ITSE-1042 Intermediate Python   Course Syllabus

1.   **Name of Course: ITSE-1042 Intermediate Python**

2.   **Number of Hours:**   40 hours (3/29/2022 - 5/12/2022)
                             Tues, Thurs @ 06:00 PM - 09:00 PM
                             Instructor Lead Online Lecture & Lab

3.   **Course Description:**

Utilizing Python 3, Intermediate Python is a project-based class in which you will learn the ins and outs of the Python language beginning where the introduction class left off. This class takes a new approach to learning python and integrates with many of the same technologies you would see working in the development world such as GitHub and cloud IDEs. This course will give you the tools and experience you need to apply the Python programming language in real world scenarios upon completion.

Required Text Book:
- **Think Python 2e: How to Think Like a Computer Scientist - 2nd Edition**, Allen Downey.
  Available for free via a PDF or HTML oneline. (https://greenteapress.com/wp/think-python-2e/)

Prerequisites:
 - ITSE-2079 Introduction to Python course, or novice knowledge of Python and OOP languages
 - Understanding of variables, data types, and basic function usage in Python 3

These prerequisites are more of a guideline as opposed to a hard requirement. You can still take the class without them, but it could prove to be more difficult. The first couple of classes will be a high level overview of Chapters 1-8 of Think Python 2nd Edition. We will be completing the exercises in class as a refresher.

4.   **Tentative Course Learning Objectives / Class Schedule:**

1. Course Introduction / IDE / Git Overview
2. Python Review, Chapters 1-8 / CodeSignal Arcade
3. Chapter 9: Case Study: word play
4. Chapter 10: Lists
5. Chapter 11: Dictionaries / Project 1 Work Time
6. Chapter 12: Tuples
7. Chapter 13: Case Study: data structure
8. Chapter 14: Files
9. Chapter 15/16/17: Classes and Objects / Functions / Methods
10. Chapter 18: Inheritance / Chapter 19: The Goodies
11. Additional Python development topic – Excel Integration
12. Project 2 Work Time -
     Solve a problem of interest to you, using Python as a part of the technical solution
13. Full Stack Development Overview Discussion / Project 2 Work Time

5.   Evaluation:

Students who participate in class discussions, demonstrate completion of class assignments and two projects, and miss no more than three unexcused class meetings, can earn continuing education units. Excused absences require notification to the instructor before the class session, with a justified reason for absence. Grading criteria for Pass-Fail (P-F), or for a letter grade (A, B, C, D, F) if required by the student, are described below:

Grade %	Grade Criteria	Comments
20%	Participation / Attendance	Active student participation and attendance
40%	Labs / Assignments	Completion of all course exercises
40%	2 Projects	Presentation and demonstration of 2 personal projects

Note: P-F students may work in small project groups by instructor approval, but individual projects are encouraged.