

2022 - BS - MS Major in Mathematics

SEMESTER - I (Common for all B.Tech Courses)						
S. No	Course Code	Course Name	L	T	P	C
1	CH 102	Fundamental concepts and applications of chemistry	3	0	0	6
2	MA 109	Calculus I (1st Half)	3	1	0	4
3	MA 121	Calculus II (2nd Half)	3	1	0	4
4	PH 101	Quantum Physics and Applications	2	1	0	6
5	BB 103	Introduction to Modern Biology	3	0	0	6
6	CS 103	Introduction to Programming - 1 (Using C) (1st Half)	3	0	2	4
7	EE 103	Introduction to Programming - 2 (Using Python) (2nd Half)	3	0	2	4
8	PH 113	Hands on Science Laboratory - I	0	0	3	3
9	HS 103	Introduction to Fine Arts				PP/NP
10	HS 106	Design Thinking and Creativity				PP/NP
11	NO 101/ NO 103	National Sports Organization (NSO)/National Service Scheme (NSS)				PP/NP
		Total Credits				37
Semester - II						
S. No	Course Code	Course Name	L	T	P	C
1	MA 102	Linear Algebra (1st Half)	3	1	0	4
2	MA 103	Differential Equations - I (2nd Half)	3	1	0	4
3	CS 201	Data Structures and Algorithms	3	0	0	6
4	CS 211	Data Structures and Algorithms Laboratory	0	0	3	3
5	PH 102	Electricity and Magnetism	2	1	0	6
6	BB 201	Biomolecules	2	1	0	6
7	CH 203	States of Matter (2nd Half)	3	0	0	3
8	CH 201	Organic Chemistry (1st Half)	3	0	0	3
9	CH 113	Hands On Science Laboratory - II	0	0	3	3

10	NO 101/ NO 103	National Sports Organization (NSO)/National Service Scheme (NSS)	0	0	2	PP/NP
		ALO				
		Total Credits				38

Semester III

S. No	Course Code	Course Name	L	T	P	C
1	HS 201	Economics	3	0	0	6
2	BB 301	Basics of Cell Biology and Genetics	3	0	0	6
3	CH 204	Physical Organic and Bioorganic Chemistry (1st Half)	3	0	0	3
4	CH 202	Inorganic Chemistry (2nd Half)	3	0	0	3
5	MA 209	Introduction to Probability Theory	3	1	0	8
6	PH 103	Waves, Oscillations & Optics	2	1	0	6
7	MA 223	Mathematics Laboratory	0	0	3	3
		ALO				
		Total Credits				35

Semester - IV

S. No	Course Code	Course Name	L	T	P	C
1	MA 220	Real Analysis	2	1	0	6
2	MA 221	Group Theory	2	1	0	6
3	MA 202	Advanced Linear Algebra	2	1	0	6
4		Program Elective-I				6
5		Program Elective-II				6
		Total Credits				30

Semester V

S.No	Course Code	Course Name	L	T	P	C
1	MA 307	Rings and Modules	2	1	0	6

2	MA 308	Introduction to Complex Analysis	2	1	0	6
3	MA 309	General Topology	2	1	0	6
4	CS 403	Graph Theory and Combinatorics	2	1	0	6
5		Program Elective-II				6
		Total Credits				30

Semester VI

S.No	Course Code	Course Name	L	T	P	C
1	CE 301	Environmental Studies	3	0	0	6
	MA 305	Ordinary Differential Equations	2	1	0	6
	MA 901	Measure Theory	2	1	0	6
		Program Elective-III				6
		HSS Elective-I	3	0	0	6
		Total Credits				30

Semester VII

S.No	Course Code	Course Name	L	T	P	C
1	MA 404	Numerical Analysis	2	1	0	6
2		Program Elective-IV				6
3		Program Elective-V				3
4		Institute Elective – I	2	1	0	6
5		HSS Elective-II	3	0	0	6
		Total Credits				27

Semester VIII

S.No	Course Code	Course Name	L	T	P	C
1		Program Elective-VI	2	1	0	6
2		Institute Elective – II	2	1	0	6
3		Institute Elective – III				6

4		Institute Elective – IV				6
5		Institute Elective – v				6
		Total Credits				30
Semester IX						
1		Independent Project				30
Semester X						
2		Independent Project				30
		Total Credits				60
Overall Credits Required (Minimum)						317