

Course Structure: M.Sc. in Physics (2019-2020)

Cat.	Deviation	Programme Components	MSC		
				Min	Max
DC/MC		Department/Programme Core	110	70	110
DE/BE		Department/Programme Elective	56	40	90
DP		Practical Component	18	0	20
DT		Thesis	40	30	40
HU/L		Humanities/Language	5/9	5	10
		Total	225/229	220	240

L: Lecture hours; T: Tutorial hours; P: Laboratory/ Practical hours; C: Credits

Subject Areas/Specilization

	Area Code	Name of the Areas				
	0	Fundamentals				
	1	Theoretical Physics				
	2	Space, High Energy, and Nuclear Physics				
	3	Condensed Matter and Materials Physics, Energy Studies, Biophysics				
	4	Photonics				
	5	Electronics, Remote Sensing				

Course Structure M.Sc. in Physics (2019-2020)						
PG-CRC Code	Course Code	Course Name	L-T-P			Credits
Department of Physics: 2-Year M.Sc. I-Semester						
DC	DC.PYM 401.18	Classical Mechanics	3	1	0	11
DC	DC.PYM 402.18	Mathematical Methods	3	1	0	11
DC	DC.PYM 403.18	Quantum Mechanics-I	3	1	0	11
DC	DC.PYM 404.18	Classical Electrodynamics	3	1	0	11
DP	DP.PYM 491.18	Physics Lab-I (General)	0	0	6	6
HU/L	HU/L	Huminities/Language	1/3	1/0	0	5/9
Total			13/15	5/4	6	55/59
Department of Physics: 2-Year M.Sc. II-Semester						
DC	DC.PYM405.18	Quantum Mechanics-II	3	1	0	11
DC	DC.PYM406.18	Condensed Matter Physics-I	3	1	0	11
DC	DC.PYM407.18	Statistical Physics	3	1	0	11
DC	DC.PYM408.18	Electronics	3	0	0	9
DE	DE	Department Elective (DE-1)	3	1/0	0/2	11
DP	DP.PYM492.18	Physics Lab-II (Electronics)	0	0	3	3
DP	DP.PYM493.18	Physics Lab-III (Condensed Matter Physics)	0	0	3	3
Total			15	4/3	6/8	59
Department Elective - (DE-1)						
DE	DE.PYM 411.18	Computational Physics	3	0	2	11
DE	DE.PYM 412.18	Advanced Mathematical Methods	3	1	0	11

Department of Physics : 2-Year M.Sc. III-Semester						
DC	DC.PYM 501.18	Nuclear & Particle Physics	3	1	0	11
DC	DC.PYM 502.18	Atomic & Molecular Physics	3	1	0	11
DE	DE	Department Elective (DE-2)	3	0	0	9
DE	DE	Department Elective (DE-3)	3	0	0	9
DP	DP.PYM 591.18	Physics Lab-IV (Spectroscopy Lab)	0	0	3	3
DP	DP.PYM 592.18	Physics Lab-V (Nuclear Physics Lab)	0	0	3	3
DC	DC.PYM 503.18	Comprehensive Viva	0	0	2	2
DT	DT.PYM 594.18	Thesis	0	0	10	10
		Total	12	2	18	58
Department Elective - DE-2, DE-3 (as applicable)						
DE	DE.PYM 511.18	Group theory and its applications	3	0	0	9
DE	DE.PYM 512.18	Quantum Field theory	3	0	0	9
DE	DE.PYM 541.18	Laser Physics	3	0	0	9
DE	DE.PYM 521.18	Space & Solar Physics	3	0	0	9
DE	DE.PYM 531.18	Condensed Matter Physics-II	3	0	0	9
DE	DE.PYM 542.18	Optics & Photonics	3	0	0	9
DE	DE.PYM 513.18	Nonlinear Dynamics	3	0	0	9
DE	DE.PYM 551.18	Advanced Electronics & Communication	3	0	0	9
DE	DE.PYM 514.18	Phase transition & critical phenomena	3	0	0	9
DE	DE.PYM 515.18	Quantum Information Theory	3	0	0	9
Department of Physics: 2-Year M.Sc. IV-Semester						
DE	DE	Department Elective (DE-4)	3	0	0	9
DE	DE	Department Elective (DE-5)	3	0	0	9
DE	DE	Department Elective (DE-6)	3	0	0	9
DT	DT.PYM 595.18	Thesis	0	0	30	30
		Total	9	0	30	57
Department Elective - DE-4, DE-5 & DE-6 (as applicable)						
DE	DE.PYM516.18	General Theory of Relativity and Cosmology	3	0	0	9
DE	DE.PYM522.18	High Energy Physics	3	0	0	9
DE	DE.PYM523.18	Astronomy and Astrophysics	3	0	0	9
DE	DE.PYM524.18	Magnetohydrodynamics	3	0	0	9
DE	DE.PYM517.18	Simulation Methods in Statistical Physics	3	0	0	9
DE	DE.PYM532.18	Advanced Condensed Matter Physics	3	0	0	9
DE	DE.PYM533.18	Nanomaterials	3	0	0	9
DE	DE.PYM534.18	Materials & Characterization techniques	3	0	0	9
DE	DE.PYM543.18	Fibre & Integrated Optics	3	0	0	9
DE	DE.PYM544.18	PBG & Meta-materials	3	0	0	9
DE	DE.PYM535.18	Renewable Energy Sources	3	0	0	9
DE	DE.PYM552.18	Microwave Remote Sensing	3	0	0	9
DE	DE.PYM553.18	Satellite Image Processing	3	0	0	9
DE	DE.PYM536.18	Biophysics	3	0	0	9
DE	DE.PYM525.18	Atmospheric Physics and Environment Science	3	0	0	9

DE	DE.PYM526.18	Introduction to Planetary Physics	3	0	0	9
DE	DE.PYM527.18	Advanced Nuclear Physics	3	0	0	9
DE	DE.PYM518.18	Experimental Aspects of Quantum Information	3	0	0	9
L: Lecture hours; T: Tutorial hours; P: Laboratory/ Practical hours; C: Credits						