

MCS 275 – Programming Tools and File Management – Spring 2022
David Dumas



1. THIS COURSE IS SYNCHRONOUS

You must be available to attend lecture and labs at their scheduled times.

If you know that you cannot attend a significant number of the course meetings, you should not enroll in this section of MCS 275.

If you know that you cannot attend class in person after UIC transitions to in person instruction, you should not enroll in this section of MCS 275.

More detail about attendance expectations can be found in the [attendance policy](#) below.

2. THE BASICS

Course Web Page [In Blackboard Learn](#)
https://uic.blackboard.com/ultra/courses/_210110_1/cl/outline

Lectures MWF 1:00-1:50pm in Lecture Center A Room 002 (CRN 16583)

Labs Tue 3:00-4:50pm in SELE 2249E (CRN 16581) or Thu 1:00-2:50pm in SES 205 (CRN 26354)
(register for *one* of these)

Instructor David Dumas <ddumas@uic.edu>
Office hours MWF 12:00-12:50pm
Online office *(a Zoom link is included in the syllabus on the Blackboard site)*
In person office 722 SEO

TA Johnny Joyce <jjjoyce22@uic.edu>
Office hours Tue 11am and Wed 3pm
Online office *(a Zoom link is included in the syllabus on the Blackboard site)*
In person office MSLC (on the 3rd Floor of SES)

3. WELCOME STATEMENT

Welcome to the 1pm MWF section of MCS 275. As your instructor, my main goals are to

- (1) **Treat everyone with dignity and respect**, to create a positive and welcoming learning environment.
- (2) **Make the course rules clear** so that there are no surprises about deadlines, grading, or other policies.
- (3) **Offer effective instruction and assessments**, so that you have a clear path to learning the material and to ensure that your progress is assessed carefully and fairly.

It is essential that you read this syllabus because it explains the course policies.

There are two sections of MCS 275 this semester. This is the syllabus for the 1pm MWF section.

4. COURSE CONTENT AND LEARNING GOALS

This course is a second semester of study in introductory computer science, designed for students who have completed CS 107, CS 109, CS 111, or MCS 260.

Key learning goals of MCS 275 include:

- Designing, writing, and debugging more complex programs than are seen in the prerequisite courses
- Understanding some fundamental algorithms and their implementation in Python
- Writing programs that follow a specification
- Learning the basics of some popular Python modules that are not in the standard library

The course is broken into units, most of which are planned to take about a week of class time. A list of units can be found on the course web page. As the semester progresses, a more detailed schedule of the topics for upcoming lectures will be posted.

5. PREREQUISITES

- Grade of C or better in MATH 180 and grade of C or better in MCS 260; or grade of C or better in CS 107 or CS 109 or CS 111; or equivalent.

Note: If you lack the prerequisites for MCS 275, your registration in the course may be canceled at some point. I do not control this process, and I wish it was more transparent.

6. HOW TO SUCCEED

As with most endeavors in a place of work or study, success in MCS 275 requires you to do at least three things:

- Know and follow the rules (as described in this document)
- Complete the assigned work on time
- Show up for the meetings

In particular, simply having good Python programming skills by the end of the semester (or even at the beginning) does not ensure success. Everyone in the course must do the work and follow the rules.

7. TEXTS

There are no required textbooks. I do not recommend purchasing any textbooks.

There are several optional texts that are available online without any purchase (though some are available only to current UIC students). The lecture slides will often reference sections or chapters of optional texts, and when such references are given, it is a good idea to consult the texts.

See the course site in Blackboard for the list of optional texts.

8. HOW THE COURSE IS DELIVERED

We are starting the semester online. A return to in person instruction is planned for 24 January (as of the time this syllabus was prepared). These plans may change, of course. Any change in delivery method will be announced clearly on the course Blackboard site, with as much advance notice as possible.

Online meetings will be held through the video meeting application [Zoom](#).

