

EECS 110: Discover CS

Syllabus

Staff

Instructor

Elizabeth Lipin, elipin@umich.edu

Office Hours:

Monday 2:00pm - 3:30pm EECS 4122

(Feb 5: BBB 4941)

Thursday 11:00am - 12:30pm EECS
2411

Saturday 2:00pm - 3:30pm [Remote](#)

Instructional Aide (IA)

Lillian Schneider, lillschn@umich.edu

Office Hours:

Tuesdays - 5:30 - 7:00pm - BBB
Learning Center Table #1

Wednesdays - 12:00 - 1:30pm -
[Remote](#)

Meeting Times

Tuesday 3:30 - 5:30 pm in DOW 1017

Office Hours

For remote office hours, please use the following queue: [queue](#)

A meeting will be created as soon as your turn comes up.

Note: the queue will only be available to join during the scheduled times.

If you are unable to attend office hours during the scheduled times, please send an email to Elizabeth or Lillian with the subject line 'EECS 110 office hours' to set up an individual meeting. We will do our best to accommodate your schedule.

Additional rules:

- *If office hours are busy, we will limit you to 15 minute timeslots. Once the 15 minutes are up, you can rejoin the queue if you need more help.*
- *Once a meeting is created, you will have 5 minutes to join before being removed from the queue.*

Course Description

Welcome to Discover CS! In this class, you will begin to explore some of the different areas of computer science. Using the programming language Python, we will teach basic CS concepts, as well as showcase the wide range of real-world, interdisciplinary applications of CS. This class is designed to be interactive, and much of our class time will be spent programming and problem solving collaboratively. Our hope is that you will walk away from this class excited about the possibilities available to you in computer science!

While all are welcome, this class is particularly designed for students from groups that have been historically underrepresented in computer science with no formal programming experience.

Course Format

EECS 110 will be taught in-person this semester. The class will be divided into two parts, with lectures during the first half (~3:30-4:30 pm) and problem-solving labs in small groups or mini lessons for the second half (~4:30-5:20 pm). The lecture portion of class will be recorded and available to view on Canvas after the class is complete.

Class Website

Course information such as the schedule, assignments, etc. can be found on [Canvas](#). Lecture slides and in-class materials will be posted before the start of lecture. The solutions to in-class exercises will be posted after class. The solutions to homeworks and labs will be posted after the due date.

We will use the website [Gradescope](#), accessible from the Canvas website, to submit assignments and labs.

Class Forum

We will use [Piazza](#) to answer questions and post announcements/reminders. Piazza will be a significant source of help and hints for class assignments. You are expected to check Piazza regularly throughout the course.

Find our class signup link at: <https://piazza.com/umich/winter2024/eecs110001wn2024>

Please use the forum to post your technical questions and allow other students the benefit of seeing questions and answers. Technical questions will not be answered over email. Before posting your question, it is advised that you search the forum for previously posted questions to avoid duplicates. You are encouraged to answer questions posted by your peers and discuss the questions. However, please do not post your own solutions, code, test cases, or output to the forum. Answers will typically be provided within 24 hours.

Contact

Please direct your technical question to Piazza, following the guidelines described above. Any additional questions or concerns can be sent through private Piazza messages or over email to course instructors.

Programming Environment

We will use the programming environment Google Colab for this course, which can be accessed through Google Drive with your University of Michigan email account. To turn in programming assignments, you must download your code to your computer and upload it to Gradescope. We will use Visual Studio Code for an extra debugging resource.

Course work and Grading

Attendance: 3% (9 out of 11 classes)

Labs: 4%

Speaker Questions: 1%

Quizzes: 2%

Homeworks: 40%

CS Interview: 10%

Final project: 25%

CS Engagement Points: 15% (each point = 1% of final grade)

Grading Breakup

Here's the grading scale we will be using:

A+ $98 \leq \% \leq 100$

A $93 \leq \% < 98$

A- $90 \leq \% < 93$

B+ $87 \leq \% < 90$

B $83 \leq \% < 87$

B- $80 \leq \% < 83$

C+ $77 \leq \% < 80$

C $73 \leq \% < 77$

C- $70 \leq \% < 73$

D+ $67 \leq \% < 70$

D $63 \leq \% < 67$

D- $60 \leq \% < 63$

E $\% < 60$

Attendance

There are 11 class periods during which attendance will be taken (highlighted in yellow on the schedule). Each student will have 2 free skip days you may use to miss class, no questions asked. Missing more than this will result in points being deducted. There will also be 2 class periods, April 9 (virtual) , and April 23, with mandatory attendance for all (see schedule for more info). These class periods do not count as possible skip days and will be used for project group check-ins and presentations respectively. Missing either of these classes will impact your final project grade (on an individual basis).

