Course title	Code	semester	T+U	Credit	ECTS
Algorithm and Programming 1		one	3+2	4	7

Prerequisite Courses	None
Language of the Course	Turkish
Course Level	Licence
Type of Course	Compulsory
Course Coordinator	
Instructors	
Course assistants	
The aim of lesson	The aim of this course is to teach the fundamentals of algorithms and programming. Algorithm development, basic programming structures, testing, debugging and general concepts of object-oriented programming are given in this course.
Course Content	Introduction to programming languages and the concept of algorithms; basic programming language structures; procedural (procedural) programming and procedural (procedural) programming language constructs. A project-oriented learning approach is used in this course. In this context, the course has a project-oriented learning component in addition to its traditional content. The project-oriented learning component involves carrying out one or more projects for learning purposes, aiming to produce certain intermediate and final outputs by students, individually or in project teams, by going through certain steps in accordance with the course objectives and learning outcomes. The project-oriented learning component of the course mainly evaluates the project outcomes and project work by the course instructor and/or jury.
Course Learning Outcomes	**Students who can successfully complete this course;** 1. Knows the concepts of structured programming. 2. Evaluates algorithms; chooses one of the possible algorithm strategies ; gives the reasons why a particular algorithm is chosen and comprehends the knowledge of implementing/designing algorithms using the chosen algorithmic strategies to solve problems. 3. programs that use basic programming constructs : basic computing, simple I/O, standard conditional and iterative constructs, and subroutines and functions. 4. , writes, tests, and debugs functions, recursive functions, subroutines, and plain event-driven programs . 5. Designs algorithms within lean programming contexts.

Weeks	Topics
one	Problem solving
2	Entry-Process-Output process,
3	Algorithm design
4	Precision, finitude, efficiency, input-output in algorithms
5	Constants, variables and expressions
6	Arithmetic, relational and logical operators
7	Input-Output statements
8	Condition and Repeat statements
9	Vector and matrix representations
10	Character information processing
11th	Subroutine and Function subroutines
12	recursion
13	Applications in a structured programming language-I
14	Applications in a structured programming language-II
15	Applications in a structured programming language-III
General Competencies	

Understand the basic programming and algorithm structure. Code development, ability to use flow loops, arrays and matrices, ability to use error trapping mechanism effectively.
resources
Cay S. Horstmann , " Big Java: Late Objects, Enhanced eText ", 2nd Edition, Wiley , October 2016. TH Cormen , CE Leiserson , RL Rivest and C. Stein , " Introduction to Algorithms ", MIT Press , 2009.
Evaluation System
The dates, days and hours of the Midterm Exam, Quiz, Final Exam and Evaluations will be announced later, according to the decision of the Faculty Administrative Board.

	WITH PROGRAM LEARNING OUTCOMES **COURSE LEARNING OUTCOMES RELATIONSHIP TABLE**										
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**
LO1	5	5	4	4	5	5	4	5	4	3	3
LO2	4	5	4	4	5	4	4	5	4	3	3
LO3	5	5	4	4	5	5	4	5	4	4	3
LO4	5	5	4	4	5	5	4	5	4	4	3
LO5	5	5	4	4	5	5	4	5	4	4	3
LO: Learning Outcomes OP: Program Outcomes											
Contribution Level	**1 Very Low**		**2 Low**		**3 Medium**		**4 High**		**5 Very High**		

Relation of Program Outcomes and Related Course

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**
Algorithm and Programming 1	5	5	4	4	5	5	4	5	4	3	3