Course Overview: CSC 101

Course title: Intro to Computer Science

Pre-requisites: None

Number of credits: 3

Catalog course description: We live in a digital society where computer-based technologies impact nearly every facet of our day-to-day lives. These technologies would not be possible without computer science. This course provides an introduction to computer science and will be of interest to both majors and non-majors who want to learn foundational concepts in the field, as well as common computer science applications. Centered around creative problem-solving and management of information, students will learn how to apply computational thinking to solve a variety of problems through hands-on projects. Topics include algorithms, writing code, data representation, information security, and artificial intelligence. After foundational concepts are covered, the course discusses common computer applications, their impact on society, and the ethical issues that arise from existing and emerging technologies.

Required instructor qualifications: Masters or Ph.D. in Computer Science or a related field; or Masters in Education with an undergraduate degree in Computer Science

Course's audience and role in Eastern's curriculum: This course is not included in Eastern's Computer Science major or minor but is in our Liberal Arts Core, fulfilling the ELAC Discipline Category of Science and Math and Learning Outcome category of Creativity.

Learning outcomes: Upon completing this course, students will be able to:

- Learning Outcome 1 (LO1): Understand foundational concepts in computer science, including algorithmic thinking, writing coding, data representation, information security, artificial intelligence, and ethical issues.
- Learning Outcome 2 (LO2): Apply creative problem-solving to solve computational problems in areas such as information security and artificial intelligence and apply computing principles for creative expression through code.
- Learning Outcome 3 (LO3): Use foundational skills in computer science to create an imaginative functional product.
- Learning Outcome 4 (LO4): Identify ethical issues in computer science and apply ethical reasoning to understand how decisions in computer science impact individuals and society.

Primary modes of instruction: Mixture of lecture and lab

Primary modes of assessment:

Assignments: Assignments are given to assess understanding of course content and ability to apply course concepts to solve computational problems. This course content covers the basic

competencies that are necessary for creativity in Computer Science. Some assignments will also cover ethical reasoning and will assess your ability to recognize ethical issues and to understand the impact that decisions in Computer Science have on other individuals and on society. The format of these questions varies and may require short answers or writing code.

Participation / Discussion

Projects

Larger assignments that may involve groupwork, writing code, and problem solving.

Other notes for instructors: As this course meets ELAC requirements, it must include the following elements and high impact practice:

Creativity
Rationale: Liberally educated students adapt and innovate in our rapidly changing world. Although creativity is often associated with the arts, innovative thought and expression are used across the disciplines and in various work situations. The capacity to see new possibilities and to make things that did not exist before is a valuable skill for various fields.
Definition: Creativity is the ability to utilize skills and strategies to synthesize ideas, perspectives, information, or materials in original and self-aware ways, and to use that synthesis to generate imaginative acts or products.

Ethical Reasoning
Rationale: Liberally educated students carefully consider how decisions and behaviors affect individuals, communities, and the world. In an increasingly complex and globalized society, it is imperative to contemplate the impact that human actions have on others and to recognize and weigh the ethical implications of different courses in life and work.
Definition: Ethical Reasoning requires students to recognize ethical issues, identify their own ethical positions and analyze other ethical perspectives in real-world situations in order to consider the impact of decisions and actions on other individuals, society, and the environment.

High Impact Practices
High Impact practices are shown to increase student efficacy and learning. These practices aim at helping students to apply what they are learning in academic and real-world contexts. This course embeds the high impact practices of Collaborative Assignments and Projects. Throughout the course, students will engage in group projects involving problem-solving through code and/or discussion and reflection of ethical issues in computer science.

Approved by the Department of Computer Science on 05/27/2026

Signature of department chair or faculty liaison: Garrett Dancik