

Zarqa University

Faculty of

Department: Engineering

Course title: Electrical Engineering

Software 1



Prerequisite: 0306110,0904371

Instructor: Eng. Ala'a Shakatreh

Lecture's time: Sun, 02:00 - 05:00

Semester: 2nd 2016/2017

Office Hours: S, T, Th 9:00- 10:00

11:00-12:00

S, Th 01:00- 02:00

Course description:

The MATLAB environment, Predefined MATLAB functions, Solutions to systems of linear equations. Symbolic mathematics, User defined MATLAB functions, Special topics in electrical engineering (signal processing, controls, electric circuits) using MATLAB.

Aims of the course:

- An ability to identify, formulates, and solves engineering problems.
- An ability to communicate effectively.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Intended Learning Outcomes (ILOs):

- Understand basic foundations of computer programming.
- Have a basic understanding of how engineers use computers to numerically solve problems
- Have a basic understanding of how to test and debug computer programs
- Have the ability and an appreciation for good documentation of computer programs.
- Understand basic algorithms for numerical solution of engineering problems
- Use Matlab for computational implementation, solution, and testing of algorithms

Course structures:

Week	C. Hrs	ILOs	Topics	Teaching Procedure	Assessment methods
1	3	1	Introduction to MATLAB	Handouts	Mid Exam
2	3	1	Variables, Scripts, and Operations	Handouts	Mid Exam
3,4	6	1,2,3	Arrays and operation with arrays	Handouts	Mid Exam
5	3	2	Random Numbers Generation, Polynomials System of Linear Equations	Handouts	Mid Exam
6,7	6	2,3,4	Graphics	Handouts	Final Exam
8	3	2	Input/Output in MATLAB and Symbolic Mathematics , Laplace transforms	Handouts	Final Exam
9,10	6	3,4,5,6	Electrical circuits by Matlab	Handouts	Final Exam



11	3	Review		
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References:

RAO V. Dukkipati, "Matlab: An Introduction with Applications", 2010, New Age International.

Assessment Methods:

Methods	Grade	Date
Midterm Exam	30	23/04/2017
Quizzes/Excercise	20	7-11/05/2017
Final Exam	50	by Department

