DEPARTMENT OF MATHEMATICS,

UNIVERSITY OF KARACHI,

Year / Semester wise Scheme of Studies of MPhil Program

1st Year (Semester I) S. No	Course Code	Course Title
1	Compulsory	RESEARCH METHODOLOGY
2	Optional I	
3	Optional II	
4	Optional III	

1st Year (Semester II) S. No	Course Code	Course Title
1	Compulsory	ADVANCE RESEARCH METHODOLOGY
2	Optional I	
3	Optional II	
4	Optional III	

List of MPhil Optional courses

SR. #.	MTHN	CR. #.	COURSE TITLES
01.	MTHN	701	DIFFERENTIAL GEOMETRIC TECHNIQUES – I
02.	MTHN	702	DIFFERENTIAL GEOMETRIC TECHNIQUES – II
03.	MTHN	703	DIFFERENTIAL EQUATIONS – I
04.	MTHN	704	DIFFERENTIAL EQUATIONS – II
05.	MTHN	705	GROUP THEORY & SYMMETRIES
06.	MTHN	707	LIE ALGERA – I
07.	MTHN	708	LIE ALGERA – II
08.	MTHN	709	TOPICS IN FLUID DYNAMICS – I
09.	MTHN	710	TOPICS IN FLUID DYNAMICS – II

10.	MTHN	711	CLASSICAL ELECTRODYNAMICS – I
11.	MTHN	712	CLASSICAL ELECTRODYNAMICS – II
12.	MTHN	713	TOPICS IN RELATIVITY – I
13.	MTHN	714	TOPICS IN RELATIVITY – II
14.	MTHN	715	SOME EXACT SOLUTIONS OF EINSTEINS VACUUM FIELD EQUATIONS
15.	MTHN	717	CONTINUUM MECHANICS – I
16.	MTHN	718	CONTINUUM MECHANICS – I
17.	MTHN	719	CLASSICAL FIELD THEORY – I
18.	MTHN	720	CLASSICAL FIELD THEORY – II
19.	MTHN	721	TOPICS IN QUANTUM MECHANICS – I
20.	MTHN	722	TOPICS IN QUANTUM MECHANICS – II
21.	MTHN	723	QUANTUM FIELD THEORY – I
22.	MTHN	724	QUANTUM FIELD THEORY – II
23.	MTHN	725	REPRESENTATION THEORY – I
24.	MTHN	726	REPRESENTATION THEORY – II
25.	MTHN	727	GAUGE THEORY OF GRAVITATION – I
26.	MTHN	728	GAUGE THEORY OF GRAVITATION – II
27.	MTHN	729	TOPICS IN NUMERICAL ANALYSIS – I
28.	MTHN	730	TOPICS IN NUMERICAL ANALYSIS – II
29.	MTHN	731	PLAZMA DYNAMICS – I
30.	MTHN	732	PLAZMA DYNAMICS – II
31.	MTHN	733	ATMOSPHERIC STUDY – I
32.	MTHN	734	ATMOSPHERIC STUDY – II
33.	MTHN	735	SOLAR-SYSTEM ASTROPHYSICS
34.	MTHN	736	STELLAR & GALACTIC ASTRONOMY
35.	MTHN	737	EXTRA-GALACTIC ASTRONOMY
36.	MTHN	738	COSMOLOGY
37.	MTHN	747	OPERATIONS RESEARCH – I
38.	MTHN	748	OPERATIONS RESEARCH – II
39.	MTHN	751	GENERAL TOPOLOGY – I
40.	MTHN	752	GENERAL TOPOLOGY – II
41.	MTHN	753	TOPOLOGICAL-DIMENSION THEORY
42.	MTHN	754	DIFFERENTIAL TOPOLOGY
43.	MTHN	755	TOPOLOGICAL GROUPS – I
44.	MTHN	756	TOPOLOGICAL GROUPS – II
45.	MTHN	757	FUNCTIONAL ANALYSIS – I