







Benha University

Summer Training I MATLAB for Engineers

Computer Systems Engineering
Electrical Engineering Department



Faculty of Engineering
(at Shoubra)

Course Title: Summer Training I
Course Code: MATLAB for Engineers
Duration: 18/08/2015 - 03/09/2015
Main Textbook: Brian Hahn and Daniel Valentine. *Essential MATLAB for Engineers and Scientists*. 5th Edition¹, Academic Press, 2013, ISBN 978-0123943989.²
Other References <http://www.mathworks.com/help/matlab/> 
Other Resources:
<http://www.gnu.org/software/octave/> 
<http://octave-online.net/> 
http://www.tutorialspoint.com/execute_matlab_online.php 

Course Contents:

- 1 Introduction to MATLAB**
 - 1.1 Using MATLAB
 - 1.2 The Desktop
 - 1.3 Sample Program
- 2 MATLAB Fundamentals**
 - 2.1 Variables
 - 2.2 The Workspace
 - 2.3 Arrays: Vectors And Matrices
 - 2.4 Vertical Motion Under Gravity
 - 2.5 Operators, Expressions, and Statements
 - 2.6 Output
 - 2.7 Repeating With for
 - 2.8 Decisions
 - 2.9 Complex Numbers
- 3 Program Design and Algorithm Development**
 - 3.1 The program design process
 - 3.2 Programming MATLAB functions
- 4 MATLAB Functions and Data Import-Export Utilities**
 - 4.1 Common functions
 - 4.2 Importing and Exporting Data

Attendance Policy:

1. Attendance is mandatory.
2. Side talking, cellphones, laptops, food/drinks, and walking³ are not allowed.



Grading System:

Attendance: 50%
Hands On: 50%

¹ You can use a different edition if you already have one.
² This edition of the book is using **MATLAB R2012b**.
³ If you are late for the lecture, then you are allowed to walk into the lecture hall but quietly.