HUDSON COUNTY COMMUNITY COLLEGE

I.	Course ID (department & number): CSC-216 DSC-216
II.	Course Name: Python Programming II
III.	Number of Credits Awarded for Course: 3
IV.	Prerequisite or Co-requisite courses or academic standing (if applicable): CSC-118 Python Programming
V.	Indicate if New or Modified Course: New
VI.	Semester and Year Course will First be Offered: Fall 2023
VII.	Name and Telephone Number and/or e-mail address of department chair or other appropriate contact person: Heather DeVries, Academic Representative to NJ Transfer hdevries@hccc.edu 201-360-4660
VIII.	Detailed Course Description: This course is intended for students who have completed the Python Programming course (CSC 118) or have the prerequisite knowledge of the course topics discussed in that class. By the end of this course, students should have a solid understanding of program classes, objects, inheritance, exceptions, file handling, database modules, graphical modules, and numerical analysis modules. Students will explore core libraries that allow programs to access operating system services, manipulate data of many types, interact with the user through graphical user interfaces (GUIs) and crunch out data metrics. Labs will be used to reinforce concepts introduced during lectures.
IX	Outline of Course Objectives: *Upon successful completion of this course, students will be able to*: 1. Create data files and store data in plain text, CSV, and binary files and learned how to use file objects and the CSV and pickle modules and store data in databases. 2. Build lists, tuples, and dictionary to store, add, remove, modify, process, count, reverse, sort, copy, slice, and concatenate data items. 3. Develop programs that handle exceptions to prevent them from crashing. 4. Design object-oriented programs with Python classes and learn how to encapsulate data. 5. Use inheritance to simplify the design of a program and reduce code duplication. 6. Create python programs to work with SQLite databases to store data in the database. 7. Apply Graphical User Interface (GUI) in Python programs.

X. Texts, Journals and Other Materials used in Course

Required Text:

Muroch's Python for Data Analyst 1st Edition by Scott McCoy
Print ISBN: 9781943872763, 1943872767
e-text ISBN: 9781943872831, 194387283X

XI. Grade Determinants

Two Practical Exams	30% (15% each)
2. Final Exam	30%
3. Lab Activities and Lab Reports	40%
Total	100%

XII. Number of Papers & Examinations

Students will be assigned questions, on various topics, to be researched for the course. In addition, students will be required to write lab reports on topics discussed in class.

XIII. Schedule of Topics to be Covered

Session	Topic	lab*	SLO
1,2,3	Create List,Tuples, and Dictionary to store data	Lab 1: Use a list for the test scores program	1
4,5	How to work with file I/O	Lab 2: Create a CSV file for trip data	1,2
6	**Exam 1**		
7	Handling exceptions and errors	Lab 3: Enhance the movie list 2.0 program	3
8,9	Object Oriented Programming	Lab 4: Enhance the dice roller program	4
10	**Exam 2**		
11	Inheritance	Lab 5: Enhance the product viewer program	4, 5
12,13	Python and SQL Database	Lab 6: Review a SQL Database and test some SQL statements	6
14	Graphical User Interface	Lab 7	7

	15	**Final Exam**