

B.S., COMPUTER ENGINEERING

Program Requirements

Students must earn a C- grade or better in each course.

Minimum Requirements for Computer Engineering B.S.: 127 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (http://catalog.uaf.edu/bachelors/)		
General Education Requirements		
Complete the general education requirements. (http://catalog.uaf.edu/bachelors/general-education-requirements/)		
As part of the general education requirements, complete:		
CHEM F105X and CHEM F106X or PHYS F213X	General Chemistry I and General Chemistry II Elementary Modern Physics	
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (http://catalog.uaf.edu/bachelors/summary-of-bachelors-degree-reqs/#bachelorofsciencetext)		
As part of the B.S. degree requirements, complete:		
MATH F252X	Calculus II	
PHYS F211X and PHYS F212X	General Physics I and General Physics II	
Computer Engineering Program Requirements		
Complete the following:		
CS F201	Computer Science I	3
CS F202	Computer Science II	3
CS F301	Assembly Language Programming	3
CS F311	Data Structures and Algorithms	3
CS F321	Operating Systems	3
EE F102	Introduction to Electrical and Computer Engineering	3
EE F203	Electric Circuits	4
EE F243	Digital Systems Design	4
EE F253	Circuit Theory	3
EE F333	Electronic Devices	4
EE F354	Engineering Signal Analysis	3
EE F443	Computer Engineering Analysis and Design	4
EE F444	Embedded Systems Design	4
EE F451	Digital Signal Processing	4
EE F461	Communication Systems and Networks	4
EE F481	Electrical and Computer Engineering Design I ¹	1
EE F482	Electrical and Computer Engineering Design II ¹	3

ES F100X	Engineering Alaska - An Introduction to Engineering	3
ES F100L	Makerspace Alaska - A Laboratory Introduction to Engineering	1
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
MATH F307	Discrete Mathematics	3

Electives

Complete two approved upper-division EE or CS Electives 6-8

Graduate level EE and CS courses may be used as electives upon approval.

Recommended Electives:

CS F331	Programming Languages
CS F361	Systems Security and Administration
CS F411	Analysis of Algorithms
CS F421	Distributed Operating Systems
CS F471	Senior Capstone I
CS F472	Senior Capstone II
EE F303	Electric Power Systems and Machines
EE F311	Engineering Electromagnetics I
EE F334	Electronic Circuit Design
EE F464	Advanced Communications Systems
EE F471	Automatic Control

Fundamentals of Engineering (FE) Examination

Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.

¹ Fulfills the baccalaureate capstone requirement.