

Department of Physics
School of Technology
B.Sc. (Physics) Course Structure

Sr. No.	Title of the Course	Course Code	Teaching Scheme			Credit Component wise	Total Credit
			L	T	P		
Semester-I							
	Compulsory Subjects						
1	University Physics – I	16BSP101T	3	0	0	3	23
2	University Physics – I Lab	16BSP101P	0	0	2	1	
3	Chemistry – I	16BSC101T	3	0	0	3	
4	Chemistry – I Lab	16BSC101P	0	0	2	1	
5	Calculus - I (For A Group)	20BSM101T	3	0	0	3	
	Basic Mathematics - I (For B Group)	20BSM102T	3	0	0		
6	English Communication	16A101	1	0	4	3	
	Foreign Language						
7	French -I	16A108	1	0	4	3	
8	Chienese -I	16A109	1	0	4		
9	Japanese -I	16A110	1	0	4		
	Elective Subject (Any Two)						
10	Introduction to Computer Science	16A104	1	0	4	3 +3	
11	Elementary Algebra	20BSM103E	3	0	0		
12	Leadership	16A106	3	0	0		
13	Understanding Theatrical Arts	16A107	1	0	4		
Semester-II							
	Compulsory Subjects						
1	University Physics – II	16BSP201T	3	0	0	3	23
2	University Physics – II Lab	16BSP201P	0	0	2	1	
3	Chemistry - II	16BSC201T	3	0	0	3	
4	Chemistry Lab-II	16BSC201P	0	0	2	1	
5	Calculus –II (For A Group)	20BSM104T	3	0	0	3	
	Basic Mathematics - II (For B Group)	20BSM105T	3	0	0		
6	Elements of Environmental Studies	16BSP203T	3	0	0	3	
	Foreign Language II						
7	French -II	16A219	1	0	4	3	
8	Chienese -II	16A220	1	0	4		
9	Japanese -II	16A221	1	0	4		
	Elective Subject (Any Two)						
10	Mechanics	16BSP202T	3	0	0	3+3	
11	Fundamental of Pragramming and data structure	16A215	1	0	4		
12	Introduction to Bio Chemistry	16BSC203E	3	0	0		
13	Theory of equation	20BSM106E	3	0	0		
14	Musical styles	16A209	1	0	4		
15	Ovierview of indian art	16A217	3	0	0		
Semester-III							
	Compulsory Subjects						
1	Analytical Geometry (For A Group)	20BSM201T	4	0	0	4	23
2	Basic Mathematics - III (For B Group)	20BSM202T					
3	Waves and Optics	17BSP301T	4	0	0	4	
4	Electricity and Magnetism	17BSP302T	4	0	0	4	
5	Electricity and Magnetism - Lab	17BSP302P	0	0	2	1	
6	Modern Method of Water treatment (Chemistry Subsidiary)	17BSC304T	4	0	0	4	
	Introduction to Modern Physics (Physics Subsidiary- Offered to Chemistry and Mathematics students only)	17BSP304T	4	0	0		
	Elective Subject (Any One from Each Group)						
	Group A						
7	Introduction to Bio organic chemistry and chemical biology (Chemistry Elective -I)	17BSC305T	3	0	0	3+3	
8	Introduction to Geo-informatics (Physics Elective-I)	17BSP305T	3	0	0		
9	Probability and statistics (Maths Elective -I)	20BSM205E	3	0	0		
	Group B						
10	Films and Society	20A330	3	0	0		
11	Workplace communication	17A309	3	0	0		
12	Environmental Psychology	20A329	3	0	0		
13	Atmospheric Sciences	17A311	3	0	0		
14	Indian Government and politics	17A312	3	0	0		
15	Basics of Accounting	17A317	3	0	0		
16	Introduction to Human Resource Management	17A318	3	0	0		
17	Introduction to Law and Governance	17A320	3	0	0		

