COURSE IDENTIFICATION FORM

Course Code and Name: IM5075 ENGINEERING APPLICATIONS WITH MATLAB				**Department of :** CIVIL ENGINEERING / MASTER PROGRAMME			
Semester	**Theoretic Hour**	**Practice Hour**	**Total Hour**	**Credits**	**ECTS**	**Education Language**	**Type: Compulsory Elective**
Atumn/Spring	3	0	3	3	5	Turkish	Optional
Prerequisite (s)							
Instructor						**Mail :** **Web :**	
Course Assistant						**Mail :** **Web :**	
Groups / Classes							
Course Aim	Our goal is to provide our students with the programming skills necessary for engineering applications by teaching Matlab.						
Course Goals	Develop MATLAB Programming Skills Mathematical Modeling Numerical Solution Techniques Data Analysis and Visualization Integration of MATLAB in Engineering Applications Simulation and Control Systems Algorithm Development Application-Oriented Projects						
Course Learning Outs and Proficiencies	• Knows the basic concepts of Matlab. • Gains programming skills in Matlab. • Learns about Matlab applications and solves engineering problems.						
Course Basic and Auxiliary Contexts	• Online resources recommended by the course instructor. • Brian H. Hahn, Daniel T.Valentine, Mühendislik ve Fen Bilimleri için Temel Matlab, • Matlab ile Teknik Programlama, Dursun Akarslan- Sezai Taşkın Papatya Yayıncılık, 2014						
Methods of Give a Lecture	Face to Face						

		If Available, to Sign (x)	General Average Percentage (%) Rate
Assessment Criteria	**Midterm Exam**	**X**	**50**
	1. Quiz		
	2. Quiz		
	3. Quiz		
	4. Quiz		
	Oral Examination		
	Practice Examination (Laboratory, Project etc.)		
	Final Exam	**X**	**50**

Semester Course Plan

Week	Subjects
1	Introduction to MATLAB
2	Workspace, expressions, Numbers
3	Variables, Special constants, Arithmetic Operators
4	Functions
5	Arrays
6	Vectors
7	Matrices
8	Conditional Structures
9	Loops
10	Drawing function graphs
11	Two-dimensional and Multi-graph drawings
12	Excel file exchange
13	Basic Level Input-Output functions
14	Solving equations, limit, derivative, integral