# Computer Science

## CS 421  Programming Languages & Compilers  
Credit: 3 OR 4 hours.

Structure of programming languages and their implementation. Basic language design principles; abstract data types; functional languages; type systems; object-oriented languages. Basics of lexing, parsing, syntax-directed translation, semantic analysis, and code generation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 233 or CS 240; CS 374.

<table>
<thead>
<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>30128</td>
<td>Lecture-Discussion</td>
<td>D3</td>
<td>04:00 PM - 05:15 PM</td>
<td>MF</td>
<td>100 - Noyes Laboratory</td>
<td>Gunter, E</td>
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</tbody>
</table>

Credit Hours: 3 hours  
Restricted to Computer Science or Statistics & Computer Science or Math & Computer Science or Computer Sci & Anthropology or Computer Sci & Astronomy or Computer Sci & Chemistry or Computer Sci & Linguistics or Computer Science&Crop Sciences or Computer Science and Music or Computer Science & Economics or Computer Science & Advertising or Computer Science & Geog & GIS or Computer Science & Philosophy major(s). 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

| 40087 | Lecture-Discussion | D4      | 04:00 PM - 05:15 PM | MF   | 100 - Noyes Laboratory | Gunter, E  |

Credit Hours: 4 hours  
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

| 71094 | Online            | DSO     | ARRANGED -        | -    | -                       | Beckman, A |

Credit Hours: 4 hours  
Additional ProctorU fees may apply This is a pilot course and no additional seats will be released.