Course Content

Course Name	Introduction to Programming		
Semester	**Course Code**	**Theory Practice Hours**	**ECTS**
4	YPZ102	2 / 2	5

Course Level	Bachelor's Degree
Course Delivery Format	Face to face
Coordinator	Assoc. Prof. Dr. Hakan Yılmaz
Coordinator E-mail	hyilmaz@ ktun.edu.tr
Instructor	Assoc. Prof. Dr. Hakan Yılmaz
Course Type	Must
	Fahri Vatansever, Algoritma Geliştirme ve Programlamaya Giriş: Akış Diyagramlarıyla Birlikte 6 Ayrı Programlama Dilinde Çözülmüş Problemler, 16. Baskı, Seçkin Yayıncılık, 2025. Ders ve Uygulama Notları
Course Objective	The objective of this course is to develop students' algorithmic thinking and problem-solving skills, enabling them to use fundamental programming constructs through a programming language and to develop correct, understandable, structured, and testable solutions to given problems.

Eng Temel Meslek Dersi	Eng Uzmanlaşma Dersi
80	20

Instructional Methods
Lecture, Demonstration, Question and Answer, Practicing, Problem Solving

Week	Course Content
1	Introduction to Programming and Algorithmic Thinking
2	Representation of Algorithms: Pseudocode and Flowcharts
3	Introduction to a Programming Language, Variables, and Basic Data Types
4	Operators, Expressions, and Decision Structures
5	Loops
6	Strings
7	Lists, Tuples, and Dictionaries
8	Midterm Exam
9	Introduction to Functions
10	Functions II and Built-in Functions
11	Modules and Code Organization
12	Arrays and Matrices
13	Recursive Functions
14	File Operations and Basic Exception Handling
15	Final Exam

No	Course Outcomes (CO)	Percent
1	Analyzes a given problem, identifies its inputs, processes, and outputs, and develops an algorithmic solution to the problem.	25
2	Represents algorithmic solutions using pseudocode, flowcharts, and a programming language.	15
3	Selects and uses appropriate variables, data types, control structures, and fundamental data structures according to problem requirements.	25
4	Decomposes a problem into functional subproblems and develops structured programs using functions and modular structures.	20

5	Tests developed programs, identifies fundamental programming errors, and applies appropriate corrections.	15

	CO 1	CO 2	CO 3	CO 4	CO 5
PO 1	6	3	6	4	3
PO 2	10	4	7	5	3
PO 3	3	2	3	4	2
PO 4	5	4	8	6	6
PO 5	0	0	0	0	1
PO 6	0	0	0	1	0
PO 7	0	1	0	0	0
PO 8	1	1	1	0	0
PO 9	0	0	0	0	0
PO 10	0	0	0	0	0
PO 11	0	0	0	0	0

ECTS Workload	Number	Duration,Min	Total Workload
Weekly Lecture Hour (Theoretical)	2	45	90
Weekly Practice/Lab Hour	2	45	90
Homework	1	1500	1500
Quiz	1	600	600
Material Design, Preparation	0	0	0

Field Studies	0	0	0
Report Preparation	0	0	0
Presentation	0	0	0
Project Making	0	0	0
Other Studies	0	0	0
Mid-Term exam and pre-study	1	2000	2000
Final Exam and pre-study	1	2800	2800

ECTS Workload	% of Mid-term Grading	% of Final Grading
Weekly Lecture Hour (Theoretical)	0	0
Weekly Practice/Lab Hour	0	0
Homework	5	5
Quiz	5	5
Material Design, Preparation	0	0
Field Studies	0	0
Report Preparation	0	0
Presentation	0	0
Project Making	0	0
Other Studies	0	0
Mid-Term exam and pre-study	90	0
Final Exam and pre-study	0	90

