

SHAHEED BB UNIVERSITY, SHERINGAL, DIR UPPER
BS Mathematics
SCHEME OF STUDIES
(Semester-Wise Breakdown)

1st Semester

S. No.	Course Code	Course Title	Marks	Credit Hours
1	MGC -311	Islamic Studies/Ethics	50	2(2+0)
2	MGC -312	Functional English	100	3(3+0)
3	MAC-313	Physics-I	100	3(3+0)
4	MGC -314	Applications of Information and Communication Technologies(ICT)	100	3(2+1)
5	MGC-315	Quantitative Reasoning-I	100	3(3+0)
6	MMC -316	Calculus-I	100	4(4+0)
7	MNCC-317	Mathematics-I*	Pass/Fail	3(0+0)
Total			550	18

2nd Semester

S. No.	Course Code	Course Title	Marks	Credit Hours
8	MGC -321	Ideology and Constitution of Pakistan	50	2(2+0)
9	MMC-322	Linear Algebra	100	4(4+0)
10	MAC-323	Physics-II	100	3(3+0)
11	MMC-324	Calculus-II	100	3(3+0)
12	MMC-325	Discrete Mathematics	100	3(3+0)
13	MGC -326	Expository Writing	100	3(3+0)
14	MNCC-327	Mathematics-II*	Pass/Fail	3(0+0)
Total			550	18

Note: Mathematics-I* and Mathematics-II* will be offered only for Pre-medical students.

3rd Semester

S. No.	Course Code	Course Title	Marks	Credit Hours
15	MMC-431	Affine Euclidean Geometry	100	3(3+0)
16	MAC-432	Computer Programming	100	3(2+1)
17	MMC-433	Algebra-I	100	3(3+0)
18	MAC-434	Physics-III	100	3(3+0)
19	MGC-435	Quantitative Reasoning-II	100	3(3+0)
20	MMC-436	Number Theory	100	3(3+0)
Total			600	18

4th Semester

S. No.	Course Code	Course Title	Marks	Credit Hours
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21	MGC-441	Natural Science	100	3(2+1)
22	MGC-442	Social Sciences	50	2(2+0)
23	MGC-443	Arts and Humanities	50	2(2+0)
24	MMC-444	Software Packages	100	3(2+1)
25	MMC-445	Calculus-III	100	4(4+0)
26	MGC-446	Entrepreneurship	50	2(2+0)
	MGC-447	Civics and Community Engagement	50	2(2+0)
Total			500	18

After successful completion of four semesters a student completed
 General Courses (GC) = 30 Credit Hrs.
 Allied Courses/Interdisciplinary = 12 Credit Hrs.
 Department Requirement (Major) = 30 Credit Hrs.
 Total = 72 Credit Hrs.

5th Semester

S. No.	Course Code	Course Title	Marks	Credit Hours
27	MMC -551	Algebra-II (Rings and Fields)	100	3(3+0)
28	MMC-552	Real Analysis-I	100	3(3+0)
29	MMC-553	Vector and Tensor Analysis	100	3(3+0)
30	MMC-554	Differential Geometry	100	3(3+0)
31	MMC-555	Topology	100	3(3+0)
32	MMC-556	Ordinary Differential Equations	100	3(3+0)
Total			600	18

6th Semester

S. No.	Course Code	Course Title	Marks	Credit Hours
33	MMC-561	General Topology	100	3(3+0)
34	MMC -562	Complex Analysis	100	3(3+0)
35	MMC-563	Classical Mechanics	100	3(3+0)
36	MMC-564	Partial Differential Equations	100	3(3+0)
37	MMC-565	Real Analysis-II	100	3(3+0)
38	MMC-566	Functional Analysis	100	3(3+0)
Total			600	18

7th Semester

S. No.	Course Code	Course Title	Marks	Credit Hours
39	MMC-671	Numerical Analysis	100	4(3+1)
40	MMC-672	Mathematical Methods	100	3(3+0)
41	----	Elective-I	100	3(3+0)
42	----	Elective-II	100	3(3+0)
43	----	Field Experience/Internship	100	3(3+0)
Total			500	16

8th Semester

S. No.	Course Code	Course Title	Marks	Credit Hours
44	MMC-681	Probability Theory	100	3(3+0)
45	MMC-682	Integral Equation	100	3(3+0)
46	----	Elective-III	100	3(3+0)
47	----	Elective-IV	100	3(3+0)
48	----	Capstone Project	100	3(3+0)
Total			500	15

NOTE:

MGC means Mathematics General Course

MAC means Mathematics Allied Course

MMC means Mathematics Major Course

MEC means Mathematics Elective Course

MNCC means Mathematics Non-Credit Course

ELECTIVE COURSES

S. No	Course Code	Course Name	Credit hours
1	MEC-674	Mathematical Modeling	03
2	MEC-675	Advanced Group Theory	03
3	MEC-676	Optimization Theory	03
4	MEC-677	Measure Theory	03
5	MEC-678	Fluid Mechanics	03
6	MEC-679	Stochastic Processes	03
7	MEC-683	Quantum Mechanics	03
8	MEC-684	Heat and Mass Transfer	03
9	MEC-685	Advanced Number Theory	03
10	MEC-686	Analytical Dynamics	03
11	MEC-687	Difference Equations	03
12	MEC-688	Convex Analysis	03
13	MEC-689	Econometrics	03
14	MEC-690	Fuzzy Set Theory	03