



KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

SKILL LABS



Schedule of Skill labs offered at KLSGIT

Sl No	Department	Start date	End date	Title of Skill lab
1	Mechanical	30/12/2024	04/01/2025	MATLAB FOR MECHANICAL ENGINEERS

Skill lab (Detailed schedule)

Sl No	Department	Title of Skill lab	Semester & Division	Venue	Dates	Faculty name	Phone No	Email id
1	Mechanical	MATLAB FOR MECHANICAL ENGINEERS	V A,B,C	CC LAB	30/12/2024 04/01/2025	DR.MMN	998615902	mnadakatti@git.edu



SKILL LAB

ON

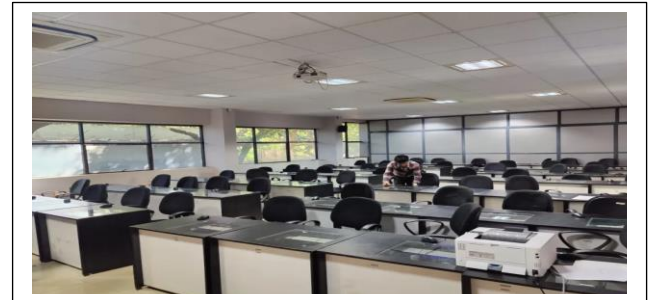
MATLAB FOR MECAHNICAL ENGINEERS For 5TH Semester Students



KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI Department of MECHANICAL ENGINEERING

Overview:

MATLAB is a powerful tool for technical computing, integrating computation, visualization, and programming in a user-friendly environment. It enables matrix manipulations, plotting, algorithm development, and interfacing with other languages like C++ and Java. Mechanical engineering students can use MATLAB for final-year projects to design, simulate, and test prototypes, as well as analyze vibrations through DAQ systems. The software's capabilities also include creating 2D and 3D graphs and developing vibration-based applications.



Mode of Conduction of each Module:

Theory: 00 Hours,
Demo: 5 Hours,
Lab Sessions: 25 Hours
Total duration: 30 Hour
Certification exam: 3 Hours

Module 1: Introduction

MATLAB INTRODUCTION
Capabilities, System requirements, MATLAB work environment, operators, plotting commands, MATABL Graphics, Uses. Arrays, vector, matrix, size
Multidimensional arrays
Matrix manipulations- Matrix creation, Basic functions

Module 2: Variables

Special variables and constants, matrices and vectors, examples
1. Arithmetic functions, Relational operators, Logical operation
2. Matrix functions – transposing a matrix, Matrix inversion
3. Types of ERRORS in MATLAB programs
Vector Generation
Magic square, data from excel to MATLAB, array operations, MATLAB m-files,
Multiple plots in same graph, 3-D plots
Demonstration

Module 3: Name

Description

GRAPHICS IN MATLAB

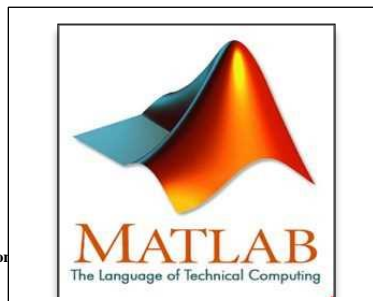
1. Graphics in MATLAB -2D plots and 3-D Plots
2. Adding titles, axis labels and annotations
3. Specifying line styles and colors.
4. Demonstration through running ready programs
5. Demonstration

Module 4: Name

Description

MATLAB FOR MACHINE LEARNING APPLICATIONS (ML)

1. Introduction to the applicability of MATLAB for AI & ML
2. Linear Regression Analysis : Theory + Demonstration
3. Logistical Regression Analysis: Thero + Demonstration.



Terms and Conditions

Students who have paid a skill lab fee to the institution are eligible for training.
The students must maintain 90% attendance for obtaining the skill lab certificate.

Students must attend training as per scheduled

Acceptance

In order to accept and start the training program, students are required to register with the respective department. Details to be provided by the student to the department include:

Name, USN, UID, Mobile No,
Email id

Coordinators:

Name DR.M.M.NADAKATTI
Dept. Of
MECHANICAL
ENGG.
Phone: 99861502
E-mail: mnadakatti @git.edu

Outcomes

- Design and Simulation Engineer
- Data Analyst/Engineer
- Automation and Control
- Systems Engineer
- Vibration and Structur

