M.Sc. (Physics) curriculum followed for 2016-2018 batches

Semester- wise structure of the programme

First Semester

Sl.No.	Course No.	Course Name	L	T	P	Credit
1	PHY 6021	Classical Mechanics	-	-	0	4
2	PHY 6031	Advanced Electronics	4	0	0	4
3	PHY 6011	Mathematical Physics	4	0	0	4
4	PHY 6041	Quantum Mechanics-I	4	0	0	4
5	PHY 6051	Laboratory -I	0	0	6	6
6	CSE 104	Computer Programming C	3	0	0	3
7		Open Electives from other departments	3	0	0	3
8	PHY 6061	Seminar	--	--	--	2
9		Total Credit				30

Second Semester

Sl.No.	Course No.	Course Name	L	T	P	Credit
1	PHY 6032	Electrodynamics and electromagnetics theory	4	0	0	4
2	PHY 6042	Quantum Mechanics-II	4	0	0	4
3	PHY 6012	Advanced Thermodynamics and statistical mechanics	4	0	0	4
4	PHY 6022	Condensed Matter Physics-I	4	0	0	4
5	PHY 3012	Computational Physics	4	0	0	4
6	PHY 6052	Laboratory -I I	0	0	6	6
7		Open Electives from other departments	3	0	0	3
8	PHY 6062	Seminar	--	--	--	2
9		Total Credit				31

Third Semester

Sl.No.	Course No.	Course Name	L	T	P	Credit
1	PHY 7011	Atomic and Molecular Physics	4	0	0	4
2	PHY 7021	Nuclear and Particle Physics	4	0	0	4
3	PHY 7031	Condensed Matter Physics-II	4	0	0	4
4	PHY7041 / PHY7071	Module (A) Group Theory OR Module (B) Introduction to Material Science and Engineering	4	0	0	4
5	PHY7051/ PHY7081	Module(A) Advanced Computational Physics OR Module (B) Experimental Techniques for Material Characterization	4	0	0	4

6	PHY 7091	Module (A) Laboratory-III OR Module B Elective-I	--	--	--	4
7	PHY 7111	Major Project	-	-	-	3
8	PHY 7121	Seminar	--	--	--	2
9		Total Credit				29

Fourth Semester

Sl.No.	Course No.	Course Name	L	T	P	Credit
1	PHY 7012	Applied Optics	4	0	0	4
2		Module(A) Elective I OR Module(B) Elective II	4	0	0	4
3		Module(A) Elective II OR Module(B) course III	4	0	0	4
4	PHY 7062	Laboratory-IV (Module A) OR Module B Elective IV	--	--	--	4
5	PHY 7111	Major Project	--	--	--	8
6	PHY 7022	General Viva-Voce	--	--	--	3
7		Open Elective	3	0	0	3
8		Total Credit				30

Possible Elective Courses for Module (A)

Sl.No.	Course No.	Course Name	L	T	P	Credit
1	PHY7072	Phase Transitions in Materials	4	0	0	4
2		Organic Electronics and Optoelectronics	4	0	0	4
3		Physics of Semiconductor Devices	4	0	0	4

Possible Elective Courses for Module (B)

Sl.No.	Course No.	Course Name	L	T	P	Credit
1	PHY7061	Nonlinear dynamics and Chaos	4	0	0	4
2	PHY7101	Quantum Computing and Quantum Information	4	0	0	4
3	PHY7032	Introduction to Quantum Field Theory	4	0	0	4
4	PHY7042	Introduction to Quantum Many Body Theory	4	0	0	4
5	PHY7052	Introduction to Special and General Relativity	4	0	0	4
6	PHY7082	Introduction to Molecular Modelling and Simulation	4	0	0	4
7	PHY7092	Physical Cosmology	4	0	0	4