CS 150 – Computer Prog for the Liberal Arts

Syllabus – Spring 2024, Section 01

Important: This syllabus and its components are subject to change based on modifications to applicable guidelines. Your instructor will attempt to communicate all changes to you in a timely manner.

Instructor Information

- Name: Robert Kelley, Ph.D.
- Office location and hours: Pasteur Hall 006B, M/W 11:00AM – 12:00PM, T 1:00PM – 3:00PM
- Telephone: 502-272-7458
- Email: rkelley@bellarmine.edu

Course Information

Course Description

Introduction to computer programming for students interested in learning the practical aspects of programming for solving problems in a wide variety of disciplines outside of computer science and engineering. The course covers basic programming constructs including statements, expressions, variables, conditionals, iteration, functions, and simple data visualization and data manipulation techniques using various Python libraries. **This course will not count for credit in the Computer Science Program.**

Modality: In Person
Meeting location: Pasteur Hall 002
Meeting day and time: M W F 9:00 – 9:50AM
Prerequisites/Corequisites: None
Credit hours: 3

Learning Outcomes

Course Outcomes

By the end of this course, students will be able to:

Objective/Outcome	Associated Assessment
Choose the correct programing structures to use for various problems and data structures	Assignments, Projects, Final Exam
Use Jupyter Notebooks to write interactive Python programs	Assignments and Projects
Use various Python libraries to extend the functionality of your Python programs.	Assignments and Projects
Maintain a code repository for sharing code	Assignments and Projects

Table 1 Course Outcomes

Course Methodology

Course Materials

Required Materials

- Deitel, Paul, and Harvey M. Deitel. Intro to Python for Computer Science and Data Science. Pearson Education, 2020. ISBN: 9780135404812 (hard copy or electronic copy)
- Anaconda Python https://www.anaconda.com/
- GitHub Account https://github.com/

Supplemental Materials

- None

Course Activities

Your proficiency in this course will be evaluated with the following:

1. **Programming Assignments:** You will complete several Python programming assignments designed to assess your ability to implement the concepts in the course. The assignments should be completed individually unless otherwise stated.
2. **Programming Project:** Toward the end of the semester, you will propose and write a comprehensive programming project that incorporates many of the concepts you have learned in class.
3. **Final Exam:** You will complete a comprehensive final exam that will focus on terms and concepts you have learned through the semester. We will discuss the details of the final exam as the end of the semester approaches.
4. **Attendance –** Attendance will contribute to your final grade. More information about attendance is in a separate section below.

Course Schedule

Week	Topics/Activities
1/5	Course Introduction
1/8 – 1/12	Introduction to Code Repositories (Git/GitHub) Introduction to Code Python/Code Editors Reading: Deitel & Deitel, Chapter 1, Sections 1.8 – 1.10
1/15 – 1/19	**Martin Luther King Jr. Day – No class (M)** Fundamental Programming Concepts in Python Reading: Deitel & Deitel, Chapter 2, Chapter 8, Sections 8.1-8.11
1/22 – 1/26	Control Statements in Python Reading: Deitel & Deitel, Chapter 3
1/29 – 2/2	Control Statements in Python cont.
2/5 – 2/9	Control Statements in Python cont.
2/12 – 2/16	Functions in Python Reading: Deitel & Deitel, Chapter 4
2/19 - 2/23	Functions in Python cont.

2/26 – 3/1	**Spring Break – No Class**
3/4 – 3/8	Data Structures in Python Reading: Deitel & Deitel, Chapter 5, 6, and 7
3/11 – 3/15	Data Structures in Python cont.
3/18 – 3/22	Data Structures in Python cont.
3/25 – 3/29	**Easter Break – No Class (F)** Data Structures in Python cont.
4/1 – 4/5	**Easter Break – No Class (M)** Writing Classes in Python Reading: Deitel & Deitel, Chapter 9
4/8 – 4/12	Writing Classes in Python cont.
4/15 – 4/19	Writing Classes in Python cont.
4/22-4/24	Last Day of Class (W)
4/29	Final Exam – 8:00AM – 11:00AM

Table 2: Course Schedule

The tentative schedule above may change at the discretion of the instructor. Also, remember that there are many important dates and deadlines published annually in the University's Master Calendar at https://www.bellarmine.edu/registrar/academic-calendars/, including the final exam schedule (https://www.bellarmine.edu/registrar/final-exam-information/). It is your responsibility to be aware of all academic calendar dates and to meet the published deadlines

Grading Information

To earn a C grade, your work must show a strong understanding of the information presented in the course. To earn a B grade your work must show a strong understanding of the information presented in the course ***and*** an ability to apply this information in problem solving. To earn an A grade your work must show a strong understanding of the information presented ***and*** an exceptional ability to apply this information in problem solving.

The following outlines the breakdown of your total grade for this course.

Category	Percentage of Total Grade
Programming Assignments	65%
Programming Project	15%
Final Exam	10%
Attendance	10%
Total	100%

Table 3: Final Grade Breakdown

Grading Scale

Final grades for this course will be assigned according to the following table.

