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.

Code	Title	Hours
Composition I and Speech		**6-7**
RHET 105 & CMN 101	Writing and Research and Public Speaking	
OR		
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
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
ACES Required		
ACES 101	Contemporary Issues in ACES	2
Computer Science Core		**22**
CS 100	Computer Science Orientation (recommended)	1
CS 124	Introduction to Computer Science I	3
CS 128	Introduction to Computer Science II	3
CS 173	Discrete Structures	3
CS 222	Software Design Lab	1
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 & CS 341	Computer Architecture and System Programming	
OR		
CS 340	Introduction to Computer Systems	3
& Two CS 4XX	Any two (2) 400-level CS courses except CS 491	
Mathematical Foundations (fulfills Quantitative Reasoning I and II)		**12-15**
CS 361	Probability & Statistics for Computer Science	3
MATH 220	Calculus	4-5
or MATH 221	Calculus I	
MATH 225	Introductory Matrix Theory	2-4
or MATH 257	Linear Algebra with Computational Applications	
or MATH 415	Applied Linear Algebra	
or MATH 416	Abstract Linear Algebra	
MATH 231	Calculus II	3
Crop Sciences Core		**14**
CPSC 102	Foundational Skills in Crop Sciences	2
CPSC 112	Introduction to Crop Sciences	4
CPSC 212	Introduction to Plant Protection	4
CPSC 393	Crop Sciences Internship	3
or CPSC 395	Undergrad Research or Thesis	
CPSC 498	Crop Sci Professional Develpmt	1
Foundational Data Analytics		**6-8**
CPSC 440	Applied Statistical Methods I	4
And select one of the following:		
CPSC 441		
CPSC 444	Introduction to Spatial Analytics	
Crop Sciences Electives		**6**
CPSC/HORT/PLPA 4XX	At least one (1) 400-level CPSC/HORT/PLPA course	
CPSC/HORT/PLPA XXX	Any CPSC/HORT/PLPA course except CPSC 241	
Total Hours		**126**

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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/*).*

First Year

First Semester	Hours	Second Semester	Hours
CS 124	3	CS 128	3
CS 100	1	CS 173	3
MATH 220	5	MATH 231	3
CMN 101 or RHET 105	3	RHET 105 or CMN 101	4
CPSC 102	2	CPSC 112	4
ACES 101	2		
	16		**17**

Second Year

First Semester	Hours	Second Semester	Hours
CS 225	4	Language Other than English (3rd level)	3
CS 222	1	CS 240 (now CS 340)	3
General Education course	3	CPSC 212	4
Free Elective course	3	General Education course	3
Free Elective course	3	Free Elective course	2
	14		**15**

Third Year

First Semester	Hours	Second Semester	Hours
Mathematical Foundations Algebra or Matrix Theory course	2	CS 374	4
General Education course	3	CS 361	3
CS 4XX	4	CS 4XX	3
CPSC 393 or 395	3	General Education course	3
CPSC 440	4	General Education course	3
	16		**16**

Fourth Year

First Semester	Hours	Second Semester	Hours
CS 421	3	General Education course	3
General Education course	3	General Education course	3
General Education course	3	ECON 102 or ACE 100	3
CPSC 498	1	Any CPSC/HORT/PLPA course except CPSC 241	3
CPSC 444 or 441	4	Free Elective course	3
4XX Elective CPSC, PLPA or HORT course	3		
	17		**15**

Total Hours 126

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Crop Sciences
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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/)
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217-333-3380
University of Illinois Undergrad Admissions (https://www.admissions.illinois.edu/)
University of Illinois Graduate Admissions (https://grad.illinois.edu/)