



CSE 110x Programming for Everyone: Introduction to Programming Spring C 2018

I. COURSE OVERVIEW

This 15-week, 3-credit hour course is an active introduction to problem-solving by way of computer science and programming. You interact with computers and algorithms daily; in this course, you will learn what computers can do, and how to instruct them to do those things. Specifically, you will learn about what a computer scientist does; basic operation and capabilities of computers; algorithmic problem-solving; debugging programs and automating basic processes; and how to write basic programs using modern programming languages. In the process, you will come away with a powerful set of thinking and problem-solving skills, which you can apply to your daily life.

Learning Objectives and Topics

By the end of this course, students should be able to:

1. Demonstrate problem solving techniques for programming.
2. Develop algorithms to solve problems. Demonstrate effective troubleshooting, testing, and debugging of programs.
3. Apply basic object-oriented analysis and design methods.
4. Describe and apply variables, basic and composite data types, and collections to the development of programs.

5. Develop programs using fundamental structures of sequence, selection, and iteration.
6. Write functions that accept parameters and return results.
7. Implement object oriented programs.
8. Describe the importance and relevance of computing and programming skills in their lives and careers.

Topics include:

- Programming with Python and Java Languages
- Algorithmic Problem Solving
- Computers and Representation of Data
- Functions
- Structured Programming
- Classes and Objects
- Arrays and Lists
- Object Oriented Programming

II. WEEKLY ACTIVITIES AND TIME COMMITMENT

Class preparation means reviewing all material required for a given section of the course and completing all assignments by the deadlines indicated. Attendance in an online course means logging into edX on a regular basis and participating in all of the activities that are posted.

This 15-week, 3-credit course requires 135 hours of student work. Therefore, expect to spend approximately 9 hours per week preparing for and actively participating in this course.

Course Content and Assignments

This is a content-rich course, designed to optimize instruction for all learners; always be sure to scroll down in any given unit to access all material. **In addition to viewing readings and videos, your success in this course will be proportional to your engagement with all the content, including ungraded activities and quizzes.**

Video and Audio

- **Lectures** from your instructional team on specific topics, designed to help you learn key concepts.
- **Guest lectures** by experts in the field.

Readings

Our course makes use of open educational resources (OERs), no purchase necessary.

Frequent Feedback

This course utilizes many different kinds of feedback, including peer review, self-assessment, instructor assessment, and automated feedback. The purpose of this feedback is to help you measure your learning progress as you develop your knowledge and skills. Many activities are ungraded; they are an opportunity for you to test your new skills, risk-free.

- **Peer review:** You will have an incredible diversity of classmates, and this is a great opportunity to learn from each other. In some activities, you will review other students ideas and programs, and we'll provide rubrics and guidelines to help you provide meaningful feedback.
- **Self-assessment:** Knowledge checks and practice challenges are ungraded activities that will help you evaluate your own learning progress.
- **Instructor assessment (ID Verified students):** With ID verification, you will receive personalized feedback on your graded assessments from a content expert. Students who ID verify have the opportunity to pursue a certificate of completion or ASU course credit toward a college degree.

Graded Assignments

Graded assignments are required, and count toward the final grade for ID Verified students planning to earn either credit or a verified certificate. Students *must*

submit *all* assignments via the edX platform unless otherwise instructed. Each assessment has submission instructions.

Skill Challenges - 10%, (5): Skill challenges are graded quizzes and non-coding written assignments.

Design Reviews - 15% (5): Design reviews are assignments that ask you to first think critically, then develop a design for solving a problem, before you write any code. In the latter half of the course, design reviews are paired with specific Project Challenges.

Project Challenges - 25%, (10): Project challenges are applied problem solving projects where the solution is an algorithm written in a programming language like Python or Java. **Note:** There will be **12** Project Challenges total, and the best **10** will count toward your grade. (The two lowest-scoring Project Challenges will be dropped.)

Midterm (25%) and Final Exam (25%): All students are invited to take the midterm and final exams. ID Verified students who wish to pursue ASU credit must opt in for proctoring.

Ungraded Activities

Many activities in this course do not directly contribute to your grade. These activities develop your knowledge and skill without penalty and are critical to your learning success and progress through the course.

Knowledge Checks and Code Reviews: As you read course content and watch videos, you'll encounter short quizzes that will help you check your knowledge and give feedback on your understanding.

