

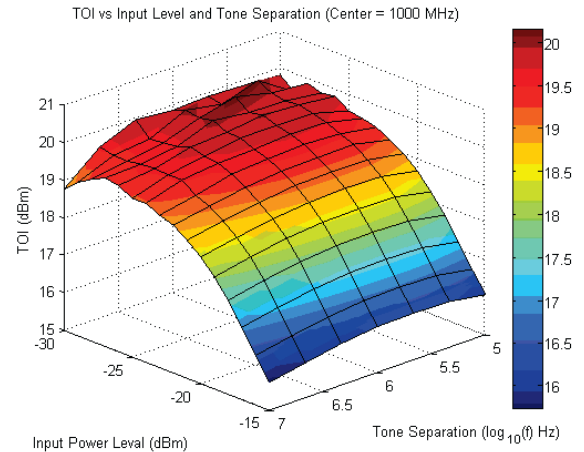
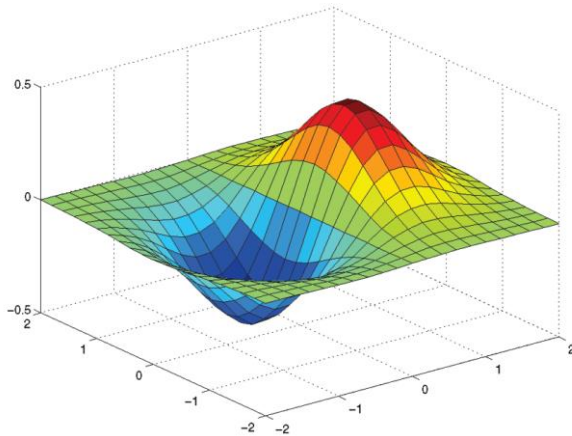


# Gyanmanjari Institute of Technology (GMIT)

## Mechanical Engineering Department

### SDP Course Content

**Name of Course : MATLAB**



#### Course Objective:

- The objective of this course is to understand the basic knowledge of MATLAB.
- Its usefulness in Engineering Programming & Simulation through mathematical matrices.
- MATLAB can serve as the platform for all your technical computing needs.
- It integrates mathematical computing, visualization, and a powerful technical language.

#### Syllabus

Sr.No.	Contents	Hrs.
1.	Introduction to MATLAB	2
2.	MATLAB basics <ul style="list-style-type: none"> <li>✓ The basic features</li> <li>✓ Vectors and matrices</li> <li>✓ Built-in functions</li> <li>✓ Plotting</li> </ul>	8
3.	Programming in MATLAB <ul style="list-style-type: none"> <li>✓ M-files: Scripts and functions</li> <li>✓ Loops</li> <li>✓ If statement</li> </ul>	6
4.	<b>Additional Topics</b> <ul style="list-style-type: none"> <li>✓ Polynomials in MATLAB</li> <li>✓ Numerical Methods</li> </ul>	4
<b>Total Hrs.</b>		<b>20</b>

**Coordinator details and timing:**

<b>Course Duration</b>	20 Hrs.
<b>Course Coordinator</b>	Prof. Krunal Khiraiya
<b>Batch Size</b>	20
<b>Course Fee</b>	NIL
<b>Targeted Audience</b>	Third sem mechanical students from Thermal and Fluid domain

**Resource requirement:**

<b>Infrastructure requirement</b>	Class room with projector,
<b>Hardware / Software</b>	20 computers with MATLAB
<b>Consumable</b>	NIL
<b>Special Equipment</b>	NIL

**Assessment criteria**

<b>Sr. No.</b>	<b>Criteria</b>	<b>Marks</b>
1	MCQ Test	50
2	Practical Exam	50
<b>Passing criteria: More than 50% marks in all component</b>		

**Course Outcome:**

- MATLAB is a software development environment that performs variety of functions such as high performance numerical computation, data analysis, data & result visualization and application development tools.
- By using this software the computation and simulation of programmed is possible.
- Student will be able to solve problems of thermal and fluid domain using MATLAB i.e. heat transfer, fluid mechanics etc.