EE-404: Programming Languages

Credit	L	T	P
3	**2**	**1**	**-**

UNIT - I
Introduction to Procedure Oriented and Object-Oriented programming: elements of object oriented programming, C++ fundamentals – data types, operators and expressions, control construct, arrays, functions.

UNIT - II
Classes and objects – Encapsulation, Abstraction, Polymorphism, Classes, Object as function arguments, returning object from function. Constructors and destructors. Inheritance.

UNIT – III
MATLAB environment: MATALAB Desktop overview, everything is matrix, defining data types, display formats, predefined variables, complex numbers, Built-in Functions, input and output statements.

UNIT - IV
Control Constructs: sequential, selection and iteration using IF-END, IF-ELSE-END, ELSEIF, SWITCH-CASE, FOR LOOPS, WHILE loops.
MATLAB applications: Polynomial in MATLAB, solving equations, numerical integration, differential.

UNIT – V
Graph and Figure plotting, Handling graphics window, plotting 2D and 3D graphs. File input and output: Opening and closing files, writing formatted output to files, reading formatted data from files, Introduction to Simulink.

Additional topics:
GUI with Matlab

TEXT/REFERENCE BOOKS.
1. E. Balaguruswamy, “Object Oriented Programming with C++”, TataMcGraw Hill, New Delhi.
2. David Kuncicky, “MATLAB Programming”, Pearson Education, 2003.
3. Turbo C++, Robert Lafore
4. C++ by Balagurusamy, Tata McGraw Hill.
5. ManaullahAbid, Programming in C, MATLAB and Simulink, CAD PLAN, 2012
6. Marc E. Herinter, “Programming in MATLAB”, Thomson Learning, 2001.
7. RK Bansal, “MATLAB and Its Application in Engineering”, Pearson 2012

Websites
www.tobefilled.com