Foundations of Computer Programming
CS49 – Winter 2019

Instructor

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Course Description

Catalog Description

This course provides an introduction to basic computer programming concepts using the Python object-oriented language. Intended for students interested in C S 1A or 2A or 3A but would like a more gradual entry to computing foundations. Coding topics include hands-on practice with software engineering tools, simple programs, variables, control structures, functions, and input /output. Concept topics include the comprehension of specifications, adherence to style guidelines, and the importance of testing to ensure that programs are usable, robust and modifiable.

Course Details

Term: Winter 2019
Course name: Foundations of Computer Programming
Course number: CS49
CRN: 31330
Section number: 01W
Lectures: Online
Labs: Online
Prerequisite: Advisory: Satisfactory score on the mathematics placement test or MATH 105 or 108; concurrent enrollment in ESLL 125 or ENGL 209.

Course Objectives

The student will be able to:

1) Demonstrate how to use an Integrated Development Environment (IDE) to write a program.
2) Write well documented code in a clear, industry-accepted style.

3) Choose an appropriate data type in which to store a program's data.
4) Convert an English description of a numeric calculation into an expression the computer can evaluate correctly.
5) Incorporate user input into a program to interact with the user.
6) Use appropriate control structures to execute instructions in different sequences.
7) Write a reusable function that solves a common problem.
8) Write code that uses an existing Application Programming Interface (API) to solve a specific problem.
9) Interpret the specifications for, and design and implement solutions to, problems from different application areas.

Student Learning Outcomes

A successful student will be able to write and debug computer programs which make use of the fundamental control structures and method-building techniques common to all programming languages. Specifically the student will use data types, input, output, iterative, conditional, and functional components of the language in his or her programs.

Required Textbook

Starting Out with Python, 4th edition, by Tony Gaddis.

We will be using **MyProgrammingLab** with eText through InclusiveAccess.
This book can be ordered through the Foothill College Bookstore.

Software Requirement

Python 3 interpreter and an (**I**ntegrated **D**evelopment **E**nvironment) **IDE**.

Python3: Go to the www.python.org. The downloads page link is listed below. Be careful to choose the version for your operating system and hardware. The python.org website also provides user documentation and tutorials.

- Python 3 Downloads
- Python documentation
- Python Tutorial

IDE: Recommendations that run on both Windows PC and Mac include **IDLE** or PyCharm. **IDLE** comes bundled with your Python3 download.

Grading Policy

Grades

Your grade is determined by:

- Assignments 75%
- Exams 25%

Tests

There will be a midterm exam and a comprehensive final exam. Exams will be administered online.

Lab Assignments

There will be eight required lab assignments. There is an optional ninth lab assignment that can be used to replace a low lab score. Labs will be turned in online.

Grading Scale

Letter Grade	Lower %	Upper %
A	93%	100%
A-	90%	92%
B+	87%	89%
B	83%	86%
B-	80%	82%
C+	77%	79%
C	73%	76%
C-	70%	72%
D+	67%	69%
D	63%	66%
D-	60%	62%

Letter Grade	Lower %	Upper %
F	0%	59%

Course Expectations

Attendance Policy

Regular attendance is required. Students will be dropped for non-participation for the following:

- Not posting a first week Introduction
- Missing two consecutive lab submissions
- Missing the midterm exam
- Missing three total lab submissions

Course Communication

Announcements: Weekly announcements and important reminders will be posted to help keep students on track with where we are in the course. If you are not receiving an email after I send out an *Announcement*, then double-check the email address and notification preferences that is on file in your Canvas account.

Public Forums: Class forum discussion enhances the course learning experience. Questions and comments should be posted to the Canvas Discussion Forum. Unless a question is of a private nature (i.e. grades, registration issues), please use the public class forum. Also, feel free to answer your fellow student questions, even if you only have a guess as to what the answer is. It is through this opportunity to engage with each other that you can both build your confidence in knowing the material as well getting to know one another.

Weekly discussions will be generated on the topic material and lab assignments. If you want to ask a question "***Post a Reply***" to that discussion.

Private Messages: Please use *public* Discussions for any question or comment that relates to the class – this helps everyone to learn. If you have a confidential question (grades or registration) use the Canvas Conversation Private Message Tool (PMT).

Checking my messages: The best way to get a hold of me is through sending a "private message" via the Canvas Conversation tool.

Posting Program Code: You can post code to the public discussions, provided that it is not source directly from your assignment. If you have an assignment question, translate that into a piece of code that does not reveal your answer or submission, exactly.

When posting code fragments (i.e. portions of your program) into questions, make sure these code fragments are perfectly indented and that they are properly formatted.

Be specific in your questions. Find exactly what you want to know about and post only that part of the code. For details, see the syllabus segment below on *How to Ask a Question*.

How to Ask a Question

Be specific. Show exactly where you seem to be faltering so that qualified others can know how to help you. This holds true if you are posing your question to the public forums, the **STEM Center** or me directly. Questions are encouraged. The engagement of questioning helps everyone learn. Just be sure to have wrestled with the problem first so that you can show you have tried to solve it. If unclear or stuck you then have narrowed down your question specifically. Knowing exactly where you are uncertain allows for incremental progress on each assignment task. Start your labs early – this allows time for the question, answer and progress cycle to happen most successfully.

