Vocational School / Computer Programming

2024 - 2025 Academic Year

PYTHON PROGRAMMING

Syllabus

Course Description					
Name	**Code**	**Semester**	**T+A Hour**	**Credit**	**ECTS**
PYTHON PROGRAMMING	BPR2160440	Fall 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. Hüseyin KINAY
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