Programming Principles 1

Instructor: Mahdi Tasfin

Course: AWD 111

Programming Principles 1

Course Description

Introduction to fundamental concepts of programming and problem-solving using Python.

Learning Objectives

On successful course completion, student will have reliably demonstrated the ability to:
-- Design, implement, test, and debug programs using the Python programming language.
-- Write code demonstrating fundamentals, including conditions, loops, functions, IO, and data types.
-- Analyze and explain the behaviour of simple algorithms that use basic programming constructs.
-- Design comprehensive unit and system tests to verify code correctness.
-- Utilize search engines and online technical forums (such as StackOverflow) to research issues.

Required Course Materials

Laptop, Internet, Stackoverflow & VSCode
GitHub: https://github.com/Pacific-Design-Academy-CA/AWD-111-Programming-Principles-1-with-Python

Course Duration

12 weeks of 4 hours/week, divided into two 2-hour sessions per week. 48 hours total.

Delivery Methods

In-class. Teaching Methods: Seminar, lecture, in-class labs.

Teaching Methods

Lectures, class discussions, visual examples and commentary to supplement lectures, class Q&A sessions, individual student/instructor Q&A and feedback, student assignment presentations with in-class feedback, examples from online sources, guest speakers.

Methods of Student Evaluation

Students will be evaluated on their ability to create work that demonstrates knowledge of stated learning objectives, make effective and compelling presentations of their work, and participate in the class. Specific assignments:
Students must complete weekly in-class programming exercises and five programming assignments consisting of four projects of 2-week duration and one final project.
4 Programming Assignments (each 15%) plus one final project (40%)

Completion Requirements

Students must complete all homework and projects in a timely manner with a minimum grade of 60%. Grades are based on total marks of assignments turned in.
Late work and poor attendance will severely reduce students' grades as per the Student Handbook. Missing over 25% of class time results in an incomplete grade (0%). If you cannot attend class, please notify your instructor.
It is the student's responsibility to study instructor-provided course notes for classes missed, and to turn in required assignments on due dates regardless of missed classes.
Academic penalties also apply to late assignments without a medical note. Refer to the PDA Student Handbook for more information.

Week by week schedule. Course outline, topics, and schedule subject to slight changes. See class website at for updates, assignments, and any schedule changes.

	Topics	*Exercises, homeworks, projects*
week 1	Introduction & purpose of this class Why Python? Variables	
week 2	Input & Output	
week 3	Control flow: if, if…else, if…elif..else	Assignment 1 due
week 4	String Manipulation Logical Operations	
week 5	Loop introduction	Assignment 2 due
week 6	String Manipulation	
week 7	List Advance Looping	Assignment 3 due
week 8	Advanced String Manipulation Dictionary	
week 9	Working with Files	Assignment 4 due
week 10	Recap	
week 11	Recap	
week 12	Recap	Final Assignment due