

M.Sc. Mathematics with Data Science
SEMESTER-WISE COURSES AND CREDIT DISTRIBUTION (Tentative)

SEMESTER-I

Sr. No.	Course Code	Course Title	L	T	P	J	Hrs./Week	Total Credits
Program Core Courses (C)								
1	PBM101C	Probability Theory	3	1	0	0	4	4
2	PBM102C	Abstract Algebra	3	1	0	0	4	4
3	PBM103C	Multivariable Calculus	3	1	0	0	4	4
Skill Enhancement Courses (SEC)								
4	PBM104S	Python Fundamentals	4	0	2	0	6	5
5	PBM105S	Analysis of Algorithms	4	0	2	0	6	5

SEMESTER-II

Sr. No.	Course Code	Course Title	L	T	P	J	Hrs./Week	Total Credits
Program Core Courses (C)								
1	PBM201C	Applied Linear Algebra	3	1	0	0	4	4
2	PBM202C	Statistical Techniques	3	1	0	0	4	4
3	PBM203C	Numerical Analysis	3	1	0	0	4	4
Skill Enhancement Courses (SEC)								
4	PBM204S	Data Science tools and techniques	4	0	2	0	6	5
5	PBM205S	Exploratory Data Analysis	3	0	2	0	4	4

SEMESTER-III

Sr. No.	Course Code	Course Title	L	T	P	J	Hrs./Week	Total Credits
Program Core Courses (C)								
1	PBM301C	Optimization Techniques	3	1	0	0	4	4
Skill Enhancement Courses (SEC)								
2	PBM302S	Machine Learning	4	0	2	0	6	5
3	PBM303S	Deep Learning	4	0	2	0	6	5
Elective Courses (EC)								
4	PBM314E-	Elective I	3	1	0	0	4	4
5	PBM325E-	Elective II	3	0	2	0	4	4

SEMESTER-IV

Sr. No.	Course Code	Course Title	L	T	P	J	Hrs./Week	Total Credits
Ability Enhancement Compulsory Courses (AECC)								
1	PBM401A	Dissertation	0	0	0	12	12	12
2	PBM402A	Scientific Writing	2	0	4	0	6	4
3	PBM403A	Summer Training	0	0	0	4	4	4

Elective Courses (EC)

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S. No.	Course Code	Course Title	L	T	P	J	Credit
Elective I							
1	PBM314E1	Graph Theory	3	1	0	0	4
2	PBM314E2	Complex Analysis	3	1	0	0	4
3	PBM314E3	Differential Equations	3	1	0	0	4
4	PBM314E4	Special Functions	3	1	0	0	4
5	PBM314E5	Topology	3	1	0	0	4
6	PBM314E6	Real Analysis	3	1	0	0	4
7	PBM314E7	Computational Fluid Dynamics	3	1	0	0	4
8	PBM314E8	Cryptography	3	1	0	0	4
9	PBM314E9	Numerical Analysis	3	1	0	0	4

Elective II

1	PBM325E1	Business Analytics	3	0	2	0	4
2	PBM325E2	Scientific Machine Learning	3	0	2	0	4
3	PBM325E3	Image Processing	3	0	2	0	4
4	PBM325E4	Internet of Things	3	0	2	0	4
5	PBM325E5	Big Data	3	0	2	0	4
6	PBM325E6	R-Programming	3	0	2	0	4