

2022 - BS - MS Major in Physics							
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	PH 202	Classical Mechanics	2	1	0	6
2	PH 203	Quantum Mechanics - I	2	1	0	6
3	PH 204	Mathematical Physics-I	2	1	0	6
4		Program Elective-I	2	1	0	6
5		HSS Elective-I	3	0	0	6
		ALO				
		Total Credits				30
Semester V						
S.No	Course Code	Course Name	L	T	P	C

1	PH 201	Electrodynamics	2	1	0	6
2	PH 304	Statistical Physics	2	1	0	6
3	PH 302	Quantum Physics-II	2	1	0	6
4	EE 229	Electronic Devices (Pre mid-sem)	3	0	0	3
5	PH 212	General Physics Laboratory	0	0	3	3
6	EE 202	Introduction to Analog Circuits (Post midsem)	3	0	0	3
7		HSS Elective-II	3	0	0	6
		ALO				
		Total Credits				33
Semester VI						
S.No	Course Code	Course Name	L	T	P	C
1	CE 301	Environmental Studies	3	0	0	6
2		Program Elective-II	2	1	0	6
3		Institute Elective – I	2	1	0	6
4		Institute Elective – II / Minor Project-I	0	0	6	6
5	PH 311	Advanced Physics Lab	0	0	3	3
6	EE 212	Devices and Circuit Lab	0	0	3	3
7		ALO				
		Total Credits				30
Semester VII						
S.No	Course Code	Course Name	L	T	P	C
1		Program Elective-III	2	1	0	6
2	PH 307	Seminar – I	0	0	3	3
3		Institute Elective – III	2	1	0	6
4		Institute Elective – VI	2	1	0	6
5		Institute Elective – V / Minor Project-II	0	0	6	6
		ALO				

		Total Credits				27
Semester VIII						
S.No	Course Code	Course Name	L	T	P	C
1		Program Elective-IV	2	1	0	6
2		Institute Elective – VI	2	1	0	6
3		Institute Elective – VII				6
4		Institute Elective – VIII/ Minor Project- III (2-1-0-6)	0	0	6	6
5	PH 308	Seminar – II	0	0	3	3
		ALO				
		Total Credits				27
Semester IX & X						
		Independent Project				60
		Total Credits				60
Overall Credits Required (Minimum)						317