

M.Sc. Physics Syllabus 2014 Synopsis (Credits: 90)

Semester I (Credits: 20 = 5 × 4)

Paper	Module	Group	Subject	No. of Classes	Marks
MPHC4101	MM I	A	Differential Equations	24	50
	MM II	B	Complex analysis & tensors	24	
MPHC4102	CM I	A	Classical Mechanics I	24	50
	QM I	B	Quantum Mechanics I	24	
MPHC4103	EL I	A	Electronics I	24	50
	EL II	B	Electronics II	24	
MPHC4104	SP I	A	Statistical Physics I	24	50
	ED	B	Electrodynamics	24	
MPHC4151	CL I	A	Core Experiments I(Non Electronics)	24	50
	CMP I	B	Computer Tools & Interfacing	24	

Semester II (Credits: 20 = 5 × 4)

Paper	Module	Group	Subject	No. of Classes	Marks
MPHC4205	GRP	A	Group Theory	24	50
	RLED	B	Relativity & Relativistic Electrodynamics	24	
MPHC4206	CM II	A	Classical Mechanics II	24	50
	FM	B	Fluid Mechanics	24	
MPHC4207	QM II	A	Quantum Mechanics II	24	50
	QM III	B	Quantum Mechanics III	24	
MPHC4208	SS I	A	Solid State I	24	50
	SP II	B	Statistical Physics II	24	
MPHC4252	CL II	A	Core Experiments II (Electronics)	24	50
	CMP II	B	Numerical Computing	24	

## Semester III (Credits: 25 = 5 × 5)

Paper	Module	Group	Subject	No. of classes	Marks
MPHC4309	ATM	A	Atomic & Molecular Physics	24	50
	SSII	B	Solid State II	24	
MPHC4310	NUC	A	Nuclear Physics	24	50
	PAR	B	Particle Physics	24	
MPHE4301/ MPHE4302	EL-GR/MPI	A	General Relativity/ Material Physics I	24	50
	EL-PLM/MP2	B	Plasma Physics/ Material Physics II	24	
MPHS4301/ MPHS4302	SPL-API/SSEI	A	Introductory Astrophysics/ Foundations of Solid State Electronics	24	50
	SPL-APII/SSEII	B	Physical Cosmology/ Semiconductor devices	24	
MPHC4353	AL I	A	Advanced Experiments I (Comm.)	24	50
	PRJ I	B	Project Level 1	24	

## Semester IV (Credits: 25 = 5 × 5)

Paper	Module	Group	Subject	No. of Classes	Marks
MPHS4403/ MPHS4404	SPL-APIII/SSEIII	A	Stellar Structure & Evolution/ Communication Theory	24	50
	SPL-APIV/SSEIV	B	Stellar atmosphere, Interstellar medium & galaxies/ Digital Signal Processing	24	
MPHS4405/ MPHS4406	SPL-APV/SSEV	A	Standard Model of Particle Interactions in Astrophysics/ VLSI	24	50
	SPL-APVI/SSEVI	B	Astroparticle Physics/ Microprocessors & Microcontrollers	24	
MPHS4407/ MPHS4408	SPL-APVII/SSEVII		Computational Astrophysics/ Optoelectronics, Photonics & Nanomaterials, Nanodevices	48	50
MPHS4451/ MPHS4452	SPL-APVIII/SSEVIII		Special Lab – Astrophysics/ Solid State Electronics	48	50
MPHS4453	ALII	A	Advanced Experiments II	24	50
		B	Project Level 2		

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