



**Jordan University of Science and Technology**  
**Faculty of Computer & Information Technology**  
**Cybersecurity Department**

CY211 Selected Visual Programming Language - JNQF Level: 7

Second Semester 2023-2024

**Course Catalog**

2 Credit Hours. This course introduces students to the art of computational problem-solving using Python and various Python libraries. First, the course introduces students to some of the essential Python topics such as input/output, Data structures such as Dictionaries and Sets, lists and tuples, control structures, GUI Programming, Data Handling, file operation, classes and objects, cybersecurity libraries, etc. Second, this course provides students with the needed skills that will enable them to make productive use of python for the fundamentals of GUI, event-driven programming principles, menus, and procedures. Moreover, it explains how to use and implement the components for GUI, such as Buttons and TextBoxes, in an Integrated Development Environment (IDE). Students will develop confidence in their ability to apply programming techniques to problems in a broad range of computational concepts and practices. This course uses the Python 3.12 programming language.

**Teaching Method:** Blended

**Text Book**

<b>Title</b>	Introduction to Computation and Programming Using Python: With Application to Understanding Data
<b>Author(s)</b>	John Gottage
<b>Edition</b>	2nd Edition
<b>Short Name</b>	Ref No.1
<b>Other Information</b>	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
Ref No.2	The Practice of Computing Using Python,	William F. Punch , Richard Enbody	3rd Edition	

**Instructor**

Name	<b>Miss Fatima Abuhjeela</b>
Office Location	Engineering Building ( N2 level 0)

Office Hours	Sun : 09:30 - 10:30 Mon : 10:00 - 11:30 Tue : 09:30 - 10:30 Tue : 11:30 - 12:30 Wed : 10:00 - 11:30
Email	fmabuhjeela@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun : 12:30 - 13:30 Room: C2008

Prerequisites		
Line Number	Course Name	Prerequisite Type
1761120	SE112 Introduction To Object- Oriented Programming	Prerequisite / Study
821123	HSS112SE Introduction To Object- Oriented Programming	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Weeks 1, 2	Introduction to Python and Control Flows	From <b>Ref No.1</b>
Week 3	Methods in Python	From <b>Ref No.1</b>
Weeks 4, 5, 6, 7	Strings ,Data Structures: List &Tuples, Dictionaries& Sets, Built-in Functions.	From <b>Ref No.1</b> , From <b>Ref No.2</b>
Weeks 1, 7, 8	GUI Concepts.	From <b>Ref No.1</b>
Weeks 9, 10	Reading and writing Text Files.	
Week 11	Using JSON.	From <b>Ref No.2</b>
Weeks 11, 12	Classes and Objects, Scope, Inheritance.	From <b>Ref No.1</b>
Weeks 12, 13	Exception Handling	From <b>Ref No.2</b>
Weeks 13, 14, 15	Python for cyber security	From <b>Ref No.2</b>

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
The student will be able to use a Python environment and write a simple code using input, output, and different control structures( selection, repetition) [1SO2] [1L7S1]	20%	
The student will be able to solve problems using functions and different collections in Python like strings, lists, tuples, dictionaries, and sets. [1SO2] [1L7S1]	35%	

The student will be able to develop a Python application using file operations, JSON library, and object-oriented. [1SO2] [1L7S1]	20%	
The students will be able to use a different GUI component to build a python application using the Tkinter library. [1SO2] [1L7S1]	15%	
The students will be able to develop a secure python application using some of the different security libraries [1SO6] [1L7C4]	10%	

Relationship to Program Student Outcomes (Out of 100%)					
SO1	SO2	SO3	SO4	SO5	SO6
	90				10

Relationship to NQF Outcomes (Out of 100%)	
L7S1	L7C4
90	10

Evaluation	
Assessment Tool	Weight
First Exam	25%
Second Exam	25%
Final Exam	50%

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 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 CLOSE-BOOK. The format for the exams is generally as follows: multiple-choice, and what is the output, writ a python program, and essay questions.
Makeup exam	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.
Workload	The average workload students should expect to spend is 6 hours/per week, practicing and solving homework.
Code of Conduct	Exam and homework need to be done individually. Copying another student's work, even if changes are subsequently made, is inappropriate, and such work will not be accepted. Cheating or copying from neighbors on the exam is an illegal and unethical activity and the standard JUST policy will be applied. All graded assignments must be your own work.
Participation	Participation in, and contribution to class discussions will affect your final grade positively. Raise your hand if you have any questions. Making any kind of disruption and (side talks) in the class will affect you negatively, Cell phone (Mobile) MUST BE SHUT OFF before you get into the class.

Date Printed: 2024-03-20