

TOROS ÜNİVERSİTESİ

Faculty Of Engineering
Industrial Engineering (English)

Course Information

MATLAB PROGRAMMING					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
INE319	Fall	3	0	3	3

Prerequisites and co-requisites	
Language of instruction	English
Type	Elective
Level of Course	Bachelor's
Lecturer	Asst. Prof. Maryam ESKANDARI
Mode of Delivery	Face to Face
Suggested Subject	
Professional practise (internship)	None
Objectives of the Course	In this course, teaching the basic principles of programming and of implementing mathematical concepts in MATLAB is aimed.
Contents of the Course	Introduction to Matlab, conditions, loops, nested loops, functions, probabilities and averages, vectors, plots, arrays-matrices, images, characters and strings, cell arrays, numeric/text procedures, file procedures, sorting and searching, recursion

Learning Outcomes of Course

#	Learning Outcomes
1	Learns MATLAB programming interface
2	Performs matrix and mathematical operations in MATLAB
3	Uses MATLAB as a problem solving environment
4	Develops algorithms
5	Uses built-in commands in MATLAB to evaluate experimental results
6	Can read data from the files and performs operations using this data
7	Writes the results of operations and shows them with graphics

Course Syllabus

#	Subjects	Teaching Methods and Technics
1	Basics of computer systems, flow diagrams, making flow charts and examples of algorithm	Lecturing
2	Overview of MATLAB programming environment, data types, constants, variables	Lecturing
3	Overview of variable types in the program, arithmetic operations, transfer statements	Lecturing
4	Input - Output statements	Lecturing
5	Loop structures	Lecturing
6	Control statements	Lecturing
7	1. Mid Term	Exam
8	Concept of arrays	Lecturing

9	Functions	Lecturing
10	Functions	Lecturing
11	Using built-in functions (Polynomials and polynomial operations, differentiation and integration, differential equation solutions)	Lecturing
12	Using built-in functions (applications of limit, integral and derivative)	Lecturing
13	Drawing Graphics	Lecturing
14	Drawing Graphics	Lecturing
15	Review	Lecturing
16	Final Exam	Exam

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
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Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	Learns MATLAB programming interface	1	1,2
2	Performs matrix and mathematical operations in MATLAB	1	1,2
3	Uses MATLAB as a problem solving environment	2	1,2
4	Develops algorithms	2	1,2
5	Uses built-in commands in MATLAB to evaluate experimental results	3	1,2
6	Can read data from the files and performs operations using this data	4	1,2
7	Writes the results of operations and shows them with graphics	3	1,2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	3	42
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	2	28
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	0	0	0
8	Midterm Exam	0	0	0
9	Quiz	0	0	0
10	Homework	0	0	0
11	Midterm Project	1	10	10
12	Midterm Exercise	0	0	0
13	Final Project	1	10	10

14	Final Exercise	0	0	0
15	Preparation for Final Exam	0	0	0
16	Final Exam	0	0	0
				90