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.

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 and Public Speaking</td>
<td>6-7</td>
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<tr>
<td>CMN 111 &amp; CMN 112</td>
<td>Oral &amp; Written Comm I and Oral &amp; Written Comm II</td>
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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)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MATH 220 or MATH 221</td>
<td>Calculus I</td>
<td>4-5</td>
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<tr>
<td>MATH 225 or MATH 257 or MATH 415 or MATH 416</td>
<td>Introductory Matrix Theory and Linear Algebra with Computational Applications and Applied Linear Algebra and Abstract Linear Algebra</td>
<td>2-4</td>
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<tr>
<td>MATH 231</td>
<td>Calculus II</td>
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Crop Sciences Core

<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>
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<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>
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</tr>
<tr>
<td>CPSC 395</td>
<td>Undergrad Research or Thesis</td>
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<tr>
<td>CPSC 498</td>
<td>Crop Sci Professional Development</td>
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</table>

Foundational Data Analytics

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

- CPSC 441
- CPSC 444

Crop Sciences Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>CPSC/HORT/PLPA 4XX</td>
<td>At least one (1) 400-level CPSC/HORT/PLPA course</td>
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<tr>
<td>CPSC/HORT/PLPA XXX</td>
<td>Any CPSC/HORT/PLPA course except CPSC 241</td>
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Total Hours 126

Information listed in this catalog is current as of 11/2023
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 (http://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>
<th>Hours</th>
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<tbody>
<tr>
<td>CS 124</td>
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<td>CS 128</td>
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<td>CS 100</td>
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<td>CS 173</td>
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<td>MATH 220</td>
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<td>MATH 231</td>
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<td>CPSC 102</td>
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<td>CPSC 112</td>
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<td>ACES 101</td>
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<thead>
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<th>Hours</th>
<th>Second Semester</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CS 225</td>
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<td>Language Other than English (3rd level)</td>
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<tr>
<td>CS 222</td>
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<td>CS 240 (now CS 340)</td>
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<td>CPSC 212</td>
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<tr>
<td>Free Elective course</td>
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<thead>
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<th>Third Year</th>
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<th>Second Semester</th>
<th>Hours</th>
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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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<tr>
<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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<table>
<thead>
<tr>
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<th>Second Semester</th>
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<tbody>
<tr>
<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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<td>CPSC 498</td>
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<td>Any CPSC/HORT/PLPA course except CPSC 241</td>
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<td>CPSC 444 or 441</td>
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<td>Free Elective course</td>
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<tr>
<td>4XX Elective</td>
<td>CPSC, PLPA or HORT course</td>
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<tr>
<td></td>
<td></td>
<td><strong>16</strong></td>
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</tbody>
</table>

Total Hours 126

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

Crop Sciences
Crop Sciences Website (https://cropsciences.illinois.edu/)
AW-101 Turner Hall, MC-046
1102 S. Goodwin Ave.
Urbana, IL 61801
217-333-3420
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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