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

Professor Mason Brown

- **Email:** mbrown1@hamilton.edu
- **Office:** SCCT 3003
- **Office Hours:** Tue / Thu 10 – 12; Wed 3 – 5

Course Logistics

- **Lectures:** Mon, Wed and Fri 11:00 - 11:50am Taylor Science Center G027
- **EdStem:** <https://edstem.org/us/join/9tQBgr>
- **Gradescope:** <https://www.gradescope.com/courses/1082375> **Code:** VWPNEY
- **Exit Questions:** <https://forms.gle/ENpZq7Mqa5NLhKnV7>

Prerequisites

There are no prerequisites for CS-101.

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 throughout the liberal arts. No prior programming experience is necessary or expected.

TA Help

Computer science teaching assistants (TAs) are available to answer programming questions, be they for your codelet, projects or homework assignments. You should not expect to leave TA hours with all 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 your bugs. TAs should be your first point of contact for aid with course materials. Please go to TA office hours before attending my office hours if you need help with debugging or clarifying a concept. If you need help with course administration, career advice, assessment clarification, or you are unsure about your query, please come to my office during office hours (see more in communication policy).

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 form working study groups and encourage peer-to-peer collaboration with the support of a tutor. Up to six students in your class can sign up for each session. It is important for the success of the group that all of its members are invested in success 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, contact 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 <https://runestone.academy/ns/books/published//thinkcspy/index.html>. Readings of 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

You should bring a laptop to labs, but not to lectures. If you cannot do this, please let us know. You should not use a phone or any similar device during labs or lectures. If you take notes on a tablet, then you should not be typing on it during class, but only writing (e.g. with a stylus) unless you require 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 it.

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/>

Grading

Your grade will be comprised of the following weighted components:

- **Lecture (15%):** You will be assessed on Monday, Wednesday, and Friday lecture attendance and participation by providing answers to exit questions at the end of each class (5%). Each Monday, Wednesday, and Friday lecture you will be assigned a small problem called a “codelet” (10%). These codelets are due at 11:59pm on the day of our following class lecture. For example, a codelet assigned on Monday will be due Wednesday at 11:59pm. Week 0 will have no codelet due. Any Wednesday with an exam scheduled will have no codelet due.
- **Labs (10%):** Thirteen weekly labs (0-12) make up an important part of this course. We will cover material in labs that is not covered in the lecture and vice versa. Your lab grade will be based on attendance and making productive use of your lab time.
- **Projects (35%):** You will be given two weeks to complete each of the seven projects (0-6) in this class. Each project will require you to write a program larger than those given in the codelets. Your name must appear at the top of each program submitted for full credit on each project.
- **Exams (40%):** You will have three midterms during class during the semester, each worth 8% of your overall grade. You will have one final exam at the end of the course worth 16%. Exams will feature a mixture of True/False, short answer, and long answer questions, you will be asked to explain what a program does and write code on paper to answer similar problems to codelets.

At the end of the semester, I will compute an average using the weights above. All final course grades will be rounded to the nearest whole number. For example, a score of 92.4 rounds to 92, but 92.5 rounds to 93. There will be no grade bumping. There is no extra credit in this course. Your grade in this class is the reflection of mastery of course content, and consistent demonstration of your ability to meet or exceed the grading criteria and rubrics of individual assignments and the exam. Effort will not be factored into your grade.

Grade Cutoff	Letter Assignment
93%	A
90%	A-
87%	B+
83%	B
80%	B-
77%	C+
73%	C
70%	C-
67%	D+
63%	D
0%	F

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 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, please contact me to work out a way to catch up.

If you must miss one of my labs for a college-sanctioned activity, you must notify me prior to the lab in question via email. If you are in another professor's lab, email the appreciate professor. In the event you miss a lab for a legitimate reason, with approval you can do lab on your own time, with a TA or myself supervising your work. Do not be late for class as it is disruptive to the instructor and other students in the class. If you are late for class once off, please wait outside until you are admitted as to not distract other students. If you are late twice, you will not be admitted.

Late Assignments and Makeups

No late work will be accepted without prior permission. If you contact the me at least three business day before the due date (unless faced with an emergency) with appropriate requests for extension and/or makeup assignments, you will be given an additional amount of time to make up late assignments equal to the time lost due to the unforeseen circumstance. There will be no makeup exams 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 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

For each project, you may work by yourself or with one other student. If you work in a pair, you should submit your project together. You may choose a different partner (or to go solo) on each project separately. Videos must be done individually. Beyond your partner on a project, you may discuss ideas with other students in the class, including helping other students with their code. However, for projects 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.

The use of artificial intelligence resources such as ChatGPT, Copilot, or any other AI code generation tools to complete assignments is considered cheating.

You are allowed to consult with me, TAs, tutors, and online resources for high-level discussion such as "I iterated over the vertices and marked each one with their strongly connected component." Furthermore, if you see a solution online, you should immediately tell me, and I will give you another problem to work on. If you are unsure about collaboration rules, ask me.

Note that a large portion of your project grade for each project will entail you explaining the complex portions of your program via video. This means you need to understand how all of the code in your project works, so you can explain it. Again, videos must be completed and submitted individually.

