# 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.

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<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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<tr>
<td>31375</td>
<td>Lecture-Discussion</td>
<td>B3</td>
<td>11:00 AM - 12:15 PM</td>
<td>TR</td>
<td>2079 - Natural History Building</td>
<td>Beckman, A</td>
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<td>31376</td>
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<td>11:00 AM - 12:15 PM</td>
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<td>Beckman, A</td>
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<td>03:30 PM - 04:45 PM</td>
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Credit Hours: 3 hours

For up-to-date information about CS course restrictions, please see the following link: [http://go.cs.illinois.edu/CSregister](http://go.cs.illinois.edu/CSregister)

Credit Hours: 4 hours

Restricted to Graduate - Urbana-Champaign.

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Credit Hours: 3 hours

Restricted to O/C Engineering City Scholars students.

Credit Hours: 4 hours

Restricted to MCS:Computer Sci Online -UIUC or NDEG:Computer Science Onl-UIUC.

This course is only for students that are in the Computer Science MCS-DS Program. Additional Coursera ID verification and ProctorU fees may apply.

Credit Hours: 4 hours

Restricted to MCS:Computer Sci Online -UIUC.

Restricted to CS online MCS Students. ProctorU and other fees may apply.