

B.S./M.S., COMPUTER SCIENCE

Accelerated B.S./M.S. Degrees

Computer science is the study of information handling and its application to the problems of the world. Computing is widely used in support of science, engineering, business, law, medicine, education and the social sciences, and offers abundant employment opportunities.

The B.S. and M.S. degrees follow the recommendations of the Association for Computing Machinery and the Institute for Electrical and Electronic Engineers. The B.S. degree is accredited by the Computing Accreditation Commission of ABET.

The computer science undergraduate program introduces the fundamentals of computer programming, hardware and theory. It emphasizes the application of general principles to real-world problems. Mathematics and engineering play critical roles in the core. A solid background in fundamentals enables graduates to understand the uses of today's computers and to participate in future developments.

Minimum Requirements for Computer Sciences B.S./M.S. Degrees: 141 credits

Learn more about the bachelor's/master's degree in computer science (<https://uaf.edu/academics/programs/bachelors/computer-science-bs-ms.php>), including an overview of the program, career opportunities and more.

College of Engineering and Mines
Department of Computer Science (<https://www.cs.uaf.edu/>)
907-474-2777

Admission Requirements

Complete the following admission requirements:

1. Computer science major, junior standing, with CS F311 completed
2. GPA 3.25 or above based on a minimum of 24 credits. Students must maintain a cumulative GPA of 3.0 to remain in the program.
3. Submit a study goal statement.
4. Submit a UAF graduate application for admission.

Program Requirements

Minimum Requirements for Degree: 141 credits

Students must earn a C- grade or better in each course.¹

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:		
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	General Physics I	
PHYS F212X	General Physics II	
Any approved ethics course		
B.S. 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
CS F371	Computer Ethics and Technical Communication	3
CS F372	Software Construction	3
CS F411	Analysis of Algorithms	3
CS F441	System Architecture	3-4
or EE F443	Computer Engineering Analysis and Design	
CS F471	Senior Capstone I ²	3
CS F472	Senior Capstone II ²	3
EE F341	Digital and Computer Analysis and Design	4
MATH F253X	Calculus III	4
MATH elective at the F300/F400 level		
MATH F307	Discrete Mathematics	3
STAT F300	Statistics	3

M.S. Program Requirements		
CS F600	Professional Software Development	4
CS F601	Algorithms, Architecture and Languages	4
CS F690	Graduate Seminar and Project	3
CS F691	Graduate Seminar and Project	3
Approved electives		16

Exam

Pass a written comprehensive exam in computer science theory and practice.

- ¹ For the master's degree, a student must earn an A or B grade in F400-level courses. A grade of C will be accepted in F600-level courses provided a B grade point average is maintained.
- ² Fulfills the baccalaureate capstone requirement.

Note: This degree program must be completed in seven years or the student will be disqualified from the program. If a student is disqualified, a B.S. in computer science will be awarded if:

1. completed in 10 years, and
2. the student meets the B.S. degree requirements for computer science.