Class Schedule - Fall 2017

Computer Science

CS 498 Special Topics  credit: 1 to 4 hours.
Subject offerings of new and developing areas of knowledge in computer science intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

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<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>61482</td>
<td>Laboratory</td>
<td>AB1</td>
<td>12:00 PM - 12:50 PM</td>
<td>W</td>
<td>0220 - Siebel Center for Comp Sci</td>
<td>Bambenek, J Campbell, R Kesan, J</td>
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<tr>
<td>61483</td>
<td>Laboratory</td>
<td>AB2</td>
<td>01:00 PM - 01:50 PM</td>
<td>W</td>
<td>0220 - Siebel Center for Comp Sci</td>
<td>Bambenek, J Campbell, R Kesan, J</td>
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<tr>
<td>61457</td>
<td>Lecture</td>
<td>AL1</td>
<td>10:00 AM - 11:15 AM</td>
<td>MW</td>
<td>1302 - Siebel Center for Comp Sci</td>
<td>Bambenek, J Campbell, R Kesan, J</td>
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Digital Forensics

Credit Hours: 4 hours
Digital Forensics
Digital forensics concerns the acquisition and investigation of evidence from all devices capable of storing digital data and is often related to the prosecution of cyber crime and fraud. The class introduces the process of forensic investigation, chain of custody, forensics analysis, court proceedings and the legal justice system. It includes examination of digital storage and network traffic from personal computers, enterprise systems, embedded devices, and mobiles. Laboratory student exercises will use the tools and techniques of digital forensics investigators. Prerequisite: a basic knowledge of computer science concepts including operating systems and networking. Information about pre-requisites and the self-assessment quiz can be seen at this link - http://publish.illinois.edu/digitalforensics1/prerequisite/

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<tbody>
<tr>
<td>68911</td>
<td>Lecture</td>
<td>AM3</td>
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<td>TR</td>
<td>3017 - Electrical &amp; Computer Eng Bldg</td>
<td>Miller, A</td>
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Credit Hours: 3 hours
Applied Cryptography

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<tbody>
<tr>
<td>68912</td>
<td>Lecture</td>
<td>AM4</td>
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<td>TR</td>
<td>3017 - Electrical &amp; Computer Eng Bldg</td>
<td>Miller, A</td>
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Credit Hours: 4 hours
Applied Cryptography
Restricted to Computer Science major(s). Restricted to Graduate - Urbana-Champaign.

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<tbody>
<tr>
<td>65109</td>
<td>Lecture-Discussion</td>
<td>DL1</td>
<td>09:30 AM - 10:45 AM</td>
<td>WF</td>
<td>1310 - Digital Computer Laboratory</td>
<td>Chan, T</td>
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Credit Hours: 4 hours
Theory II
### 69636
Lecture-Discussion  
OL3  
11:00 AM - 12:15 PM  
TR  
3269 - Beckman Institute  
Herman, G  
Sohn, M  
Zilles, C  

Credit Hours: 3 hours  
Intro to Online Learning Sys  
Restricted to students with Junior or Senior class standing.  
In this project-based course, students will learn about online learning systems as they develop questions and tools for an existing online learning platform. Students will learn core educational theories about how to make effective online learning systems including perspectives from statistics, cognitive science, and motivational research.

### 69637
Lecture-Discussion  
OL4  
11:00 AM - 12:15 PM  
TR  
3269 - Beckman Institute  
Herman, G  
Sohn, M  
Zilles, C  

Credit Hours: 4 hours  
Intro to Online Learning Sys  
Restricted to Graduate - Urbana-Champaign.  
In this project-based course, students will learn about online learning systems as they develop questions and tools for an existing online learning platform. Students will learn core educational theories about how to make effective online learning systems including perspectives from statistics, cognitive science, and motivational research.

