-data, and fault tolerant systems; control over networks; vision-based control; system estimation and identification; dynamic games. May be repeated up to 12 hours within a term, and up to 20 hours total for the course. Credit towards a degree from multiple offerings of this course is not given if those offerings have significant overlap, as determined by the ECE department. Prerequisite: As specified each term. It is expected that each offering will have a 500-level course as prerequisite or co-requisite.

<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>44092</td>
<td>Lecture</td>
<td>DL</td>
<td>02:00 PM - 03:20 PM</td>
<td>TR</td>
<td>4070 - Electrical &amp; Computer Eng Bldg</td>
<td>Liberzon, D</td>
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Hybrid Systems and Control
Restricted to Graduate - Urbana-Champaign.
Switched/hybrid systems are dynamical systems that combine continuous dynamics and discrete events. Such systems are of theoretical interest and important in many applications, and they have attracted considerable attention in the recent control literature. This advanced graduate-level course will introduce the students to recent research results on analysis and design of switched and hybrid systems. Prerequisite: ECE 515.

| 68114| Lecture  | GT      | 09:30 AM - 10:50 AM| TR   | 3015 - Electrical & Computer Eng Bldg  | Hajek, B    |

Credit Hours: 4 hours
Game Theory
Restricted to Graduate - Urbana-Champaign.
Prerequisites: ECE 490 or ECE 515 or ECE 534 Game theory is the theory of decision problems with multiple decision makers, often with conflicting objectives. The theory seeks to describe the actions of decision makers in various settings, and, in some cases, to aid in the design of incentives to steer the collective actions towards specified objectives. The course focuses on fundamental theory, with applications to a broad range of problems arising in networks, such as resource allocation, incentives for investment, and pricing.