Lectures (MWF, 50 minutes) will always have an associated zoom meeting for synchronous remote participation. When classes are online, the zoom meeting will be the sole lecture delivery method. When classes are in person, I will still run a zoom meeting from the lecture room so that it is possible to attend remotely on occasion as needed (e.g. due to mild illness, quarantine, travel disruptions). No permission is needed to attend remotely, however, students should not attend class on zoom on a regular basis if in person classes are being held.

Video recordings, slide presentations, and sample programs from lectures will be posted to the course web site for review.

Labs (Tue or Thu, 110 minutes) will be completely online at first, and it is planned to transition them to in person events at a later date. Once the labs move to in-person instruction, it will only be possible to join lab remotely if a student receives permission to do so, and such permission will be reserved for unusual, extenuating circumstances. This is because labs are essential work and collaboration periods for students in MCS 275, and it is very difficult to run an effective lab when some students are in person and others are online.

Always come to lab ready to work, by bringing a device where you can develop and run Python code, or by planning to use the lab computers exclusively throughout the semester.

Labs will *not* be recorded.

All course meetings (i.e. lectures and labs) will take attendance. See the [attendance policy](#) for details.

9. IMPORTANT DATES AND DEADLINES

Fixed dates. Some of these dates are taken directly from the [UIC academic calendar](#), which takes precedence in case of any changes after the start of the semester.

10 Jan	Mon	First day of class
17 Jan	Mon	No meetings (Martin Luther King, Jr. day)
21 Jan	Fri	Add/drop deadline
4 Feb	Fri	Project 1 due at 6pm central
25 Feb	Fri	Project 2 due at 6pm central
18 Mar	Fri	Project 3 due at 6pm central
		Late drop deadline
21-25 Mar	Mon-Fri	No meetings (spring vacation)
29 Apr	Fri	Project 4 due at 6pm central
		Last day of class
		Last date MCS 275 work is due
10 May	Tue	Departmental deadline for instructor to submit grades
16 May	Mon	Course grades become available on my.uic.edu

Recurring.

- **Homework is due every Tuesday at Noon central time** unless a schedule change is announced. Exceptions: No homework is due on 11 January, and the assignment in the second week will be delayed one day due to the holiday on 17 January.

10. TYPES OF COURSE WORK

There are three types of work in MCS 275: ungraded **worksheets** that are the focus of Tue/Thu labs, weekly **homework**, and four larger coding **projects**.

Note in particular that there are **no midterm exams, no final exam, and no other high-stakes assessments**. I have tried to distribute graded work across the semester as evenly as possible. There are also **no graded in-class quizzes or tests**.

All work that is graded in MCS 275 is collected on Gradescope, an online assignment submission system that you can access from the course Blackboard site.

11. WORKSHEETS

The main activity of the Tue/Thu labs will be students working individually or in small groups on a worksheet of problems and short coding exercises that reinforce and expand on the previous week's lecture material. The worksheet for each week will be posted to the course site before the lab meeting. If the worksheet is not completed during lab, students are encouraged to complete the remaining problems on their own.

Starting in week 3 of the semester, the first problem on each worksheet will be handled differently depending on which lab you are enrolled in:

- Tuesday lab students: Problem 1 will be completed in a group discussion led by the TA.
- Thursday lab students: Attempt problem 1 before lab, and bring your solution or work to present.

Each week's worksheet is designed to prepare you for the homework that is due the following Tuesday.

Worksheet solutions will be posted each week, and students will be allowed to refer to these solutions while working on the week's homework. However, having solutions available should not be seen as a substitute for the practice you get by completing the worksheet yourself.

Worksheet collaboration policy: Collaboration on worksheets is strongly encouraged (inside or outside labs).

12. HOMEWORK

Each week, a homework assignment will be posted in Gradescope on Thursday afternoon. The submission deadline will be indicated on the assignment and can be checked on Gradescope. Usually, the deadline will be the following Tuesday at Noon.

Homework is to be completed individually, outside of class meeting times.

Homework is graded primarily by the TA and reviewed by the instructor.

Completing homework regularly and doing well on the assignments is important, but we understand students face occasional variations in their workload (e.g. midterms, deadlines in other courses, etc.) and other circumstances that interfere with their work on MCS 275. To account for these, we give you several opportunities to miss an assignment without affecting your grade, as described below.

