

B.S., COMPUTER ENGINEERING

Program Requirements

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

Minimum Requirements for Computer Engineering B.S.: 134 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (https://catalog.uaf.edu/archives/2020-2021/bachelors/)		
General Education Requirements		
Complete the general education requirements. (https://catalog.uaf.edu/archives/2020-2021/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. (https://catalog.uaf.edu/archives/2020-2021/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		
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
CS F331	Programming Languages	3
EE F102	Introduction to Electrical and Computer Engineering	3
EE F203	Electric Circuits	4
EE F204	Electrical Engineering Fundamentals II	4
EE F333	Electronic Devices	4
EE F311	Engineering Electromagnetics I	3
EE F331	High-frequency Lab	1
EE F343	Digital Systems Analysis and Design	4
EE F353	Circuit Theory	3
EE F354	Engineering Signal Analysis	3
EE F443	Computer Engineering Analysis and Design	4
EE F444	Embedded Systems Design ¹	4
EE F463	Communication Networks	3
ES F101	Introduction to Engineering	3
ESM F450	Economic Analysis and Operations	3

MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
MATH F307	Discrete Mathematics	3

Electives

<i>Approved Electives</i>		6
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Recommended Electives:

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	
CS F484	Computer Graphics Fundamentals	
CS F485	Computer Graphics Rendering	
EE F334	Electronic Circuit Design	
EE F451	Digital Signal Processing	
EE F461	Communication Systems	
EE F464	Communication Networks Design	
EE F471	Automatic Control	

<i>Approved Engineering Science Electives</i>		3
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ES F208	Mechanics	
ES F331	Mechanics of Materials	
ES F341	Fluid Mechanics	
ES F346	Introduction to Thermodynamics	
ME F334	Elements of Material Science/ Engineering	

Fundamentals of Engineering (FE) Examination

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

¹ Fulfills the baccalaureate capstone requirement.