

BSMS Major in Physics

Semester - I (Common for all B.Tech Courses)

S.No	C. Code	Course	L	T	P	C
1	MA 101	Calculus	3	1	0	8
2	PH 101	Quantum Physics and Applications	2	1	0	6
3	CH 102	Fundamental Concepts and Applications of Chemistry	3	0	0	6
4	BB 103	Introduction to Modern biology	3	0	0	6
5	PH 113	Hands on Science Laboratory - I	0	0	3	3
6	CS 101	Introduction to Programming	3	0	2	8
7	HS 101	Introduction to Fine Arts	0	0	1	PP/NP
8	HS 106	Design Thinking and Creativity	1	0	0	PP/NP
9	NO107/NO105	NSO/NSS	0	0	2	2
First Semester Total Credits						39

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 105/ NO 107	National Sports Organization (NSO)/National Service Scheme (NSS)	0	0	2	2
ALO						
Total Credits						40

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 205	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	CE 301	Environmental Studies	3	0	0	6	
2	EE 229	Electronic Devices (post Mid Sem)	3	0	0	3	
3	PH 322	Mathematical Physics-I	2	1	0	6	
4		Program Elective-I	2	1	0	6	
5		HSS Elective-I	3	0	0	6	
	PH 312	General Physics Laboratory	0	0	3	3	
		ALO					
		Total Credits					30

Semester V							
<u>S.No</u>	Course Code	Course Name	L	T	P	C	
1	PH 314	Electrodynamics	2	1	0	6	
2	PH 323	Classical Mechanics	2	1	0	6	
3	PH 310	Quantum Mechanics - I	2	1	0	6	
4	EE 202	Introduction to Analog Circuits (Post midsem)	3	0	0	3	
5	EE 212	Device and Circuit Lab	0	0	3	3	
6	PH 411	Advanced Physics Laboratory	0	0	3	3	
7		HSS Elective-II	3	0	0	6	
		ALO					
		Total Credits					33

Semester VI							
<u>S.No</u>	Course Code	Course Name	L	T	P	C	
1		Program Elective-II	2	1	0	6	
2	PH 405	Quantum Mechanics - II	2	1	0	6	
3	PH 304	Statistics Physics	2	1	0	6	
4		Institute Elective – I	2	1	0	6	
5		Institute Elective – II / Minor Project-I	0	0	6	6	
6		ALO					
		Total Credits					30

Semester VII							
<u>S.No</u>	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/	2	1	0	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)					321