If you are forced to miss additional classes for personal emergencies or health/medical reasons, etc., please contact Elizabeth directly.

Attendance will be graded based on the completion of in class quizzes. To get attendance credit, the quiz must be completed during the time provided in class. Further attempts can be made to improve accuracy for weekly engagement credit, but attendance points can only be earned by completing the quiz in class at least once, inputting the correct word of the day.

If you miss class, you are still responsible for completing the weekly assignments prior to the deadline unless the instructors give you an extension prior to the due date.

Weekly Assignments

Each week, you will have several assignments to complete. For class periods with labs, you will turn in (as a group) the Colab notebook worked on in class. These are due each Wednesday at midnight. Missing the lecture does not excuse you from labs.

For classes with guest lectures/panels you are required to individually submit a Canvas Survey with questions to ask the guests. These will be due the day before class, Monday, at midnight, in order to allow instructors time to look over and make a list of the questions submitted before class. You will have 3 opportunities to submit questions, two of which will count towards your grade.

The in class quizzes completed for attendance will also be graded for accuracy. The lowest 2 quizzes will be dropped. Since completion also counts toward your attendance grade, timestamps will be considered. If you submit the quiz outside of the time allotted in class, you will not receive attendance for that day, but you can still earn points for the quiz. Please note, the weekly assignments are separate from class attendance points.

If you are unable to come to class, you are still responsible for turning in the class period's weekly activities.

If you are missing the class period due to personal emergencies or health/medical reasons, etc. that will make meeting the deadline difficult, please reach out to Elizabeth to discuss your options.

Homeworks

There will be four homework assignments at the beginning of the semester to demonstrate your grasp of basic computer science principles. There will also be one “mini” assignment at the beginning of the semester to make sure everyone is comfortable with the Colab environment we

will be using. Each assignment will specify the material to be turned in. Homework is due by 11:59pm on the due date.

Homeworks 2 and 4 will be completed with partners as pair programming assignments. You may select a partner up to two weeks before the assignment is due; if you have not selected a partner, I will assign one.

CS Interview Assignment

Each student must interview someone farther along in the field of computer science and engineering (e.g., an older undergraduate student, a graduate student, a faculty member, a computing professional). We encourage you to interview someone that you can relate to (e.g., interviewing a woman if you are a woman). The interview should focus on the career path and experiences of the person you are interviewing.

After the interview, each student must write a two-page paper (single-spaced) about what they learned from the interview. This paper will be due on April 12th.

Final Project

Each student will work with a team to complete a final project of their choice. There will be a set of projects to choose from and groups will rank their preferred projects. This project will have three milestones: project selection (November 3), a check-in (November 21), and code turn-in (December 5). More details will be forthcoming about the requirements for this project.

CS Engagement Points

In order to get full credit in the class, you must earn at least 15 CS Engagement Points throughout the semester. These points can be earned through participating in activities related to the class, as well as other computer science activities. All points must be earned by the last day of class, April 23rd. No points will be accepted after this deadline. A full list of activities available for CS Engagement Points is on Canvas.

We will track CS Engagement Points points on Canvas. Some activities will require you to fill out a [Google Form](#) and others will be tracked automatically. Many of these points are graded using the honor system. Please note that it is a violation of the honor code to tell us that you've attended an event when you really have not; such violations will be reported to the honor council (see section *Policy on Collaboration and Cheating* below).

Regrade Policy

Once the grades for an assignment are published, you will have one week to request regrades on the assignment. You can request on Gradescope, via email, or by speaking to Elizabeth or Lillian in class or office hours. Typically regrade requests are for if you think we made a mistake while grading, however we also allow regrade requests to be an opportunity to earn some partial credit on points you have lost. You will need to show the instructors that you understand why you lost

points and what the correct answer is. You can do this via Gradescope, email, or talking to Elizabeth or Lillian. We will give you 75% partial credit of the points you earn back (ie. if you lost 2 points, but show us effort and understanding you will earn 1.5 points back). Note: for regrade requests where the instructors make a mistake in grading, full points are given back

Late Assignments

All assignments must be turned in on the date that they are due. They must be submitted electronically using Canvas or Gradescope and we will use the later timestamp to validate turn-in time. We will only accept homework, labs, and the CS Interview late, outside of granted extensions, using the following policy:

Late assignments will be penalized 10% per day (where each day starts at 11:59pm on the due day). Assignments turned in after three days will not be accepted.

Late day tokens (use them wisely!): To accommodate for coinciding deadlines you may have from other courses, or personal unforeseen events such as sickness, each person has 3 late day tokens. Each token provides an automatic extension of 1 calendar day---no questions asked. We will automatically use them on your late assignments. When you are out of tokens, the late penalties will apply.

