

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

Department of Computer Science, University of Central Arkansas      2/21/20 revised

## CPE Required Courses (55 hours)

Code	Title	Prerequisites
ENGR 1301	Intro to Engineering	
CSCI 1470	Computer Science I	MATH 1390
CSCI 1480	Computer Science II	CSCI 1470
CSCI 2320	Data Structures	CSCI 1480
CSCI 2340	Assembly Lang.	CSCI 1480
ENGR 2447	Electronics	PHYS 1420/1442, MATH 1496
ENGR 3301	Signals and Systems	MATH 3331, PHYS 1442, CSCI 1470
CSCI 3380	Computer Arch.	CSCI 2320
CSCI 3381	OO Software Dev.	CSCI 2320
ENGR 3415	Digital Logic	ENGR 2447, CSCI 2340
ENGR 3416	Microprocessor Sys.	ENGR 3415
ENGR 4311	Senior Design 1	*
ENGR 4312	<b>(Z)</b> Senior Design 2	**
CSCI 4321	<b>(D, R)</b> Ethical Impl.	45+ credits
ENGR 4450	Embedded Systems	ENGR 3416
CSCI 4490	Software Eng.	CSCI 3381

## CPE Elective Courses (9 hours)

Code	Title	Prerequisites
ENGR 3340	Image Processing	ENGR 3301
ENGR 3447	Microelectronics	ENGR 2447
ENGR 4315	Signal Processing	ENGR 3301
CSCI 3xxx/4xxx	Any upper level CSCI course ***	
CSEC 3xxx/4xxx	Any upper level CSEC course	

## Math Required Courses (20 hours)

Code	Title	Prerequisites
MATH 1496	Calculus I	MATH 1390, MATH 1392/1580
MATH 1497	Calculus II	MATH 1496
MATH 2311	Elementary Statistics	MATH 1360/1390
MATH 3320	<b>(I)</b> Linear Algebra	MATH 1497/CSCI 2330
MATH 3331	<b>(C)</b> Differential Eq. I	MATH 1497
CSCI 2330	Discrete Math	CSCI 1480

## Science Required Courses (12 hours)

Code	Title	Prerequisites
BIOL 1400 or BIOL 1440	Exp. Concepts in Biology Principles of Biology I	CHEM 1301
PHYS 1441	University Physics I	MATH 1496
PHYS 1442	University Physics II	PHYS 1441

\* 2.75 GPA or higher in ENGR and PHYS courses and consent of instructor

\*\* C or better in ENGR 4311 during the previous semester and consent of instructor

\*\*\* Except those that are already required

Notes:

- Prerequisites columns: "A,B" means "A and B"; "A/B" means "A or B".
- UCA Upper-Division Core: **(C)** Communication, **(I)** Critical Inquiry, **(D)** Diversity, **(R)** Responsible Living, **(Z)** Capstone

For additional information, consult your academic advisor or visit

<https://bit.ly/2FbxMJV>