

<b>Course Description Form</b>			
<b>Course Code and Name</b>	MM102 Introduction to Engineering Programming		
<b>Course Semester</b>	2		
<b>Catalog Content</b>	Introduction to basics of computer systems, computer organization, introduction to algorithms, flowcharts and programming, MATLAB programming language and data structure.		
<b>Textbook</b>	MATLAB An Introduction With Applications, Amos Gilat, John Wiley		
<b>Supplementary Textbooks</b>	1. Introduction to Engineering Programming: Solving Problems with Algorithms. James Paul Hooloway. Wiley & Sons, Inc. 2003. 2. Introduction to MATLAB for Engineers, William J Palm III, McGraw-Hill.		
<b>Credit</b>	4		
<b>Prerequisites of the Course ( Attendance Requirements)</b>	80% attendance required.		
<b>Type of the Course</b>	Compulsory		
<b>Instruction Language</b>	English		
<b>Course Objectives</b>	The students are expected to develop computer programs to solve mechanical engineering problems by writing codes in MATLAB.		
<b>Course Learning Outcomes</b>	1. Modeling engineering problems with computer. 2. Changing existing programs according to current problem. 3. Controlling the accuracy of program outputs. 4. Providing graphical representation of numerical results.		
<b>Instruction Methods</b>	The mode of delivery of this course is face to face		
<b>Weekly Schedule</b>	1.Week: Introduction to programming 2.Week: Introduction to programming 3.Week: MATLAB Fundamentals 4.Week: MATLAB Fundamentals 5.Week: MATLAB Scripts 6.Week: Logic and Flow Control 7.Week: Logic and Flow Control 8.Week: Midterm 1 , Logic and Flow Control 9.Week: MATLAB Functions 10.Week: MATLAB Functions 11.Week: Ploting 12.Week: Working with Data Files 13.Week: Data types 14.Week: Troubleshooting Code 15.Week: Final Exam		
<b>Teaching and Learning Methods</b> <i>(These are examples. Please fill which activities you use in the course)</i>	Weekly theoretical course hours :2 Weekly applied course hours:1 Internet searching:1 Implementing materials:1 Homework preparing:3 Preparation of Midterm and Midterm Exam:6 Final Exam and Preparation for Final Exam:6		
<b>Assessment Criteria</b>		<b>Numbers</b>	<b>Total Weighting (%)</b>
	Midterm Exams	1	40
	Assignment	2	5
	Application	4	10

	Projects						
	Practice						
	Quiz	2	5				
	Percent of In-term Studies (%)		60				
	Percentage of Final Exam to Total Score (%)		40				
	Attendance						
<b>Workload</b>	<b>Activity</b>	<b>Total Number of Weeks</b>	<b>Duration (weekly hour)</b>	<b>Total Period Work Load</b>			
	Weekly Theoretical Course Hours	14	2	28			
	Weekly Tutorial Hours	14	1	14			
	Reading Tasks						
	Studies	14	1	14			
	Material Design and Implementation	14	1	14			
	Report Preparing	2	3	6			
	Preparing a Presentation						
	Presentations						
	Midterm Exam and Preparation for Midterm Exam	1	6	6			
	Final Exam and Preparation for Final Exam	2	6	12			
	Other ( should be emphasized)						
	Total Workload			94			
	Total Workload / 25			3.76			
Course Credit (ECTS)			4				
<b>Contribution Level Between Course Learning Outcomes and Program Outcomes</b>	No	Program Outcomes	1	2	3	4	5
	1	Adequate knowledge of subjects specific to mathematics, natural sciences and related engineering disciplines; ability to use theoretical and applied knowledge related to these areas in complex engineering problems					x
	2	Ability to identify, define, formulate, and solve complex engineering problems; ability to select and apply appropriate analysis and modeling methods to this end.					x
	3	Ability to design a complex system, process, device or product under realistic constraints and conditions to meet specific requirements; ability to apply modern design methods for this purpose					
	4	Ability to develop, select and use modern techniques and tools required for the analysis and solution of complex problems encountered in engineering practice; ability to				x	

		use information technologies effectively						
	5	Ability to design and conduct experiments, collect data, analyze and interpret results to investigate complex engineering problems or discipline-specific research topics						
	6	Ability to work effectively in disciplinary and multi-disciplinary teams; ability to work individually			x			
	7	Ability to communicate effectively in Turkish, both orally and in writing; knowledge of at least one foreign language; the ability to write effective reports and understand written reports, to prepare design and production reports, to deliver effective presentations, to give and receive clear and understandable instructions	x					
	8	Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology, and to renew oneself constantly						x
	9	Acting in accordance with ethical principles, professional and ethical responsibility; information about standards used in engineering applications						
	10	Information about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation; information about sustainable development						
	11	Knowledge about the universal and social effects of engineering applications on health, environment and safety and the problems of the age reflected in the engineering field; awareness of the legal consequences of engineering solutions						
<b>The Course's Lecturer(s) and Contact Informations</b>		<ol style="list-style-type: none"> <li>1. Dr. Tolga Pırasacı , e-mail: <a href="mailto:pirasaci@gazi.edu.tr">pirasaci@gazi.edu.tr</a></li> <li>2. Dr. Muhittin Bilgili , e-mail: <a href="mailto:bilgili@gazi.edu.tr">bilgili@gazi.edu.tr</a></li> <li>3. Dr. Nimeti Döner , e-mail: <a href="mailto:nimetidoner@gazi.edu.tr">nimetidoner@gazi.edu.tr</a></li> </ol>						