

# Requirements for the B.S. Degree in Software Engineering

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

## CS Required Courses (32 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. <b>[C]</b>	CSCI 2320
CSCI 3370	Prog. Langs.	CSCI 2320
CSCI 4300	Operating Sys.	Jun/Sen, CSCI 3330
CSCI 4315	Info. Sec. <b>[R]</b>	Jun/Sen, CSCI 2335
CSCI 4321	Ethics <b>[G, R]</b>	Jun/Sen, CSCI 2320

## SWE Required Courses (25 hours)

Pref/Num	Title	Prerequisites
CSCI 2360	Intro. S/W Eng.	CSCI 1480
CSCI 3340	Reqs. Eng.	CSCI 2360
CSCI 3355	S/W Des. & Const.	CSCI 3381
CSCI 3381	OO S/W Dev.	CSCI 2320
CSCI 4325	S/W Testing	CSCI 3381
CSEC 4330	S/W Sec.	CSCI 4315
CSCI 4335	Cloud Comp.	Jun/Sen, CSCI 2335
CSCI 4490	S/W Eng. <b>[Z]</b>	CSCI 3381

## 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 <b>[I]</b>	MATH 1497/2330

## Science Required Courses (8 hours)

Pref/Num	Title	Prerequisites
BIOL 1440	Princ. of Biol. I	CHEM 1301
PHYS 1410 or PHYS 1441	Coll. Phys. 1  Univ. Phys. 1	MATH 1390  MATH 1496 <sup>1</sup>

## Math/Science Elective Courses (at least 9 hours)

Pref/Num	Title	Prerequisites
MATH 1497	Cal. II	MATH 1496
MATH 2471	Cal. III	MATH 1497
MATH 3331	Ord. Diff. Equ. I <b>[C]</b>	MATH 1497
MATH 3381	Data Clean. & Vis.	MATH 3311
MATH 4340	Num. Methods	MATH 3320
MATH 4371	Intro. Prob.	MATH 1497
BIOL 1441	Princ. of Biol. II	BIOL 1440
CHEM 1450	Coll. Chem. I	MATH 1390
CHEM 1451	Coll. Chem. II	CHEM 1450
GEOG 1400	Earth Sys. Sci.	
GEOG 2475	Geog. Info. Sys. I	
PHYS 1420	Coll. Phys. 2	PHYS 1410
PHYS 1442	Univ. Phys. 2	PHYS 1441 <sup>2</sup>

<sup>1</sup> Pre- or corequisite

<sup>2</sup> Pre- or corequisite: MATH 1496 (Cal. I)

### 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://tinyurl.com/26csyfbd>