

Department of Mechanical Engineering			
Computer Applications of Mechanical Engineering (67300)			
Total Credits	1		
major compulsory			
Prerequisites	P1 : Computer Programming (66111)		
Course Contents			
This course introduces the most popular used software (MAT LAB) for matrix operations, and solution of linear equations. Programming methods in MATLAB software (m-files) and the software library of m-defined functions. Graphical representation of data structures and analysis of Mechanical systems.			
Intended Learning Outcomes (ILO's)		Student Outcomes (SO's)	Contribution
1	Use basic Matlab variables, functions, commands and operators	K	30 %
2	Create Matlab functions	K	15 %
3	Create Branching statements: if statement, switch statement etc. And program Matlab loops	K	55 %
Textbook and/ or References			
Matlab Programming for Engineers, 4th Ed. Chapman S. J.			
Assessment Criteria		Percent (%)	
First Exam		20 %	
Second Exam		20 %	
Quizzes		20 %	
Final Exam		40 %	
Course Plan			
Week	Topic		
1 &2	Introduction to Matlab		
2, 3, 4 &5	Matlab basics: variables, workspace, figures, principle commands etc.		
6 &7	Built-in functions and Matlab help		
8	MIDTERM EXAM 1		
8, 9, &10	Branching statements (if, switch-case, while)		
11, 12 &13	Loops		
13	MIDTERM EXAM 2		
14 &15	User defined functions.		
16	Animated figures		
16	Final Exam		