M. Sc. Physics Curriculum, 2025-27

Semester -I					
Sl. No.	Category	Course Title	L	T	P
1	Core Course 1	Mathematical Physics and Computational Programming-I	3	1	1
2	Core Course 2	Classical Mechanics	3	1	0
3	Core Course 3	Quantum Mechanics-I	3	1	0
4	Core Course 4	Condensed Matter Physics	3	0	0
5	Core Course 5	Nuclear and Particle Physics	3	1	0
6	University Core Course	Professional Communication	0	0	2
		Total			

Semester -II					
Sl. No.	Category	Course Title	L	T	P
1	Core Course 6	Mathematical Physics and Computational Programming-II	3	1	1
2	Core Course 7	Quantum Mechanics-II	3	1	0
3	Core Course 8	Digital Systems and Microprocessor	3	0	1
4	Elective -I	Elective -I	3	1	0
5	Elective-II	Elective-II	-	-	-
		Total			

Semester –III					
Sl. No.	Category	Course Title	L	T	P
1	Core Course 9	Electrodynamics	3	1	0
2	Core Course 10	Statistical Mechanics	3	1	0
3	Core Course 11	Atomic and Molecular Physics	3	1	1
4	Core Course 12	Fundamentals of Quantum Computing	3	1	0
5	Elective-III	Elective-III	-	-	-
6	University Core Course	Research Methodology, innovation and IPR	4	0	0
		Total			

Semester -IV					
Sl. No.	Category	Course Title	L	T	P
1	Research Project	Dissertation	0	0	0
		Total			

List of Elective I					
S.No.	Category	Course Title	L	T	P
1	Elective 1	Semiconductor Fabrication	3	1	0
2	Elective 1	Optical waveguide and optoelectronic devices	3	1	0

3	Elective 1	Solid State Electronics	3	1	0
4	Elective 1	Nanomaterials and Applications	3	1	0
List of Elective II					
S.No.	Category	Course Title	L	T	P
1	Elective 2	Advanced Nuclear Physics	3	1	0
2	Elective 2	Astrophysics and Cosmology	3	1	0
3	Elective 2	Battery & Fuel Cell Systems	3	1	0
4	Elective 2	Microwaves and Antenna Propagation	3	1	0
List of Elective III					
Sl No.	Category	Course Title	L	T	P
1	Elective 3	Nanoelectronics and Quantum Devices	3	1	0
2	Elective 3	Computational Methods and Materials Simulation	2	0	2
3	Elective 3	Solar Materials & Fabrication	3	1	0
4	Elective 3	Harvesting and Self-powered Devices	3	1	0
5	Elective 3	Smart Optical and Thermal Materials	3	1	0
6	Elective 3	Astronomical Observations and Coordinate Systems	3	1	0

C
5
4
4
3
4
2
22
C
5
4
4
4
4
21
C
4
4
5
4
4
4
25
C
12
12
C
4
4

4
4
C
4
4
4
4
C
4
4
4
4
4
4