**Basics of MATLAB Tool**

 **Add on Course for VI Semester**

 **B.E. Computer Science and Engineering**

 **Duration:** 30 Hours

# Learning Objectives:

1. To learn features of MATLAB as a programming tool.
2. To promote new teaching model that will help to develop programming skills and technique to solve mathematical problems.
3. To understand MATLAB graphic feature and its applications.
4. To use MATLAB as a simulation tool.

# Module1. Introduction to MATLAB

* The MATLAB Environment
* MATLAB Basics – Variables, Numbers, Operators, Expressions, Input and output.
* Vectors, Arrays – Matrices

# Module 2. MATLAB Functions.

* Built-in Functions
* User defined Functions

# Module 3. Programming with MATLAB

* Conditional Statements, Loops
* MATLAB Programs – Programming and Debugging.
* Applications of MATLAB Programming.

# References:

1. “A Guide to MATLAB - for Beginners and Experienced Users”, 2nd Ed., Brian R. Hunt, Ronald L. Lipsman, Jonathan M. Rosenberg, Cambridge University Press, (2006).
2. “Essentials of MATLAB Programming”, 2nd Ed., Stephen J. Chapman, Cengage Learning, (2009).