

Syllabus TL;DR

CMSC 140: Introduction to programming

Fall 2021

Section 1: MWF 1pm, Rotunda 354
Section 2: MWF 2pm, Rotunda 354
Websites: <https://canvas.longwood.edu/courses/1302536>
<http://cs.longwood.edu/courses/cmssc140>
Professor: Don Blaheta, Ruffner 334, blahetadp@longwood.edu
100% office hours: Tuesdays 10–11am; Wednesdays 3-4:30pm;
Thursdays 1–2pm; Fridays 11am-noon

Textbook and resources

A Practical Introduction to Python Programming, by Brian Heinold.

https://www.brianheinold.net/python/python_book.html

Python 3 editor/classroom support: Codeboard.io

<https://codeboard.io/>

Things you must have: a laptop (which you bring on designated lab days); a device with video support (for Zoom attendance, and to record/upload video); internet access (for Zoom attendance, homework, and to record video); a suitable mask (following university guidelines).

Zoom attendance quick links

These can also be found on the Canvas page for the course.

| | | |
|--|--|---|
| <p>Zoom link for SECTION 1</p>  | <p>Zoom link for SECTION 2</p>  | <p>Zoom link for OFFICE HOURS</p>  |
|--|--|---|

Content

Engagement. You need to be an active participant in this class: engaged during class time, and participating in the Canvas-based participation stuff that I post. 10% of the grade is for all of that.

Lab work (and homework). The central goal of the course is that you learn to Collaborative program, so the bulk of the work you do will be “lab” work, i.e. writing programs. Homeworks can be revised to recover up to 90% of the points on the assignment. This work will make up 25% of the grade.

Course project. Your course project will involve working with a data set in your Collaborative area, building a program to process that data, and writing up your results. Evaluation will be based on the program code itself as well as your written and verbal proposals and conclusions based on the results; all that together will be worth a total of 25% of the final grade.

Exams. There will be two exams, one in early October and one in early December. Non-collaborative
You are not permitted to discuss the exams *at all*, with anyone other than me. Each exam is worth 20% of the grade (total of 40%).

Grading scale

I tend to grade hard on individual assignments, but compensate for this in the final grades. The grading scale will be approximately as follows:

| | | | | | |
|----|----------|---|----------|----|-----------|
| A– | [85, 90) | A | [90, 95) | A+ | [95, 100] |
| B– | [70, 75) | B | [75, 80) | B+ | [80, 85) |
| C– | [55, 60) | C | [60, 65) | C+ | [65, 70) |
| D– | [40, 45) | D | [45, 50) | D+ | [50, 55) |

While there will be no “curve” in the statistical sense, I may slightly adjust the scale at the end of the term if it turns out some of the assignments were too difficult. Final grades of A+ are recorded as an A in the grading system. Final grades below the minimum for D– are recorded as an F.

Note that *individual* grades recorded in Canvas should be accurate (and you should let me know if there’s a data entry error!), but *averages* as computed by Canvas sometimes are not, if the averaging is complex or (especially) if an individual student has a special case scenario. The reference gradebook is my own spreadsheet, and while I will try to make Canvas reflect it (including averages) as well as I can, Canvas can’t always handle it.

Calendar

Days marked **-L** mean you should bring your laptop that day, as we will be doing lab work.

| Wk | M | W | F |
|----|---|--|---|
| | August | | |
| 1 | 23 — Introduction The idea of an algorithm | 25 -L — How to read/use a textbook Hello world | 27 — Ch. 1 Input/output, comments |
| 2 | 30 — Ch. 2 for loops range | September | |
| | | 1 -L — (continued) | 3 — Quantitative Reasoning |
| 3 | [Labor Day] no class | 8 — What makes a workable quantitative question? | 10 — Ch. 3 Arithmetic Order of operations |
| 4 | 13 -L — Random, Math | 15 — Limitations of a QR process | 17 — Ch. 4 if and blocks Comparisons and booleans and or not |
| 5 | 20 -L — Blocks and nesting Flowcharts | 22 — else, elif | 24 -L — (continued) |
| 6 | 27 — Ch. 6 Interpreting results of a quant question Strings | 29 -L — (continued) | October |
| | | | 1 ** — String slicing More string practice Test cases: checking your work |
| 7 | 4 — Checking results for reasonability Resolving limitations | 6 — QR: Putting it together | [Fall Break] no class |
| 8 | 11 — Review | 13 — Exam 1 | 15 — Ch. 7 Lists List operations Looping over lists |

* **31 August:** Deadline to add/drop classes (5pm)

** **1 October:** Deadline to elect pass/fail option (5pm)

| Wk | M | W | F |
|----|---|--|---|
| | October | | |
| 9 | 18 Ch. 5 Standard list-loop algorithms | 20–L — (continued) split | 22 — Adding/removing items Multiple assignment Writing the quant program Project overview |
| 10 | 25–L — List-loop practice | 27–L Ch. 12 Text files | 29–L — CSV files Project proposal due |
| | November | | |
| 11 | 1 Ch. 11 Dictionaries | 3 * Ch. 8 split, join List comprehensions | 5 8.5 2D lists |
| 12 | 8 Ch. 13 Function basics | 10–L — Scope Using functions practically | 12–L — Speech practice Project work day |
| 13 | 15 — Elevator speeches | [Research Day] no class | 19 Ch. 9 while loops break, continue |
| 14 | 22 — Lightning talks | [Thanksgiving] no class | [Thanksgiving] no class |
| | | December | |
| 15 | 29 — Review | 1 — Exam 2 | 3 — Elevator speeches |

Project program and writeup due Tue, 7 Dec, 2pm
Exam times reserved for (online) speech overflow if needed:
Tue 7 Dec; Sec 1: 8–10:30am Sec 2: 11:30–2pm

* **3 November:** Deadline to withdraw from a class (5pm)