

BSc. Computer Science Course Outcomes & Objectives

Student Outcomes

Student outcomes describe what students are expected to know and be able to do by the time of graduation. The Computer Science Department's Bachelor of Science program must enable students to attain, by the time of graduation:

- An ability to apply knowledge of computing and mathematics appropriate to the discipline.
- An ability to identify, formulate, and develop solutions to computational challenges.
- An ability to design, implement, and evaluate a computational system to meet desired needs within realistic constraints.
- An ability to function effectively on teams to accomplish shared computing design, evaluation, or implementation goals.
- An understanding of professional, ethical, legal, security, and social issues and responsibilities for the computing profession.
- An ability to communicate and engage effectively with diverse stakeholders.
- An ability to analyze impacts of computing on individuals, organizations, and society.
- Recognition of the need for and ability to engage in continuing professional development.
- An ability to use appropriate techniques, skills, and tools necessary for computing practice.
- An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computational systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
- An ability to apply design and development principles in the construction of software systems of varying complexity.

Program Educational Objectives

Our program educational objectives for students 3-5 years after graduating with a Bachelor of Science degree in Computer Science are that they will be:

- **Broadly Educated and Versatile.** Able to draw upon foundational knowledge, learn, adapt and successfully bring to bear analytical and computational approaches on changing societal and technological challenges.
- **Inspiring and Collaborative.** Are a leader and a responsible citizen whose strengths come from an ability to draw on and contribute to diverse teams, expertise, and experiences?
- **Innovative.** Drives scientific and societal advancement through technological innovation and entrepreneurship.
- **Engaged.** Is and remains engaged with the University of Colorado, the state of Colorado, and technical and scientific professional communities.