

# COMPUTER SCIENCE + ADVERTISING, BS

for the degree of Bachelor of Science in Computer Science + Advertising

COMPUTER SCIENCE + ADVERTISING is sponsored jointly by the Siebel School of Computing and Data Science and the Charles H. Sandage Department of Advertising. This is a program for students who have an interest in careers in the advertising field with a technology focus. Cloud computing, the availability and ubiquity of data, and the rapid and pervasive adoption of mobile technology have created a paradigm shift in the advertising industry. Projected areas of growth in advertising and communications are in Search Engine Optimization, web analytics, computational advertising, and other emerging areas of technology and media.

The degree will prepare students for advanced study at the graduate level as well as immediate entry into the workforce at advertising agencies, businesses with in-house advertising and marketing divisions, and technology companies.

View all College of Media undergraduate (<http://catalog.illinois.edu/schools/media/#undergradtext>) and graduate (<http://catalog.illinois.edu/schools/media/#graduatetext>) degree programs.

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Please see a computer science advisor in 1210 Siebel Center, as well as an advertising advisor in the College of Media Student Services Center in 18 Gregory Hall.

## Graduation Requirements

Minimum hours required for graduation: 124 hours.

## University Requirements

Minimum of 40 hours of upper-division coursework, generally at the 300- or 400-level. These hours can be drawn from all elements of the degree.

Students should consult their academic advisor for additional guidance in fulfilling this requirement.

The university and residency requirements can be found in the Student Code (<https://studentcode.illinois.edu/article3/part8/3-801/>) (§ 3-801) and in the Academic Catalog (<http://catalog.illinois.edu/general-information/degree-general-education-requirements/>).

## General Education Requirements

Follows the campus General Education (Gen Ed) requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT/>). Some Gen Ed requirements may be met by courses required and/or electives in the program.

Code	Title	Hours
Composition I		4-6
Advanced Composition		3

Humanities & the Arts (6 hours)	6
Natural Sciences & Technology (6 hours)	6
Social & Behavioral Sciences (6 hours)	6
fulfilled by ECON 102, and ANTH 103 or PSYC 100 or SOC 100	
Cultural Studies: Non-Western Cultures (1 course)	3
Cultural Studies: US Minority Cultures (1 course)	3
Cultural Studies: Western/Comparative Cultures (1 course)	3
Quantitative Reasoning (2 courses, at least one course must be Quantitative Reasoning I)	6-10
fulfilled by CS 124; and CS 128; and CS 225; and MATH 220 or MATH 221; and MATH 231	
Language Requirement (Completion of the third semester or equivalent of a language other than English is required)	0-15

## Major Requirements

Code	Title	Hours
<b>Computer Science Core</b>		
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 340	Introduction to Computer Systems	3
CS 374	Introduction to Algorithms & Models of Computation	4
CS 421	Programming Languages & Compilers	3 or 4
Computer Science Technical Electives: Two 400-level courses chosen in consultation with an advisor. These two courses must be above CS 403, not CS 491, and distinct from all other courses used to fulfill program requirements or options.		6
<b>Mathematical Foundations (also fulfills QR I and II gen eds.)</b>		
MATH 220 or MATH 221	Calculus Calculus I	5
MATH 231	Calculus II	3
MATH 225 or MATH 257	Introductory Matrix Theory Linear Algebra with Computational Applications	2 or 3
CS 361	Probability & Statistics for Computer Science	3

## College of Media Foundations

Select one from:		3-4
ANTH 103	Anthro in a Changing World	
PSYC 100	Intro Psych	
SOC 100	Introduction to Sociology	
ECON 102	Microeconomic Principles	3
ECON 103 or ECON 302	Macroeconomic Principles Inter Microeconomic Theory	3
BADM 320	Principles of Marketing	3

## Advertising Core

ADV 250	Advertising and Brand Strategy	3
ADV 281	Advertising Research Methods	3
ADV 284	Consumer Insight	3
ADV 360 or ADV 483	Innovations in Advertising Audience Analysis	3

ADV 390	Content Creation	3
ADV 461	Computational Advertising	3
ADV 492	Tech and Advertising Campaigns	3
Advertising Electives: Any ADV courses not already required for the major.		6
<b>Total Hours</b>		<b>124</b>

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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.

Electives are additional courses to help students achieve 124 hours required for the degree. These can often be any level, but students should check with their advisor for specific guidance.

Students must fulfill their Language Other Than English requirement by successfully completing a third level of a language other than English. See the corresponding section on the Degree and General Education Requirements.

First Year	
First Semester	Hours
Advertising Elective	3
CS 124	3
MATH 220 or 221	5
Composition I or General Education course	4
<b>Total Hours 15</b>	

First Year	
Second Semester	Hours
ADV 250	3
CS 128	3
CS 173	3
MATH 231	3
General Education course or Composition I	3
General Education course	3
<b>Total Hours 18</b>	

Second Year	
First Semester	Hours
ADV 281	3
CS 222	1
CS 225	4
MATH 257	3

General Education course	3
Language Other than English (3rd level)	4
<b>Total Hours 18</b>	

Second Year	
Second Semester	Hours
ADV 284	3
CS 340	3
CS 361	3
General Education course	3
General Education course	3
<b>Total Hours 15</b>	

Third Year	
First Semester	Hours
ADV 390	3
CS 374	4
BADM 320	3
ECON 102	3
General Education course	3
<b>Total Hours 16</b>	

Third Year	
Second Semester	Hours
ADV 360 or 483	3
ADV 492	3
ECON 103	3
ANTH 103, PSYC 100, or SOC 100	3
General Education course	3
<b>Total Hours 15</b>	

Fourth Year	
First Semester	Hours
CS 421	3
Advertising Elective	3
CS Tech Elective	3
General Education course	3
Elective	3
<b>Total Hours 15</b>	

Fourth Year	
Second Semester	Hours
ADV 461	3
CS Tech Elective	3
Elective	3

Elective	3
	<b>12</b>

**Total Hours 12**

**Total Hours: 124**

*for the degree of Bachelor of Science in Computer Science + Advertising*

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1. Evaluate the historical, ethical, economic, legal, and social aspects of modern advertising.
  2. Conduct research, visualize data, and apply inference and machine learning methods to extract knowledge.
  3. Critically evaluate and select audiences for effective and ethical advertising delivery.
  4. Create strategic and evidence-driven brand communications.
  5. Develop and implement efficient algorithms to solve problems.
  6. Develop, analyze, and test software in the advertising context.
  7. Collaborate with diverse teams to develop strategic recommendations for clients.

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## Charles H. Sandage Department of Advertising

Charles H. Sandage Department of Advertising website (<https://media.illinois.edu/advertising/>)  
 CS+Advertising website (<https://media.illinois.edu/degrees-programs/computer-science-advertising/>)  
 addept@illinois.edu  
 (217)333-1602

## College of Media

College of Media Catalog page (<http://catalog.illinois.edu/schools/media/>)  
 College of Media website (<https://media.illinois.edu/>)

## Siebel School of Computing and Data Science

Siebel School of Computing and Data Science website (<https://siebelschool.illinois.edu/>)  
 undergrad@cs.illinois.edu