Continual Access to the Internet and Late Policy

Since this is a fully online class, it is your responsibility to make sure that you have continuous Internet access. Please plan ahead of time and be aware of the weekly deadlines. If you know that there will be a conflict ahead of time with class responsibilities, then you need to contact me PRIOR to the deadline.

Late lab assignments will be accepted with a two point penalty **per day** late up to two days after the due date.

Late exams are not accepted.

Course Outline

Week	Topic	To Do
1	Introduction to Computers and Programming	Post Introduction
2	Input, Processing and Output	Lab1
3	Decision Structures and Boolean Logic	Lab 2
4	Repetition Structures	Lab 3
5	Functions	Lab 4
6	Lists and Tuples	Midterm Exam
7	Strings	Lab 5
8	Dictionaries and Sets	Lab 6
9	Recursion	Lab 7
10	Using classes from the predefined API	Lab 8
11	Review	Optional Lab 9
12		Final Exam

Winter 2019 Important Dates

Monday, Jan. 7: First day of Winter Quarter 2019

Monday, Jan 21: Martin Luther King, Jr. Holiday (college closed)

Friday, Jan. 18: Last day to add 12-week, quarter-length classes. *Add date is enforced.*

Sunday, Jan. 20: Last day to drop for a full refund or credit (for 12-weeks, quarter-length classes). Last day to drop for a refund/credit for all other classes is listed inside MyPortal, on the Students Tab under 'View Your Class Schedule. *Drop date is enforced.*

Sunday, Jan. 20: Last day to drop 12-week, quarter-length classes with no record of grade. *Drop date is enforced.*

Friday, Feb. 1: Last day to **request pass/no pass grade**. *Request date is enforced.* You may complete the form online before the term begins. Once the term begins, you must submit the completed form to the Admissions & Records Office. Download the form via your MyPortal.fhda.edu account.

Friday-Monday, Feb 15-18: Observance of Presidents Day Weekend (college closed

March 1: Last day to petition for Winter associate degree or certificate.

March 1: Last day to petition for a Spring associate degree for transfer (ADT).

Friday, March 1: Last day to drop with a "W." *Withdraw date is enforced.*

Monday-Friday, March 25-29: Final exams

Friday, March 29: Last day of Winter Quarter

Monday, April 8: First day of Spring 2019 Quarter

Help Resources

Disability

To obtain disability-related accommodations, students must contact the Disability Resource Center (DRC) at the start of the quarter.

Tutoring

STEM Success Center

Opportunities for CS Students

The Computer Science Department supports a blog that contains announcements of internships, scholarships, software offers, pertinent public lectures and other useful CS

updates. Announcements will be posted often during the quarter. Students are encouraged to take advantage of CS opportunities available here.

College Policies

Academic Honesty

Your lab and exam submissions must be your own work.

The following guidelines apply:

You are encouraged to discuss in the forum about course questions but you may not examine nor reuse any other student's code. You are not allowed to copy code from **any** source — other students, the Web, etc.

Academic Integrity Statement

It is every student's responsibility to know what constitutes academic dishonesty.

If you have any questions, feel free to ask me, our division dean or the **Dean of Student Affairs & Activities**.

- Academic Integrity Statement
- z-card

Official Due Dates for the Course

Date	Day	Reading	Lab Assignment Due 11:59 PM	Test Due11:59 PM
Jan. 7	Monday	Syllabus & Resources & Module 1 & Text Ch. 1		
Jan. 14	Monday	Module 2 & Text Ch. 2.1–2.9		
Jan. 15	Tuesday		Assignment 1	
Jan. 21	Monday	Module 3 & Text Ch. 3.1–3.6		
Jan. 22	Tuesday		Assignment 2	
Jan. 28	Monday	Module 4 &		

		Text Ch. 4.1–4.7		
Jan. 29	Tuesday		Assignment 3	
Feb. 4	Monday	Module 5 & Text Ch. 5.1–5.9		
Feb. 5	Tuesday		Assignment 4	
Feb. 11	Monday	Module 6 & Text Ch. 7.1–7.6;7.9		
Feb. 12	Tuesday			**Midterm**
Feb. 18	Monday	Module 7 & Text Ch. 8		
Feb. 19	Tuesday		Assignment 5	
Feb. 25	Monday	Module 8 & Text Ch. 9.1-9.2		
Feb. 26	Tuesday		Assignment 6	
Mar. 4	Monday	Module 9 & Text Ch.12		
Mar. 5`	Tuesday		Assignment 7	
Mar. 11	Monday	Module 10 & Text Ch. 10.1–10.3		
Mar. 12	Tuesday		Assignment 8	
Mar. 18	Monday	Module 11		
Mar. 19	Tuesday		Assignment 9 (Optional)	
Mar. 26	Tuesday			**Final Exam**

Changes

This syllabus is subject to changes, additions, deletions, and/or corrections.

Last Updated: 12/26/2018 5:21 PM