CS21B: Intermediate Python Programming

Description: CS21B is an in-depth study of essential intermediate ***computer science concepts*** and ***OOP*** programming techniques using the ***Python*** language. Class inheritance, abstract classes, data structures, Tkinter GUIs, NumPy arrays and Python for web programming are among the many topics that will be covered in depth.

A working facility with simple algebra as well as good written English comprehension skills are both strong advisories. **CS 21A** is the ***prerequisite*** for this course.

Instructor:

I am Allie Xiong, and you can email me at xiongallie@fhda.edu. Typically, you will ask questions through the private or public message center here in the course and only use email if you have trouble logging in.

but not required. We use an book called "***Python for Everyone***" (any edition) by Horstmann et. al./Wiley. You can order this through the Foothill Bookstore at http://books.foothill.edu/, phone: (650) 949-7305.

Required software: We will be using a variety of software in this class. We will mostly utilize open source software and you are responsible for installing, configuring and utilizing the software to complete your projects. We will use Python IDLE or PyCharm for python programming.

Student Learning Outcomes:

- A successful student will be able to develop a Python program that runs other programs, accesses a database, and transfers files over a network.
- A successful student will be able to develop an event driven Python program that interacts with the user through a graphical user interface that employs windows, dialog boxes, buttons, menus and text fields.

Communication:

Questions and comments should be posted to Canvas course site discussion forum. You are encouraged to answer your fellow student questions. Steps needed to post your public questions and comments for this course can be found on the Canvas Discussion Instructions Page.

If you have a confidential question (grades or registration), you can send me private message by first clicking on **Inbox** at the far left, then selecting this course and me as your intended recipient.

Steps needed to post your public questions and comments for this course can be found on the Canvas Inox Instructions Page.

Class organization:

This course will be organized as follows:

1. The class materials will be posted every Monday providing a combined lecture/lab section. During each section there will be reading and instructions, video tutorials, online exercises, lab assignments. Please post your question in Canvas "Discussion forum" if you have a question, or need the material clarified.
2. Assignments are due the next Wednesday by 2pm. The cut-off time is one weeks after the due date. Late submission points will be reduced for 10% each day, up to 30% points maximum.
3. There will be a mid-term exam and a final exam.

    - a **30-point Midterm** on ***Friday*** of the ***sixth*** week, and a **60-point Final Exam** on ***Tuesday*** of the ***12th*** week. You are to take the **Midterm** in a single ***one-hour*** sitting and the **Final Exam** in a single ***two-hour*** sitting.
    - All tests will be available ***starting 6 PM the day before it is due*** and remain open until ***midnight the day it is due***. The are no make-ups if you fail to take a quiz or exam. Failing to do so will result in an ***automatic drop***.
    - If you exceed the time limit or hit the due date/hour (midnight), the test will be submitted automatically with the answers you have chosen up to that point.

4. There are three quizzes. You are to take the quizzes in one ***single 30-minute*** sitting, except for the course syllabus and policy quiz, which can be taken multiple times.

Official Due Dates for Course

Date:	Day	Read Module	Lab Assignment Due 2 PM	Take Quiz/Test
Jan 7	Monday	Syllabus & Resource 1R		
Jan 8	Tuesday	Week 1A		
Jan 11	Friday	Week 1B		
Jan 14	Monday	Resource 2R		
Jan 15	Tuesday	Week 2A		
JAN 16	Wednesday		Assignment 1	Course Policy Quiz

				Last Day to Post Introduction
Jan 18	Friday	Week 2B		
Jan 21	Monday	Resource 3R		
Jan 22	Tuesday	Week 3A		
Jan 23	Wednesday		Assignment 2	
Jan 25	Friday	Week 3B		Python Quiz 1
Jan 29	Tuesday	Week 4A		
Jan 30	Wednesday		Assignment 3	
Feb 1	Friday	Week 4B		
Feb 5	Tuesday	Week 5A		
Feb 6	Wednesday		Assignment 4	
Feb 8	Friday	Week 5B		
Feb 12	Tuesday	Week 6A		
Feb 13	Wednesday		Assignment 5	
Feb 15	Friday	Week 6B		Midterm Exam
Feb 19	Tuesday	Week 7A		

