

San José State University
College of Science/Department of Computer Science
CS22A, Python Programming for Non-Majors I, Fall, 2021, Section 2

Course and Contact Information

Instructor: Nada Attar

Office Location: MH 218

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Email: nada.attar@sjsu.edu

Office Hours: TuTh 11:00-12:00 pm

Zoom Link: <https://sjsu.zoom.us/j/88357860513>
Meeting ID: 883 5786 0513
Appointment slots (required for office hours):
<https://calendar.google.com/calendar/u/0/selfsched?sstoken=UUIPZVdhWkdtZFI4fGRlZmF1bHR8ZmJhMGUzOTQ3YTM5MjIxODRmZTI2YjJjMmE1M2QyNGE>

Class Days/Time: TuTh 7:30-8:45 pm

Zoom Link: <https://sjsu.zoom.us/j/83201790294>
Meeting ID: 832 0179 0294

Prerequisites: This course is intended for students who have no prior programming experience and who are interested in pursuing a Minor in Bioinformatics.

Course Description

This course is an introduction to Python Programming. Programming in interesting, relevant, and practical contexts. Image and video manipulation, digital music, databases, web pages, data analysis in life sciences, other applications. Fundamental programming constructs: data structures and algorithms, iterations, functions.

Course Format

Canvas Learning Management System and Messaging:
Course materials such as syllabus, handouts, notes, hands-on exercises, project instructions, etc. can be found on the Canvas Learning Management System course login website at <http://sjsu.instructure.com>. You are responsible for regularly checking with the Canvas messaging system to learn of any updates.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

1. CLO 1: Explain fundamental programming constructs such as assignments, sequential operations, iterations, conditionals, defining functions, and abstraction.
2. CLO 2: Analyze and explain the behavior of Python programs.
3. CLO 3: Apply fundamental programming constructs in life and physical science contexts.

Required Texts/Readings

Python for Biologists by Martin Jones, 2015, ISBN-13: 978-1492346135, ISBN-10: 1492346135.

Note: The author is a biologist. This book, as well as Advanced Python for Biologists, were written especially for scientists who are new to programming. The author maintains a website for the books at <http://pythonforbiologists.com>.

An older version of the book can be found online: <http://userpages.fu-berlin.de/digga/p4b.pdf>.

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

Homework assignments will be individual, regularly assigned, will include written problem assignments, and perhaps some online exercises. The homework is a tool for you to learn the material and prepare you for the exams.

There will be a programming group project. Each group consists of two students. Information on the project, including topics and deadlines, will be given later.

Final Examination:

One final closed book cumulative exam.

Grading Information

Your grade for the course will be based on the following components:

- Exam 1 - 10%
- Exam 2 - 10%
- Final Exam - 20 %
- Assignments - 40 %
- Term Project (20%)

Final exam and quizzes are closed book; final exam is comprehensive. No extra point options in the final. No make-ups exams except in case of verifiable emergency circumstances. Any additional rules and regulations can be applied when taking exams to prevent dishonesty and cheating.

Determination of Grades

The following shows the grading scale to be used to determine the letter grade:

Percentage	Grade
95 and above	A+
92-94	A
90 - 91	A-
87 - 89	B+
83 - 86	B
80 - 82	B-
77 - 79	C+
73 - 76	C
70 - 72	C-
67 - 69	D+
63-66	D
60-62	D-
59 and below	F

Classroom Protocol

The lectures will be on an online mode. Regular class attendance is highly recommended and strongly encouraged. A video for each lecture will be posted after the class. The recorded lectures will be shared only with the students enrolled in the course through Canvas. This section has online office hours, that are in time slot format. The time slot should be reserved before the midnight of the previous day of the office hours. Please have your camera on during office hours. Do not publicly share or upload material for this course such as exam questions, lecture notes, or solutions without my consent.

Students are not allowed to share any of the materials of the course without the instructor's consent.

University Policies

The link below contains university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc.: <https://www.sjsu.edu/curriculum/courses/syllabus-info.php>

Policies

Late homework/projects

All assignments and projects will be due on Thursday of the indicated week at 6:00pm. The assignment will be posted at least a week before the due date to give enough time to work and ask for help during my virtual office hours. Please do not email me few hours before the deadline asking me to help you understand concepts. If I feel that you just start working on your assignment at the due date, I will ignore your emails because I know you won't be able to finish understanding the problem, coding, testing, compiling, and debugging in a few hours. So, please start early and manage your time wisely.

