

Title of the course: Matlab (Math software)

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References:

Help of MATLAB software itself!

Helpful Links: <https://www.mathworks.com/>

Assessments:

Mid-term Exam (programming is included)	5 points
Final Exam	10 points
Class Activity	3 points
Attendance	2 points

Subjects to be discussed:

TOPICS	SESSIONS	OBJECTIVES
INTRODUCTION TO MATLAB AND ITS APPLICATIONS	1st and 2nd sessions	Learning: <ul style="list-style-type: none">• What is MATLAB• What is a tool box in MATAB and its functionality• Important tool boxes in MATLAB
MATLAB SOFTWARE , ITS DIFFERENT PARTS AND BASIC COMMANDS	3rd ,4th and 5th sessions	<ul style="list-style-type: none">• Different windows in MATLAB and their functionalities• How to work with the software• Writing simple commands in MATLAB such as clear , who whos , clc etc.
DATA TYPES IN MATLAB	6th and 7th Sessions	<ul style="list-style-type: none">• Different data types in MATLAB• Learning relative commands such as round, ceil• Symbolic variable and how to define them

		<ul style="list-style-type: none"> • Scope of variables in MATLAB
<p>HOW TO WORK WITH MATRICES IN MATLAB</p>	<p>7th ,8th and 9th session</p>	<ul style="list-style-type: none"> • Learning relative commands such as max , min , sort , • What are special matrices in MATLAB and how to build them • How to extract data from a matrix
<p>SOLVING MATH IN MATLAB</p>	<p>10th ,11th and 12th sessions</p>	<ul style="list-style-type: none"> • Solving mathematical equation in MATLAB • Solving Limit in MATLAB • Finding integration • Solving differentiability
<p>WRITING USER DEFINED FUNCTIONS AND PROGRAMS USING MATLAB</p>	<p>13th ,14th and 15th sessions</p>	<ul style="list-style-type: none"> • How to define a user function • How to write programs in MATLAB • Writing few well known algorithms in MATLAB
<p>HANDLING DATA AND WORKING WITH GRAPHS IN MATLAB</p>	<p>16th ,17th and 18th sessions</p>	<ul style="list-style-type: none"> • Working with relative commands such as ezplot ,plot etc, • How to insert data in MATLAB • How to visualize data in MATLAB • Creating different types of graph and figures in order to compares different sort of data