



CS 100 – Programming 1

Course Outline

COURSE INFORMATION

Course Name: Programming 1 – Introduction to Programming with Python

Delivery Format: Asynchronous, Self-Paced

Course Instructor: Louai Rahal, MA, MSc, LL.M., PhD

COURSE DESCRIPTION

This course is an introduction to the fundamental concepts in computer programming. Students will learn how to create variables, functions, iterations, and how to process Strings and files. Topics covered in this course include: if/else conditionals, while/for loops, string processing, reading and writing to files, and automated web surfing. The course also covers several Python modules (PyPDF2, os, web browser) and provides guidelines on writing programs that interact with the operating system and the internet

LEARNING OUTCOMES

By the end of this course, students will know how to write python scripts that:

- read input from the user and process the input
 - open, read, and edit files
 - create new folders and files
 - merge and edit pdf files
 - open web pages in the web browser
 - download files from the internet
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COURSE TEXTBOOK

Automate the Boring Stuff with Python, by Al Sweigart.

<https://automatetheboringstuff.com/>

ASSESSMENTS

To pass this course, students must pass all the following assessments:

- 10 Quizzes (15 multiple-choice questions each)
- 10 Programming Assignments
- 2 Exams (30 multiple-choice questions each)

The passing grade for all assessments is **100%**. Students can re-take the assessments as many times as needed to get the passing grade.

DIGITAL BADGE



- When students pass the course, they will receive the **Free Polytech-Programming 1** digital badge.



COURSE MODULES

- Module 1 Python Syntax, Expressions, and Data Types
- Module 2 If/Else Statements
- Module 3 Loops
- Module 4 Functions
- Module 5 Lists
- Module 6 Dictionaries
- Module 7 Reading and Writing to Files
- Module 8 Processing Text
- Module 9 PDF Documents
- Module 10 Web Scraping