Course Syllabus

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Overview

CS3B is the second in a 3-part introductory series offered by the CS Department. It's an introduction to the object-oriented programming methodology using the Python programming language. Throughout this quarter we'll cover a wide range of topics in OOP, data structures, and algorithms, and get plenty of practices with working on various projects in Python.

Student Learning Outcomes

Upon completion of this course:

- A successful student will be able to write and debug Python programs which make use of inheritance, i.e., the "is a" relationship, common to all OOP languages. Specifically, the student will define base and derived classes and use common techniques such as method chaining in his or her programs.
- A successful student will be able to use the Python environment to define the basic abstract data types (stacks, queues, lists) and iterators of those types to effectively manipulate the data in his or her program.

Logistics

Lectures and instructor

The class meets in-person 1:30-3:20pm on Tuesday and Thursday in Room 4308.

My name is **Zibin Yang**. I can be contacted using the message system on Canvas. My email is **yangzibin@fhda.edu (mailto:yangzibin@fhda.edu)** (but see contact policy below). I also work at the CS Lab in the **STEM Center (https://foothill.edu/stemcenter/)** 2-5:30pm on Monday, and 12-5:30pm on Wednesday. Note during those hours I help students in the order they sign up.

Textbook and references

The **required** readings for the course are available as **Modules**. They were authored by Michael Loceff, a long-time CS professor at Foothill.

Otherwise, for more in-depth and perhaps a different perspective on the materials, you may **optionally** pick any relevant Python textbook that fit your style and budget. Loceff recommends ***Python for Everyone, any Edition***, by Horstmann et. al.

There are also plenty of excellent and free online resources, the best of which is probably the official Python documentation repository, **https://docs.python.org/ (https://docs.python.org/)**. It's not a textbook, but it's probably the most authoritative and complete reference for Python.

Development Environment

We'll use Python version 3 in this class. Again, make sure whatever Python interpreter you use is version 3. Preferably, you should have Python 3.6 (which came out in December 2016) or above. While you may use whatever code editor and runtime environment you know and are comfortable with, I recommend you use **PyCharm (https://www.jetbrains.com/pycharm/)** . The Community Edition is free and sufficient for this class.

Grade

Your grade is determined by points you earned in **Assignments**, **Quizzes**, and a **CS 3B Final Exam**. The breakdown is:

Assignments	72%
Quizzes	16%
Final	12%

Assignments are programming projects, and are expected to take 2-10 hours each week. There are 10 of them, 1 each week starting on week 2. Of the 10, 9 are mandatory, each is worth 8% of your grade; 1 is extra credit that's worth 4% of your grade. Late assignments are accepted, at 10% penalty each day it's late for up to 7 days. Note that even if the assignment is submitted a minute past the deadline, it's considered late by one whole day. Each student gets 7 free late days with no penalty for the quarter.

Quizzes are short (2-4 questions) and conducted online, and are expected to take less than 30 minutes each. There are 10 of them, 1 per week starting on week 2. 2 quizzes with lowest points will be dropped. Each is worth 2% of your grade.

There will be 1 in-class final that makes up 12% of your grade. According to **Final Exam Schedule (https://foothill.edu/calendar/finalexams.html)** , it'll be held on Thursday, 3/28/2019, 1-3pm.

Finally, to encourage in-class participation, any time you give a thoughtful (correct or not) answer to a question I ask in-class, you get 0.5% extra credit, for up to a total of 1% of your grade for the quarter. In other words, with just 2 such participations, you'll have earned 1% extra credit for the class. Of course, I encourage you to continue to participate in the class even after earning the full 1% extra credit.

There will also be other opportunities to get extra credits, such as more advanced part of an assignment. Details will become available as the quarter progresses.

Your letter grade will be determined as follows.

Grade	**Range**
A+	97% 100%
A	91.0% < 97.0%
A-	88.0% < 91.0%
B+	86.0% < 88.0%
B	80.0% < 86.0%
B-	78.0% < 80.0%

Grade	Range
C+	75.0% < 78.0%
C	67.0% < 75.0%
D	60.0% < 67.0%
F	0.0% < 60.0%

Academic Integrity

All of your graded works must be **100% your own**. Do not copy or use anyone else's (your classmate's, friend's, any free or paid website's) code and pass that as your own work. You may discuss assignments in concepts with each other in-person or using the public **Discussions** forums, but you must work on your own solutions.

Drops and Withdrawals

Please refer to **Foothill Winter 2019 Dates and Deadlines (https://foothill.edu/calendar/winter2019.html)** for important dates.

Attendance of lectures is required for the course. Attendance will be taken the first two weeks of the class.

To avoid being dropped by the end of the first two weeks, a student must:

- Have at least one recorded attendance
- Post a brief introduction in **First Week Introductions**
- Take **Quiz #1**
- Submit for **Assignment 1 - Game Basics: Cards and Hands** by 1/19/19. If more time is needed for the assignment, please contact the instructor.

Beyond the first two weeks, a student can be dropped if s/he stops participating in the class, which includes missing 2 or more assignments or missing 2 or more quizzes without prior discussion with the instructor.

Where to get help

I want you to learn and be successful. While whether that happens or not largely depends on your own effort, there are plenty of resources to help you achieve that goal.

Private message to the instructor

For private matters that are not suitable in the public forum, such as grades, contact me using the Canvas messaging system, which is preferred. Use my email only if there are problems with Canvas.

