CS-101 CS for All | Fall 2025 | Course Syllabus

Professor Karyn Doke

- **Email:** kdoke@hamilton.edu
- **Office:** SCCT 2015A

- **Office Hours:** Mondays 1-2pm, Tuesdays 10:30-11:30am, Fridays 2-4pm or by appointment. Note that office hours are when I'm available to help students! You are more than welcome to drop by at any point during scheduled office hours without letting me know beforehand, whether to ask a question about code, or just chat.

Course Logistics

- **Lectures:** Mon/Wed/Fri 9:00 - 9:50am, KJ Building 102
- **EdStem:** https://edstem.org/us/courses/81246/discussion
- **Gradescope:** https://www.gradescope.com/courses/1091516, **Entry Code:** WJ58YG
- **Blackboard:** https://blackboard.hamilton.edu/

Prerequisites

There are no prerequisites for this course.

Course Description

The first course in computer science is an introduction to algorithmic problem-solving using the Python programming language. Topics include primitive data types, mathematical operations, structured programming with conditional and iterative idioms, functional abstraction, and objects. Students apply these skills in writing programs to solve problems in domains across the liberal arts. No previous programming experience necessary.

TA Help

Computer science TAs are available in SCCT 2017 to answer questions about programming, whether for your projects or homework assignments. You should not expect to leave TA hours with all of your problems solved. They are available to you as a source of advice and hints, but their duties do not include writing your code or fixing all of your bugs. TA office hours are at the following times:

- Sundays: 4-6pm and 7-10pm
- Mondays: 4-6pm and 7-10pm
- Tuesdays: 7-10pm
- Wednesdays: 7-10pm
- Thursdays: 7-10pm

QSR center

In addition to our regular computer science TAs, the QSR center runs a facilitated group study for CS101. These sessions are available to help you to form working study groups and encourage

peer-to-peer collaboration with the support of a tutor. Up to six students from your class are able to sign up for each session. It is important for the success of the group that all of its members are invested in succeeding together. For this reason the QSR center asks group members to commit to the weekly session for the duration of the semester. Drop in tutoring is also available. If you are interested in participating, reach out to the QSR center directly at https://www.hamilton.edu/academics/centers/qsr.

Course Materials

Textbooks & Resources

This course uses a free, interactive book *How to Think Like a Computer Scientist: Interactive Edition* available at at https://runestone.academy/ns/books/published//thinkcspy/index.html. Readings from this text will be assigned weekly. For additional resources, see the following:

- For tutorials and practice: Learn Python at https://www.learnpython.org/
- For a resource: Online documentation for Python 3 at https://docs.python.org/3/

Laptops and Electronics

Laptops should not be used during lectures unless directed by the professor. Additionally, the use of phones or any similar device are not permitted during lectures. If you need to take notes on a tablet, then you should only be writing (e.g. with a stylus) unless you require an accommodation for a disability. Tablets should be kept flat on the desk and should not be propped up unless you require accommodation for a disability. If you would like to discuss this restriction, you are always welcome to come talk to me about. You should bring your laptop to the weekly labs.

Software

You'll need access to a computing environment that supports programming in Python using the *integrated development environment* called *Thonny*. You can install from: https://thonny.org/ (the first lab will guide you through this process).

Grading

- **Codelets (10%):** Each day that we have class, we will assign one or two small problems called "codelets". These codelets will be due at 11:59pm on the day of our following class meeting. For example, a codelet assigned on Monday would be due on Wednesday at 11:59pm. The instructions for each codelet will be posted on EdStem. For each codelet, you may work by yourself or with one other student in the same course section. You may choose a different partner (or go solo) on each codelet. If working with a partner, you should submit the codelet together (more about this in codelet instructions).
- **Programming Projects (35%):** You will be given 2 weeks (on average) to complete each of the 7 projects in this class. Each project will require you to write a program larger than those given in the codelet assignments. The instructions for each project will be posted on EdStem. For each project, you may work by yourself or with one other student in the same course section. You may choose a different partner (or go solo) on each project. If you work in a pair, you should submit your project together, however, videos must be done individually (more about this in project instructions).

