

Vocational School / Computer Programming

2024 - 2025 Academic Year

PYTHON PROGRAMMING

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
PYTHON PROGRAMMING	BPR2260440	Spring Semester	1+2	2	5
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	Short Cycle (Associate's Degree)				
Course Type	Elective				
Course Coordinator	Lect. Beyza KOYULMUŞ				
Name of Lecturer(s)	Lect. Khaled Walid Mohamed Abdelfatah ELGAMMAL				
Assistant(s)	Pycharm				
Aim	The aim of this course is to teach the Python Programming language.				
Course Content	This course contains; Course Introduction,What is Python, Environment Setups, First Project,Variables,Data Types (Numbers),Data Types (Float, String, String Functions),Data Types (List, List Functions, Tuple),Data Types (Map, Dictionaries),Operators, Mathematical Operations,Conditional Statements - Decision Structures (if, elif, else),Loops (While, For),Functions,Global and Local variables, Lambda Expressions, recursive functions,Modules, File Operations,Object Oriented Programming (Class, Object, Access Designators, Inheritance, Abstraction, Polymorphism, Encapsulation).				
Course Learning Outcomes		Teaching Methods	Assessment Methods		
Uses control statements, loops, functions and lists		10, 12, 14, 16, 6, 9	A, E, G		
Understand programming concepts and techniques using Python Language		14, 16, 6, 8, 9	A, F		
Defines the concepts of encapsulation, polymorphism, inheritance and abstraction		16, 6, 8, 9	A, E		
Solves basic programming problems		14, 16, 6, 8	A, E, F		
Uses list functions		16, 6, 8, 9	A		
Learns file operations		12, 14, 16, 6, 8, 9	A		
Master data types and functions		14, 6, 8, 9	A, F		
Teaching Methods	10: Discussion Method, 12: Problem Solving Method, 14: Self Study Method, 16: Question - Answer Technique, 6: Experiential Learning, 8: Flipped Classroom Learning, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, E: Homework, F: Project Task, G: Quiz				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Course Introduction				
2	What is Python, Environment Setups, First Project				
3	Variables				
4	Data Types (Numbers)				
5	Data Types (Float, String, String Functions)				
6	Data Types (List, List Functions, Tuple)				
7	Data Types (Map, Dictionaries)				
8	Operators, Mathematical Operations				
9	Conditional Statements - Decision Structures (if, elif, else)				
10	Loops (While, For)				
11	Functions				
12	Global and Local variables, Lambda Expressions, recursive functions				
13	Modules, File Operations				
14	Object Oriented Programming (Class, Object, Access Designators, Inheritance, Abstraction, Polymorphism, Encapsulation)				
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			
Resources					