

MATLAB COURSE CONTENTS

5th Semester Electrical Engineering

1. Matlab as {best} calculator
2. Standard Matlab windows
3. Operation with variables
 - 3.1 Naming
 - 3.2 Checking existence
 - 3.3 Clearing
 - 3.4 Operations
4. Arrays
 - 4.1 Columns and rows: creation and indexing
 - 4.2 Size & length
 - 4.3 Multiplication, division, power
 - 4.4 Operations
5. Writing script files
 - 5.1 Logical variables and operators
 - 5.2 Flow control
 - 5.3 Loop operators
6. Writing functions
 - 6.1 Input/ Output arguments
 - 6.2 Function visibility, path
 - 6.3 Example: Matlab startup
7. Simple graphics
 - 7.1 2D plots
 - 7.2 Figures and subplots



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S. S. Selokar
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Data and data flow in Matlab

1. Data types
 - 1.1 Matrix, string, cell and structure
 - 1.2 Creating, accessing elements and manipulating of data of different types
2. Files Input-Output
 - 2.1 Matlab files
 - 2.2 Text files
 - 2.3 Binary files
 - 2.4 Mixed text-binary files
3. Communication with external devices
 - 3.1 Serial port
 - 3.2 Parallel port
 - 3.3 Sound card
 - 3.4 Video input

GUI DEVELOPMENT in MATLAB

1. Introduction to GUIDE
2. Design of GUI
3. Property Inspector
4. Learning Callback
5. Pexample

Advanced Plots in MATLAB

1. Surface Plots
2. Contour Plots
3. Special Plots



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J. S. Selokar
Authorized Signatory