- **Labs (10%):** Weekly labs make up an important part of this course. We may cover material in labs that is not covered in the rest of class and vice versa. Your lab grade will be based on attendance and making productive use of your lab time.
- **Attendance & Participation (5%):** Class attendance is very important. You should attend every class unless you have a very good reason not to. Please inform me if you know in advance that you will miss a class. Your attendance grade will be negatively affected by unexcused absences. Arriving late for class will count as half of an unexcused absence. Additionally, if you expect to miss class for religious, athletic, or academic conflicts, please contact me at the earliest possible time to be excused and arrange for missed work. Your grade here will primarily be based on exit questions that you complete at the end of every class. These exit questions will show me that you are engaging with the material and be a record of your attendance.
- **Midterms (24%):** We will have three midterms during the semester each worth 8% of your overall grade. Midterms are 50-minute written exams given in person in class at the regularly schedule time on the following Wednesday dates: **September 24**, **October 22**, and **November 19**. Midterms will feature a mixture of True/False and short answer questions where you will be asked to write code on paper. Midterms can only be rescheduled for conflicts with college-sanctioned activities or for medical reasons supported with a note from your healthcare provider.
- **Final Exam (16%)** The final exam is a timed, 3-hour written exam given in person on Friday, December 19 from 9:00am-12:00pm. Final exams cannot be rescheduled.

At semester's end, I'll calculate your final grade based on the stated weights. Grades round to the nearest whole number (92.4 to 92, 92.5 to 93). Your grade will be converted to a letter grade based on these cutoffs: 45 F, 60 D-, 63 D, 67 D+, 70 C-, 73 C, 77 C+, 80 B-, 83 B, 87 B+, 90 A-, 93 A. There is no A+ grade. No grade bumping or extra credit will be permitted. Grade reflects mastery of course content and meeting or exceeding assignment/exam criteria. Effort isn't a grading factor. Final grades will be posted to Blackboard.

Course Policies

EdStem

All communication for this course happens through the course EdStem server (URL posted above). All course material and assigned work will be posted to this server. It is your responsibility to regularly check for these updates and any communication from me. You are encouraged to ask and answer each other's questions, following the guidelines under Academic Integrity & Collaboration. Any personal communication, or communication for which privacy is desired, should be done via email or in one-on-one meetings with me.

Gradescope

All assigned work should be submitted on the Gradescope course page via the URL posted above. Additionally, all grades for submitted work will be posted on this page.

Blackboard

I will not be posting any course content (beyond this syllabus) to the course blackboard page. I will, however, make available the breakdown of your grade throughout the semester so that you can monitor your progress (Gradescope does not have this feature).

Attendance

You are expected to attend every class. You may be excused only for college-sanctioned activities and you must let me know about such absences as soon as you are notified. This includes missing class for religious, athletic, or academic conflicts. If you are sick or have an important appointment at the health or counseling center, please email me before the class and take care of yourself. If you will be absent for a significant period of time, please contact me to work out a way to catch up and get you access to the appropriate resources.

If you must miss a lab for a college-sanctioned activity, an illness or any other extenuating circumstance, you should notify the lab instructor via email. In this event, you will have one week to makeup the lab during TA office hours (see above for times).

Do not be late for class as it is disruptive to the instructor and other students in the class. If you are perpetually late for class, you will not be admitted.

Late Assignments and Makeups

No late work will be accepted without prior permission. If you require an extension, please email your professor at least one business day before the due date (unless faced with an emergency) with appropriate requests. Extensions are typically 48 hours unless there are extenuating circumstances. Once the extension has expired, 5% deduction per day will be applied to late assignments. There will be no makeup work granted.

Incompletes

Incompletes will be granted for only the most extreme circumstances. To be considered for an incomplete you must 1) let me know at in advance that you are seeking an incomplete, and 2) provide documentation to support the request. This decision is also made in consultation with the Dean of Students.

Re-Grade Requests

If you believe we have made a genuine error when grading your assignment, please submit a grade review request through Gradescope with an explanation describing why the grade received is incorrect, with references to the posted rubric. Grade reviews must be requested within **one week** of a grade being posted. After this time, no grade will be revisited. In the event of a grade review, the entire assignment will be reviewed. It is possible to receive a lower grade on a reviewed assignment. Similarly, inquiries about missing grades must be made within one week of grades being posted.

Academic Integrity & Collaboration

Hamilton's policy on plagiarism can be found in the Honor Code: https://www.hamilton.edu/student-handbook/studentconduct/honor-code. Cases of plagiarism will be taken seriously and referred to the Honor Court. Anything you turn in should be your own work, and each instance of collaboration with or borrowing from others should be properly acknowledged and cited. If you reference

anything besides notes from class, the textbook, or the professor, you should cite (see below) it in your submission. This course features a significant amount of programming, which falls under this policy.

