

Course Structure for the Program B.Sc. (Hons.) Physics

1st Year

Semester – I					
Paper Name		Paper Code	No of Papers	Credit	L-T-P
<i>Core (Theory)</i>	MATHEMATICAL PHYSICS I	PHY11001	1	4	4-0-0
	MECHANICS	PHY11002	1	4	4-0-0
<i>Core (Lab)</i>	MATHEMATICAL PHYSICS LAB I	PHY12003	1	2	0-0-4
	MECHANICS LAB	PHY12004	1	2	0-0-4
<i>Generic Elective (Theory)</i>	ELECTIVE MATHEMATICS I*	MTH11101	1	6	5-1-0
<i>Generic Elective (Lab)</i>	--	--			
<i>Foundation (Ability Enhancement Compulsory Course)</i>	ENGLISH LANGUAGE AND LITERATURE	ENG11057	1	2	2-0-0
<i>Value Added Courses</i>	DESIGN THINKING	DGS11001	1	2	2-0-0
Total			7	22	

* For non-lab based subjects total credit will be 6 for one paper (e.g., Mathematics, L-T-P: 5-1-0)

Semester – II					
Paper Name		Paper Code	No of Papers	Credit	L-T-P
<i>Core (Theory)</i>	MATHEMATICAL PHYSICS II	PHY11005	1	4	4-0-0
	WAVE AND OPTICS	PHY11006	1	4	4-0-0
<i>Core (Lab)</i>	MATHEMATICAL PHYSICS LAB II	PHY12007	1	2	0-0-4
	WAVE AND OPTICS LAB	PHY12008	1	2	0-0-4
<i>Generic Elective (Theory)</i>	ELECTIVE MATHEMATICS II*	MTH11509	1	6*	5-1-0
<i>Generic Elective (Lab)</i>	--	--			
<i>Foundation (Ability Enhancement Compulsory Course)</i>	ENVIRONMENTAL SCIENCE AND ENERGY RESOURCES	EVS11105	1	2	2-0-0
<i>Value added Course</i>	INTER DISCIPLINARY PROJECT	IDP14001	1	3	
Total			7	23	

2nd Year

Semester – III					
Paper Name		Paper Code	No of Papers	Credit	L-T-P
<i>Core (Theory)</i>	ELECTROSTATICS AND CURRENT ELECTRICITY	PHY11009	1	4	4-0-0
	THERMAL PHYSICS	PHY11010	1	4	4-0-0
	ELECTRONICS I	PHY11011	1	4	4-0-0
<i>Core (Lab)</i>	ELECTRICITY LAB	PHY12012	1	2	0-0-4
	THERMAL PHYSICS LAB	PHY12013	1	2	0-0-4
	ELECTRONICS LAB I	PHY12014	1	2	0-0-4
<i>Generic Elective (Theory)</i>	ELECTIVE CHEMISTRY I/ ELECTIVE COMPUTER SCIENCE I/ ELECTIVE ZOOLOGY I/ ELECTIVE STATISTICS I*/ ELECTIVE BOTANY I	CHM11151/ CSE21641/ ZOL11001/ SDS11506/ BOT11001	1	4	4-0-0
<i>Generic Elective (Lab)</i>	ELECTIVE CHEMISTRY LAB I// ELECTIVE COMPUTER SCIENCE LAB I/ ELECTIVE ZOOLOGY LAB I/ ELECTIVE BOTANY LAB I	CHM12152/ CSE22642/ ZOL12002/ BOT12002	1	2	0-0-4
<i>Foundation (Skill Enhancement Compulsory Course)</i>	COMPUTATIONAL SKILLS / BASIC INSTRUMENTATION SKILLS / WEATHER FORECASTING / MECHANICAL DRAWING	CSE21645/PHY11026/ GEO11019/ MEE12320	1	2	2-0-0
<i>Value Added Course</i>	COMMUNITY SERVICE	SOC14100	1	1	
<i>Value Added Course</i>	VENTURE IDEATION	EIC11001	1	2	2-0-0
Total			11	29	