Monthly homework excuse: For each of the months of February, March, and April, a student may request to be excused from one homework assignment whose deadline falls in that month. Students must request the excuse *before the assignment is due* by email to their TA. No reason for the request should be given. Unused excuses do not "roll over" (e.g. if no request is made in February, it does not allow two in March). Keep in mind that months have different numbers of homework assignments.

If you request to be excused from a homework assignment, it is expected that you will not submit any work on it at all. Being excused from an assignment is a one-way process; once excused, you cannot receive credit for the assignment (even if you submit work on it and do well).

Homework dropping: At the end of the semester, the **two** lowest homework grades that haven't been excused will be dropped.

Homework collaboration policy: Collaboration is not permitted on homework. Each assignment will list what textbooks and online resources students are allowed to consult, if any.

13. PROJECTS

Four coding projects will be assigned during the semester. These will be substantial projects that students work on over a longer period, writing a program or set of programs to meet given specifications. These specifications, the *project descriptions*, will be posted to the course web site.

Projects will be submitted using Gradescope. The due dates for the projects are listed in [Section 9](#) above. Once a project is accepting submissions, its deadline can also be seen in Gradescope.

Each student's project submission will be graded in two ways: First, an automated system (the "autograder") will run a series of tests to see whether the submission performs the requested tasks. Students can view the autograder report shortly after submission, and can use the results to revise and resubmit their project (before the deadline).

There is no limit to the number of submissions before the deadline, but only the last submission received before the deadline will count toward the project grade. Students who make only one submission to the autograder—and who thus do not use its feedback to improve their projects—will often lose many points due to small and easily corrected errors, such as formatting differences or off-by-one mistakes. Please avoid this by planning to make your first submission to the autograder well before the deadline.

The results of the autograder will account for most of the points available for projects 1, 2, and 3; the exact fraction may vary from project to project.

Second, a manual code review by the instructor will look for adherence to the course coding requirements, sufficient comments, etc., as requested in the project description. Some feedback will be given at this stage to help students improve their performance on future projects.

Project dropping: No project scores are dropped. All four projects count toward a student's final grade.

Project collaboration policy: This policy applies to projects 1, 2, and 3. Project 4 will have its own policy, to be announced at a later date.

Students may consult the course texts and the lecture slides or videos when working on projects. However, each student must be the sole author of the code they submit for a project; copying code from online resources or from other students is not permitted.

Project deadlines are strict: The project deadlines are important: Unless an extension is granted (see [Section 17](#)), a project submitted after the deadline will receive no credit. If you know you will miss a project deadline, *ask for an extension* and as always *indicate the new deadline you are requesting*. The process for requesting extensions is described in more detail in the section [Policy on missed or late work](#) below.

14. CODING STANDARDS

Code submitted for a grade in MCS 275 must follow some basic formatting rules in order to be eligible for full credit. These rules are collected in a **coding standards** document that is available on the course web page. The rules encourage good coding practices and make programs more readable.

15. ATTENDANCE POLICY

Students are required to attend the lectures and labs, and we take attendance in all course meetings. When meeting in person, we will use a smartphone-based attendance recording app called *Acadly*. Check the course web page for instructions. In addition to automating the attendance recording process, this app will record the distances between students in the room for contact tracing purposes.

We know things happen from time to time that might make you miss an occasional lecture or lab, such as a travel issue or mild short-term illness. It is still expected that you will attend most of the course meetings. To

account for occasional absences, we ignore a certain number of absences of each type when computing your attendance percentage.

Specifically, each lecture or lab meeting will assign you an attendance score of 0% (absent) or 100% (present), and at the end of the semester:

- The **five** lowest lecture attendance scores are dropped
- The **two** lowest lab attendance scores are dropped

This means you can miss up to five lectures and up to two labs and still have a 100% attendance average at the end of the semester.

Once classes are in person, occasionally attending a lecture using zoom will still count as attendance.

When labs are held in person, attending in person is generally required. You need permission to attend lab remotely at any time when classes are being held in person.

See [Section 19](#) for details about how these attendance scores contribute to your course grade.

