Programming Fundamentals I

COP 3502C Section UFOL, UDER *Academic Term:* Fall 2022

Class Periods: Online

Instructor:

Amanpreet Kapoor

kapooramanpreet@ufl.edu [Use course slack for communication]

Office Hours: TBD, by appointment

Teaching Assistants/Peer Mentors

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Course Description

This is the first course of a two-semester introductory sequence for students without prior programming experience. Topics include major concepts of computer science and computer programming processes, including object-oriented programming, procedural and data abstraction and program modularity.

Course Objectives

By the end of the semester, successful students should be able to:

- understand what programming is and the unique features of Python,
- read and understand programs written in Python,
- design and implement programs using Python,
- interpret and execute programs to get results, and
- debug (identify and fix) syntax, semantic, and logic errors in Python source code.

Professional Component (ABET):

This course contributes to meeting the professional component of ABET program criteria:

4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

Required Textbooks and Software

Programming in Python 3 with zylabs, zyBooks
 URL: learn.zybooks.com
 Book code: <u>UFLCOP3502CFall2022</u>

Recommended Materials

• Textbook: Python Crash Course, Eric Matthes (No Starch Press, 2016)

Mobile Computing Requirement

• The College of Engineering requires students to have a mobile computing device (standard laptop) with 802.11 WiFi capability (https://www.eng.ufl.edu/students/resources/computer-requirements/). Students are required to bring their mobile computing devices to class for in-class assignments!

Course Schedule (Tentative)

| Mod. | Dates | Lecture | Lab | Project |
|------|---------------|---|---------------------|----------------|
| NA | 08/25 - 08/28 | Course Syllabus | No Quiz / No Lab | |
| 00 | 08/29 - 09/04 | Introduction to Computer Science | No Quiz / No Lab | |
| 01 | 09/06 - 09/11 | Variables & Arithmetic, & IO | Lab 01 / Quiz 01 | |
| 02 | 09/12 - 09/18 | Program Control | Lab 02 / Quiz 02 | |
| 03 | 09/19 - 09/25 | Methods | Lab 03 / Quiz 03 | P1 Due: 09/23 |
| Е | 09/26 - 10/02 | Review, EXAM 1 | No Quiz/ No Lab | P2a Due: 09/30 |
| 04 | 10/03 - 10/09 | Data Types – Strings, Lists | Lab 04 / Quiz 04 | |
| 04 | 10/10 - 10/16 | Data Types – Tuples, Sets, Dictionaries | Lab 05 / Quiz 05 | P2b Due: 10/14 |
| 05 | 10/17 - 10/23 | Software Engineering | Project walkthrough | P2c Due: 10/21 |
| 06 | 10/24 - 10/30 | Class and Inheritance | Lab 06 / Quiz 06 | |
| Е | 10/31 - 11/06 | Review, EXAM 2 | No Quiz/ No Lab | |
| 07 | 11/07 -11/13 | Searching and Sorting Algorithms | Lab 07 / Quiz 07 | P3 Due: 11/11 |
| 80 | 11/14 - 11/20 | Recursion | Lab 08 / Quiz 08 | |
| BR | 11/21 - 11/27 | BREAK | No Quiz / No Lab | |
| 09 | 11/28 - 12/04 | File I/O | Lab 09 / Quiz 09 | P4 Due: 12/02 |
| FE | 12/05 - 12/07 | Final Review and Q&A | No Quiz/ No Lab | |

Evaluation of Grades

| Assignment | Weightage | Percentage of Final Grade |
|-----------------------------|-----------|---------------------------|
| Quizzes (10, Drop Lowest 2) | 2% x 8 | 16% |
| Labs (9, Drop Lowest 1) | 2% x 8 | 16% |
| Exam 1 | 10% | 10% |
| Exam 2 | 10% | 10% |
| Final Exam | 14% | 14% |
| Projects (1, 2, 3) | 8% x 3 | 24% |
| Project 4 | 10% | 10% |
| Extra Credit Opportunities | Up to 3% | 3% |
| | | Total : 103% |

Grading Policy

| Percent | Grade | Grade Points |
|-------------|-------|---------------------|
| 92.5- 103 | Α | 4.00 |
| 89.5 - 92.4 | A- | 3.67 |
| 86.5 - 89.4 | B+ | 3.33 |
| 82.5 - 86.4 | В | 3.00 |
| 79.5 - 82.4 | B- | 2.67 |
| 76.5 - 79.4 | C+ | 2.33 |

| Percent | Grade | Grade Points |
|-------------|-------|---------------------|
| 72.5 - 76.4 | С | 2.00 |
| 69.5 – 72.4 | C- | 1.67 |
| 66.5 - 69.4 | D+ | 1.33 |
| 62.5 - 66.4 | D | 1.00 |
| 59.5 - 62.4 | D- | 0.67 |
| 0 - 59.9 | Е | 0.00 |

More information on UF grading policy: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Note: A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: an average of C- is equivalent to a GPA of 1.67 and therefore does not satisfy this graduation requirement. For more information on grades and grading policies, please consult the catalog.