### 66825
Lecture  
RK1  
02:00 PM - 03:15 PM  
MW  
1320 - Digital Computer Laboratory  
Kumar, R  

Credit Hours: 3 hours  
The Art of Web Programming

### 40091
Lecture  
SL3  
12:30 PM - 01:45 PM  
MW  
1404 - Siebel Center for Comp Sci  
Yershova, G  

Credit Hours: 3 hours  
Virtual Reality  
Fundamentals of virtual reality systems, including geometric modeling, transformations, graphical rendering, optics, the human vision system, the vestibular system, interface design, human factors, developer recommendations, and technological issues. Implementation exercises and a final project are included. Extensive programming background not required

### 40092
Lecture  
SL4  
12:30 PM - 01:45 PM  
MW  
1404 - Siebel Center for Comp Sci  
Yershova, G  

Credit Hours: 4 hours  
Virtual Reality  
Restricted to Graduate - Urbana-Champaign.  
Fundamentals of virtual reality systems, including geometric modeling, transformations, graphical rendering, optics, the human vision system, the vestibular system, interface design, human factors, developer recommendations, and technological issues. Implementation exercises and a final project are included. Extensive programming background not required

### 62232
Lecture-Discussion  
ST  
03:30 PM - 04:45 PM  
TR  
1109 - Siebel Center for Comp Sci  
Xie, T  

Credit Hours: 4 hours  
Software Testing  
Software systems are becoming increasingly complex and there is a growing awareness that software testing is needed to deal with this growing complexity. This course explores foundational concepts and practical techniques and tools for testing software and assuring its quality. Topics focus on testing of code, but will also cover analysis of software models and their use in testing. Topics cover software testing at the unit, module, subsystem, and system levels, automatic and manual techniques for generating and
validating test data, the testing process, functional testing, security testing, performance testing, and regression testing. Students will have opportunities to improve testing skills by using advanced industrial tools.

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<tbody>
<tr>
<td>69784</td>
<td>Lecture-Discussion</td>
<td>03:30 PM - 04:45 PM</td>
<td>TR</td>
<td>1109 - Siebel Center for Comp Sci</td>
<td>Xie, T</td>
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Credit Hours: 3 hours
Software Testing

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<td>69390</td>
<td>Online</td>
<td>ARRANGED -</td>
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<td>Xie, T</td>
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Software Testing
Restricted to MS: Civil Engr - Online - UIUC, MCS:Computer Sci Online -UIUC, MS:Mechanical Engineering -UIUC, MS: Aerospace Engr-Online-UIUC, or NDEG:Grad Nondegree-CE-UIUC.
Restricted to online non-degree, online MCS, online MSAE, online MSME, and online MSCE students. For more details on this course section, please see http://engineering.illinois.edu/online/courses/.

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<tr>
<td>67900</td>
<td>Lecture</td>
<td>09:30 AM - 10:45 AM</td>
<td>TR</td>
<td>1302 - Siebel Center for Comp Sci</td>
<td>Kravets, R</td>
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Credit Hours: 3 hours
Wireless Network Lab

Wireless networks are everywhere in our world, one laptops, smartphones, sensor and the new IoT devices popping up everywhere. Understanding how wireless networks work and why they break is the key to their successful deployment and integration. In the first half of this class, we focus on the basics of wireless networking, from the physical transmission of radio signals to the impact of lossy communication on higher layer routing and transport protocols. The second half of the class is dedicated to student let topics, including sensor networks, IoT, security and privacy, energy conservation and general performance improving techniques. Over the course of the semester, students design and implement a group project using a variety of wireless devices and technologies, ending with a project report and a poster presentation of their work.

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<tr>
<td>67901</td>
<td>Lecture</td>
<td>09:30 AM - 10:45 AM</td>
<td>TR</td>
<td>1302 - Siebel Center for Comp Sci</td>
<td>Kravets, R</td>
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Credit Hours: 4 hours
Wireless Network Lab

Restricted to Graduate - Urbana-Champaign.
Wireless networks are everywhere in our world, one laptops, smartphones, sensor and the new IoT devices popping up everywhere. Understanding how wireless networks work and why they break is the key to their successful deployment and integration. In the first half of this class, we focus on the basics of wireless networking, from the physical transmission of radio signals to the impact of lossy communication on higher layer routing and transport protocols. The second half of the class is dedicated to student let topics, including sensor networks, IoT, security and privacy, energy conservation and general performance improving techniques. Over the course of the semester, students design and implement a group project using a variety of wireless devices and technologies, ending with a project report and a poster presentation of their work.