Beyond your partner on assignments, you may discuss ideas with other students in the class, including helping other students with their code. However, for assignments you are never allowed to copy any amount of code from another student or from other sources, including the Internet. Outside of working with your partner, sharing or receiving code, typing code into others' editors, allowing someone to type into yours, and copying code from online resources is not allowed. Write in your own words. You are allowed to consult with the professor, TAs, tutors, and online resources for high-level discussions about concepts.

The use of artificial intelligence (AI) such as ChatGPT, Copilot, or any other AI code generation tool to complete assignments is considered cheating. Doing so would be equivalent to having a person write code that you submit, a clear violation of the Honor Code.

Academic integrity is important, and the department will not tolerate violations. Egregious violation of these rules (i.e., cheating on an exam, plagiarism that is beyond overlooking a citation for a line or two of code, etc.) will be reported and result in a final grade of 'F' for the class.

Citation

Always cite any external help in your projects to acknowledge their contribution, except class notes or professor discussions. This includes peers, TAs, tutors, and internet sources. Any non-self-written part must be cited. Code citations should appear in comments, documents, and when discussed, listing author and location. A mere acknowledgment isn't enough; citations must identify the source and help received. Here are two examples of proper citations:

```
# CITE: Billy Williams
# HELP: Discussed how to use anonymous functions with filter.

# CITE: http://www.math.rutgers.edu/~greenfie/gs2004/euclid.html
# HELP: Source of Euclid's method for determining GCD.
```

Good rules of thumb:

- Never have anyone else (besides your partner) type into your text editor
- Never copy code from another student, the internet, or AI
- Cite any collaboration or outside reference you use
- **Ask if you are unsure**

Public Code Policy

You may not post code you write in this class publicly (e.g. GitHub, your blog, etc.), even after the semester ends. This is to ensure that current and future students aren't able to find answers. You may provide your code privately to potential employers.

Seeking Help

Accommodations

If you believe you may need accommodation for a disability, contact me privately within the first two weeks of the semester to discuss your specific needs. If you have not already done so, please contact Allen Harrison, Assistant Dean of Students for International Students and Accessibility at 315-859-4021, or via email at aharriso@hamilton.edu. He is responsible for determining reasonable and appropriate accommodations for students with disabilities on a case-by-case basis.

Mental Health and Wellness

If you are feeling isolated, depressed, sad, anxious, angry, or overwhelmed, you aren't alone: we all struggle sometimes. Don't stay silent! Talk to a trusted confidant: a friend, a family member, a professor you trust. The counseling center offers completely confidential and highly professional services, and can be contacted at 315-859-4340. If this seems like a difficult step, contact me. We can talk and call or walk to the counseling center together.

Course Outline

Please note that this is subject to change. Students will be notified of changes in a timely fashion.

Week	Monday	Topic	Project Due Date
00	Aug. 25	Turtle Graphics	
01	Sept. 1	Loops & Strings	
02	Sept. 8	Lists, Advanced Loops	
03	Sept. 15	Audio Manipulation	Monday: Project 0
04	Sept. 22	Selection & Boolean Logic	Wednesday: Exam 1
05	Sept. 29	Functions & Accumulators	Monday: Project 1
06	Oct. 6	Intro to Matplotlib	
07	Oct. 13	Natural Language Processing	Monday: Project 2
08	Oct. 20	CSVs, Grids	Wednesday: Exam 2
09	Oct. 27	Advanced Grids	Monday: Project 3
10	Nov. 3	Image Manipulation	
11	Nov. 10	More Images, Dictionaries	Monday: Project 4
12	Nov. 17	HTML Basics & Forms	Wednesday: Exam 3; Friday: Project 5
	Nov. 24	Thanksgiving Break!	
13	Dec. 1	Webscraping	
14	Dec. 8	Classes & Objects	Monday: Project 6
15	Dec. 15	Final Exam (Dec 19)	9am-12pm

Reading Schedule

Week	Readings
00	Chapter 1, Chapter 2, Chapter 3, Sections 4.1-4.3
01	Sections 4.4-4.11 & Chapter 9
02	Sections 4.4-4.11 & Chapter 10
03	SimpleAudio Tutorial & SimpleAudio Documentation
04	Chapter 7
05	Chapter 6 & Chapter 8
06	Matplotlib
07	Natural Language Processing With Python's NLTK Package & NLTK Documentation
08	Section 10.24 & Chapter 11
09	Section 10.24
10	Image Processing With the Python Pillow Library & Pillow Documentation
11	Chapter 12
12	HMTL Basics & HTML Forms
	No Readings, Thanksgiving Break
13	Beautiful Soup: Build a Web Scraper With Python & Beautiful Soup Documentation
14	Chapter 17
15	No Readings, Final Exam