**COMPUTER SCIENCE + CROP SCIENCES, BS**

for the degree of Bachelor of Science Major in Computer Science & Crop Sciences

Crop sciences department website: https://cropsciences.illinois.edu/
Computer science degree information: https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs
Overview of college admissions & requirements: Agricultural, Consumer & Environmental Sciences (http://catalog.illinois.edu/schools/aces/academic-units/#text)
College websites: https://aces.illinois.edu/ and https://engineering.illinois.edu
Computer science contact: undergrad@cs.illinois.edu (academic@cs.illinois.edu)
Crop sciences contact: sbartlet@illinois.edu

Computer Science + Crop Sciences (CS+CPSC) is a first-of-its-kind partnership between The Grainger College of Engineering’s Department of Computer Science and the Department of Crop Sciences in the College of Agricultural, Consumer and Environmental Sciences.

Our growing population and changing climate demand out-of-the-box, multidisciplinary thinkers who can handle increasingly rich data sets. CS+CPSC students fill this crucial gap in the agriculture sector, combining a strong technical background with crop sciences expertise powerful enough to change the world.

Students will be among the first to analyze robotics-enabled soil and field measurements, predict weather and climate impacts on food supplies, and accelerate plant improvement through the simultaneous analysis of genetics, environment, and management.

Please see the Computer Science advisor in 1210 Siebel Center, as well as the Crop Sciences advisor in AE-116 Turner Hall.

To graduate from the Computer Science and Crop Sciences curriculum, a student must complete the following courses, all of which must be taken for a traditional letter grade.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHET 105 &amp; CMN 101</td>
<td>Writing and Research &amp; CMN 101 and Public Speaking</td>
<td>6-7</td>
</tr>
<tr>
<td>OR CMN 111 &amp; CMN 112</td>
<td>Oral &amp; Written Comm I &amp; CMN 112 and Oral &amp; Written Comm II</td>
<td></td>
</tr>
<tr>
<td>Advanced Composition</td>
<td>Select from campus-approved list.</td>
<td>3-4</td>
</tr>
<tr>
<td>Cultural Studies</td>
<td></td>
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</tbody>
</table>

Select one course from Western culture, one from non-Western culture, and one from U.S. minority culture from campus approved lists.

**Foreign Language**
Coursework at or above the third level is required for graduation.

**Quantitative Reasoning I**
See Mathematical Foundations for specific requirement.

**Quantitative Reasoning II**
See Mathematical Foundations for specific requirement.

**Natural Sciences and Technology**
See Crop Sciences Core for specific requirement.

**Humanities and the Arts**
Select from campus-approved list.

**Social and Behavioral Sciences**
Select from campus-approved list.

**ACES Required**
ACES 101 Contemporary Issues in ACES 2

**Computer Science Core** 22
CS 100 Freshman Orientation (recommended) 1
CS 125 Intro to Computer Science 4
CS 126 Software Design Studio 3
CS 173 Discrete Structures 3
CS 225 Data Structures 4
CS 374 Introduction to Algorithms & Models of Computation 4
CS 421 Programming Languages & Compilers 3

**Computer Science Technical Track** 8-11
Choose from the following options:
- CS 233 Computer Architecture & CS 241 and System Programming
- OR
- CS 240 Introduction to Computer Systems
- & Two CS 4XX Any two (2) 400-level CS courses except CS 491

**Mathematical Foundations (fulfills Quantitative Reasoning I and II)** 12-13
CS 361 Probability & Statistics for Computer Science 3
MATH 220 Calculus 4-5
or MATH 221 Calculus I
MATH 225 Introductory Matrix Theory 2
MATH 231 Calculus II 3

**Crop Sciences Core** 16
CPSC 102 Foundational Skills in Crop Sciences 2
CPSC 112 Introduction to Crop Sciences 4
CPSC 393 Crop Sciences Internship or CPSC 399 Undergrad Research or Thesis
CPSC 498 Crop Sci Professional Development 1
Select two of the following: 6
- CPSC 226 Introduction to Weed Science
- CPSC 270 Applied Entomology
- PLPA 204 Introductory Plant Pathology

**Foundational Data Analytics** 6-8

Information listed in this catalog is current as of 08/2020
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC 440</td>
<td>Applied Statistical Methods I</td>
<td>4</td>
</tr>
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</table>

And select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC 441</td>
<td>Introduction to R Programming</td>
</tr>
<tr>
<td>CPSC 444</td>
<td>Introduction to Spatial Analytics</td>
</tr>
</tbody>
</table>

**Crop Sciences Electives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC/ HORT/ PLPA 4XX</td>
<td>At least one (1) 400-level CPSC/HORT/PLPA course</td>
</tr>
<tr>
<td>CPSC/ HORT/ PLPA XXX</td>
<td>Any CPSC/HORT/PLPA course except CPSC 241</td>
</tr>
</tbody>
</table>

**Total Hours**

|                  | 126 |

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