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/cmsc140

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

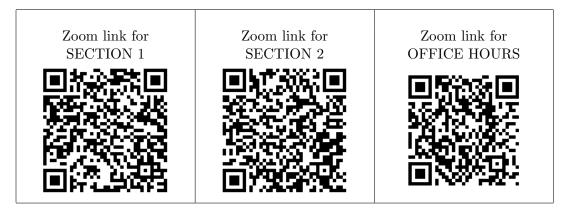
Python 3 editor/classroom support: Codeboard.io

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.



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 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]
$\mathrm{B}-$	[70, 75)	В	[75, 80)	B+	[80, 85)
C-	[55, 60)	\mathbf{C}	[60, 65)	C+	[65, 70)
$\mathrm{D}-$	[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 $-\mathbf{L}$ mean you should bring your laptop that day, as we will be doing lab work.

·	v		Q
Wk	M	W	F
1	August 23	$25\mathrm{-L}$	27
	_	_	Ch. 1
	Introduction The idea of an algorithm	How to read/use a textbook Hello world	Input/output, comments
	The idea of an argorithm	Hello world	
		September	
2	30	$^*ig $ 1 $-{f L}$	3
	Ch. 2	_	_
	for loops range	(continued)	Quantitative Reasoning
3	[I -h]	8	10
	Labor Day	_	Ch. 3
	no class	What makes a workable	Arithmetic
		quantitative question?	Order of operations
4	${\bf 13-\!L}$	15	17
	_	_	Ch. 4
	Random, Math	Limitations of a QR process	if and blocks
			Comparisons and booleans
			and or not
5	$\mathbf{20-\!L}$	22	$24\text{-}\mathbf{L}$
	Blocks and nesting Flowcharts	else, elif	(continued)
			October
6	27	$29\!-\!\mathbf{L}$	1 **
	Ch. 6		
	Interpreting results of a	(continued)	String slicing
	quant question		More string practice
	Strings		Test cases: checking your
			work
7	4	6	Fall Break
	——————————————————————————————————————	OD: D::44::- :: 11	no class
	Checking results for	QR: Putting it together	
	reasonability		
0	Resolving limitations	4.5	
8	11	13	15
		— D	Ch. 7
	Review	Exam 1	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
9	October 18 Ch. 5	$\mathbf{20-\!L}$	22
	Standard list-loop algorithms	(continued) split	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	۵.*	
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
15	29	December 1	3
	— Review	 Exam 2	Elevator speeches

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CMSC140

Sec 2: 11:30-2pm

Tue 7 Dec; Sec 1: 8–10:30am

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