Practice Challenges: Practice challenges are ungraded, applied problem-solving challenges where the solution is an algorithm written in a programming language like Python or Java.

Play, Create, Share: These discussion activities, included throughout the course, are opportunities to apply what you have learned, share the results with your classmates, and receive their feedback. (Remember to keep the conversation civil, and free of harsh judgement.) The course team may also comment, to provide additional insight and expertise.

Live Code Examples: Live code examples are interactive, executable code that allows you to explore programming concepts. You will be asked to execute the code, observe the results, and often to make changes or analyze the code behavior.

Point(s) of Interest: Points of interest are things that we think you might find enriching, but are not strictly necessary. By visiting points of interest, you can take a more “scenic route” as you progress through the course.

Introductions: Please visit the “Introduce Yourself!” subsection located in “Your First Hour as a Computer Scientist,” to tell the course team and your classmates a little bit about yourself, your community, and how you expect to change as a result of this course in the course’s Introduce Yourself! discussion forum.

Course Readiness Quiz: This quiz is designed to ensure you are familiar with the information covered in “Your First Hour” section. While this quiz does **not** count toward your grade, you **must successfully complete** it to access week 1, and the rest of the course.

III. COURSE REQUIREMENTS AND COMMUNICATION

Course Requirements

Recommended Prior Knowledge: To be successful in this course, we recommend English language fluency and computer literacy, as well as high school algebra and understanding of basic mathematical concepts.

Online Course Requirements: You will find all content and learning activities within the edX platform. All course interactions use Internet technologies. It is your responsibility to watch all required videos and assigned readings, and complete all graded assessments. You are encouraged to interact with your peers and course team in the discussion forums, and ask questions there as well.

Course Communication

All written communication will take place in discussion boards, course updates, and on the course home page. Office hours will be held regularly through YouTube Live. Live session(s) are recorded, and students can watch after the initial broadcast. Office hour sessions will be announced ahead of time, and a link will be provided to join the session.

Each week, there will be a dedicated discussion board called “General Questions,” where you can post general questions and comments about the subject matter, as well as any direct inquiries for the instructor and course team. *Please use this forum to ensure timely response.*

IV. STUDENT EVALUATION

Here is the breakdown of your grade:

Item (# of assignments)	Weight	Proctored	Graded
Skill Challenges (5)	10%	No	Yes
Project Challenges (10)	25%	No	Yes
Design Reviews (5)	15%	No	Yes
Midterm Exam	25%	Yes	Yes
Final Exam	25%	Yes	Yes

Final grades are based on the number of points you earn on the course activities listed above. There is no extra credit available. You can see your percentage of the total points to date on your edX progress page. Final scores will be absolute as follows: 90% or better will receive an A, 80% or better a B, 70% or better a C, below 70% is a failing grade. There will be no + or - added to grades.

You must pass the course with a grade of C (70%) or higher, and be on the ID verified track, in order to be either eligible for credit from Arizona State University or an edX verified certificate. Please note that exams that fail the proctoring review will result in an assignment grade of 0. A student earning an overall grade of a C or higher who fails proctoring is not eligible for a certificate. If your proctored exam is marked suspicious, you have up to 75 days from when you completed the exam to appeal the decision. After that time, appeals will not be accepted or reviewed.

*Note: You have **up to one year to purchase credit** after you become eligible. Please see Section IX, below, “Taking this Course for ASU Credit or edX Verified Certificate,” for specifics on fees and deadlines.*

V. GFA POLICIES

Assignment Deadlines: This is an online course. Your instructional team will provide all content and learning activities on our edX platform. All course interactions will use Internet technologies; it is your responsibility to review all content, fulfill all assignments on time, and ask any questions you have in our designated discussion area. All deadlines are listed in UTC time. For more information, please see section VI, “UTC Time Zone” below.

Late assignments will not be accepted at any point during the course. We recommend that you establish your time management schedule for this course during the first two days that the course is open to meet all course obligations.

For time management tips, sign up for the [GFA Orientation course](#) and review the Time Management section. Please also review our “Tips for Student Success” video in the “Before the Course Begins” section.

Subject to Change Notice: This syllabus is to be used as a guide only. Information contained here, such as assignments, grading scales, deadlines, and other materials are subject to change. It is your responsibility to read the course announcements regularly to be aware of any changes or updates in the course.

