



Jordan University of Science and Technology
Faculty of Computer & Information Technology
Data Science Department

DS111 Programming For Data Science (2) - JNQF Level: 7

Summer Semester 2023-2024

Course Catalog

3 Credit Hours. This course introduces students to advanced python. Topics include data collection, data scraping, data exploring and data analysis and visualization in python. Python for machine learning and data science will be provided. Also, the following python packages are covered: NumPy, Pandas, and Matplotlib.

Teaching Method: On Campus

Text Book

Title	Introduction to Python Programming and Data Structures
Author(s)	Y. Daniel Liang
Edition	3rd Edition
Short Name	Textbook 1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Textbook 2	Intro to Python for Computer Science and Data Science: Learning to Program with AI, Big Data and The Cloud	Paul Deitel, Harvey M. Deitel	1st Edition	
Textbook 3	Pandas for Everyone: Python Data Analysis	Daniel Y. Chen	2nd Edition	

Instructor

Name	Mr. Jawad Damir
Office Location	A2 L-3
Office Hours	
Email	jmdamir@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Mon, Tue, Wed : 10:00 - 11:30 Room: A3128

Prerequisites		
Line Number	Course Name	Prerequisite Type
1781100	DS110 Programming For Data Science (1)	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Tuples, Sets, and Dictionaries	Chapter 14 From Textbook 1
Week 2	Object-Oriented Programming	Chapter 9 From Textbook 1
Weeks 3, 4	NumPy	Chapter 7 From Textbook 2
Weeks 5, 6	Pandas	Chapter 1, Chapter 2 From Textbook 3
Week 7	Data Visualization	Chapter 3 From Textbook 3

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Understanding how to use different data structures in Python. [1SO2] [1L7S3]	25%	
Understanding how to process multi-dimensional numerical data efficiently in Python. [1SO2] [1L7S3]	25%	
Understanding how to load, explore, and analyze data efficiently in Python. [1SO2] [1L7S3]	30%	
Understanding how to visualize data effectively in Python. [1SO2] [1L7S3]	20%	

Relationship to Program Student Outcomes (Out of 100%)					
SO1	SO2	SO3	SO4	SO5	SO6
	100				

Relationship to NQF Outcomes (Out of 100%)	
L7S3	
100	

Evaluation

Assessment Tool	Weight
First Exam	15%
Second Exam	15%
Lab and Assignments	30%
Final Exam	40%

Policy	
Attendance	Excellent attendance is expected. In accordance with university regulations, students missing more than 20% of total classes are subject to failure. No excuses will be accepted. If you miss a class, it is your responsibility to find out about any announcements or assignments you may have missed. Attendance will be recorded at the beginning or end of each class.
Exams	All exams will be CLOSED-BOOK. The format for the exams is generally as follows: multiple-choice, write-code, debugging code, writing code and find-output of code.
Makeup Exams	Makeup exams should not be given unless there is a valid excuse. Arrangements to take an exam at a time different than the one scheduled MUST be made prior to the scheduled exam time. In accordance with university regulations, students should bring a valid excuse authenticated through valid channels in JUST.
Average Weekly Workload	Average work-load student should expect to spend is 4 to 6 hours/week.
Code of Conduct	Exams, quizzes, assignments, homework, and lab work need to be done individually. Copying of another student's work, even if changes are subsequently made, is inappropriate, and such work will not be accepted. Cheating or copying from neighbor on exam is an illegal and unethical activity and standard JUST policy will be applied. All graded assignments and homework must be your own work.

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