EECS 110: Discover CS
Syllabus

Instructor
Katherine Mayo, kamayo@umich.edu

IA
Sarah Kurata

Meeting Times
Tuesday 3:30 - 5:30 pm

Office Hours
Sarah:
Sunday 1:00 - 2:30 pm virtual (Remote queue here)
Thursday 2:00 - 3:30 pm in

Katherine:
Tuesday 5:30 - 6:30 pm in
Wednesday 3:30 - 4:30 pm virtual (Remote queue here)
Thursday 10:00 - 11:30 am in

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

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, subject to campus covid protocols. If the covid situation requires a permanent or temporary change to virtual instruction, we will hold class meetings over Zoom.

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 Q&A sessions 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. If you are not automatically added to the course on Gradescope, use the entry code: .

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.

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 posed by your peers and discuss the questions. However, please do not post your own solutions, project code, test cases, or output to the forum.

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 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.

Course work and Grading

Attendance: 3% (7 out of 10 classes)
Weekly Engagement: 7%
Programming assignments: 40%
Computer Science interview: 10%
Final project: 25%
Flex points: 15% (each flex point = 1% of final grade)

Attendance
There are 10 class periods during which attendance will be taken (highlighted in yellow on the schedule). Each student will have 3 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, November 22nd and December 6th, 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 Katherine directly.

Weekly Engagement
Each class will have a way for you to earn engagement points for that class period. For class periods with labs, you will turn in (as a group) the collab notebook worked on in class. These are due Wednesday at 6 pm (24 hours after the class is over). For classes with guest lectures/panels you are required to individually submit a Google form (made available on the Canvas site) with questions to ask the guests. These will be due the day before class, Monday at 6 pm, in order to allow instructors time to look over and make a list of the questions submitted before class. Please note, the weekly engagement points 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 engagement activity.

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 Katherine to discuss your options.

Programming Assignments
There will be four programming 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. Assignments are due by the beginning of class on the due date. Assignments may be turned in up to 3 days late, with a penalty of 10% for each day late. No credit will be given after 3 days excluding emergencies.

Assignments 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.

Computer Science Interview
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. More details will be provided towards the beginning of the semester.

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 November 15th.

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 4th), a check-in (November 22th), and code turn-in + presentation (December 6th). More details will be forthcoming about the requirements for this project.

Flex Points
In order to get full credit in the class, you must earn at least 15 flex points throughout the semester. These flex points can be earned through participating in activities related to the class, as well as other computer science activities. All flex points must be earned by the last day of class, December 6. A full list of activities available for flex points is on Canvas.

We will track flex points on Canvas. Some activities will require you to fill out a Google sheet 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).

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:**
August 30	Thinking through problems like a programmer Lab #1: Using colab	
September 6	Python Lesson #1: Input/output, math, variables Lab #2: input/output, math, variables	
September 13	Python Lesson #2: If statements, variables Lab #3: if statements, variables	*Homework 0 due*
September 20	Python Lesson #3: Loops Lab #4: loops	
September 27	Guest Lecture: Dr. Somayeh Molaei Q & A	*Homework 1 due*
October 4*	Industry Tour @ Atomic Object	
October 11	Python Lesson #4 : Lists, dictionaries Lab #5: lists, dictionaries	*Homework 2 due*
October 18	No Class – Fall Study Break	
October 25	Python Lesson #5: Function, libraries Lab #6: image manipulation	*Homework 3 due*
November 1	Undergraduate Panel Introduce Final Project	*Final Project and Team Selection Survey due Nov 4th (Friday)*
November 8	Guest Lecture: ~~Professor Jenna Wiens~~ Sarah Jabbour and Madeline Endres Q&A	*Homework 4 due*
November 15	Project work day	*Computer Science Interview due*
November 22	Final Project Check-In (virtual options will available)	*Final Project Check-In*
November 29	Final project presentations **mandatory attendance for all**	
December 6	Industry panel	*Final projects due*

* due to changes in scheduling: everyone will get attendance credit for attending this, even if you elect not to come

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Covid Policy
If you are sick or have any symptoms of Covid, please DO NOT come to class and follow the school's recommendations for proper quarantine/isolation. We will follow the University's guidelines for mask wearing and in-person classes. See here for up to date information from the University.

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. 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 flex 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 19th. I strongly encourage you to honor your cultural and religious holidays! However, if I do not hear from you by September 19th, 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, etec. 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 accomodations 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 Accomodations (VISA) form. Any information you provide is private and confidential and will be treated as such.