16. PLAN IN CASE OF INSTRUCTOR OR TA ABSENCE

If the instructor or TA cannot lead a course meeting in person but can do so remotely (e.g. due to illness or quarantine), that meeting will switch to an online format. Such a change will be announced clearly on Blackboard with as much advance notice as possible.

If the instructor or TA is unable to lead a course meeting at the usual time, one of these plans will be used:

- Asynchronous lecture delivery: A lecture video will be recorded and provided on the course Blackboard site.
- In-person substitute: Another instructor will lead the meeting as usual.
- Cancellation: In exceptional circumstances, such as an emergency that occurs just before a scheduled meeting, cancellation of the meeting may be the only feasible option.

In any of these cases, an announcement will be made on the course Blackboard site. It is expected that instructor and TA absences will be rare.

17. POLICY ON MISSED OR LATE WORK

The sections above concerning Homework and Projects describe the standard policies that are in place to handle missed or late Projects. In general, meeting the deadlines for course work is important, and extensions will not be granted on a regular basis.

Students who add the course after the first meeting should contact the instructor to develop a plan for the work they have missed (e.g. extension or excuse from missed assignments and attendance scores).

For other missed or late **homework**: In most cases extensions are not granted because we have other mechanisms in place to handle occasional missed homework, such as monthly excuses and dropping of low scores (see [Section 12](#)). Contact the instructor if you believe you are in an extenuating circumstance that justifies an exception to this policy.

For missed or late **projects**: We understand that emergencies happen and that circumstances outside the course can sometimes interfere with a student's ability to complete the work on time. Students in MCS 275 may contact the instructor to request an extension if they know they will miss a project deadline. **When doing so, always specify a new deadline that you are requesting** and provide a brief description of the reason for the request. Requests of this nature remain confidential.

18. ACADEMIC HONESTY

Everything you submit for a grade in this course must be entirely your own work. You are also not allowed to give or receive assistance on graded work in MCS 275, except for assistance given by course staff or which is explicitly allowed by the assignment instructions.

Here are some examples of activities that violate the rules in MCS 275 and hence constitute academic misconduct. Keep in mind this list is not exhaustive.

- Sending your code for a homework question or project to another student to submit as their own, or to use as a reference as they work on the assignment
- Searching the internet for answers to a homework question or for help with a project
- Asking for help solving homework problems or part of a project in an online forum or commercial service
- Asking an instructor or TA in another course a question for the purpose of using their answer as a solution to a homework problem or as part of a project in MCS 275

It is usually very easy to detect instances of cheating and plagiarism, often without any special tools. **However, in MCS 275, we also use automated tools to detect cheating.** We can easily tell if two pieces of code differ by changing variable names, adding and removing comments and indentation, and other common superficial evasion techniques. If you are ever tempted to cheat, please do not take the risk! Instead, contact the course staff and discuss what you are struggling with. Extension requests are always given serious consideration while instances of cheating are never tolerated.

Incidents of academic misconduct will be reported to the Dean of Students office and handled under UIC's [Student Disciplinary Policy \(https://go.uic.edu/DisciplinaryPolicy\)](https://go.uic.edu/DisciplinaryPolicy) for investigation, hearings, and possible sanctions. No warning will be given in advance. The penalties for academic misconduct are typically quite severe, and the disciplinary proceedings are time-consuming. A course grade will not be assigned while such proceedings are underway, and this can create its own problems (e.g. with financial aid, registering for courses having MCS 275 as a prerequisite, etc.).

Many students find it helpful to do course work in a team or study group. Please do this, but only for the elements of the course where collaboration is allowed.

