

**SCHEME OF STUDIES OF M.PHIL MATHEMATICS (SESSION-
2017-18)**

SEMESTER -I

S.NO	COURSE TITLE	COURSE CODE	CREDIT HOURS
1.	ADVANCED NUMERICAL ANALYSIS	MATH-720	03
2.	MATHEMATICAL METHODS	MATH-731	03
3.	NUMERICAL SOLUTIONS OF DIFFERENTIAL EQUATIONS	MATH-743	03
4.	ADVANCED TOPOLOGY	MATH-705	03
TOTAL CREDIT HOURS			12

SEMESTER –II

S.NO	COURSE TITLE	COURSE CODE	CREDIT HOURS
1.	FUNCTIONAL ANALYSIS	MATH-711	03
2.	MATHEMATICAL MODELLING AND SIMULATIONS	MATH-730	03
3.	NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS	MATH-752	03
4.	MATHEMATICAL STATISTICS	MATH-718	03
TOTAL CREDIT HOURS			12

List of Courses for M.Phil 2 years Program in Mathematics recommended by the Board.

S.No	Course No.	Title	Credit Hours.
1.	MTH-711	Advanced Calculus	3
2.	MTH-712	Advanced Group Theory	3
3.	MTH-713	Advanced Measure Theory	3
4.	MTH-714	Advanced Topology	3
5.	MTH-715	Algebraic Topology	3
6.	MTH-716	Field Theory	3
7.	MTH-717	Rings and Categories of Modules	3
8.	MTH-718	Advanced Functional Analysis	3
9.	MTH-719	Elementary knot theory	3
10.	MTH-720	Boundary layers theory	3
11.	MTH-721	Gas dynamics	3
12.	MTH-722	Astronomy	3
13.	MTH-723	Theoretical Astrophysics	3
14.	MTH-724	Advanced Numerical Analysis	3
15.	MTH-725	Spectral Theory in Hilbert Spaces	3
16.	MTH-726	Banach Algebra	3

17.	MTH-727	Topological Vector Spaces	3
18.	MTH-728	Mathematical logic	3
19.	MTH-729	Mathematics for Scientists	3
20.	MTH-730	Computational Fluid Dynamics	3
21.	MTH-731	Network flows Algorithms	3
22.	MTH-732	Advanced Fluid Dynamics	3
23.	MTH-733	Mathematical Modeling and Numerical Simulation	3
24.	MTH-734	Advanced Mathematical Methods	3
25.	MTH-735	Large scale scientific computations	3
26.	MTH-736	Statistical Decision Theory	3
27.	MTH-737	Parallel Algorithms	3
28.	MTH-738	Computational Geometry	3
29.	MTH-739	Advanced Approximation Theory	3
30.	MTH-740	Perturbation Methods in Fluid Mechanics	3
31.	MTH-741	Numerical Solutions for Integral Equations	3
32.	MTH-742	Advanced Operation Research	3
33.	MTH-743	Applied functional Analysis	3
34.	MTH-744	Advanced Partial Differential Equations	3
35.	MTH-745	Wavelet Analysis	3
36.	MTH-746	Introduction to complex variables	3
37.	MTH-747	Several Complex Variables	3
38.	MTH-748	Riemann Surfaces	3
39.	MTH-749	Differential Geometry	3
40.	MTH-750	General Relativity	3
41.	MTH-751	Mathematical Biology	3
42.	MTH-752	Numerical Solutions of Differential Equations	3
43.	MTH-753	Research Methodology	3
44.	MTH-754	Numerical Solutions of PDE's	3
45.		Advanced Mathematical Statistics	3
46.		Regression Analysis	3
47.	MTH-799	Thesis / Dissertation	6