

Introduction to Computer Science

Course Overview and Syllabus

Grade level: 9–10

Prerequisite Courses: None

Credits: 1.0

Course Description

This full-year course is designed for students in grades 9–10, although any students across grades 9–12 may enroll. This course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can affect the world. Students have creative, hands-on learning opportunities to create computer programs, develop web pages, design mobile apps, write algorithms, and collaborate with peers while building strong foundational knowledge. This course provides a solid foundation for more advanced study as well as practical skills that students can use immediately.

Course Objectives

Throughout the course, you will meet the following goals:

- Explore the impact of computing on personal, ethical, social, economic, and cultural practices
- Describe characteristics of the internet
- Use algorithms to solve computational problems
- Apply programming, design, and development methods to real-world situations
- Plan and write multiple programs using programming languages such as Python
- Discuss how lifelong learning and professional development impact advancement and career satisfaction

Student Expectations

This course requires the same level of commitment from you as a traditional classroom course. Throughout the course, you are expected to spend approximately 5–7 hours per week online on:

- Interactive lessons that include a mixture of videos, readings, and tasks
- Assignments in which you apply and extend learning in each lesson
- Assessments, including quizzes, tests, and cumulative exams

Communication

Your teacher will communicate with you regularly through discussions, email, chat, and system announcements. You will also communicate with classmates, either via online tools or face to face, as you collaborate on projects, ask and answer questions in your peer group, and develop your speaking and listening skills.

Grading Policy

You will be graded on the work you do online and the work you submit electronically to your teacher. The weighting for each category of graded activity is listed below.

Grading Category	Weight
Lesson Quizzes	20%
Unit Tests	20%
Cumulative Exams	20%
Assignments	10%
Projects	30%
Additional	0%

Scope and Sequence

When you log into Edgenuity, you can view the entire course map—an interactive scope and sequence of all topics you will study. The units of study are summarized below:

- Unit 1:** Computer Science Then and Now
- Unit 2:** Hardware and Software
- Unit 3:** Computational Thinking
- Unit 4:** Control Structures and Data Types
- Unit 5:** Classes and Connections
- Unit 6:** Programming Algorithms
- Unit 7:** Design and Development
- Unit 8:** Laws and Security
- Unit 9:** Ethics
- Unit 10:** Applications