Semester-IV								
Compulsory Subjects								
1	Elements of Mathematical Physics	17BSP401T	4	0	0	4	23	
2	Heat and Thermodynamics	17BSP402T	4	0	0	4		
3	Material Science	17BSP403T	4	0	0	4		
4	Material Science Lab	17BSP403P	0	0	2	1		
5	Smart Chemistry in everyday life (Chemistry Subsidiary)	17BSC404T	4	0	0	4		
	Structure and Properties of Materials (Physics Subsidiary- Offered to students of Chemistry and Mathematics only)	17BSP404T	4	0	0			
Elective Subject (Any One from Each Group)								
Group A								
6	Time Series Analysis (Physics elective -2)	17BSP405T	3	0	0	3		
7	Environmental Chemistry (Chemistry Elective -2)	17BSC405T	3	0	0			
Group B								
9	Statistics	17A408	3	0	0	3		
10	Rural Development in India	17A409	3	0	0			
11	Cognitive Psychology	20A434	3	0	0			
12	Educational Psychology	20A435	3	0	0			
13	Soft Skills	17A412	3	0	0			
14	Advanced Atmospheric Science	17A414	3	0	0			
15	Principles of Financial Management	17A420	3	0	0			
Semester-V								
Compulsory Subjects								
1	Atomic and Molecular Physics	18BSP501T	4	0	0	4	25	
2	Solid State Physics	18BSP502T	4	0	0	4		
3	Classical Mechanics	18BSP503T	4	0	0	4		
4	Electromagnetic theory	18BSP504T	4	0	0	4		
5	Nuclear and Particle Physics	18BSP505T	4	0	0	4		
6	Solid State Physics Lab	18BSP502P	0	0	2	1		
7	Nuclear and Particle Physics Lab	18BSP505P	0	0	2	1		
Elective Subject (Any One)								
8	Introduction to Bio- Physics	18BSP506T	3	0	0	3		
9	Medical physics (Not offered)	18BSP507T	3	0	0			
Semester-VI								
Compulsory Subjects								
1	Statistical Mechanics	18BSP601T	4	0	0	4	25	
2	Introduction to Quantum Mechanics	18BSP602T	4	0	0	4		
3	Basic Electronics	18BSP603T	4	0	0	4		
4	Fundamental of Atmospheric Sciences and climate change	18BSP604T	4	0	0	4		
5	Laser and Applications	18BSP605T	4	0	0	4		
6	Electronics Lab	18BSP603P	0	0	2	1		
7	Atmospheric science and Remote sensing lab	18BSP604P	0	0	2	1		
Elective Subject (Any One)								
8	Radiological Physics (Not offered)	18BSP606T	3	0	0	3		
9	Introduction to Plasma Physics	18BSP607T	3	0	0			
Semester-VII								
Compulsory Subjects								
1	Mathematical Physics-II	19BSP701T	4	0	0	4	24	
2	Introduction to Nanomaterials	19BSP702T	4	0	0	4		
3	Measurements, Instrumentation and Control	19BSP703T	4	0	0	4		
4	Renewable Energy and Energy Harvesting	19BSP704T	4	0	0	4		
5	Measurements, Instrumentation and Control Lab	19BSP703P	0	0	2	1		
6	C Programming Lab	19BSP701P	0	0	2	1		
Elective Subject (Any Two)								
7	Applied Optics (Not offered)	19BSP705T	3	0	0	3 + 3		
8	Introduction to Bio-informatics	19BSP706T	3	0	0			
9	Introduction to Programming	19BSP707T	3	0	0			
10	Introduction to Astrophysics (Not Offered)	19BSP708T	3	0	0			
11	Medical Physics (Not Offered)	19BSP709T	3	0	0			
Semester-VIII								
1	Experimental Techniques	19BSP801T	4	0	0	4	23	
2	Vacuum Science and Cryogenics	19BSP802T	4	0	0	4		
3	Major Project	19BSP803				15		