**COMPUTER SCIENCE + CROP SCIENCES, BS**

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

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.

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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>
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</thead>
<tbody>
<tr>
<td>RHET 105</td>
<td>Writing and Research</td>
<td>6-7</td>
</tr>
<tr>
<td>&amp; CMN 101</td>
<td>Public Speaking</td>
<td></td>
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<tr>
<td>OR</td>
<td>CMN 111</td>
<td></td>
</tr>
<tr>
<td>&amp; CMN 112</td>
<td>Oral &amp; Written Comm I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Oral &amp; Written Comm II</td>
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</tbody>
</table>

Advanced Composition

Select from campus-approved list. 3-4

Cultural Studies

Select one course from Western culture, one from non-Western culture, and one from U.S. minority culture from campus approved lists. 9

Foreign Language

Coursework at or above the third level is required for graduation. 0-15

Quantitative Reasoning I

See Mathematical Foundations for specific requirement. 3

Quantitative Reasoning II

See Mathematical Foundations for specific requirement. 3

Natural Sciences and Technology

Select from campus-approved list. 6

Humanities and the Arts

Select from campus-approved list. 6

Social and Behavioral Sciences

Select from campus-approved list. 6

Mathematical Foundations (fulfills Quantitative Reasoning I and II) 12-15

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CS 361</td>
<td>Probability &amp; Statistics for Computer Science</td>
<td>3</td>
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<tr>
<td>MATH 220</td>
<td>Calculus</td>
<td>4-5</td>
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<tr>
<td>or MATH 221</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>MATH 225</td>
<td>Introductory Matrix Theory</td>
<td>2-4</td>
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<tr>
<td>or MATH 257</td>
<td>Linear Algebra with Computational Applications</td>
<td></td>
</tr>
<tr>
<td>or MATH 415</td>
<td>Applied Linear Algebra</td>
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</tr>
<tr>
<td>or MATH 416</td>
<td>Abstract Linear Algebra</td>
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</tr>
<tr>
<td>MATH 231</td>
<td>Calculus II</td>
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Crop Sciences Core 14

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CPSC 102</td>
<td>Foundational Skills in Crop Sciences</td>
<td>2</td>
</tr>
<tr>
<td>CPSC 112</td>
<td>Introduction to Crop Sciences</td>
<td>4</td>
</tr>
<tr>
<td>CPSC 212</td>
<td>Introduction to Plant Protection</td>
<td>4</td>
</tr>
<tr>
<td>CPSC 393</td>
<td>Crop Sciences Internship</td>
<td>3</td>
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<tr>
<td>or CPSC 395</td>
<td>Undergrad Research or Thesis</td>
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<tr>
<td>CPSC 498</td>
<td>Crop Sci Professional Developm</td>
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Foundational Data Analytics 6-8

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<tr>
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<tr>
<td>CPSC 440</td>
<td>Applied Statistical Methods I</td>
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And select one of the following:

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<tr>
<td>CPSC 441</td>
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<td></td>
</tr>
<tr>
<td>CPSC 444</td>
<td>Introduction to Spatial Analytics</td>
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Crop Sciences Electives 6

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

Total Hours 126

Information listed in this catalog is current as of 06/2023
for the degree of Bachelor of Science Major in Computer Science + Crop Sciences

Sample Sequence
This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

Students must fulfill their Language Other Than English requirement by successfully completing a third level of a language other than English. CPSC 112 will count as one of the natural sciences and technology general education requirements. See the corresponding section on the Degree General and Education Requirements page (https://catalog.illinois.edu/general-information/degree-general-education-requirements/).

<table>
<thead>
<tr>
<th>First Year</th>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester</th>
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<tbody>
<tr>
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<td>CS 128</td>
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<td>CS 173</td>
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<td>RHET 105 or CMN 101</td>
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<td>CPSC 112</td>
<td>4</td>
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<tr>
<td>ACES 101</td>
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<th>First Semester</th>
<th>Hours</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>CS 225</td>
<td>4</td>
<td>Language Other than English (3rd level)</td>
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<td>CS 222</td>
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<td>CS 240 (now CS 340)</td>
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<td>General Education course</td>
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<td>CPSC 212</td>
<td>4</td>
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<tr>
<td>Free Elective course</td>
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<td>General Education course</td>
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<table>
<thead>
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<tbody>
<tr>
<td>Mathematical Foundations</td>
<td>2</td>
<td>CS 374</td>
<td>4</td>
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<tr>
<td>Algebra or Matrix Theory course</td>
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<td>General Education course</td>
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<td>CS 361</td>
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<td>CS 4XX</td>
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<td>CS 4XX</td>
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<td>CPSC 393 or 395</td>
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<td><strong>Total</strong></td>
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<table>
<thead>
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<th>Fourth Year</th>
<th>First Semester</th>
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<th>Second Semester</th>
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<td>CS 421</td>
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<tr>
<td>General Education course</td>
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<td>ECON 102 or ACE 100</td>
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<tr>
<td>CPSC 498</td>
<td>1</td>
<td>Any CPSC/HORT/PLPA course except CPSC 241</td>
<td>3</td>
<td></td>
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<tr>
<td>CPSC 444 or 441</td>
<td>4</td>
<td>Free Elective course</td>
<td>3</td>
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<tr>
<td>4XX Elective CPSC, PLPA or HORT course</td>
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<td>3</td>
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<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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<td><strong>16</strong></td>
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Total Hours 126

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Crop Sciences
Crop Sciences Website (https://cropsciences.illinois.edu/)
AW-101 Turner Hall, MC-046
1102 S. Goodwin Ave.
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Email: cropsciences@illinois.edu

College of Agricultural, Consumer & Environmental Sciences
College of Agricultural, Consumer & Environmental Sciences Website (https://aces.illinois.edu/)

ACES Office of Academic Programs
128 Mumford Hall
1301 West Gregory Drive
Urbana, IL 61801
217-333-3380
ACES-Academics@illinois.edu

Advising
Undergraduate Advising Email: ugrad@cropsciences.illinois.edu
Graduate Advising Email: grad@cropsciences.illinois.edu
Advising Website (https://cropsciences.illinois.edu/about/contact-us/#paragraph--604)

Admissions
ACES Undergraduate Admissions (https://aces.illinois.edu/admissions/)
visitACES@illinois.edu
217-333-3380
University of Illinois Undergrad Admissions (https://www.admissions.illinois.edu/)
University of Illinois Graduate Admissions (https://grad.illinois.edu/)

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