

FRESHMAN		SOPHOMORE		JUNIOR		SENIOR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
BTGE 1725 3 The Bible and the Gospel [a]	COM 1100 3 Fundamentals of Speech	BTGE 2730 3 Old Testament Literature [a]	CHEM 1050 3.5 Chemistry for Engineers [b]	CS 3410 3 Algorithms [G] [M] [N]	BTGE 2740 3 New Testament Literature [b] [c]	BTGE 3755 3 Theology I [c] [d]	BTGE 3765 3 Theology II [d]
CS 1210 3 Intro to Programming Using C++ [A]	CS 1220 3 Object-Oriented Design Using C++ [A] [D]	CS 2210 3 Data Structures Using Java [D] [G]	CS 3310 3 Operating Systems [D] [K]	EGCP 2120 3 Micro-controllers [A] [B]	EGCP 3010 3 Advanced Digital Logic Design [A] [B]	EGCP 4310 3 Computer Networks [G] [K]	EGCP 4250 3 CMOS-VLSI Design [O]
EGCP 1010 3 Digital Logic Design [B]	EGCP 1920 1 Intro to Elect & Comp Engineering [A] [B]	EGME 1810 1 Engineering Graphics	EGEE 2010 4 Circuits [H] [J] [L]	EGEE 3210 3 Electronics I [L] [O]	EGCP 3210 3 Computer Architecture [A] [B]	EGCP 4810 4 Computer Engr Senior Design I [K] [N] [O] [P]	EGCP 4820 3 Computer Engr Senior Design II [P]
EGGN 1910 1 Engr, Comp, & Christian Vocation	MATH 1715 4 Calculus II [C] [E]	HUM 1400 3 Introduction to Humanities	LIT 2XXX 3 Literature Elective	GBIO 1000 3.5 Principles of Biology	EGGN 3110 3 Professional Ethics	EGGN 4010 0 Senior Seminar	HIST 3 History Elective
ENG 1400 3 Composition	PEF 1990 2 Physical Activity and Healthy Living	MATH 2740 3 Differential Equations [E] [H]	MATH 2520 3 Discrete Math & Probability Princip for CS [F] [M]	3 Technical Elective / Concentration	3 Technical Elective / Concentration	GSS 1100 3 Politics and American Culture	3 Social Science Elective
MATH 1705 4 Calculus I [C]	PHYS 2110 4 General Physics I [E] [F]	PHYS 2120 4 General Physics II [F] [J]			3 Technical Elective / Concentration	3 Technical Elective / Concentration	
17	17	17	16.5	15.5	18	16	15

Program accredited by:



Engineering Accreditation Commission

Left Side	Middle	Right Side
Required prerequisite ID	Required corequisite ID	This course prerequisite ID
[A] is a prerequisite for [A]		Credit hours 3
ENGR & COMP SCI MATH & SCIENCE GENERAL EDUCATION		

TOTAL PROGRAM HOURS:

132

Program, concentration, and elective information on reverse side

Computer Engineering Program Information

WHAT IS COMPUTER ENGINEERING?

Computer engineering focuses on designing and integrating computer hardware and low-level software so computing systems work efficiently and reliably. Computer engineers develop things like processors, embedded systems, firmware, and the hardware-software interfaces inside many devices.

WHAT KINDS OF JOBS CAN I GET WITH A COMPUTER ENGINEERING DEGREE?

Computer engineers are in high demand and have opportunities to work in hardware, software, or roles that span both. Common jobs include embedded systems engineer, firmware developer, FPGA engineer, or robotics engineer. Many computer engineers are employed in tech, aerospace, automotive, medical device, defense, and semiconductor companies.

WHY CHOOSE CEDARVILLE?

The School of Engineering and Computer Science education at Cedarville is based on three pillars, aimed at helping students:

1. *Discover their purpose*
2. *Know their people*
3. *Prepare to change their world*

Addressing these topics from a biblical perspective is critical for developing not only an understanding of their pursuit of their career, but also their life-long roles as followers of Jesus Christ!

Computer Engineering Program Concentrations

Students in the computer engineering program at Cedarville University have the option to complete a data science / artificial intelligence concentration in place of their 12 hours of Technical Electives.

DATA SCIENCE / ARTIFICIAL INTELLIGENCE

- » DSAI-2110 Data Management for AI (3 hrs)
- » DSAI-3110 Foundations of Data Science & Machine Learning (3)
- » DSAI-3510 Neural Networks and Deep Learning (3)
- » EGEE-2110 Engineering Analysis (3)

Computer Engineering Program Electives

TECHNICAL ELECTIVES MUST INCLUDE THE FOLLOWING:

- » Any 3XXX- or 4XXX-Level EGCE, EGCP, EGEE, EGGN, or EGME Course, or CY-1000, or DSAI-3110, or MATH-2705, or PHYS-2130 (3 hrs)
- » Any 3XXX- or 4XXX-Level EGCE, EGCP, EGEE, EGGN, EGME, CS, or CY course, or DSAI-3510, or any 3XXX-Level MATH or PHYS course (3)
- » Any 3XXX- or 4XXX-Level EGCE, EGCP, EGEE, EGGN, EGME, CS, or CY course (3)
- » Any 4XXX-Level EGCE, EGCP, EGEE, EGGN, EGME, CS, or CY course (3)

Computer Engineering Critical Path

The below sequence of courses is most critical for students' timely completion of the program due to prerequisites.