You may work collaboratively with any number of other students on the Codelets (not programming projects), and are encouraged to do so. You may submit code that you and other students wrote together.

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: Mason Brown

HELP: Discussed how to use anonymous functions with `filter`.

CITE: <http://www.math.rutgers.edu/~greenfie/g2004/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.

Consequences for Academic Dishonesty

Academic integrity is important, and I 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 result in a final grade of 'F' for the class.

Project Code Headers

All project code must have a docstring header at the top with your name(s), date, and the assignment name. Projects without this header will have points taken off.

Here is an example of a proper header:

```
""""  
Name: Mason Brown  
Date: 8/10/25  
Assignment: Codelet 0  
""""
```

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.

Communication Policy

The best way to reach me is via email. Please include your full name, course (CS101), and a short description of your question. I typically respond within 24 hours. Please note if it is outside work hours, I will likely not respond till hours resume. You are always welcome at my office without an appointment during office hours. During the listed office hours (see the top of this document or Compass), I keep an open-door policy, you do not need to send an email in advance to attend.

Before you come to office hours, I ask that you first spend time reviewing provided documentation for the answer. While I cannot provide direct solutions to graded problem, I can help you in several ways by clarify the wording of the problem or restate what it's asking, ask guiding questions to help you think through your approach, reiterate information shared in class, review the high-level concepts from lecture that connect to the problem, suggest strategies, staff ([QSR](#)), or additional problems to try. If you are looking for more step-by-step, tutor-style help with math or coding, the QSR Center is an excellent resource, and I encourage you to take advantage of it. In addition to the QSR Center talk to your TA's during labs for information on their office hours.

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	Introduction to HTML
	No Readings, Thanksgiving Break
13	HTML Forms
14	Beautiful Soup: Build a Web Scraper With Python & Beautiful Soup Documentation
15	No Readings, Final Exam

Course Outline

Your first lecture is in week zero on the 29th of Aug at 11am in Taylor Science Center G027. Teaching will start at 11am, please be punctual. There are no labs in week zero. In week one you will have a lab that could be Monday through Friday. Please check your own class schedule for your lab day and time; you may not be in my labs. Please note that the following outline is subject to change, but you will be notified of any changes in a timely fashion.

Weekly topic	Date	Week	Lecture	Codelet Due	Project Due	Exam	Labs
Introduction to computer science	29-Aug	0	A	No codelet week 0 but lecture on Friday			No labs week 0
Turtle Graphics API, Loops, & Strings	1-Sep 3-Sep 5-Sep	1	A B C	Given and due class B C00: Turtle API triangles C01: Turtle API arrow box			L0: Turtles & Loops
Lists, Advanced Loops	8-Sep 10-Sep 12-Sep	2	A B C	C02: Turtle API boxes C03: Tweet C04: Turtle location x,y			L1: Loops, Lists, & Randomness
Audio Manipulation	15-Sep 17-Sep 19-Sep	3	A B C	C05: Turtle functions C06: Turtle menu C07: Find index	P0: Turtles		L2: Lists & Audio 1
Conditions, Booleans	22-Sep 24-Sep 26-Sep	4	A B C	C08: Sum index slice No codelet due to exam C09: Overlay		Exam 1	L3: Audio 2
Function Definition	29-Sep 1-Oct 3-Oct	5	A B C	C10: Larger than C11: Filtered C12: Drum rhythm	P1: Audio		L4: Functions, Accumulators, & Debugging
While Loops, Matplotlib	6-Oct 8-Oct 10-Oct	6	A B C	C13: Notes to audio C14: Split audio C15: Three Secound Song			L5: Plots & Words
Natural Language Processing	13-Oct 15-Oct	7	A B	C16: Append random digit C17: Tagged words	P2: Strings		No labs this week (Recess after Wednesday)
CSVs, Grids 1	20-Oct 22-Oct 24-Oct	8	A B C	C18: Return odd and even No codelet due to exam C19: Number of verbs		Exam 2	L6: NLP
Grids 2	27-Oct 29-Oct 31-Oct	9	A B C	C20: Even grid builder C21: Grid threshold finder C22: Transform grid	P3: NLTK		L7: Grids
Image Manipulation 1	3-Nov 5-Nov 7-Nov	10	A B C	C23: Majority element C24: Image edges C25: GPA add functions			L8: Design Principles
Image Manipulation 2, Dictionaries	10-Nov 12-Nov 14-Nov	11	A B C	C26: Brightest pixel C27: Mystery gradient C28: GIF	P4: Crossword		L9: Images 1
HTML 1	17-Nov 19-Nov 21-Nov	12	A B C	C29: Find location No codelet due to exam C30: Count pixels	P5: Images	Exam 3	L10: Images 2 & Timing
HTML 2	1-Dec 3-Dec 5-Dec	13	A B C	C31: Website href C32: Scrape defenders C33: Scrape award winners			L11: Web Design
Web Scraping	8-Dec 10-Dec 12-Dec	14	A B C	C34: ForSale class C35: Cookie Jar C36: Chess problem	P6: Scraping		L12: Web Scraping
Review	15-Dec	15		No codelet final week		Exam 7pm	

September 4th Last day to add a course

October 3rd Last day to exercise credit/no credit and last day to drop a course