

Academic Map: Computer Science, Data Science

Department: _____ Computer Science _____ **Degree:** _____ BS _____
Program/Major: _____ Computer Science _____
Track/Emphasis: _____ Data Science _____
Does this program require a minor? (Yes/No) _____ No _____

Important program information in the online *Undergraduate Bulletin*:

UCA Core Requirements: <http://uca.edu/ubulletin/general-policies-information/uca-core/>
LD UCA Core Check Sheet: <http://uca.edu/academicbulletins/ld-uca-core/>
UD UCA Core Course List: <http://uca.edu/academicbulletins/ud-uca-core/>
Degree Requirements: <http://uca.edu/ubulletin/general-policies-information/degree-requirements/>
Program Description: <http://uca.edu/ubulletin/colleges-departments-programs/college-of-natural-sciences-and-mathematics/department-of-computer-science/>
Course Descriptions: <http://uca.edu/ubulletin/courses/>

This degree program requires a total of 120 semester credit hours, including at least 40 upper-division credit hours.

Comparable courses in the Arkansas Course Transfer System (ACTS) are cross-referenced in the ACTS column of each semester block below; a [core link](http://uca.edu/academicbulletins/ld-uca-core/) (http://uca.edu/academicbulletins/ld-uca-core/) takes the user to the *Undergraduate Bulletin*'s UCA Lower-Division Core check sheet, where UCA Core options and ACTS course numbers are listed in full; an [acts link](http://uca.edu/academicbulletins/acts/) (http://uca.edu/academicbulletins/acts/) takes the user to the *Undergraduate Bulletin*'s ACTS page (http://uca.edu/academicbulletins/acts/) for additional information and a UCA-ACTS crosswalk.

Year 1

Fall – Semester 1 (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
CSCI	1470	Computer Science I	4	
MATH	1496	Calculus I	4	MATH2405
WR TG	1310	Introduction to College Writing	3	ENGL1013
		Lab Science Course ¹	4	acts link

Spring – Semester 2 (Credit hours: 16)

SUBJ	NUM	TITLE	SCH	ACTS
CSCI	1480	Computer Science II	4	
MATH	2311	Elementary Statistics	3	MATH2103
WR TG ENGL	1320 1320	Academic Writing and Research or Interdisciplinary Writing and Research or Other approved alternative (LD UCA Core: Research/Writing) ²	3	ENGL1023 ENGL1023 core link
		LD UCA Core Elective	3	core link
		LD UCA Core Elective	3	core link

Year 2**Fall – Semester 3 (Credit hours: 16)**

SUBJ	NUM	TITLE	SCH	
CSCI	2320	Data Structures	3	
MATH	2330	Discrete Structures I	3	
		Lab Science Course	4	
		LD UCA Core Elective	3	core link
		LD UCA Core Elective	3	core link

Spring – Semester 4 (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	
CSCI	3330	Algorithms	3	
CSCI	3360	Database Systems [UD UCA Core: C]	3	
MATH	3320	Linear Algebra [UD UCA Core: I]	3	
		LD UCA Core Elective	3	core link
		LD UCA Core Elective	3	core link

Year 3**Fall – Semester 5 (Credit hours: 14)**

SUBJ	NUM	TITLE	SCH	
CSCI	3385	Artificial Intelligence	3	
CSCI	3381	Object-Oriented Software Development with Java	3	
CSCI	3190	Social Implications of Technology	1	
		Lab Science Course	4	
		LD UCA Core Elective	3	core link

Spring – Semester 6 (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	
CSCI	4371	Machine Learning	3	
CSCI	4300	Operating Systems	3	
MATH	3311	Statistical Methods	3	
		Data Science Elective [UD UCA Core: R]	3	
		Data Science Elective	3	

Year 4**Fall – Semester 7 (Credit hours: 15)**

SUBJ	NUM	TITLE	SCH	
CSCI	4370	Data Mining	3	
		Data Science Elective	3	
		Data Science Elective	3	
		General Elective [UD UCA Core: D]	3	
		General Elective	3	

Spring – Semester 8 (Credit hours: 14)

SUBJ	NUM	TITLE	SCH	
CSCI	4191	Seminar in Applied Computing	1	
CSCI	4491	Applied Data Science [UD UCA Core: Z]	4	
		Data Science Elective	3	
		General Elective	3	
		General Elective	3	

 SIGNED – DEPARTMENT CHAIR

 DATE

 SIGNED – COLLEGE DEAN

 DATE

To be completed by the advisor when an Eight-Semester plan is accepted by the student:

If applicable, has student selected a minor? Type “x” as appropriate. _____ No _____ Yes

If “yes,” specify: _____

Notes

¹ This degree program requires a minimum of 12 credit hours in Lab Sciences in Biology, Chemistry, and Physics. Course sets that satisfy the requirement include BIOL 1440 and 1441 (Principles of Biology I and II), CHEM 1450 and 1451 (College Chemistry I and II), PHYS 1410 and 1420 (College Physics 1 and 2), and PHYS 1441 and 1442 (University Physics 1 and 2). A student must take a sequence (8 credits) from one of the three subject areas and one course from an area outside of the sequence.

² See appropriate choices, alternatives, or substitutions under “UCA Core” in the *Undergraduate Bulletin*. Prior to completion of 30 semester hours, a student must complete a UCA Core course designated as a First-Year Seminar (FYS) in Critical Inquiry, Diversity, or Responsible Living (one of the LD UCA Core courses in the second semester must be designated FYS).

The student will also need to complete major, minor, or general elective courses designated as fulfilling the upper-division and capstone requirements of the UCA Core. See annotations in this Academic Map and consult the *Undergraduate Bulletin* and your academic advisor for courses that fulfill these upper-division requirements.