

**CENTRAL UNIVERSITY OF KERALA
DEPARTMENT OF COMPUTER SCIENCE
M.Sc. COMPUTER SCIENCE**

VALUE ADDED COURSE					
COURSE CODE	COURSE TITLE	CONTACT HRS/WEEK			CREDITS
		LEC	LAB	TUT	
CSC5053	MATLAB	2	2	1	Nil

Lec = Lecture, Tut = Tutorial, Lab = Practical

This is an audited/value added **skill based course** and the credits will not be added to marklist.

Course Objective:

The main objective of this course is to impart knowledge on the basic principles of programming using MATLAB.

By completing this course, students will obtain the following course/learning outcomes:

1. Knowledge gained:
 - (i) State of art of programming techniques using MATLAB
2. Skill gained:
 - (ii) Designing algorithms using MATLAB
3. Competency gained:
 - (iii) Development of real life applications using MATLAB.

Prerequisites: Nil

Grading:

Lab implementation	– 25%
Participatory based group Project	– 25%
Assignment/Quiz/presentation	– 25%
Individual project	- 25%

CSC5053 – MATLAB

Module 1

The MATLAB environment and getting touch/help, MATLAB search path, advantages and disadvantages of MATLAB, applications.

Module 2

MATLAB basics: variables and arrays, initializing variables in MATLAB, multidimensional arrays, sub arrays, end function, disp function, fprintf function, load and save commands, scalar operations, array and matrix operations, built-in MATLAB functions, Introduction to plotting, 2-D plots and 3-D plots.

Module 3

Program design techniques: logical data type, relational operators, logic operators, logical functions. Branching statements: if...else, switch, Loops: while, for, break, continue, nesting loops, complex data, string functions, user defined functions, case study

Text Books/References:

1. Stephen J. Chapman, Essentials of MATLAB Programming, Wadsworth Publisher, 2008
2. Stormy Attaway, A Practical Introduction to Programming and Problem Solving, 4th edition, Elsevier, 2016
3. Ram N. Patel, Ankush Mittal, Programming in MATLAB a Problem Solving Approach, Person Publication, 2014.
4. Manoj Khanna, Geeta Bhatt, Pawan Kumar. MATLAB Essentials for Problem Solving, PHI Learning Publisher, 2016.