Letter Grade	Lower Limit (%)	Upper Limit (%)
A+	97.00	100.00
A	93.00	96.99
A-	90.00	92.99
B+	87.00	89.99
B	83.00	86.99
B-	80.00	82.99
C+	77.00	79.99
C	73.00	76.99
C-	70.00	72.99
D+	67.00	69.99
D	65.00	66.99
D-	60.00	64.99
F	0.00	59.99

Table 4 Grading Scale

Course Policies

Attendance

This is a **very interactive class**. Excessive absences will make it difficult for you to succeed in this course. **Attendance is part of your grade.** If you miss more than three or four sessions over the semester, you will struggle to keep up with the content and pace of the course. In addition, I do not tolerate excessive tardiness. We are all late occasionally - it happens. However, if you are consistently late to class, I will not allow you to make up any graded work that was administered that day and I may prevent you from attending a session altogether. In short – be here, on time and ready to go. Please e-mail me in advance to let me know you must miss class. **If you arrive to class more than 5 minutes late or leave more than 15 minutes early from class without permission, you will be marked absent for the day.**

Late Work Policy

You may turn in any Programming Assignment up to 24 hours late for a 25% penalty on your grade. I will not accept any assignments past 24 hours for any reason. This does not apply to the Programming Project which must be turned in on time for credit.

Generative AI Policy

I consider AI-based assistance, such as ChatGPT and Github Copilot, the same way I consider collaboration with other people: you are welcome to talk about your ideas and work with other people, both inside and outside the class, as well as with AI-based assistants. **However, all work you submit must be your own.** You should never include in your assignments anything that was not written directly by you without proper citation (including quotation marks and in-line citation for direct quotes and comments for code snippets). Including anything you did not write in your assignment without proper citation will be treated as an academic misconduct case.

If you are unsure where the line is between collaborating with AI and copying from AI, here is the heuristic the following heuristics:

- Never hit “Copy” within your conversation with an AI assistant. You can copy your own work into your conversation, but do not copy anything from the conversation back into your assignment. Instead, use your interaction with the AI assistant as a learning experience, then let your assignment reflect your improved understanding.
- Do not have your assignment and the AI agent itself open on your device at the same time. Like above, use your conversation with the AI as a learning experience, then close the interaction down, open your assignment, and let your assignment reflect your revised knowledge. This heuristic includes avoiding using AI assistants that are directly integrated into your composition environment: just as you should not let a classmate write content or code directly into your submission, so also you should avoid using tools that directly add content to your submission.

I reserve the right to request an oral explanation of any assignment including the code.

Policy adapted from original policy written by David Joyner, Georgia Institute of Technology, for CS7637: Knowledge-Based AI

Classroom Expectations

Cell Phone/Social Media Policy

Like everyone else, I love staying connected to my friends and family. However, there are situations in which it is not appropriate and/or efficient to use a cell phone or computer to access text messages or social media. While in class, put your phone on vibrate. If you receive an emergency call, go out into the hall to answer it. Otherwise, keep your cell phone put away and stay off social media on the lab machines. **If I notice that you are violating this policy, I will ask you to leave.**

Accommodation Policy

If you have an official accommodation letter from disability services, you must make an appointment with me within one week of receiving that letter to discuss accommodation. This is extremely important. I cannot appropriately support your disability without a face-to-face discussion. Depending on the nature/number of accommodations, I may further require that you attend office hours every week to ensure you stay on track.

Communication/E-mail Template

I check email twice a day Monday-Friday. I will check once in the morning between 8:00am and 9:00am and once in the afternoon between 3:00pm and 6:00pm. I will not check email on the weekends.

The subject line for your emails should start with:

[CS-XXX-YY] – (whatever you want to put in the rest of the subject). XXX should be the course number and YY should be the section number, for example: *[CS-130-01] – Question about the midterm exam*.

Your email messages should also contain a greeting and a closing. See below for an example:

> *Dr. K. –*
>
> *I need to miss class on Thursday because of a doctor’s appointment.*
>
> *Thanks,*
> *Amazing Student*

Due to the amount of email, I receive, I will not guarantee to respond to messages that do not have the correct subject line and format.

Technology

Required equipment/hardware

You are encouraged to use your own laptop for this course. However, if you do not have a laptop of your own that can run the tools you need, you may use one of the lab laptops during class. **Lab laptops may not be taken out of the classroom for any reason.**

Required applications/software

The software required for this course is outlined in the **Required Materials** section of this syllabus.

Technical support

The Technology Support Center (TSC) provides technology services for the Bellarmine community for Moodle, Office 365, email, and other technology needs. The TSC is open Monday through Friday. You may stop by the TSC on the "A" Level of the Library, call 502.272.8301, or email tsc@bellarmine.edu.

Important Information for Your Success

As a Bellarmine University student, you are expected to be engaged in the learning process throughout the semester. However, circumstances may arise that impact your success as a student. It is important that you review university policies and services that may apply in certain circumstances. To do so, simply use your smartphone to scan the QR code at left, or visit this link: http://aka.bellarmine.edu/policiesandservices

Information about the following policies and services can be found at that link:

Policies

- Academic Honesty
- University-Sponsored Travel Notification/Extended Absence Policy
- Field Trips
- Student Concern Reporting
- Title IX and Sexual Misconduct Notification
- Bias Incident Reporting
- Chosen Name
- Pronouns and Gender Identity

Services

- Technology Support Center
- W.L. Lyons Brown Library
- Student Success Center
- Accessibility Resource Center and student accommodations for disabilities
- Counseling Center and Health Services

This syllabus is subject to change at the discretion of the instructor. Any changes will be announced and discussed in class and the schedule on Moodle will be updated to reflect the change.