



# CSE 110: Principles of Programming

## Overview

Every day, computers and algorithms touch the lives of everyone around us in both mundane and profound ways. These algorithms are in the plants and distribution systems that bring you clean water and electricity, sensors that moderate the flow of traffic, in the tractors and combines that sow and harvest our food, and in the satellites that measure and predict the weather trends. If you are curious about what computers can do and how we instruct them to do those things - this course is for you. No prior programming experience is needed for this course. In addition to exposure to programming, you will gain a powerful set of thinking and problem-solving skills that you can use in your daily life. Start taking advantage of the power of computers around us to make our world a better place.

## What You'll Learn

- Demonstrate problem solving techniques for programming
- Develop algorithms to solve problems; demonstrate effective troubleshooting, testing, and debugging of programs
- Describe and apply variables, basic and composite data types, and collections to the development of programs
- Develop programs using fundamental structures of sequence, selection, and iteration
- Write functions that accept parameters and return results
- Implement object-oriented programs
- Describe the importance and relevance of computing and programming skills in our lives and careers

## How to Succeed

To be successful in this course, we recommend English language fluency and computer literacy. We also encourage you to make sure your laptop or desktop computer meets the [technical requirements](#).

## Earn College Credit

This course appears on your transcript identically to how it appears on the transcript of an enrolled ASU student.

This course satisfies 3 credit hours toward the Computer/Statistics/Quantitative Applications (CS) General Studies requirement at Arizona State University. It is strongly encouraged that you consult with your institution of choice to determine how these credits will be applied.

In order to receive academic credit for this course, you must earn a grade of "C" or better. You have one year to add the course to your transcript.

## Exams and Grading

20%

Readings & Activities

20%

Individual Assignments

20%

Lab

20%

Midterm Exam

20%

Final Exam

# CSE 110: Continued

## Time Commitment

This is an asynchronous, online course. This means, while you will have deadlines, you do not need to be at your computer at specific times or participate in live activities.

To be successful in this class, you must view all course pages and complete all graded work by the deadlines indicated. Also, keep in mind that "attendance" in an online course means logging into the platform on a regular basis, checking for course announcements, and visiting and participating in the discussion forums.

### 12 week Version

This 3 credit, 12 week course requires about 135 hours of work. Therefore, expect to spend approximately 12-15 hours per week preparing for and engaging in this course.

### 16 week Version

This 3 credit, 16 week course requires about 135 hours of work. Therefore, expect to spend approximately 8-10 hours per week preparing for and engaging in this course.

## Materials

This course makes use of open educational resources (OERs) provided within the course, **no purchase necessary**.

## Graded Assignments

Graded assignments are required and count towards your final grade. Students must submit all assignments via the course site unless otherwise instructed.

**Skill Challenges (10%):** The five skill challenges are autograded quizzes and non-coding written assignments. These quizzes are open book, and must be completed by you.

**Project Challenges (40%):** Project challenges are applied problem solving projects where the solution is an algorithm written in a programming language like Python or Java. There will be 13 project challenges total, and the best 11 will count toward your grade. The two lowest-scoring project challenges will be dropped.

**Midterm Exam (20%):** The midterm is a timed, unproctored exam

**Final Exam (30%):** The final is a timed, **proctored** exam.

## Assignment Deadlines

Your instructional team will provide all content and learning activities on or through your course site. It is your responsibility to review all content, fulfill all assignments on time, and ask any questions you have in the designated discussion area. It is also your responsibility to determine the due dates and times for all course assignments according to your time zone. Due to the large-scale format of Universal Learner Courses, late assignments will not be accepted at any point during the course, and we cannot make exceptions.

## Course Communication

All communication will take place via the discussion forums and course announcement page. There will be a discussion forum where you can post general questions, comments, and direct inquiries for the instructor and course team. Please use these forums to ensure a timely response. Your instructor will not be able to respond to email.

## Additional Information

If you have questions about Universal Learner Courses and how they work, please visit [ea.asu.edu](https://ea.asu.edu) or contact our support team at [ulcourses@asu.edu](mailto:ulcourses@asu.edu).