COMPUTER SCIENCE + EDUCATION: SECONDARY EDUCATION, BS

for the degree of Bachelor of Science Major in Computer Science + Education, Secondary Education concentration

The **Computer Science + Education, BS** is sponsored jointly by the Department of Computer Science and the Department of Curriculum & Instruction. The Secondary Education concentration provides the coursework and field experience for students to be licensed to teach computer science in grades 5-12. The degree will prepare students to join the workforce as teachers in the state of Illinois, providing them with the knowledge necessary to teach and develop computer science curricula.

To graduate from the Computer Science and Education curriculum, a student must complete all courses with a traditional letter grade.

To be recommended for licensure, candidates are required to maintain a cumulative grade point average of 2.5 (A=4.0). Candidates in teacher licensure programs must receive a C- or better in ALL content and professional education coursework. Licensure requirements are subject to change without notice as a result of new mandates from the Illinois State Board of Education or the Illinois General Assembly.

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To graduate from the Computer Science and Education curriculum, a student must complete all courses with a traditional letter grade.

In order to be recommended for licensure, candidates are required to maintain University of Illinois at Urbana-Champaign, cumulative, content area, and professional education grade point averages of 2.5 (A=4.0). Candidates in teaching licensure programs must maintain a C- or better in ALL content and professional education coursework. Candidates should consult their adviser or the Council on Teacher Education for the list of courses used to compute these grade point averages. For teacher education licensure requirements applicable to all curricula, see the Council on Teacher Education.

Licensure requirements are subject to change without notice as a result of new mandates from the Illinois State Board of Education or the Illinois General Assembly.

Code	Title	Hours
Orientation Seminar		
EDUC 101	Education Orientation Seminar	1

The following degree requirements also meet general education course requirements and must be selected from the campus General Education (https://courses.illinois.edu/) course list.

Code	Title	Hours
General Education Requirements		
Composition		
Composition I		4-6
Advanced Composition		3-4
Quantitative Reasoning		
See Computer Science Core and Mathematical Foundations for specific requirement.		
Natural Sciences and Technology		
From approved campus list		6
Humanities and the Arts		
From approved campus list		6
Social and Behavioral Sciences		
From approved campus list		6
Cultural Studies		
Western Culture(s) from approved campus list		3
U.S. Minority Culture(s) from approved campus list		3
Non-Western Culture(s) from approved campus list		3
Language other than English		
Three years of one language other than English in high school or competion of the third semester of college-level language		0-12
Computer Science Core Requirements (fulfills Quantitative Reasoning)		
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
Choose 1 from:		8-9
CS 233 & CS 341	Computer Architecture and System Programming	
OR		
CS 340 & Two CS 4XX	Introduction to Computer Systems Any two (2) 400-level CS courses	
Choose 1 from:		3
CS 357	Numerical Methods I	
CS 421	Programming Languages & Compilers	
Mathematical Foundations (fulfills Quantitative Reasoning)		
CS 361	Probability & Statistics for Computer Science	3
MATH 220 or MATH 221	Calculus Calculus I	4-5
MATH 231	Calculus II	3
Choose 1 from:		2-3
MATH 225	Introductory Matrix Theory	
MATH 227	Linear Algebra for Data Science	
MATH 257	Linear Algebra with Computational Applications	
Concentration		
Students must complete 36-39 credit hours within one of the following areas of concentration: 1) Learning Science or 2) Secondary Education.		36-39
Electives		
Electives		0-8
Total Hours		**120**

Code	Title	Hours
CI 401	Introductory Teaching in a Diverse Society	3
CI 403	Teaching a Diverse High School Student Population	3
CI 404	Teaching and Assessing Secondary School Students	3
CI 473	Disciplinary Literacy	3
EDPR 442	Educational Practice in Secondary Education	12
EDUC 201	Identity and Difference in Education	3
EDUC 202	Social Justice, School and Society	3
EPSY 201	Educational Psychology (Gen Ed PSYC 100 is a prerequisite for EPSY 201)	3
EPSY 485	Assessing Student Performance	3
SPED 405	General Educator's Role in Special Education	3
Total Hours		**39**

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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. For more information, see the corresponding section on the Degree and General Education Requirements page *(http://catalog.illinois.edu/general-information/degree-general-education-requirements/).*

First Year

First Semester	Hours	Second Semester	Hours
EDUC 101	1	Composition I or General Education course (PSYC 100 recommended)	4
CS 124	3	EDUC 201	3
Composition I or General Education course (PSYC 100 recommended)	4	CS 128	3
Language Other Than English (3rd level) or Elective course	4	CS 173	3
MATH 220 or 221	4	MATH 231	3
	16		**16**

Second Year

First Semester	Hours	Second Semester	Hours
CS 222	1	CS 233 or 340	4
CS 225	4	CS 361	3
EPSY 201	3	EDUC 202	3
MATH 257, 227, or 225	3	General Education course	3
General Education course	3	General Education course	3
	14		**16**

Third Year

First Semester	Hours	Second Semester	Hours
CS 341 (or CS 400-level course)	4	CI 401	3
General Education course	3	CI 473	3
General Education course	3	CS 374	4
Elective course	3	Elective course (or CS 400-level course)	3
Elective course	2		
	15		**13**

Fourth Year

First Semester	Hours	Second Semester	Hours
CI 403	3	CI 404	3
CS 357 or 421	3	EDPR 442	12
EPSY 485	3		
SPED 405	3		
Elective course	3		
	15		**15**

Total Hours 120

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217-244-8286
Department of Curriculum & Instruction website (https://education.illinois.edu/ci/)
Department of Curriculum & Instruction faculty (https://education.illinois.edu/faculty-finder/?dept=Curriculum%20Instruction)

Office of Undergraduate Programs
110 Education Building
Student Academic Affairs email (saao@education.illinois.edu)
217-333-2800
Admissions & Academics website (https://education.illinois.edu/programs/undergrad/)

Student Academic Affairs website (https://education.illinois.edu/student-resources/undergraduate/undergraduate-advising-support/)

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Computer Science + Education website (https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs/computer-science-education/)