- Late days are rounded up to the nearest integer. For example, a submission that is 4 hours late will count as one day late.
- Extreme circumstances, like medical emergencies, etc.: In such cases, additional, no-penalty extensions will be granted. Contact Elizabeth with some written documentation (like doctor's note).
- Assignments turned in after three days will not be accepted.

To avoid any confusion, here are some examples:

Number of late days of assignment	Tokens used in assignment	Penalty
1	0	10%
1	1	0%
2	0	20%
2	1	10%
2	2	0%

3	0	30%
3	1	20%
3	2	10%
3	3	0%
4 or more	Not accepted	100% (not accepted)

Note that the only method of submission is Canvas/Gradescope. It is your responsibility to ensure that the assignments have been uploaded successfully by the due date. Assignments not successfully uploaded by the due date will not be accepted.

Also note that any changes you make to the homework already submitted on Canvas/Gradescope counts as a resubmission. If you make any changes to the assignment after the due date has passed you will be assigned a late penalty based on the number of days that have passed. For example, if you edit an assignment on February 5 and it was due on February 2 you will be assigned a 30% penalty (10% per day) as explained above. This is non-negotiable.

Course Schedule

This schedule is tentative and subject to change. Please refer to Canvas for the most up-to-date schedule.

Attendance taken – free skip days can be used

Attendance required – free skip days cannot be used

Date:	In-class:	Due:
January 16	Class Intro & Programming Intro Lab #0: Getting Started & Using Colab	
January 23	Python Lesson #1: I/O, Math, Variables Lab #1: I/O, Math, Variables	
January 30	Python Lesson #2: If statements, Variables Lab #2: If statements, Variables	<i>Homework 0 due</i>
February 6	Python Lesson #3: Loops Lab #3: Loops	<i>Homework 1 due</i>
February 13	Guest Speaker TBD	

	Mini Lesson: Debugging	
February 20	Python Lesson #4 : Lists, Dictionaries Lab #4: Lists, Dictionaries	<i>Homework 2 due</i>
February 27	No Class – Spring Break	
March 5	Python Lesson #5: Functions, Libraries Lab #5: Functions, Libraries	
March 12	Undergraduate Panel Final Project Intro Mini Lesson: Image Manipulation	<i>Homework 3 due</i>
March 19	Industry Tour Atomic Object	
March 26	Guest Speaker: TBD Mini Lesson: Common Libraries and Debugging Functions	
April 2	Project Work Day	<i>Homework 4 due</i>
April 9	Final Project Check-In - Virtual	<i>Final Project Check-In CS Interview due</i>
April 16	Project Work Day	
April 23	Final Project Presentations *Attendance Mandatory*	<i>Final projects due Flex Points due</i>

Policy on Collaboration and Cheating

All cheating will be reported to the Engineering Honor Council as appropriate. While you are allowed to work together and collaborate on assignments, you are not allowed to copy someone else's work and represent it as your own. You must write your own code, and you must understand the code that you write. While limited external resource use for getting information is acceptable, using online resources or people to write the majority of code is not. Proper pair programming practices must be followed when pair programming is required.

As mentioned above, it is also considered cheating to lie in order to gain additional CS Engagement Points or attendance points. For example, it is cheating if you say that you have attended an event that you did not really attend.

Religious and Cultural Observance

Anyone with religious or cultural observances that coincide with this class or any deadlines should let the instructor know by email by September 16th. I strongly encourage you to honor your cultural and religious holidays! However, if I do not hear from you by September 16th, I will assume you plan to attend all class meetings.

Student Mental Health and Wellbeing

Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, mental health, alcohol, or other drugs, identities, finances, etc. If you are experiencing concerns, seeking help is a courageous thing to do for yourself and those who care about you. If the source of your stressors is academic, please contact me so that we can find solutions together. For personal concerns, U-M offers many resources, so of which are listed at [Resource for Student Well-being](#) on the Well-being for U-M Students website. You can also search for additional resources on that website.

Counseling and Psychological Services (CAPS) at 734-764-8312 or <https://caps.umich.edu> during and after hours and on weekends and holidays, or through its counselors physically located in schools on both North and Central campuses.

You may consult University Health Services (UHS) at 734-764-8320 and <https://www.uhs.umich.edu/mentalhealthsvcs> or for alcohol or drug concerns, see <https://uhs.umich.edu/aodresources>.

Accommodations for Students with Disabilities

If you need accommodations for a disability, please let your instructor know at the beginning of the semester or at least 2 weeks in advance. As soon as you make us aware of your needs, we can work with the Services for Students with Disabilities (SSD) office to help determine appropriate academic accommodations. SSD (734-763-3000; <https://ssd.umich.edu>) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. Any information you provide is private and confidential and will be treated as such.