Bachelor of Science in Computer Science

The Bachelor of Science (BS) in Computer Science (CS) at the University of Alaska Anchorage teaches students the fundamental principles of computer science and topical issues in computing so they may pursue advanced degrees or enter the workplace as productive, competent software development or information technology professionals. The program seeks to further the profession of computer science through professional activities and public service within the local community and beyond. Faculty engage in and disseminate research to advance the development of computer science and provide innovative technological solutions to address the needs of modern society.

The BS in Computer Science is accredited by the Computing Accreditation Commission of ABET, https://www.abet.org (https://www.abet.org/).

Admission Requirements

Complete the Admission Requirements for Baccalaureate Degrees (http://catalog.uaa.alaska.edu/academicpoliciesprocesses/admissions/undergraduate/).

Special Considerations

- Students who intend to enroll in this degree of study are strongly encouraged to complete the following content in high school with a grade of C or better: Trigonometry (1/2 year), Physics (1 year), Algebra (2 years), Chemistry (1 year), and English (3 years). Insufficient preparation may increase the number of semesters required to complete the degree.
- A student who is unable to earn a minimum grade of C in any course offered by the College of Engineering may retake that course up to two additional times. A student who fails to earn a minimum grade of C on the second attempt will be required to meet with an academic advisor and a member of the College of Engineering professional advising staff to develop a plan for improvement of academic performance before continuing in the program. Failure to earn a minimum grade of C on the third attempt will result in removal from the program. Re-admittance requires a letter of appeal from the student with an explanation of any mitigating factors and how these factors have been addressed. Re-admittance is subject to approval by the department chair of the program.

Graduation Requirements

- Complete the General University Requirements for Baccalaureate Degrees (http://catalog.uaa.alaska.edu/undergraduateprograms/baccalaureaterequirements/).
- Complete the General Education Requirements for Baccalaureate Degrees (http://catalog.uaa.alaska.edu/undergraduateprograms/baccalaureaterequirements/gers/).

- The 3 credit Quantitative Skills GER will be met and exceeded by the following degree requirements:MATH A251, MATH A251F, MATH A252, or MATH A252F.
- For 3 credits of Humanities GER, choose PHIL A305.
- The 7 credit Natural Science GER will be met and exceeded by the following degree requirements: (PHYS A123 & PHYS A123L) OR (PHYS A211 & PHYS A211L), and (PHYS A124 & PHYS A124L) OR (PHYS A212 & PHYS A212L).
- All computer science majors must take a standardized test of knowledge of computer science approved by the CS faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- Complete the following major requirements with a minimum grade of C in all CSCE, MATH and STAT courses.

Code	Title	Credits
Core Courses		
CSCE A101	Introduction to Computer Science	3
CSCE A201	Computer Programming I	4
CSCE A211	Computer Programming II	4
CSCE/EE A241	Computer Hardware Concepts	4
CSCE A248	Computer Organization and Assembly Language Programming	3
CSCE A311	Data Structures and Algorithms	3
CSCE A321	Operating Systems	3
CSCE A331	Programming Language Concepts	3
CSCE A351	Automata, Algorithms and Complexity	3
CSCE A360	Database Systems	3
CSCE A365	Computer Networks	3
CSCE A401	Software Engineering	3
CSCE A465	Computer and Network Security	3
CSCE A470	Computer Science and Engineering Capstone Project	3
Required Support Courses		
MATH A251	Calculus I	4-6
or MATH A251F	F.A.T. Calculus I	
MATH A252	Calculus II	4-6
or MATH A252F	F.A.T. Calculus II	
MATH A261	Introduction to Discrete Mathematics	3
PHYS A123 & A123L	College Physics I and College Physics I Laboratory	4
or PHYS A211 & A211L	General Physics I and General Physics I Laboratory	
PHYS A124 & A124L	College Physics II and College Physics II Laboratory	4
or PHYS A212 & A212L	General Physics II and General Physics II Laboratory	
STAT A307	Probability and Statistics	4

ENGL A313	Professional Writing	3
or ENGL A414	Research Writing	
or ENGL A478	Public Science Writing	
PHIL A305	Professional Ethics	3
Upper-Division Courses [1]		12
Total		**86-90**

[1] *Complete an additional 12 upper-division credits in CSCE, MATH (excluding MATH A420 and MATH A495A) or STAT. Nine of these credits must be in CSCE courses. A maximum of 3 credits of CSCE A395, a maximum of 3 credits of CSCE A495, and maximum of 6 credits of CSCE A498 may be applied to degree requirements.*

A minimum of 120 credits is required for the degree, of which 39 credits must be upper-division.

Honors in Computer Science

The Bachelor of Science in Computer Science recognizes distinguished achievement by conferring programmatic honors in computer science. In order to receive honors in computer science, a student must meet the following requirements:

- Meet the requirements for Graduation with Honors (http://catalog.uaa.alaska.edu/academicpoliciesprocesses/academicstandardsregulations/graduation/);
- Meet the requirements for a Bachelor of Science in Computer Science;
- Earn a minimum GPA of 3.50 in the major requirements;
- Show active participation in a computer science related organization such as a UAA club or community group. Membership in a national professional organization such as the Association for Computing Machinery (ACM) or the Institute of Electrical and Electronics Engineers (IEEE) is encouraged but insufficient to meet this requirement. To apply for honors, students must submit a written reflection to the computer science and engineering department chair by the graduation application deadline that explains how participation enhanced the student's learning experience in computer science.