Academic Map: Computer Engineering

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

Important program information in the online *Undergraduate Bulletin*:

UCA Core Requirements:	https://uca.edu/ubulletin/general-policies-information/uca-core/
LD UCA Core Check Sheet:	https://uca.edu/academicbulletins/ld-uca-core/
UD UCA Core Course List:	https://uca.edu/academicbulletins/ud-uca-core/
Degree Requirements:	https://uca.edu/ubulletin/general-policies-information/degree-requirements/
Program Description:	https://uca.edu/ubulletin/colleges-departments/cn/computer-science/
Course Descriptions:	https://uca.edu/ubulletin/courses/

This degree program requires a total of 123 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 (https://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 takes the user to the *Undergraduate Bulletin*'s ACTS page (https://uca.edu/academicbulletins/acts/) for additional information and a UCA-ACTS crosswalk.

Year 1

Fall – Semester 1 (Credit hours: 17)

SUBJ	NUM	TITLE	SCH	ACTS
CSCI	1470	Computer Science I	4	
MATH	1496	Calculus I (LD UCA Core, Quantitative)	4	MATH2405
ENGR	1301	Introduction to Engineering (LD UCA Core, Responsible Living, FYS)[1]	3	
WRTG	1310	Introduction to College Writing (LD UCA Core, Writing Foundation)	3	ENGL1013
		LD UCA Core Requirement	3	core link

Spring – Semester 2 (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
CSCI	1480	Computer Science II	4	
PHYS	1441	University Physics 1 (LD UCA Core, Physical Science)	4	PHYS2034
WRTG ENGL	1320 1320	Academic Writing & Research or Interdisciplinary Writing & Research or Other approved alternative (LD UCA Core, Research & Writing)	3	ENGL1023 ENGL1023 core link
MATH	1497	Calculus II	4	MATH2505

Year 2

Fall – Semester 3 (Credit hours: <u>16</u>)

SUBJ	NUM	TITLE	SCH	ACTS
CSCI	2320	Data Structures	3	
CSCI	2340	Assembly Language Programming	3	
CSCI	2330	Discrete Math	3	
PHYS	1442	University Physics 2	4	PHYS2044
		LD UCA Core Requirement	3	core link

Spring – Semester 4 (Credit hours: <u>17</u>)

SUBJ	NUM	TITLE	SCH	ACTS
ENGR	3415	An Introduction to Digital Logic	4	
ENGR	2447	Electronics	4	
MATH	3320	Linear Algebra [UD UCA Core: I]	3	
MATH	3331	Ordinary Differential Equations [UD UCA Core: C][2]	3	
		LD UCA Core Requirement	3	core link

Year 3

Fall – Semester 5 (Credit hours: <u>16</u>)

SUBJ	NUM	TITLE	SCH	ACTS
CSCI	3380	Computer Architecture	3	
ENGR	3301	Signals and Systems	3	
CSCI	3381	Object-Oriented Software Development with Java	3	
MATH	2311	Elementary Statistics	3	MATH2103
BIOL	1400 1440	Exploring Concepts in Biology or Approved alternative (LD UCA Core, Life Science)	4	BIOL1004 core link

Spring – Semester 6 (Credit hours: <u>16</u>)

SUBJ	NUM	TITLE	SCH	ACTS
ENGR	3416	Microprocessor Systems	4	
ENGR		Computer Engineering Elective[3]	3	
CSCI	4321	Ethical Implications [UD UCA Core: D, R]	3	
		LD UCA Core Requirement	3	core link
		LD UCA Core Requirement	3	core link

Year 4

Fall – Semester 7 (Credit hours: <u>14</u>)

SUBJ	NUM	TITLE	SCH	ACTS
ENGR	4311	Senior Design I	3	
CSCI	4490	Software Engineering [UD UCA Core: Z]	4	
ENGR	4450	Embedded Systems	4	
ENGR		Computer Engineering Elective	3	

Spring – Semester 8 (Credit hours: <u>12</u>)

SUBJ	NUM	TITLE	SCH	ACTS
ENGR	4312	Senior Design II [UD UCA Core: Z]	3	
ENGR		Computer Engineering Elective	3	
		LD UCA Core Requirement	3	core link
		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] See appropriate choices, alternatives, or substitutions under "UCA Core" in the *Undergraduate Bulletin* and the lower-division UCA Core (LD UCA Core) Check Sheet (core link). During the first year, a student must complete a UCA Core course designated as a First-Year Seminar (FYS) in Critical Inquiry, Diversity, or Responsible Living (for this program, ENGR 1301 fulfills this requirement). Where "LD UCA Core Requirement" is listed, any LD UCA Core requirement not specifically listed elsewhere in the Academic Map (AMAP) may be used; consult your academic advisor in selecting courses to fulfill these requirements.

[2] 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 (UD UCA Core). See annotations in this AMAP for requirements in this program that fulfill UD UCA Core requirements.

[3] For a list of choices, see the Computer Engineering program description in the *Undergraduate Bulletin*.