19. COURSE GRADE COMPUTATION

The course grade is computed as an average of homework, projects, and attendance scores, weighted as follows:

- **40% - Homework**
 - Any assignments you were excused from are removed from consideration
 - The **two** lowest remaining scores are dropped
 - The remaining homework scores are converted to percentages and averaged.
- **40% - Projects**
 - All project grades are converted to percentages
 - The percentages are averaged
- **10% - Lecture attendance**
 - We make a list of lecture attendance scores, each of which is 0% if absent and 100% if present
 - The **five** lowest scores in this list are removed
 - The remaining ones are averaged to get your lecture attendance score
- **10% - Lab attendance**
 - We make a list of lab attendance scores, each of which is 0% if absent and 100% if present
 - The **two** lowest scores in this list are removed
 - The remaining ones are averaged to get your lab attendance score

And just to be clear about the meaning of weighted average, this means your final course grade is equal to:
 $0.4 \times (\text{homework average}) + 0.4 \times (\text{project average}) + 0.1 \times (\text{lecture attendance}) + 0.1 \times (\text{lab attendance})$

When final course grade percentages are available, they will be converted to letter grades according to the following scale:

- A = 85% – 100%
- B = 75% – 84.9999%
- C = 65% – 74.9999%
- D = 55% – 64.9999%
- F = less than 55%

Note that the scale above does not involve any rounding, so for example a final percentage of 84.97% corresponds to a grade of B. Also, raw percentages are used in all cases, with no modification or “curve”.

20. COMMUNICATION WITH COURSE STAFF

Outside of course meetings, office hours, and scheduled appointments, email and Discord are the best ways to contact course staff in most cases. Please only email course staff from your @uic.edu email address.

The instructor will usually respond to email or Discord questions within 24 hours. Response over a weekend may be slower.

Keep in mind that questions received in the last few hours before a course deadline (for a homework assignment or project) usually cannot be answered in time to help you with your work. It is a good idea to seek assistance as far in advance as possible.

21. COMMUNICATION WITH OTHER STUDENTS

In all class settings (meetings, office hours, online forums, etc.) students are required to treat everyone with respect. Harassment, bullying, discrimination, bigotry, and other behaviors that create a harmful or exclusionary environment will not be tolerated.

The course Discord server can be used to communicate with other students in the class (as a group, or through individual private messages).

22. UNIVERSITY POLICIES

UIC requires that every syllabus mention the following university policies.

22.1. **Academic deadlines.** The UIC academic calendar can be found at:

<http://catalog.uic.edu/ucat/academic-calendar/>

In particular this calendar includes the deadlines for adding and dropping courses.

22.2. **Academic honesty and standards of conduct.** All UIC students are required to abide by the rules and standards of conduct described in the [Student Disciplinary Policy \(https://go.uic.edu/DisciplinaryPolicy\)](https://go.uic.edu/DisciplinaryPolicy). In particular, this policy prohibits academic misconduct such as plagiarism.

22.3. **Disability accommodation.** The University of Illinois at Chicago UIC is committed to full inclusion and participation of people with disabilities in all aspects of university life. Students who face or anticipate disability-related barriers while at UIC should connect with the Disability Resource Center (DRC) by visiting drc.uic.edu, by emailing drc@uic.edu, or by calling (312) 413-2183 to create a plan for reasonable accommodations. In order to receive accommodations, students must disclose disability to the DRC, complete an

interactive registration process with the DRC, and provide their course instructor with a Letter of Accommodation (LOA). Course instructors in receipt of an LOA will work with the student and the DRC to implement approved accommodations.

22.4. **Religious holidays.** The UIC Senate Policy on religious holidays (approved May 25, 1988) is as follows:

“The faculty of the University of Illinois at Chicago shall make every effort to avoid scheduling examinations or requiring that student projects be turned in or completed on religious holidays. Students who wish to observe their religious holidays shall notify the faculty member by the tenth day of the semester of the date when they will be absent unless the religious holiday is observed on or before the tenth day of the semester. In such cases, the students shall notify the faculty member at least five days in advance of the date when he/she will be absent. The faculty member shall make every reasonable effort to honor the request, not penalize the student for missing the class, and if an examination or project is due during the absence, give the student an exam or assignment equivalent to the one completed by those students in attendance. If the student feels aggrieved, he/she may request remedy through the campus grievance procedure.”

The University Holidays and Religious Observances calendar can be found at:

<http://oae.uic.edu/religious-calendar/>

23. REVISION HISTORY OF THIS DOCUMENT

- 2022-01-09 Initial publication