

# CS 1400: Intro to Computer Programming

Course Details and Objectives

Fall 2023

## Course Information

### Description of CS 1400

CS 1400: Introduction to Computer Programming is the first of two courses that make up our introduction to computer programming. We will use the Python programming language in this course. The second course, CS 1410, teaches object-oriented programming using the Java programming language. For many people, CS 1400 will be their first CS course - if you are one of these people, be kind and generous with yourself as you learn a new way of thinking about problem-solving! This course introduces the engineering and mathematical skills required to effectively program computers, as well as the range of issues confronted by computer scientists. A major theme of the course is the role of procedural and data abstraction in decomposing programs into manageable pieces. Students will complete extensive programming exercises that involve the application of elementary software engineering techniques.

### Learning Outcomes

By completing this course, students will be able to:

- use variables, assignment, selection, and repetition to form solutions to simple problems
- exploit procedural abstraction (non-recursive and recursive methods) to decompose a program into manageable pieces
- employ data collections and their algorithms to solve problems, especially canonical loop patterns to process arrays and lists
- incorporate an understanding of creating and using object types, as well as their scope and life cycle, into solutions
- utilize binary representations, memory models (references, heap, stack), and persistent storage (files) in solving problems
- leverage the features of an Integrated Development Environment to design, implement, test, debug, and document a complete computer program, given only a problem statement

### Instructor

Daniel Kopta, *Email:* [dkopta@cs.utah.edu](mailto:dkopta@cs.utah.edu) *Office:* MEB 3190A

### Lectures

Lectures are Mondays and Wednesdays from 3:00pm to 4:20pm in room GC 1900.

## Labs

When enrolling in this class, you also enrolled in a Tuesday lab section. These are smaller, weekly meetings led by the TAs designed to give you practice with the concepts discussed in class and other necessary instruction. Attending and completing labs is required for credit. Attend the lab section you are enrolled in.

## Laptop Requirement

Per Kahlert School of Computing policy, students enrolled in a CS class with a lab/discussion component are required to use their own laptop for the lab. Students are responsible for administering their own laptops, such as installing software and backing up data. For recommendations and further information, please see the official policy:

[https://handbook.cs.utah.edu/2023-2024/CS/Academics/laptop\\_policy.php](https://handbook.cs.utah.edu/2023-2024/CS/Academics/laptop_policy.php)

## Class Website

The class website is on Canvas at <https://utah.instructure.com> (select the CS 1400 section 001 course). It will contain all pertinent course info and materials such as lectures, announcements, updates, corrections, and grades. Students are required to check their email and Canvas regularly until final grades are posted.

## Coursework

### Grading

Students with an average score on all exams of 65% or lower will receive that average as their final course score. Otherwise, scores will be determined by the following category weights:

assignments	35%
exams	45%
labs	10%
e-book	5%
participation	5%

If  $X$  is your overall course score, letter grades will be assigned using the below mapping. Scores will *not* be rounded.

	$90 > X \geq 87$ B+	$80 > X \geq 77$ C+	$70 > X \geq 67$ D+	
$100 \geq X \geq 93$ A	$87 > X \geq 83$ B	$77 > X \geq 73$ C	$67 > X \geq 63$ D	$60 > X \geq 0$ E
$93 > X \geq 90$ A-	$83 > X \geq 80$ B-	$73 > X \geq 70$ C-	$63 > X \geq 60$ D-	

## Assignments

The instructions for each assignment and its due date will be posted on the class website. It is the student's responsibility to ensure the successful and timely submission of each programming assignment — start early and follow the instructions carefully. Corrupted or missing files will not be grounds for extensions. Double-check your submissions, and save a digital

copy of all of your work. Many assignments will be submitted through the Gradescope system, which provides some basic checking and testing. Students should review the results of this testing and use it to make sure the assignment is submitted properly and working.

### **Exams**

Midterm exams will be given during the regular class time in the regular class room on Wednesday, September 27 and Wednesday, November 1. The final exam will be held on Wednesday, December 13 at 3:30pm in the regular class room. All exams are written exams.

Be sure to carefully read the exam average policy in the Grading section above.

### **E-book**

There will be weekly readings and online programming exercises through the course e-book. These exercises are critical practice for material covered during the week.

### **Participation**

The class participation grade will be based on attendance and completion of in-class responses using polling software during most class sessions. Half of the credit will be awarded for answering questions at all, and half will be awarded for answering correctly. Bring an internet-connected device to class.

### **Dropped Scores**

The one lowest ebook, and three lowest participation scores will be dropped. The purpose of these dropped scores is to account for illness or other extraordinary circumstances preventing you from completing or attending them. Do not use your dropped scores simply to avoid doing the work. No exam or assignment scores will be dropped.

### **Getting Help**

See the “Getting Help” page on Canvas for information about my office hours, TA help hours, discussion boards, etc.

## **Course Guidelines**

### **Piazza**

Piazza is used for questions and discussions related to the course. Instructions for signing up on Piazza can be found on Canvas. Students must use their first and last names (as they appear in Canvas) in their Piazza profile, such that the correct name is visible to the instructor and TAs on posts. Note that students may select to post anonymously, such that their name is not visible to classmates. If your question is one that other students can't answer, such as “why did I lose points on...?”, or “can I have an extension on...?” do not post it publicly on Piazza; post it privately (to instructors only).

### **Late Work and Regrades**

Late assignment submissions will incur a penalty of 10% of the assignment's max value if submitted within the 24-hour period following the due date. This penalty increases by 10% per 24-hour period, up to three days. Work submitted more than three days late will not

receive credit. An assignment is considered late if submitted any amount of time past the deadline, as measured by the submission system. Any delays caused by the submission system or corrupt/lost files is not an excuse for lateness. **Do not risk submitting at the last minute.** Late days apply to programming assignments only; other work, such as labs and e-book exercises, will not be accepted late. Students who wish to appeal a score on an assignment, a lab, a quiz, or a test must do so within one week of the score being released.

### **Academic Misconduct**

Academic misconduct (cheating) is an issue taken seriously by the Kahlert School of Computing, so much so that the academic misconduct policy for this course is in a separate document. You must read that document, which you can find on Canvas. See the University of Utah Student Code for a detailed description of the university policy on cheating. Any student found cheating will fail the course.

### **College of Engineering Guidelines**

For information on withdrawing from courses, appealing grades, and more, see:  
<https://www.coe.utah.edu/semester-guidelines>

### **Students with Disabilities**

The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

### **Safety**

The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit [safeu.utah.edu](http://safeu.utah.edu).

Violence and harassment based on race, national origin, color, religion, age, disability, sex or gender (which includes sexual orientation and gender identity/expression) is a civil rights offense and will not be tolerated. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776.