Grades will not be <u>"bumped up"</u>, and no <u>additional credit</u> will be offered at the end of the term – so do not ask! Any request for a final grade increase, via "bumping" or "extra credit" will result in a **deduction of 1%** of the student's final grade.

Make-Up and Late Submission Policy

- 1. No make-up or late submission allowed on guizzes. Remember, we drop two lowest scores.
- 2. Exams may be made up when a student has an excused absence. These absences must be notified to the instructor at least 72 hours before the exam along with written documentation from a reputable source as evidence. Excused absences must be consistent with university policies in the undergraduate catalog (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx). Please note that there is no guarantee that requests will be accommodated.

Code Submissions

- 3. Functionality is key to success in software development and computer science, so it is extremely important that the guidelines are followed. Failure to follow these instructions will result in penalties.
- 4. Code must compile / run in debug and release mode. Debug information should never be released in the final version of a software project. Projects that do not compile AND run will be marked zero.
- 5. Your project and lab grades will be based on your zybooks grade instead of the output you have in any other text editors e.g., PyCharm. Thus, when your program doesn't work on zybooks, reach out to your TA or your instructor.
- 6. Include only those files specified by the documents in your archive. Projects should have no directory structure except as explicitly mentioned in the documentation. If the project has naming or organization error(s), its grade will be zero.

Class Expectations

- 7. Grade reviews must be requested within one week of a grade being posted. After two weeks, no grade will be revisited. In the event of a grade review, the entire assignment will be reviewed.
- 8. Projects and labs submitted late will be penalized by **10% each day** up to four days. After the fourth day, you will get a 0. We also count weekends as regular days. So, if an assignment is due Friday, and you submit it on Sunday, you will be graded out of 80 instead of 100 (2 days late penalty).
- 9. Attending live labs are optional but encouraged.

Course Communication, Office Hours and Code Review Policy

- 10. Use course slack or office hours for all course related communication. For any personal communication such as accommodations request, you can use emails, but we will not answer course related questions such as debugging requests on email. Note that we do not respond to Canvas messages as we prefer to keep all communications in one place.
- 11. We typically answer queries on Slack within 48 business hours.
- 12. Students should visit the course staff during scheduled office hours for help on projects or quizzes. Do not send emails or "@" instructors or TAs about project help. The TAs and instructor will often try to answer questions, when possible, in #labs or #projects channels, but the way to get personalized help is to visit them during office hours.
- **13**. The course staff cannot provide you more than 15 minutes of their time in case of long lines or more than two students waiting to get help during office hours.
- 14. When making any debugging requests, make sure you provide the context of what problem you are trying to solve and where is your code failing. Small snippets (1 2 lines of code) can be posted on slack but not the entire code.
- 15. Debugging requests for projects/quiz questions must first go through the TAs, or a post on slack. This is strongly encouraged given we have a large class and several of you might have similar questions. If your problem is not fixed, then reach out to the instructor.

Academic Dishonesty

- **16.** Quizzes, Projects, and Exams are to be worked independently without code sharing. <u>All cheating or dishonest behaviors will be reported to the Honor Court immediately.</u>
- 17. As for the labs, you will work with your peers during the discussion section. But you must submit your own code.
- 18. Sharing/copying, "borrowing" of code structure, looking at code from another student or providing such code, and plagiarism, in addition to other dishonest behaviors, are all considered to be academic dishonesty.

- No information regarding the project, quiz, and exam solutions may be shared by students except for a discussion at a conceptual level.
- 19. For any conceptual discussions, cite the peer who you discussed it with or cite the internet resource you referred to. Such discussions should be held on a whiteboard using explanation figures/pseudo-codes or through talking. We strongly encourage that if you have doubts, visit the course staff in-office hours. Looking at any piece of your peer's code, sharing files, searching for solutions found online, or using someone else to code your solution is strictly prohibited.
- 20. Any student found to have violated these rules, whether a provider or receiver or unauthorized help, will be given a zero on that assignment and a two letter final grade decrement for a first offense. For a second offense, you will get an E grade, the failing grade. Also, for both offenses, you will be reported to the Honor Court. If you aren't clear on what constitutes plagiarism, ask the course staff.

University Honesty Policy

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://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-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.

Privacy

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Disclaimer

Although every effort will be made to implement all course policies as stated in this syllabus, course policies are subject to change at the discretion of the Instructor, based on unforeseen circumstances occurring during the semester or continuous feedback from the enrolled students.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. 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 under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every *Programming Fundamentals I Online, COP 3502C*Page 4

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person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: https://registrar.ufl.edu/ferpa.html

Campus Resources:

<u>Health and Wellness</u>

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: https://counseling.ufl.edu, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

COVID-19

- You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated.
- If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF

- Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus.
- If you are withheld from campus by the Department of Health through Screen, Test & Protect, you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.
- UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the UF Health Screen, Test & Protect website for more information.
- Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. https://www.crc.ufl.edu/.

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. https://teachingcenter.ufl.edu/.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/.

Student Complaints Campus: https://care.dso.ufl.edu.

On-Line Students Complaints: http://www.distance.ufl.edu/student-complaint-process.