Feb 20	Wednesday		Assignment 6	
Feb 22	Friday	Week 7B		
Feb 26	Tuesday	Week 8A		
Feb 27	Wednesday		Assignment 7	
Mar 1	Friday	Week 8B		Python Quiz 2
Mar 5	Tuesday	Week 9A		
Mar 6	Wednesday		Assignment 8	
Mar 8	Friday	Week 9B		
Mar 12	Tuesday	Week 10A		
Mar 13	Wednesday		Assignment 9	
Mar 15	Friday	Week 10B		
Mar 19	Tuesday	Week 11A		
Mar 20	Wednesday		*Bonus Assignment*	
Mar 22	Friday	Week 11B		
Mar 26	Tuesday			Final Exam
Mar 29	Friday		(No assignments accepted after 2 PM	

on this date.)

Grading:
Your work on the course assignments will be measured on the following dimensions.

1. Complexity: The complexity of the code you wrote in contribution to your project.
2. Problem solving: Are you able to understand big picture, breakdown problem into smaller pieces, find solutions to problems without easy step-by-step instructions.
3. Good programming practice: How well your programs are written, the clarity and usefulness of the comments you wrote in your code.
4. Does your program work: Does the code you wrote compile and execute to achieve the functionality it is supposed to. Even if the entire project doesn't work, we can evaluate individual code chunks.
5. Is it submitted on time: For each one date late, there's a point reduction of 10%, with the maximum late submission point reduction of 30%. The cutoff date to submit is two weeks after the due date.

Your grades will be based on:

1. Mid-term exam in sixth week: 30 points, about 9% of your final grade
2. Final exam in 12th week: 20% of your final grade
3. Weekly lab assignments and quizzes: 180 points, about 58%
4. Quizzes: 42 points, about 13%
5. Total: 312 points (100%)

Grading Scale

% needed for	this grade
97	A+
91	A
88	A-
86	B+
80	B
78	B-
75	C+
67	C

60	D
< 60	F

Drops and withdrawal

For a complete reference of all withdrawal dates and deadlines refer to the Foothill College registration page at the college web site here:

Foothill Winter 2019 Calendar

To stay enrolled in this class, you must participate regularly in your **lab assignments** and **exams**. This is part of the ***class participation*** that online classes must possess in order to maintain their transferability and accreditation.

You will be dropped by me for any of the following:

- If you do not ***post*** an ***introduction*** to the **"First Week Introductions" Discussion Forum** by ***Wednesday of the second week,*** you will be dropped for non-participation.
- If you do not get **100%** on a short **Course Syllabus and Assignment Policy Quiz** by ***Wednesday of the second week,*** you will be dropped for non-participation.
- **Missing a scheduled quiz or exam** without prior notice will result in an automatic drop.
- If you ***do not login*** for **nine (9)** consecutive days you may be dropped.
- If you ***receive a zero*** on ***any two (2)*** **Lab Assignments** due to ***non-submission***, you may be dropped. ***A non-submission zero*** includes a submission that has ***no merit*** or shows ***no serious design/coding/debugging*** and is merely an attempt to avoid the drop.

Academic Integrity
Cheating of any kind will not be tolerated in this class. This class will be useful to only if you commit to making the best use of the opportunity, resources and guidance to learn. Read the academic integrity policy here: http://www.foothill.edu/services/handbook/index.php

Any variation of collaborating or copying programming lab assignments is prohibited. The assignment must be 100% your own work.

If you have questions, there is a place to ask for help with homework: the **Public Forums** labeled for that purpose or the ***STEM Center***. You can even answer each other's questions in the **Discussion Forums**. If I think you are giving too much information away, I'll edit your post.

STEM Tutorial Center

If the online forums here are not enough, please visit the STEM Center page, and click **Schedule and Available Instructors**. These people are qualified to help you with assignments or modules without giving you an answer that will short-circuit your discovery process. Let them know that you are not to receive actual assignment solution code or even fragments. They probably know this already, but it's your responsibility to avoid submitting something that was written by a tutor or another person.

Disabilities Recourse Center

If you need help, please contact ***Disability Resource Center*** **(DRC)** at the start of the quarter. To contact **DRC**, you may:

- Visit **DRC** in Building 5400
- Visit the DRC Web Page
- Email **DRC** at adaptivelearningdrc@foothill.edu
- Call **DRC** at 650-949-7017 to make an appointment

If you need any accommodation with disability related needs, please contact me and provide appropriate documents from the DRC to establish the existence of the disability and the need for accommodation.