Academic Integrity: Academic honesty is expected of all students in all coursework and exams. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification, and dismissal. For more information, review ASU’s [Academic Integrity Policy](#) and [edX’s Terms of Service](#).

Prohibition of Commercial Note Taking Services: In accordance with ACD 304-06 Commercial Note Taking Services, written permission must be secured from the official instructor of the class in order to sell the instructor's oral communication in the form of notes. Notes must have the notetaker's name as well as the instructor's name, the course number, and the date.

Title IX: As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can obtain information about support, including counseling and academic support, from the university at <https://sexualviolenceprevention.asu.edu/faqs>.

VI. UTC TIME ZONE

To accommodate students from across the globe, all deadlines are posted in UTC time, the global standard. Please see the “Course Information and Support” subsection in “Your First Hour as a Computer Scientist” for a detailed explanation.

Remember, it is your responsibility to understand UTC and determine the due dates and times for your time zone. Make sure you address this, ideally before the first set of assignments is due, and definitely before the midterm, to avoid any unnecessary stress. **Deadline extensions will *NOT* be granted for misunderstanding UTC time.**

VII. GENERAL AND TECHNICAL REQUIREMENTS

This course is best accessed by a reasonably modern browser on a laptop or desktop computer. Course videos can be accessed using the edX app for iPhone and Android. For more information about mobile, review [edX on the Go](#).

Students who are interested in taking the course for credit will need additional computer requirements and skills to access the remote proctor service. Please see the [Software Secure](#) site, which details Proctor Now’s requirements.

If you are not certain about your system, it is highly recommended that you complete the practice proctored exam to confirm system compatibility.

VIII. GENERAL AND TECHNICAL ASSISTANCE

Student Support and General Technical Issues: Please access the [edX Help Center](#) for solutions to common problems. Please also be sure to review our “Before the Course Begins” section for further information. If you are still experiencing issues, you can reach out to gfa@edx.org.

Accessibility: If you are a student with a disability, and you would like to request an accommodation, please send an email to accessibility@edx.org.

Proctoring: If you opt in for proctored assessments and experience technical issues, please do the following to address them:

1. Contact our proctoring partner, Software Secure, at 1-855-436-2039 for US and Canada and 1-617-658-2879 for International (Outside US and Canada).
2. Send an email to edX at gfa@edx.org.

Both Software Secure and edX must be informed of the issue to ensure resolution.

Please put “Problem with proctored exam” in the subject line. Also, provide as much information as possible, including screenshots, error messages, and urgency due to upcoming deadlines.

IX. TAKING THIS COURSE FOR ASU CREDIT OR edX VERIFIED CERTIFICATE

ASU Credit: Students wishing to take this course for ASU credit are required to do the following:

- ID verify by January 19, 06:59 UTC
- **Opt in for proctoring** for the midterm and final exams
- Pass the course with a C or better (70% or higher)

Verified Certificate: Students wishing to take this course for a verified certificate are required to do the following:

- ID Verify by January 19, 06:59 UTC
- Pass the course with a C or better (70% or higher)

Cost: The course is 3 credits.

- ID verification: \$49 USD/course
- Credit: \$600 USD/course.

Please note that exams that fail the proctoring review will result in an assignment grade of 0. A student earning an overall grade of a C or higher who fails proctoring is not eligible for a certificate. If your proctored exam is marked suspicious, you have up to 75 days from when you completed the exam to appeal the decision. After that time, appeals will not be accepted or reviewed.

ID Verification Status

When you verify your identity for an edX course, that verification is effective for one year. Your dashboard provides the status of your ID verification.

You must be ID verified in order to complete proctored exams. Please check your verification status regularly.

It will take a few days for the ID verification process to be completed, so please plan accordingly. Deadlines will not be extended due to re-verification issues.

Purchasing Credit

Important: Provided you have met all requirements for this course, you can purchase credit (\$600 USD) from ASU for **up to one year** after you become credit eligible.

Your date of eligibility **may differ** from the course end date or the date certificates are issued. Please visit your course progress page, specifically the “Requirements for Course Credit” section, to see the status of your credit eligibility.

Please review “Earn University Credit / Proctoring Requirements” in your “First Hour” section for additional details.

Note: Potential limitations of internet connectivity by some countries are beyond the control of Arizona State University and may limit the ability of an ID Verified student residing in those countries to complete all the assessments, and therefore potentially impede the eligibility to earn college credit. Students impacted by such limitations should contact gfa@edx.org.