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UNIVERSITY BAREILLY

Established by Govt. of U.P. with 2nd of UGC Act, 1956 vide U.P. Act 22 of 2010.

BCS-090	IT Workshop (Sci Lab/ MATLAB)	L T P 3 0 0	3 Credits
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Pre-requisites: None

Course Objectives:

CO1	To Impart the Knowledge to the students with MATLAB software.
CO2	To provide a working introduction to the Matlab technical computing environment.
CO3	To introduce students the use of a high-level programming language, Matlab.
CO4	To bridge the skill gaps and make students industry ready.
CO5	To provide an opportunity to students to develop inter-disciplinary skills.

Detailed Syllabus

MODULE-I

Programming Environment: MATLAB Windows, A First Program, Expressions, Constants, Variables and assignment statement, Arrays.

MODULE-II

Graph Plots: Basic plotting, Generating waveforms, Control Statements: Conditional statements: If, Else, Else-if, Repetition statements: While, for loop.

MODULE-III

Procedures and Functions: Built in functions. Manipulating Text: Writing to a text file, Reading from a text file.

Text Books:

1. MATLAB: An Introduction with Applications, by Amos Gilat, 2nd edition, Wiley, 2004,
2. C.B. Moler, Numerical Computing with MATLAB, SIAM, 2004.



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Course Outcomes: After the completion of the course the student will be able to:

CO1	Understand the need for simulation/implementation for the verification of mathematical functions.
CO2	Understand the main features of the MATLAB program development environment to enable their usage in the higher learning
CO3	Implement simple mathematical functions/equations in numerical computing environment such as MATLAB
CO4	Interpret and visualize simple mathematical functions and operations thereon using plots/display.
CO5	Analyze the program for correctness and determine/estimate/predict the output and verify it under simulation environment using MATLAB tools