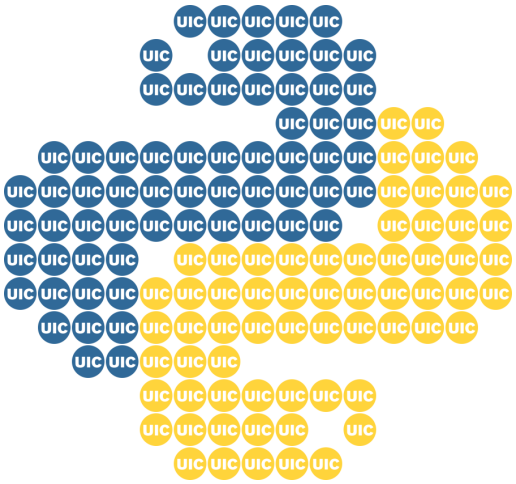
# MCS 260 – Introduction to Computer Science – Fall 2020

Emily Dumas



## 1. Basic course information

| | | |
|---|---|---|
| **Course Web Page** | In Blackboard Learn<br>https://uic.blackboard.com/ultra/courses/_171012_1/cl/outline | |
| | Course material archive (persists after course ends)<br>https://dumas.io/teaching/2020/fall/mcs260/ | |
| **Lecture sections**<br>(50 min, register for one) | MWF 10am<br>CRN 42917<br>D. Dumas | MWF 2pm<br>CRN 12337<br>D. Dumas |
| **Discussion sections for students in 10am lecture**<br>(110 min, register for one) | Tue 10am<br>CRN 43624<br>J. Vaccaro | Thu 10am<br>CRN 42919<br>J. Vaccaro |
| **Discussion sections for students in 2pm lecture**<br>(110 min, register for one) | Tue 2pm<br>CRN 39191<br>K. Viswanathan | Thu 1pm<br>CRN 12334<br>J. Vaccaro |
| **Instructor**<br>Office hours<br>Office | Emily Dumas <ddumas@uic.edu><br>MWF 1:00-1:50pm<br>*(a Zoom link is included in the syllabus on the Blackboard site)* | |
| **TA**<br>Office hours<br>Office | Jennifer Vaccaro <jvacca4@uic.edu><br>Tue & Fri 3-4pm<br>*(a Zoom link is included in the syllabus on the Blackboard site)* | |
| **TA**<br>Office hours<br>Office | Kylash Viswanathan <kviswa5@uic.edu><br>Tue 4-5pm<br>*(a Zoom link is included in the syllabus on the Blackboard site)* | |

## 2. Course content

This course is an introduction to computer science that assumes no prerequisite knowledge of computer programming or computer science concepts. The course focuses primarily on teaching the basics of the Python programming language (version 3). A secondary goal is to discuss general topics from computer science encountered along the way, and to improve students' computer literacy.

A list of topics for each lecture may be found on the course web site.

## 3. Prerequisites

- Credit or concurrent registration in Math 180.

## 4. Texts

No textbook purchases are required.

- Primary text
  - *Think Python, Second Edition* by Allen B. Downey
    `https://greenteapress.com/wp/think-python-2e/`
  - Available online and as PDF without purchase; print edition can be purchased if desired.
- Secondary texts/references (free)
  - Official Python Standard Library Documentation
    `https://docs.python.org/3/library/index.html`
  - *Practical Python Programming* by David Beazley
    `https://dabeaz-course.github.io/practical-python/Notes/Contents.html`
    - This is a condensed summary (meant to be used with an intensive 4-day workshop) that assumes more familiarity with computer programming. Best to use as a review tool once you've learned the basics from the lectures or other references.
  - The official Python 3 tutorial
    `https://docs.python.org/3/tutorial/`
    - This tutorial takes a while to get moving, as much of its early content is commentary for people with prior programming experience about the strengths of Python. However, starting in Section 3: An Informal Introduction to Python it has nice examples of many language features.
- Secondary print texts (optional)
  - *Python Programming: An Introduction to Computer Science, Third Edition* by John Zelle
  - *Computer Science: An Overview, 12th Edition* by Glenn Brookshear and Dennis Brylow

## 5. Delivery method

This is a 100% online, synchronous course. All course meetings will use Zoom accessed through meeting links posted to the course web page in UIC's Blackboard Learn instance.

