

Branch Name:	Computer Engineering / Information Technology / Artificial Intelligence and Data Science / Information and Communication Technology / Mechanical Engineering / Civil Engineering/ Electrical Engineering / Robotics & Automation / Artificial Intelligence & machine learning / Electronics& Communication Engineering/ AI Powered Cloud and DevOps)
Program Code:	ET103 / ET105 / ET108 / ET107 / ET101 / ET106 / ET109 / ET113/ ET114 / ET115/ ET116
Course Title:	Engineering Mathematics-I with Computing tools Practical
Course Code:	2ET1000101P
Pre-requisite Course:	Basic about computer operating system.

Course Objectives:

The objective of this course is to learn mathematical concepts using SCILAB

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)								Total (Marks)
					Theory (Marks)				Practical (Marks)				
	L	T	P	Total	SEE		CCA		SEE		CCA		
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
01	-	-	02	02	-	-	-	-	10	25	10	25	50

Course Contents:

Sr. No.	Detail of Practical	Contact Hours
1	a. SCILAB environment and functionalities of toolbox b. Explore assignment, semicolons, comments, and case sensitivity. c. Defining Variables, multiple assignments. d. Getting help, examples, and demonstrations. e. Explore different mathematical operators.	08
2	a. Creating and running a script file b. Writing small script files and running them for solving mathematical problems	04
3	a. Understand symbolic math tool box b. Differentiation of standard functions and its combinations using symbolic math toolbox. c. Integration of standard functions and its combinations using symbolic math toolbox	08
4	a. Understanding looping techniques b. Applying looping techniques to solve mathematical problems. c. Understanding conditional statements and applying the same to mathematical problems	04
5	a. Writing small program using loops and conditional statements for solution of mathematical expansions and problems. b. Executing the written programs and getting the output.	06

Reference Books:

1. Programing using SCILAB Theory and Practical by Akhilesh Kumar
2. Introduction to SCILAB by Michael Baudin

Course Outcomes: On completion of this course, the students will be able to

Course Outcomes	Description	Bloom's Taxonomy Level
CO1	Discuss the basic structure of SCILAB tool box	Understanding (2)
CO2	Understanding tool box and looping techniques	Understanding (2)
CO3	Use symbolic math toolbox in SCILAB to differential and integrate the standard functions	Applying (3)
CO4	Write a small program to solve mathematical equations.	Applying (3)

Mapping of CLO with PO and PSO:

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CLO1	H	M	M	L	M				L		L					
CLO2	H	M	M	L	M							L				
CLO3	H	M	M		M											
CLO4	M	M	M		M							L				

H: High, M: Medium, L: Low