



**ESOGU ELECTRICAL-ELECTRONICS ENGINEERING DEPARTMENT
COURSE INFORMATION FORM**

Course Title	Course Code
INTRODUCTION TO PROGRAMMING	151221203

Semester in Program	Number of Course Hours per Week		ECTS Credit
	Theory	Practice	
Fall	2	2	5

Course ECTS Credit Distribution				
Basic Sciences	Engineering Sciences	Design	General Education	Social
40	40	0	20	0

Language of Instruction	Course Level	Course Type
English	Undergraduate	Required

Prerequisite	NONE
Objectives of the Course	To introduce basic concepts of programming. To design flowcharts to describe algorithms. To be able to select appropriate statements and to implement them among sequential, selection, and repetition statements. To know why functions are important for programming languages. To implement programs with arrays.
Brief Course Content	Introduction to Programming, Flowcharts, Selection Statements, Operators, Repetition Statements, Functions, and Arrays.

Learning Outcomes of the Course	Contributed POs	Teaching Methods *	Assessment Methods **
1 Students will learn basic concepts about programming.	2, 4, 5b, 6a	1,3,5,10,11	A, D, I, K
2 Students will learn how to draw flowchart to describe the algorithms.	2, 4, 5b, 6a	1,3,5,10,11	A, D, I, K
3 Students will learn and use selection statements.	2, 4, 5b, 6a	1,3,5,10,11	A, D, I, K
4 Students will learn and use operators.	2, 4, 5b, 6a	1,3,5,10,11	A, D, I, K
5 Students will learn and use repetition statements.	2, 4, 5b, 6a	1,3,5,10,11	A, D, I, K
6 Students will learn why functions are an important concept and how it is implemented.	2, 4, 5b, 6a	1,3,5,10,11	A, D, I, K
7 Students will learn how to use arrays.	2, 4, 5b, 6a	1,3,5,10,11	A, D, I, K
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*Teaching Methods 1:Lecture, 2:Discussion, 3:Experiment, 4:Simulation, 5:Question-Answer, 6:Tutorial, 7:Observation, 8:Case Study, 9:Technical Visit, 10:Problem Solving, 11:Individual Work, 12:Team/Group Work, 13:Brain Storm, 14:Project Design / Management, 15:Report Preparation and/or Presentation

**Assessment Methods A:Exam, B:Quiz, C:Oral Exam, D:Homework, E:Report, F:Article Examination, G:Presentation, I:Experimental Skill, J:Project Observation, K:Class Attendance; L:Jury Exam

Main Textbook	Paul Deitel and Harley Deitel, C How to Program, 7th Edition, Pearson Education.
Supplementary Resources	Web sites and other sources.
Necessary Course Material	NONE

Course Weekly Schedule	
1	Introduction to C programming 1. Basic input and output statements.
2	Introduction to C programming 2. Memory concepts and Arithmetic in C.

3	Selection Statements 1. if and if ... else statements, Math Library functions.
4	Selection Statements 2. Multiple selection with switch keyword, Operators.
5	Repetition Statements 1. Counter-controlled repetition, for and while keywords.
6	Repetition Statements 2. Sentinel-controlled repetition, do ... while keyword, break and continue statements.
7	Examples for selection and repetition statements
8	Mid-Term Exams
9	Solving midterm questions
10	Functions 1. User-defined Functions, Function Prototype, Function Call, and Function Definition Concepts.
11	Functions 2. Random number generation with user-defined functions.
12	Examples for functions.
13	Arrays 1. Defining and initialization of arrays.
14	Arrays 2. Passing arrays to functions, sorting and searching arrays
15	Arrays 3. Multidimensional arrays.
16,17	Final Exams

Calculation of Course Workload			
Activities	Count	Time (Hour)	Total Workload (Hour)
Weekly classroom time	14	2	28
Weekly study time (review, reinforcing, preparation)	14	2	28
Working Questions	5	3	15
Lab Experiments	11	2	22
Studying for experiments	11	2	22
Mid-Term Exam	1	2	2
Studying for Mid-Term Exam	1	20	20
Final Exam	1	2	2
Studying for Final Exam	1	20	20
Total workload			159
Total workload / 30			5.3
Course ECTS Credit			5

Assessment	
Activity Type	%
Mid-term	30
Experimental Skill	30
Bir öge seçin.	
Bir öge seçin.	

Final Exam	40
Total	100

COURSE CONTRIBUTION TO THE PROGRAM OUTCOMES

(5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low)

NO	PROGRAM OUTCOMES	Contribution
1	a. Sufficient knowledge of mathematics	
	b. Sufficient knowledge of basic sciences	
	c. Sufficient basic engineering and Electrical-Electronics engineering knowledge	
	d. Skill of applying all these knowledge and experience to complicated Electrical-Electronics engineering problems	
2	Skill of defining, identifying, formulating and solving the complicated problems in Electrical-Electronics engineering and related areas by applying appropriate analysis and modelling methods.	2
3	Skill of designing a complicated process, system, equipment or product by applying modern design methods under realistic constraints and conditions.	
4	To analyze and solve the complicated engineering problems:	5
	a. skill of developing, selecting and applying the required techniques and devices	4
5	To study the complicated on the complicated Electrical-Electronics engineering problems and research subjects:	
	a. skill of experimental design	5
6	b. skill of performing the experiments, collecting the data and analyzing and interpreting the results	
	a. Skill of performing individual studies	2
7	b. Skill of performing intra and interdisciplinary and multidisciplinary teamwork and studies	
	a. Skill of effective oral and written communication in Turkish and English	
	b. Skill of improving and using foreign language knowledge	
	c. Skill of effective reporting, understanding the reports and preparing the design and production reports	
8	d. Skill of effective presentation and giving and getting clear and understandable instructions.	
	Awareness of the necessity of life-long learning and skill of accessing to information and following the improvements in contemporary science and technology	
9	a. Awareness of necessity of behaving in accordance with the ethical principles and awareness of the importance of having professional ethical responsibilities	
	b. Knowledge about legal regulations and standards of engineering	
10	a. Knowledge about project management, risk management and change management	
	b. Awareness of the significance of entrepreneurship and innovation	
	c. Knowledge about sustainable development	
11	Knowledge about the effects of engineering applications and practices on the global and social health, ecology and safety, knowledge about the current problems in relation to the working areas of Electrical-Electronics engineering; and awareness of the legal issues resulting from engineering solutions	
12	Knowledge about modern problems in local and universal scale	

INSTRUCTORS

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