Lectures will be recorded and posted to the course web site for students to review. Lecture slide presentations will also be available for students to view and download.

To join course meetings, students must use the Zoom account that the University has already created for them, linked to their `@uic.edu` email address; see the course web page for help with Zoom.

## 6. Important dates and deadlines

Fixed dates:

| | | |
|---|---|---|
| Aug 24 | Mon | First day of class |
| Sep 4 | Fri | Add/drop deadline |
| Sep 7 | Mon | No meetings (Labor Day) |
| Sep 18 | Fri | Project 1 due at 6pm Central |
| Oct 9 | Fri | Project 2 due at 6pm Central |
| Oct 30 | Fri | Late drop deadline |
| Nov 3 | Tue | No meetings (Election Day) |
| Nov 6 | Fri | Project 3 due at 6pm Central |
| Nov 26–27 | Thu–Fri | No meetings (Thanksgiving) |
| Dec 4 | Fri | Project 4 due at 6pm Central & Last day of class |

Recurring:

- Starting Aug 31, quizzes are due every Monday at 6:00pm Central time, unless a schedule change is announced.

## 7. Course work

There are three main types of work in MCS 260: weekly *worksheets* used in Tue/Thu discussion meetings, weekly *quizzes*, and scheduled coding *projects*.

**Worksheets.** The main activity of the Tue/Thu discussion meetings will be students working individually or in small groups on a worksheet of problems and short coding exercises that reinforce and expand on the lecture material. The worksheets will be posted to the course site before the discussion meeting. Student work on these worksheets is not collected and not counted toward the course grade, but the worksheets are nevertheless an essential component. For example, worksheets are important preparation for the weekly quiz. A student who misses a discussion meeting for any reason should still complete the worksheet.

Collaboration on worksheets is allowed, and in fact is strongly encouraged.

**Quizzes.** There will be a weekly online quiz, to be taken outside of class meeting times. Quizzes will be administered using the online assignment platform Gradescope, which is accessed through the Blackboard course site. Quizzes will be due on Mondays at 6:00pm Central time, unless a schedule change is announced. Students can check the deadline for the next upcoming quiz by accessing Gradescope from the course home page.

Once in each calendar month (August, September, October, November, December) a student may be excused from one quiz upon request. Such a request must made to the student's TA and must be received before the quiz deadline; no reason for the request should be given.

At the end of the semester, the two lowest quiz grades for each student will be dropped.

Collaboration is not permitted on quizzes. The quizzes are "closed book"; texts and other resources are not to be consulted. For this reason, it is recommended and requested that students complete the quiz in a single sitting.

**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 6 above. Once a project description is published, the deadline can also be seen in Gradescope.

Each student project submission will be graded in two ways: First, an autograder will run a series of automated 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, but only the last submission received before the deadline will count toward the project grade. As a result it is highly advantageous to make the first submission well before the deadline, to allow time to debugging. The results of the autograder will account for most of the points available in each project; the exact fraction may vary from project to project, and will be announced in the project description.

Second, a manual code review will look for good coding practices, sufficient comments, etc., as requested in the project description. Course staff will provide feedback at this stage, to give students suggestions for improvement in future projects.

All four projects will count toward a student's final grade; that is, no low scores will be dropped.

Collaboration is not permitted on projects. 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 permiited.

The project deadlines are important: Unless an extension is granted (see section 12), a project submitted after the deadline but within 24 hours of the deadline will be graded with a penalty of 20% of the total available points subtracted. (If the result is a negative number, then the score will be set to zero.) It will not be possible to submit projects more than 24 hours after the deadline. Note that point deductions for late submission are not supported directly by Gradescope, and thus will be applied manually when the final grades are computed.

