Computer Science

CS 433  **Computer System Organization**  credit: 3 OR 4 hours.
Computer hardware design and analysis and interface with software. Advanced processor design, including superscalar, out-of-order
issue, branch prediction, and speculation. Memory hierarchy design, including advanced cache optimizations, main memory, and virtual
memory. Principles of multiprocessor design, including shared-memory, cache coherence, synchronization, and consistency. Other
advanced topics depending on time; e.g., GPUs and accelerators, warehouse computers and data centers, security. Same as CSE
422. 3 undergraduate hours. 4 graduate hours. Prerequisite: CS 233.

<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>36069</td>
<td>Lecture-Discussion</td>
<td>T3</td>
<td>11:00 AM - 12:15 PM</td>
<td>TR</td>
<td>1214 - Siebel Center for Comp Sci</td>
<td>Adve, S</td>
</tr>
<tr>
<td>43363</td>
<td>Lecture-Discussion</td>
<td>T4</td>
<td>11:00 AM - 12:15 PM</td>
<td>TR</td>
<td>1214 - Siebel Center for Comp Sci</td>
<td>Adve, S</td>
</tr>
</tbody>
</table>

Credit Hours: 3 hours
Not intended for First Time Freshman students.
Restricted to Undergrad - Urbana-Champaign.
For up-to-date information about CS course restrictions, please see the following link: http://go.cs.illinois.edu/CSregister

Credit Hours: 4 hours
Not intended for First Time Freshman students.
Restricted to Computer Science or Bioinformatics major(s). Restricted to Graduate - Urbana-Champaign.
For up-to-date information about CS course restrictions, please see the following link: http://go.cs.illinois.edu/CSregister