Computer Engineering Major Bachelor of Science (91 credit hours)

Computer Engineering students are exposed to the concepts of electricity, electronics, digital logic, computer architecture, computer organization, and computer science, and how they apply to the designing embedded systems and computer systems. Students will have the opportunity to see various applications of Computer Engineering to digital system design and computer design.

49 credit hours from the Common Engineering Core, Including Mathematics and Basic Sciences:
- ENGR 2001, Introduction to Engineering, 1 credit hour
- ENGR 2002, Introduction Mechanical Laboratory, 1 credit hour
- ENGR 2003, Introduction to Electrical and Computer Laboratory, 1 credit hour
- ENGR 2010, Statics, 3 credit hours
- ENGR 2030, Circuit Analysis, 3 credit hours
- ENGR 2080, Service Through Engineering and Technology, 3 credit hours[1]
- ENGR 2090, Systems Engineering, 3 credit hours[1,2]
- ENGR 2310, Computational Problem Solving, 3 credit hours
- ENGR 4950, Senior Design I, 2 credit hours[2]
- ENGR 4960, Senior Design II, 2 credit hours[3]
- CHEM 2110, General Chemistry I, 4 credit hours[4]
- MATH 2010, Calculus I, 4 credit hours[5]
- MATH 2020, Calculus II, 4 credit hours
- MATH 3010, Linear Algebra with Differential Equations, 4 credit hours
- MATH 3100, Differential Equations, 3 credit hours
- PHYS 2240, General Physics I, 4 credit hours
- PHYS 2250, General Physics, II, 4 credit hours

42 credit hours of major specific requirements:
- MATH 2200/CPSC 2250, Discrete Mathematics, 4 credit hours
- MATH 4010, Probability, 3 credit hours
- ENGR 2200, Foundations of Digital Electronics, 2 credit hours
- ENGR 3030, Signals and Controls, 3 credit hours
- ENGR 3220, Electronics, 3 credit hours
- ENGR 3260, Embedded Systems, 3 credit hours
- ENGR 3270, Digital Logic, 3 credit hours
- ENGR 3280, Microcontrollers, 3 credit hours
- ENGR 4250, Digital Signal Processing, 3 credit hours
- CPSC 2420, Computer Architecture, 2 credit hours
- CPSC 2430, Compilers and Languages, 2 credit hours
- CPSC 2500, Data Structures and Algorithms, 4 credit hours
- CPSC 4420, Operating Systems, 4 credit hours
- ENGR/CPSC Breadth Elective, 3 credit hours: Take at least 3 hours from ENGR 2110, 3080, 4020, CPSC 3410, 3520

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[1] This course fulfills the Global/Intercultural Ways of Knowing requirement in the Liberal Arts Program.
[2] This is a Writing Intensive course in the Liberal Arts Program.
[3] This is both a Writing and Speaking Intensive course in the Liberal Arts Program.
[4] This course fulfills the Scientific Ways of Knowing requirement in the Liberal Arts Program.
[5] This course fulfills the Quantitative Ways of Knowing requirement in the Liberal Arts Program.
NOTE: All students must complete a minimum of 120 total credit hours to graduate from Anderson University.

Questions? Please contact the Department of Physical Sciences & Engineering.

Proposed course sequence:

Freshman: MATH 2010, CHEM 2110, ENGR 2001, 2002, 2003; MATH 2020, PHYS 2240, ENGR 2310
Sophomore: MATH 3010, PHYS 2250, ENGR 2010, 2080; MATH 3100, ENGR 2030, 2090, 2200
Junior: MATH 4010, ENGR 3030, 3220; MATH 2200/CPSC 2250, CPSC 2420, 2430, ENGR 4250
Senior: ENGR 3270, 3280, 4950; CPSC 4420, ENGR 3260, 4960, ENGR/CPSC Elective

SEMESTER 1		SEMESTER 2	
Quantitative Reasoning, MATH 2010	4 Hours	MATH 2020	4 Hours
Scientific Ways, CHEM 2110	4 Hours	PHYS 2240	4 Hours
ENGR 2001, 2002, 2003	3 Hours	ENGR 2310	3 Hours
ENGL 1110	3 Hours	ENGL 1120	3 Hours
LART 1050	1 Hour	Personal Wellness	2 Hours

SEMESTER 3		SEMESTER 4	
MATH 3010	4 Hours	MATH 3100	3 Hours
PHYS 2250	4 Hours	ENGR 2030	3 Hours
ENGR 2010	3 Hours	ENGR 2220	2 Hours
Global/Intercultural Ways,ENGR 2080	3 Hours	Global/Intercultural Ways, ENGR 2090 (Writing Intensive)	3 Hours
COMM 1000	3 Hours	BIBL 2000	3 Hours

SEMESTER 5		SEMESTER 6	
MATH 4010	3 Hours	MATH 2200/CPSC 2250	4 Hours
ENGR 3030	3 Hours	ENGR 4250	3 Hours
CPSC 2500	4 Hours	CPSC 2420	2 Hours
ENGR 3220	3 Hours	CPSC 2430	2 Hours
Social/Behavioral Ways	3 Hours	Language	4 Hours

SEMESTER 7		SEMESTER 8	
ENGR 4950 (WI)	2 Hours	CPSC 4420	3 Hours
ENGR 3270	3 Hours	ENGR 3260	3 Hours
ENGR 3280	3 Hours	ENGR/CPSC Elective	3 Hours
Civic WoK	3 Hours	ENGR 4960 (Speaking Intensive, WI)	2 Hours
Aesthetic WoK	3 Hours	Christian WoK	3 Hours
Civil DIscourse and Critical Reasoning	2 Hours		

Questions? Please contact the Department of Physical Sciences & Engineering.