

“Computer Programming and GUI Development using MATLAB”

March 18-23, 2016

(Hands-on Experience Oriented Programming Skill Development Program)

Schedule

Day 1 18/03/2016	17:00-17:30		Registration
	17:30-18:00		Inauguration and Welcome Address followed by Tea
	18:00-19:00	Lecture	Introduction to MATLAB User Interface, Using MATLAB as Calculator
	19:00-20:00	Lab	Working in Command Window
Day 2 19/03/2016	9:00-10:00	Lecture	Basic Operations, Display Formats, Defining and Handling Variables
	10:00-11:00	Lab	MATLAB Applications
	11:00-12:00	Lecture	Data Format, Expressions and Matrices, Mathematical Operations
	12:00-13:00	Lab	Expressions and Matrices, Accessing element of Arrays
	13:00-14:00		Lunch Break
	14:00-15:00	Lecture	Relational/logical Operators, Using MATLAB as Smart Calculator
	15:00-16:00	Lab	Calculations using MATLAB
	16:00-17:00	Lecture	Programming Basics, Conditional/logical Statement
	17:00-18:00	Lab	Preparing your first program using conditional statement
Day 3 20/03/2016	9:00-10:00	Lecture	Execution Control, Loops, Writing Functions
	10:00-11:00	Lab	Program using do-while, for loops etc.
	11:00-12:00	Lecture	Engineering Applications of Artificial Neural Network using MATLAB
	12:00-13:00	Lecture	Use of Artificial Neural Network Toolbox
	13:00-14:00		Lunch Break
	14:00-15:00	Lecture	2D Plotting Visualization Using MATLAB
	15:00-16:00	Lab	Plots for some Engineering Applications
	16:00-17:00	Lecture	Nesting Functions, Data Input/Output in Various Format
	17:00-18:00	Lab	Practice on Calling Functions
Day 4 21/03/2016	9:00-10:00	Lecture	Polynomials, curve fitting and interpolations
	10:00-11:00	Lab	Polynomials, curve fitting and interpolations
	11:00-12:00	Lecture	3D Plots, Modifying plots using property editor, Automating Plots
	12:00-13:00	Lab	Modifying plots using property editor, Automating Plots
	13:00-14:00		Lunch Break
	14:00-15:00	Lecture	Numerical Solution of Ordinary Differential Equations
	15:00-16:00	Lab	Numerical Solution of Ordinary Differential Equations
	16:00-17:00	Lecture	Building Graphical User Interface (GUI) Basics
	17:00-18:00	Lab	Building Graphical User Interface (GUI) Basics
Day 5 22/03/2016	9:00-10:00	Lecture	MATLAB Applications, Projects/Case studies Demonstration
	10:00-11:00	Lab	Algorithm development and implementation using MATLAB
	11:00-12:00	Lecture	Numerical Methods
	12:00-13:00	Lab	Solving simultaneous equations
	13:00-14:00		Lunch Break
	14:00-15:00	Lecture	Building GUI's using graph window, adding buttons and Menu
	15:00-16:00	Lab	Develop your on GUI
	16:00-17:00	Lecture	Optimization Techniques using MATLAB
	17:00-18:00	Lecture	Report Generation etc.
Day 6 23/03/2016	9:00-10:00	Lecture	Making GUI with Advanced features
	10:00-11:00	Lab	Project on GUI
	11:00-12:00	Lecture	Debugging and Trouble shooting programs
	12:00-13:00	Lab	Development Tools and Programming Techniques, Generating Executable Files and
	13:00-14:00		Lunch Break
	14:00-15:00	Lecture	CAD Applications and visulisation, Reading writing text files
	15:00-16:00	Lab	Handling data in MS Excel
	16:00-16:30		Valedictory and Certificate Distribution followed by High Tea