

Syllabus TL;DR

CMSC 140: Introduction to programming

Spring 2022

Section 2: MWF 11am, Rotunda G54
Websites: <https://canvas.longwood.edu/courses/1304520>
<http://www.cs.longwood.edu/courses/cmsc140/2>
Professor: Don Blaheta, Ruffner 334, blahetadp@longwood.edu
100% office hours: Mondays 2–3pm; Tuesdays 11am–12:30pm;
Wednesdays 3–4pm; Thursdays 2–3:30pm

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.



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 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. Collaborative

Course project. Your course project will involve working with a data set in your 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. Collaborative

Exams. There will be two exams, one in early March and one in late April. **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%). Non-collaborative

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
January			
1		12 — Introduction The idea of an algorithm	14 –L — How to read/use a textbook Hello world
2	[MLK Jr Day no class]	19 — Ch. 1 Input/output, comments	* 21 — Ch. 2 for loops range
3	24 –L — (continued)	26 — Quantitative Reasoning	28 — What makes a workable quantitative question?
4	31 — Ch. 3 Arithmetic Order of operations	February	
5	7 — Ch. 4 if and blocks Comparisons and booleans and or not	2 –L — Random, Math	4 — Limitations of a QR process
6	14 –L — (continued)	9 –L — Blocks and nesting Flowcharts	11 — else, elif
7	21 –L — String slicing More string practice Test cases: checking your work	16 — Ch. 6 Interpreting results of a quant question Strings	18 –L** — (continued)
8	28 — Review	23 — Practicing with codingbat	25 — QR: Checking results for reasonability Resolving limitations Putting it together
		March	
		2 — Exam 1	4 — TBA

* **20 January:** Deadline to add/drop classes (5pm)

** **18 February:** Deadline to elect pass/fail option (5pm)

Wk	M	W	F
	March	SPRING BREAK	
9	14 Ch. 7 Lists List operations Looping over lists	16 Ch. 5 Standard list-loop algorithms	18–L — (continued) split, join Multiple assignment
10	21 — Adding/removing items Writing the quant program Project overview	23–L — List-loop practice	25–L Ch. 12 Text files
11	28–L — CSV files Project proposal due	30* Ch. 11 Dictionaries	April 1 Ch. 8 Dictionary practice List comprehensions 8 –L — Scope Using functions practically 15 — Elevator speeches 22 — Lightning talks 29 — Elevator speeches
12	4 8.5 2D lists	6 Ch. 13 Function basics	
13	11–L — Speech practice Project work day	13 — TBA	
14	18 Ch. 9 while loops break, continue	[Research Day no class]	
15	25 — Review	27 — Exam 2	
May Project program and writeup due Wed, 4 May, 2pm Exam times reserved for (online) speech overflow if needed: Wed, 4 May 11:30–2pm			

* **30 March** : Deadline to withdraw from a class (5pm)