1.	Title of the course	Programming Laboratory
2.	Course number	MA507P
3.	Structure of credits	0-0-3-2
4.	Offered to	PG
5.	New course/modification to	Modification To MA5191/7
6.	To be offered by	Department of Mathematics and Statistics
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	**Course Objective(s):** To give practice on the basics of programming using C++. To develop hands-on programming ability to solve a linear system using C++, Python and Matlab.	
10.	**Course Content:** C++ environment, Variables, Arrays, Selection and Repetition Structure, Functions, Debugging a Code, Pointers, Class, Developing a library to solve a linear system using C++. Finding solution of a linear system using existing Python and Matlab libraries.	
11.	**Textbook(s):** 1. Weiss M A, *Data Structures and Algorithm Analysis in C++*, Pearson (2007). 2. Lambert K A, *The Fundamentals of Python: First Programs*, Cengage Learning (2011).	
12.	**Reference(s):** 1. Stroustrup B, *The Design and Evolution of C++*, Addison-Wesley, (1994). 2. Stroustrup B, *Programming: Principles and Practice Using C++*, Addison Wesley (2014). 3. Horton I, *Beginning Visual C++ 2013*, Wiley (2014). 4. Fausett L V, *Applied Numerical Analysis Using MATLAB*, Pearson (2007).	