Public discussion

The **Discussions** area is a place to ask questions and post comments relevant to the modules, assignments, etc. You should also try to to answer your fellow students' questions. You are all part of the community and should engage each other.

Anything you post should be respectful, clear, and specific. Use common sense, and do not post things like direct answer to the assignments, or a whole piece of code and ask "why doesn't it work".

If you paste code, make sure they are properly formatted. See **Week 3R - Posting Code to Discussions (https://www.fgamedia.org/faculty/loceff/cs_courses/common/compilers/cs_all_posting_code_CANVAS.html)** for guidelines.

STEM Center

The **STEM Center (https://foothill.edu/stemcenter/)** in room 4213 has qualified tutors for various STEM subjects. There's a **CS Lab (https://foothill.edu/stemcenter/tutoring-schedules/schedule-cs.html)** in room 4204 dedicated to CS courses. It even provides **online CS tutoring (https://foothill.edu/stemcenter/tutoring-schedules/schedule-cs-online.html)**. It's free and a great resource if you need one-on-one help.

NetTutor

Foothill contracted with an outside company to provide online tutoring at no cost to the students. You can access that by clicking NetTutor on the menu on the left.

Disability-Related Accommodations

If necessary, please contact the **Disability Resource Center (DRC) (https://foothill.edu/drc/)** as early as possible, by

- visiting the DRC in room 5400
- emailing the DRC at **adaptivelearningdrc@foothill.edu (mailto:adaptivelearningdrc@foothill.edu,)**
- **(mailto:adaptivelearningdrc@foothill.edu,)** calling DRC at 650-949-7017 to make an appointment.

Course Summary:

Date	Details	
Wed Jan 16, 2019	**Assignment 1 - Game Basics: Cards and Hands (https://foothillcollege.instructure.com/courses/8595/assignments/213942)**	due by 11:59pm
Fri Jan 18, 2019	**Quiz #1 (https://foothillcollege.instructure.com/courses/8595/assignments/213936)**	due by 11:59pm
Wed Jan 23, 2019	**Assignment 2 - Adding a Deck (https://foothillcollege.instructure.com/courses/8595/assignments/213943)**	due by 11:59pm
Fri Jan 25, 2019	**Quiz #2 (https://foothillcollege.instructure.com/courses/8595/assignments/213932)**	due by 11:59pm

Date	Details	
Wed Jan 30, 2019	Assignment 3 - Cellular Automata (https://foothillcollege.instructure.com/courses/8595/assignments/213944)	due by 11:59pm
Fri Feb 1, 2019	Quiz #3 (https://foothillcollege.instructure.com/courses/8595/assignments/213931)	due by 11:59pm
Wed Feb 6, 2019	Assignment 4 - Encryption Keys and Inheritance (https://foothillcollege.instructure.com/courses/8595/assignments/213945)	due by 11:59pm
Fri Feb 8, 2019	Quiz #4 (https://foothillcollege.instructure.com/courses/8595/assignments/213933)	due by 11:59pm
Wed Feb 13, 2019	Assignment 5 - Mortgage Calculator GUI (https://foothillcollege.instructure.com/courses/8595/assignments/213946)	due by 11:59pm
Fri Feb 15, 2019	Quiz #5 (https://foothillcollege.instructure.com/courses/8595/assignments/213939)	due by 11:59pm
Wed Feb 20, 2019	Assignment 6 - Operator Overloading and Abstract Inheritance in Prime Number Fields (https://foothillcollege.instructure.com/courses/8595/assignments/213947)	due by 11:59pm
Fri Feb 22, 2019	Quiz #6 (https://foothillcollege.instructure.com/courses/8595/assignments/213935)	due by 11:59pm
Wed Feb 27, 2019	Assignment 7 - Deep Memory Seven Segment Displays (https://foothillcollege.instructure.com/courses/8595/assignments/213948)	due by 11:59pm
Fri Mar 1, 2019	Quiz #7 (https://foothillcollege.instructure.com/courses/8595/assignments/213938)	due by 11:59pm
Wed Mar 6, 2019	Assignment 8 - A Seven Segment Display in a GUI (https://foothillcollege.instructure.com/courses/8595/assignments/213949)	due by 11:59pm
Fri Mar 8, 2019	Quiz #8 (https://foothillcollege.instructure.com/courses/8595/assignments/213940)	due by 11:59pm
Wed Mar 13, 2019	Assignment 9 - Implementing Lazy (Soft) Deletion in a General Tree (https://foothillcollege.instructure.com/courses/8595/assignments/213950)	due by 11:59pm
Fri Mar 15, 2019	Quiz #9 (https://foothillcollege.instructure.com/courses/8595/assignments/213934)	due by 11:59pm

Date	Details	
Wed Mar 20, 2019	**Assignment 10 - Implementing Lazy Deletion Using Multiple Inheritance** (https://foothillcollege.instructure.com/courses/8595/assignments/213941)	due by 11:59pm
Fri Mar 22, 2019	**Quiz #10** (https://foothillcollege.instructure.com/courses/8595/assignments/213930)	due by 11:59pm
Thu Mar 28, 2019	**Final exam** (https://foothillcollege.instructure.com/courses/8595/assignments/213937)	due by 3pm
	Class participation extra credit (https://foothillcollege.instructure.com/courses/8595/assignments/213951)	