**Policy change for Project 4:** Students are free to use any textbooks or online references while working on Project 4, so long as it remains an individual effort. Each student must be the sole author of the work they submit for the project. (This policy change allows for independent study of new material that has been encouraged for this project.)

## 8. Course grade computation

As noted above, the only graded assessments are quizzes and projects. Each category accounts for 50% of the final course grade.

Course grades are first computed as a percentage, and then converted to a letter grade.

At the end of the semester, the course grade percentage is computed as follows:

- Each project score and quiz score is converted to a percentage
- The list of quiz percentages is modified as follows:
  - Any quiz from which the student was excused is removed
  - Remaining unsubmitted quizzes are considered as 0%
  - The two lowest remaining quiz percentages are removed
- The remaining quiz percentages are averaged to obtain a *quiz average*
- All project scores are converted to percentages and averaged to obtain a *project average*.
- The course grade is computed as

$$0.5 \times (\text{quiz average}) + 0.5 \times (\text{project average})$$

Starting a few weeks into the semester, a running indicator of the current quiz, project, and overall averages will be shown in the Blackboard gradebook. However, this running average will only be updated once per week.

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%

Under very unusual, unexpected circumstances, I reserve the right to make minor changes to this scale that make it more generous. The overwhelming likelihood, however, is that the scale above will be applied with no change, and students should not pin their hopes for a certain final grade on the possibility of such modification.

Since it is a common student question, I will point out that the scale above does not involve any rounding, so for example a final percentage of 84.9% is a B. (The line must be drawn somewhere, and having a fixed cutoff is simpler than explaining a rounding policy.)

## 9. Communication with course staff

Email is the only way to communicate with course staff outside of course meetings and office hours. Please only write to course staff from your `@uic.edu` email address.

## 10. Communication with other students

A discussion forum will be available on the course web site for use by everyone associated with the course. In MCS 260, this forum is intended to provide as a way for students to consult one another outside of course meetings. Course staff will not use the forum regularly.

The weekly discussion meetings also provide opportunities to communicate with other students in the class.

## 11. Attendance

This is a synchronous course, so it is designed to provide the optimal learning experience to students who attend all lectures and discussion meetings.

However, in order to provide the most flexible learning environment during this semester of unprecedented change and uncertainty, the course has been designed so as to avoid penalizing students who miss course meetings. Therefore, attendance will not be taken, and no graded assessments will be administered during course meetings.

Students who miss lectures must review the lecture videos in order to stay current on the course material.

Students who miss discussion meetings on a regular basis may fall behind, as the activities in these meetings reinforce the lecture material and provide opporunities for support and guidance from the teaching assistants.

## 12. Policy on missed or late work

The sections above concerning Quizzes 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 for students and instructors.

However, 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 260 may contact me (the instructor) to request an extension for some course work; such a request should indicate the scope (which assignment, how long, etc.) and provide a brief description of the reason for the request. Requests of this nature remain confidential.

In my experience (over a decade of teaching at UIC), *students whose circumstances would easily justify an extension of this type are often very hesitant to request it*. It is unfortunate when an extension policy only benefits those who need it least, and therefore, my advice to students who are missing deadlines due to difficult circumstances is simple: Please contact me.

## 13. University Policies

UIC requires that every syllabus mention the following university policies.

13.1. **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.

13.2. **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). In particular, this policy prohibits academic misconduct such as plagiarism.

13.3. **Disability accommodation.** The University of Illinois at Chicago is committed to maintaining a barrier-free environment so that students with disabilities can fully access university programs, courses, services, and activities. Students with disabilities who require accommodations for access or participation in this course are welcome, but must be registered with the Disability Resource Center (DRC). Students may contact the DRC at 312-413-2183 (voice) or 312-413-0123 (TTY). Further information is available from the DRC web page (http://drc.uic.edu/).

13.4. **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/

## 14. Revision history of this document

- 2020-11-20 Updated with more flexible rules for consulting books and online resources for Project 4
- 2020-08-27 Staff change and quiz deadlines specified
- 2020-08-21 Initial publication