Late Submission:

- 0-6hr -> no penalty
- +6hr -> 60% penalty
- +12hr -> 100% penalty

If you believe an error was made in the grading of your assignments, quizzes, or final exam, you can request a re-grade from the instructor. A request must be sent to the instructor no more than one week after the grades are posted.

Online Discussion Forum Etiquette

Ask clear questions to get better answers. Make sure your question has not been already asked and answered. Read these guidelines (<http://superuser.com/help/how-to-ask>) when you ask a question. It is fine to share a couple of lines of code but please don't just post your code or share a significant amount of code. Try to ask general questions.

CS22A, Data Structures and Algorithms, Summer, 2021

Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	Th 8/19	Introductions, Course Expectations, Python Interpreter and Python Coding Style Hands-On One and Book (MJ) Chapter One
2	Tu 8/24	MJ Chapter Two, Printing and Manipulating Text, pages 14 - 28 Hands-On Two
2	Th 8/26	MJ Chapter Two, Printing and Manipulating Text, pages 14 – 28 [Continuation] Hands-On Two
3	Tu 8/31	MJ Chapter Two, Printing and Manipulating Text, pages 28 - 36 Hands-On Three
3	Th 9/2	MJ Chapter Two, Printing and Manipulating Text, pages 28 - 36 [Continuation] Hands-On Three
4	Tu 9/7	MJ Chapter Three, Reading and Writing Files, pages 54 - 66 Hands-On Four
4	Th 9/9	MJ Chapter Three, Reading and Writing Files, pages 54 – 66 [Continuation] Hands-On Four
5	Tu 9/14	MJ Chapter Four, Lists and Loops, pages 77 - 86 Hands-On Five
5	Th 9/16	MJ Chapter Four, Lists and Loops, pages 86 - 92 Hands-On Six
6	Tu 9/21	MJ Chapter Four, Lists and Loops, pages 86 – 92 [Continuation] Hands-On Six
6	Th 9/23	Exam 1
7	Tu 9/28	MJ Chapter Five, Writing our own Function, pages 105 - 119 Hands-On Seven
7	Th 9/30	MJ Chapter Five, Writing our own Function, pages 105 – 119 [Continuation] Hands-On Seven
8	Tu 10/5	MJ Chapter Five, Writing our own Function, pages 121 – 122 Hands-On Eight
8	Th 10/7	MJ Chapter Five, Writing our own Function Hands-On Nine
9	Tu 10/12	MJ Chapter Six, Conditional Tests, pages 129 – 139 Hands-On Ten
9	Th 10/14	MJ Chapter Six, Conditional Tests, pages 129 – 139 [Continuation] Hands-On Ten
10	Tu 10/19	MJ Chapter Six, Conditional Tests, pages 139 – 141 Hands-On Eleven
10	Th 10/21	MJ Chapter Seven, Conditional Tests, pages 142 – 143 Hands-On Twelve
11	Tu 10/26	MJ Chapter Seven, Conditional Tests, pages 142 – 143 [Continuation] Hands-On Twelve
11	Th 10/28	MJ Chapter Seven, Regular Expressions, pages 151 – 167 Hands-On Thirteen
12	Tu 11/2	MJ Chapter Seven, Regular Expressions, pages 151 – 167 Hands-On Thirteen
12	Th 11/4	MJ Chapter Seven, Regular Expressions, pages 168 – 169 Hands-On Fourteen
13	Tu 11/9	Exam 2
13	Th 11/11	Veteran's Day - Campus Closed

14	Tu 11/16	MJ Chapter Seven, Regular Expressions, pages 168 – 169 [Continuation] Hands-On Fourteen
14	Th 11/18	MJ Chapter Eight, Dictionaries, pages 179 – 193 Hands-On Fifteen
15	Tu 11/23	MJ Chapter Eight, Dictionaries, pages 179 – 193 [Continuation] Hands-On Fifteen
15	Th 11/25	Rescheduled Holiday - Campus Closed
16	Tu 11/30	Projects Due Student Presentations
16	Th 12/2	Student Presentations
17	Th 12/9	Final Exam: 7:45-10:00 PM