

Requirements for the B.S. Degree in Computer Science

Department of Computer Science and Engineering, University of Central Arkansas 4/7/26 revised

CS Required Courses (42 hours)

Pref/Num	Title	Prerequisites
CSCI 1470	Comp. Sci. I	MATH 1390
CSCI 1480	Comp. Sci. II	CSCI 1470
CSCI 2320	Data Struct.	CSCI 1480
CSCI 2335	Networking	CSCI 1480
CSCI 3330	Algorithms	CSCI 2320, MATH 2330
CSCI 3360	DB Sys. [C]	CSCI 2320
CSCI 3370	Prog. Langs.	CSCI 2320
CSCI 3381	OO S/W Dev.	CSCI 2320
CSCI 3385	Artificial Intel.	CSCI 2320
CSCI 4300	Operating Sys.	Jun/Sen, CSCI 3330
CSCI 4315	Info. Sec. [R]	Jun/Sen, CSCI 2335
CSCI 4321	Ethics [G, R]	Jun/Sen, CSCI 2320
CSCI 4490	S/W Eng. [Z]	CSCI 3381

CS Elective Courses (12 hours)

Pref/Num	Title	Prerequisites
CSEC 2300	Intro. Cyber. ¹	CSCI 1470
CSCI 2310	Intro. Data Sci. ¹	CSCI 1480
CSCI 2360	Intro. S/W Eng. ¹	CSCI 1480
CSCI 3V75	Internship ²	Jun/Sen
CSEC 3320	Comp. Forens. [I]	CSEC 2300, CSCI 4305
CSCI 3340	Reqs. Eng.	CSCI 2360
CSCI 3355	S/W Des. & Const.	CSCI 3381
CSCI 4V95	Indep. Study ³	Jun/Sen
CSCI 4305	Linux/UNIX Sys.	CSCI 2320
CSEC 4320	Ethical Hacking	CSCI 4305, 4315, 4321
CSCI 4325	S/W Testing	CSCI 3381
CSEC 4330	S/W Sec.	CSCI 4315
CSEC 4335	Network Sec.	CSCI 4315
CSCI 4335	Cloud Comp.	Jun/Sen, CSCI 2335
CSCI 4353	Multimedia	CSCI 2320
CSCI 4357	Prog. Mob. Dev.	CSCI 3381
CSCI 4360	Special Topics	Jun/Sen
CSCI 4365	Web Tech.	CSCI 3330
CSCI 4370	Data Mining	CSCI 3300/3385
CSCI 4371	Mach. Learning	CSCI 3300/3385
CSCI 4372	Data Clustering	CSCI 3300/3385

Math Required Courses (13 hours)

Pref/Num	Title	Prerequisites
MATH 1491 or MATH 1496	Appl. Cal. or Cal. I	MATH 1390 (MATH 1390, 1392)/ MATH 1486
MATH 2330	Disc. Struct. I	MATH 1491/1496, CSCI 1470
MATH 3311	Stat. Methods	MATH 1491/1496, CSCI 1470
MATH 3320	Linear Algebra [I]	MATH 1497/2330

Math Elective Courses (3 hours)

Pref/Num	Title	Prerequisites
MATH 1497	Cal. II	MATH 1496
MATH 3391	Nonparam. Stat.	MATH 3311
MATH 3392	Multivar. Anal.	MATH 3311, 3320
MATH 4340	Num. Methods	MATH 3320
MATH 4373	Regr. Anal.	MATH 3311

Science Required Courses (8 hours)

Pref/Num	Title	Prerequisites
BIOL 1400 or BIOL 1440	Expl. Conc. in Biol. or Princ. of Biol. I	CHEM 1301
CHEM 1400 or CHEM 1450	Chem. in Soc. or Coll. Chem. I	MATH 1390
GEOG 1400	Earth Sys. Sci.	
PHYS 1400 or PHYS 1410 or PHYS 1441	Phys. Sci. or Coll. Phys. 1 or Univ. Phys. 1	MATH 1390 MATH 1496 ⁴

1 No more than three hours of electives at the 2000 level may be counted toward the major (an additional three hours may be counted with the chair's consent).

2 For additional information, visit <https://uca.edu/cse/internships/>

3 Major GPA of at least 3.0 and the instructor's consent (for additional information, visit <https://uca.edu/cse/engage-in-research/>)

4 Pre- or corequisite

Notes:

- Prerequisite columns: "A, B" means "A and B"; "A/B" means "A or B"
- UCA Upper-Division Core: Communication [C], Global Learning [G], Critical Inquiry [I], Responsible Living [R], Capstone [Z]

For additional information, consult your academic advisor or visit <https://bit.ly/2zoTvPb>