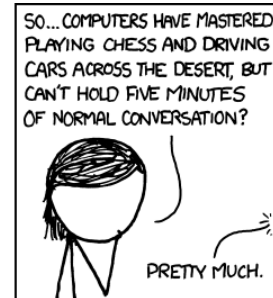## LIN4930/6932 Programming for Linguists

Fall 2022

Tues 8:30-10:25am & Thurs 9:35-10:25am
Room: Weil 408E
Textbook: Horstmann & Necaise, Python for Everyone, 3rd. ed.
(eBook recommended)

Instructor: Sarah Moeller
Email: smoeller@ufl.org

Office hours: Tues 11:45-12:35pm
and Thurs 10:40-11:30 in Turlington
4017

Course description

An introduction to computer programming with the high level programming language Python. Students learn to address a range of problems with a specific focus on natural language processing and linguistics, such as automatic discovery of morphemes in a new languages. The class is suitable for students with no prior experience in computing or programming.

Goals

After the course, students should (ideally):

- . . . be familiar with variables, data types, control structures, reading and writing files, functions, and basic data structures.
- . . . understand basic program design and be able to independently produce small programs that perform basic generic tasks as well as specific tasks addressing questions in linguistic research
- . . . be familiar with fundamental design principles in programming, including time complexity, to be able to produce sound and efficient programs, and to be able to reason about implementation choices from the point of view of elegance, program readability, and computational efficiency

Grade breakdown

Attendance & Participation	10%
Lab assignments	15%
Midterm	15%
Final	20%
Homeworks/Final Project	40%
Total	100%

Attendance and Participation

Content are mainly conveyed via "participation" quizzes and videos on Canvas. Class time centers around exercises that stimulate thinking and help practice new skills. Participation in these activities and in general discussions is highly encouraged.

Labs

Labs are weekly assignments that make reference to class material or discussion. They are Python programs, brief analyses of existing programs, or a check on understanding of concepts.
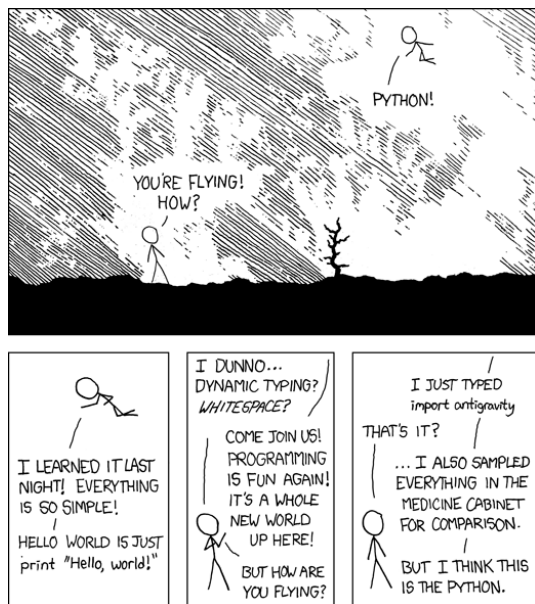
Late homework policy

Each student gets a total of 7 "late homework days" to use throughout the semester. You may use these days to turn in homeworks late, no questions asked, as long as you notify the instructor before sample solutions are released that your homework is late, not missing. How how you distribute these days is up to you; for example, you might use 2 days for one homework and 5 for another. Once your late homework days are used up, a 10% grade reduction per day will apply, Sundays or your preferred day of religious observance excepted.

Final Project (LIN6932 only)

Students who are enrolled in LIN6932 will design a final project that must be related to linguistics and involve programming in Python. Students are strongly encouraged to discuss their project ideas with the instructor at least 2-4 weeks before the last day of classes.

The fine print

ACADEMIC INTEGRITY. UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

DIGITAL DISTRACTION. When your device is displaying things irrelevant to class, you distract not only yourself but other students to whom the screen is visible. Research demonstrates that such distraction is detrimental to learning. I expect your full attention and presence, and I expect you to allow the same to others. Violation of this may result in public reprimand.

CLASSROOM CONDUCT. Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. I pledge to treat each of you with dignity, respect, and professional courtesy; I expect you to do the same for me and for each other.

ACCOMMODATION POLICIES. If you qualify for accommodations because of a disability, please submit your accommodation letter from the Disability Resource Center to me in a timely manner so that your needs can be addressed. Get started with the Disability Resource Center https://disability.ufl.edu/students/get-started/.

RELIGIOUS OBSERVANCES A student should inform the faculty member of the religious observances of their faith that will conflict with class attendance, with tests or examinations, or with other class activities prior to the class or occurrence of that test or activity. The faculty member is obligated to accommodate that particular student's religious observances. See policy details at https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/#religiousholidaystext.

COURSE EVALUATIONS. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu or via ufl.bluera.com/ufl/.

GRADING SCHEME.

		B+	87-89%	C+	77-79%	D+	67-69%		
A	94-100%	B	83-86%	C	73-76%	D	63-66%	F	0-59%
A-	90-93%	B-	80-82%	C-	70-72%	D-	60-62%		

LIN4930/6932 Schedule Fall 2022
Subject to change. Updated 8/24/22

DATE	LECTURE	TOPIC	READING	DUE
8/26	1	Introduction	Syllabus	
8/30	2	Programming Environments	1.1-1.4	
	3	Operators	1.5-1.7, 2.1-2.2	
9/2		Lab 2		
9/6	4	Decision Structures	3.1-3.4	
	5	Algorithms	3.5, 3.9	
9/8		Lab 3		
9/13	6 – 7	While-loops	4.1-4.3	
9/15		Lab 4		**HW1**
9/20	8	Lists	6.1-6.2	
	9	Strings	2.4, 3.8	
9/22		Lab 5		
9/27	10	Functions	5.1-5.3	
	11	More about lists	6.4	
9/29		Lab 6		
10/4	12	More about functions	5.4-5.5, 5.8	
	13	For -loops	4.6	
10/6		Lab 7		
10/11	14	Program design	How To 2.1, 2.3	
	15	Files	7.1, 7.2	
10/13		Lab 8		**HW2**
10/18	16	More Program design	4.11	
		Review		
10/20		MIDTERM		
10/25	17-18	Recursion	5.10, 11.1-11.2, 11.4	
10/27		Lab 9		
11/1	19	Formatting strings	2.5.3	
	20	Binary	7.4	
11/3		Lab 10		**HW3**
11/8	21 – 22	Sets & Dictionaries	8.1-8.2	
11/10		Lab 11		
11/15	23 – 24	Data Visualization	Toolbox 3.2 (in sec. 3.9)	
11/17		Lab 12		
11/22	25 – 26	Computational Complexity	12.1-12.7	
11/26		THANKSGIVING		
11/29	27 – 28	Functional programming	Handout	
12/1		Lab 12		**HW4**
12/9				**Take-home final**
12/16				**Final Project**