1.	Title of the course	Data Science Programming Laboratory
2.	Course number	MA522M
3.	Structure of credits (L-T-P-C)	1-0-2-2
4.	New course/modification to	New
5.	To be offered by	Mathematics and Statistics
6.	Prerequisite	None
7.	**Course Objective(s):** To explore the datatypes, syntax and semantics of the Python language. To practice the object-oriented programming concepts. To develop solvers using numpy and scipy libraries. To explore graphics libraries in R. To generate data analytics report using data handling.	
8.	**Course Content:** Python: datatypes, list, tuple, dictionary, sets, branching, loops, recursion, functions, arguments, class, numpy, scipy, matplotlib, pandas, R: default data-sets, import, colors, charts, frequencies, data handling, hypothesis testing, regression, correlation, T-test, chi-square test, ANOVA.	
9.	**Textbook(s):** 1. Martin C B, Python: The Complete Reference, 2nd Edition, McGraw Hill Education (2018). 2. R for Everyone: Advanced Analytics and Graphics, 2nd Edition, Pearson Education (2018).	
10.	**Reference(s):** 1. Mark S, Programming in Python 3: A Complete Introduction to the Python Language, 2nd Edition, Pearson Education (2018). 2. Garrett G, Hands-On Programming with R, O'Reilly (2014). 3. Hadley W and Garrett G, R for Data Science, O'Reilly (2017). 4. Robert J, Numerical Python, 2nd Edition, Apress (2018).	