

Paper Structure for M.Sc (Physics)

St. Xavier's College (in collaboration with Bose Institute, Kolkata)

Semester 1:

Paper	Modules	Group	Subjects	Course Span	Marks
PHMEG011	C-MT-DE	A 15	Differential Equations, Special Functions, Green's Functions, Integral Transforms	Sem1	50
	C-MT-CV	B 15	Complex Analysis	Sem 1	
	C-MT-LA	C 10	Linear Algebra & Finite Dimensional Vector Spaces	Sem 1	
PHMEG021	C-CP-CM	A 15	Classical Mechanics	Sem 1	50
	C-MT-TA	B 10	Tensor Analysis	Sem 1	
	C-CP-NLD	C 15	Non Linear Dynamics	Sem 1	
PHMEG031	C-CP-ED	A 20	Electrodynamics	Sem 1	50
	C-CP-SR	B 20	Special Relativity	Sem 1	
PHMEG041	C-TS-SP1	A 20	Statistical Physics I	Sem 1	50
	C-QMI	B 20	Quantum Mechanics I	Sem 1	
PHMEG051	S-EI1-DE	A 20	Digital Electronics	Sem 1	50
	S-EI1-AE	B 20	Analog Electronics	Sem 1	
PHMEG261	C-EX1		Experimental Physics I	Sem 1	50

Semester 2:

Paper	Modules	Group	Subjects	Course Span	Marks
PHMEG062	C-TS-SP2	A	Statistical Physics 2	Sem 2	50
	S-EI2-SP	B	Semiconductor Physics	Sem 2	
PHMEG072	C-QMIIa	A	Quantum Mechanics IIa	Sem 2	50
	C-QMIIf	B	Quantum Mechanics IIb – Rel QM.	Sem 2	
PHMEG082	S-SS	A	Solid State Physics (a)	Sem 2	50
	S-SS	B	Solid State Physics (b)	Sem 2	
	C-MT-GTh	C	Group Theory	Sem 2	
PHMEG272	C-EX2	A	Communication & Microwave Expts.	Sem 2	50
	S-EI2-ME	B	Microprocessors and Micro-controllers	Sem 2	
PHMEG512	C-CMP1	A	Computational Physics and Interfacing I	Sem 1 & 2	50

Semester 3:

Paper	Modules	Group	Subjects	Span	Marks
PHMEG093	S-AM(a)	A 20	Atomic Physics	Sem 3	50
	S-AM(b)	B 20	Molecular Physics	Sem 3	
PHMEG103	S-PL	A 20	Plasma Physics	Sem 3	50
	C-CP-GR/FM	B 20	Gen. Relativity/Fluid Mechanics	Sem 3	
PHMEG113	S-NE(a)	A 20	Nuclear Physics	Sem 3	50
	S-NE(b)	B 20	Elementary Particle Physics	Sem 3	
PHMES123a/s	A1-AC(a,b)/SS	A 20	Introductory Astrophysics & Cosmology/ Atmospheric Physics & Chemistry	Sem 3	50
	O1-HE/APP	B 20	Introductory High Energy Physics/Upper Atmosphere & Remote Sensing	Sem 3	

Semester 4:

Paper	Modules	Group	Subject	Course Span	Marks
PHMEG134	A2-AC(a,b)/SS	A	Stellar Structure & Evolution/Advanced Plasma Physics	Sem 4	50
	O2-HE/SS	B	Stellar Atmosphere, Binary Stars & ISM/Advanced Plasma Physics	Sem 4	
PHMEG144	A3-AC(a,b)/APP	A	QFT & Standard Model/Dynamic	Sem 4	50
	O3-HE/APP	B	Astroparticle Physics/Atmospheric Science	Sem 4	
PHMEA284a/s	A-EX3	A	Advanced Experiments (Nuclear Expts. & Astrophysics/Space Science)	Sem 3 & 4	50
PHMEG524	C-CMP 2	A	Computational Physics II	Sem 3 & 4	50
PHMEG764	A-PRJ	-	Project	Sem 3 & 4	50

- **Continuous internal assessment (CIA) comprises 20% of the marks in each paper**
- **Paper Numbers 01 – 25 denote theory papers, 26 – 50 are reserved for practical papers, 51 – 75 are for computational papers, 76 – 100 are for projects / research based papers**