Semester – IV					
Paper Name		Paper Code	No of Papers	Credit	L-T-P
<i>Core (Theory)</i>	ELECTROMAGNETISM AND SPECIAL THEORY OF RELATIVITY	PHY11018	1	4	4-0-0
	ELEMENTS OF MODERN PHYSICS	PHY11019	1	4	4-0-0
	ELECTRONICS II	PHY11020	1	4	4-0-0
<i>Core (Lab)</i>	ELECTROMAGNETISM LAB	PHY12021	1	2	0-0-4
	MODERN PHYSICS LAB	PHY12022	1	2	0-0-4
	ELECTRONICS LAB II	PHY12023	1	2	0-0-4
<i>Generic Elective (Theory)</i>	ELECTIVE CHEMISTRY II/ ELECTIVE COMPUTER SCIENCE II/ ELECTIVE ZOOLOGY II/ ELECTIVE STATISTICS II*/ ELECTIVE BOTANY II	CHM11153/ CSE21643/ ZOL11003/ SDS11507/ BOT11003	1	6*/ 4	5-1-0*/ 4-0-0
<i>Generic Elective (Lab)</i>	ELECTIVE CHEMISTRY LAB II// ELECTIVE COMPUTER SCIENCE LAB II/	CHM12154/ CSE22644/ ZOL12003/	1	2	0-0-4

	ELECTIVE ZOOLOGY LAB II/ ELECTIVE BOTANY LAB II	BOT12003			
<i>Foundation (Skill Enhancement Compulsory Course)</i>	COMPUTATIONAL SKILLS / BASIC INSTRUMENTATION SKILLS / WEATHER FORECASTING / MECHANICAL DRAWING	CSE21645/PHY11026/ ./ MEE12320	1	2	2-0-0
<i>Value Added Course</i>	HUMAN VALUES AND PROFESSIONAL ETHICS	PSG11021	1	2	2-0-0
Total			10	28	

* For non-lab based subjects total credit will be 6 for one paper (e.g., Mathematics, L-T-P: 5-1-0)

3rd Year

Semester – V					
Paper Name		Paper Code	No of Papers	Credit	L-T-P
<i>Core (Theory)</i>	QUANTUM MECHANICS AND APPLICATIONS	PHY11027	1	4	4-0-0
	STATISTICAL MECHANICS	PHY11028	1	4	4-0-0
<i>Core (Lab)</i>	QUANTUM MECHANICS LAB	PHY12029	1	2	0-0-4
	STATISTICAL MECHANICS LAB	PHY12030	1	2	0-0-4
<i>Core Discipline Specific Elective (Theory)</i>	EXPERIMENTAL TECHNIQUES/ EMBEDDED SYSTEMS- INTRODUCTION TO MICROCONTROLLER/ PHYSICS OF DEVICES AND INSTRUMENTATION	PHY11031/ PHY11032/ PHY11033	1	4	4-0-0
	EXPERIMENTAL TECHNIQUES LAB/ MICROCONTROLLER LAB/DEVICES AND INSTRUMENTATION LAB	PHY12034/ PHY12035/ PHY12036/	1	2	0-0-4
<i>Core Discipline Specific Elective (Lab)</i>	ADVANCED MATHEMATICAL PHYSICS/ CLASSICAL DYNAMICS* / APPLIED DYNAMICS	PHY11037/ PHY11038/ PHY11039	1	6* / 4	5-1-0/ 4-0-0
	ADVANCED MATHEMATICAL PHYSICS LAB/ APPLIED DYNAMICS LAB	PHY12040/ PHY12041	1	2	
	INDUSTRY INTERNSHIP	PHY14042	1	2	
Total			8/9	26	

Semester – VI					
Paper Name		Paper Code	No of Papers	Credit	L-T-P
<i>Core (Theory)</i>	ELECTROMAGNETIC THEORY LASER AND FIBER OPTICS	PHY11043	1	4	4-0-0
	SOLID STATE PHYSICS	PHY11044	1	4	4-0-0
<i>Core (Lab)</i>	E M THEORY LAB	PHY12045	1	2	0-0-4
	SOLID STATE PHYSICS LAB	PHY12046	1	2	0-0-4

<i>Core Discipline Specific Elective (Theory)</i>	NUCLEAR AND PARTICLE PHYSICS*/ ASTRONOMY AND ASTROPHYSICS/ ATMOSPHERIC PHYSICS/ NANO- MATERIALS AND APPLICATIONS	PHY11047/ PHY11048/ PHY11049/ PHY11050	1	6*/ 4	5-1-0/ 4-0-0
	ATMOSPHERIC PHYSICS LAB/ NANO MATERIALS AND APPLICATIONS LAB	PHY12051/PHY12052	1	2	0-0-2
<i>Core Discipline Specific Elective</i>	DISSERTATION	PHY15053	1	6	
	SEMINAR ON CONTEMPORARY RESEARCH IN PHYSICS	PHY15054	1	2	
Total			8	26	

Total Credit: 22 + 23 + 29 + 28 + 26 + 26 = 154