DTC-SAP-234 Introduction to Python Programming

SEMESTER: Spring

CREDITS: 6 ECTS (lecture 3 credits + laboratory 3 credits)

LANGUAGE: English

DEGREES: SAPIENS program

Course overview

This course introduces students to the fundamentals of Python programming, covering essential concepts and techniques for effective coding and problem-solving. Designed for beginners, it builds a solid foundation in programming, from basic syntax and data manipulation to structured programming and debugging skills.

Prerequisites

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Course contents

Theory:

- Module 1: Introduction to Python
- Module 2: Data Types and Operators
- Module 3: Control Flow
- Module 4: Data Structures
- Module 5: Functions
- Module 6: Error Handling and Debugging
- Module 7: Introduction to Object-Oriented Programming
- Module 8: Final Project

Laboratory:

- Lab 1: Setting up the environment and writing basic Python programs.
- Lab 2: Exploring Python data types and operations.
- Lab 3: Implementing conditional statements and loops for control structures.
- Lab 4: Working with lists, tuples, dictionaries, and sets in Python.

This document is a brief outline of the course and does not replace the official program of study

- Lab 5: Defining and calling functions.
- Lab 6: Handling exceptions and debugging Python programs effectively.
- Lab 7: Creating classes and objects.
- Lab 8: Developing a Python-based program.

Textbook

- Python Crash Course, 3rd Edition: A Hands-On, Project-Based. Introduction to Programming. Eric Matthes

Grading

The following conditions must be accomplished to pass the course:

- A minimum overall grade of at least 5 over 10.
- A minimum grade in the ordinary or/and extraordinary final exam of 4 over 10.

The overall grade is obtained as follows:

- Final exam (50%)
- Midterms (20%)
- Final project (10%)
- Labs (10%)
- Class participation (10%)