

Department of Physics

Details of Institute Core (IC) Courses

Institute Core (IC) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	PHI101	Physics	3-0-0	Theory
2	PHI102	Physics Lab	0-0-2	Practical

Details of Departmental Compulsary (DC) Courses

Departmental Compulsary (DC) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	PHC200	Waves and Acoustics	3-0-0	Theory
2	PHC201	Classical Mechanics	3-0-0	Theory
3	PHC202	Mathematical Physics	3-0-0	Theory
4	PHC203	Mechanics Lab	0-0-2	Practical
5	PHC204	Waves and Acoustics Lab	0-0-2	Practical
6	PHC205	Introduction to Quantum Mechanics	3-0-0	Theory
7	PHC206	Applied Optics	3-0-0	Theory
8	PHC207	Nuclear Science and Engineering	3-0-0	Theory
9	PHC208	Electrodynamics	3-0-0	Theory
10	PHC209	Optics Lab	0-0-2	Practical
11	PHC210	Electricity and Magnetism Lab	0-0-2	Practical
12	PHC300	Thermal Physics Lab	0-0-2	Practical
13	PHC301	Electronics Lab	0-0-2	Practical
14	PHC302	Solid State Physics	3-0-0	Theory
15	PHC303	Applied Optics Lab	0-0-2	Practical
16	PHC304	Spectroscopy Lab	0-0-2	Practical
17	PHC401	Project - I	0-0-0	Non-Contact
18	PHC402	Project - II	0-0-0	Non-Contact
19	PHC501	Classical Mechanics and Special Theory of Relativity	3-1-0	Theory
20	PHC502	Methods of Mathematical Physics	3-1-0	Theory
21	PHC503	Optics and Optical Instrumentation	3-0-0	Theory
22	PHC504	Electronics	3-0-0	Theory
23	PHC505	Numerical Methods and Computer Programming	3-0-0	Theory
24	PHC506	Experimental Physics - I	0-0-2	Practical
25	PHC507	Experimental Physics - II	0-0-2	Practical
26	PHC508	Quantum Mechanics	3-1-0	Theory
27	PHC509	Electrodynamics and Radiation theory	3-0-0	Theory
28	PHC510	Atomic and Molecular Physics	3-1-0	Theory
29	PHC511	Condensed Matter Physics	3-0-0	Theory
30	PHC512	Experimental Physics - III	0-0-2	Practical
31	PHC513	Experimental Physics - IV	0-0-2	Practical
32	PHC514	Statistical Mechanics	3-1-0	Theory
33	PHC515	Laser Physics and Technology	3-0-0	Theory
34	PHC516	Nuclear and Particle Physics	3-0-0	Theory
35	PHC517	Computation and Simulation	0-0-2	Practical
36	PHC518	Experimental Physics - V	0-0-2	Practical
37	PHC571	Research Methodology and Statistics	3-0-0	Theory
38	PHC572	Theoretical Physics	3-0-0	Theory
39	PHC573	Experimental Physics	3-0-0	Theory
40	PHC574	Numerical Methods and Simulation	3-0-0	Theory
41	PHC575	Physics of Phase Transformations	3-0-0	Theory
42	PHC597	Thesis	0-0-0 (36)	Non-Contact
43	PHC598	Thesis	0-0-0 (18)	Non-Contact
44	PHC599	Thesis	0-0-0 (S/X)	Audit
45	PHS401	Internship	0-0-0 (S/X)	Audit

Details of Engineering Science Option (ESO) Courses

Engineering Science Option (ESO) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	PHE200	Biomedical Engineering	3-0-0	Theory
2	PHE202	Material Science and Engineering	3-0-0	Theory

Details of Departmental Elective (DE) Courses

Departmental Elective (DE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	PHD400	Photonics & Optoelectronics	3-0-0	Theory
2	PHD401	Optical Fiber Communication	3-0-0	Theory
3	PHD501	Advanced Quantum Mechanics	3-0-0	Theory
4	PHD502	Computational Physics	3-0-0	Theory
5	PHD503	High Energy Physics	3-0-0	Theory
6	PHD504	Biophysics	3-0-0	Theory
7	PHD505	Thin Film and Vacuum Technology	3-0-0	Theory
8	PHD506	Characterization Techniques	3-0-0	Theory
9	PHD507	Plasma and Space Physics	3-0-0	Theory
10	PHD508	Fibre Optics and Applications	3-0-0	Theory
11	PHD509	Advanced Condensed Matter Physics	3-0-0	Theory
12	PHD510	Quantum Computation and Information	3-0-0	Theory
13	PHD511	Astrophysics and Cosmology	3-0-0	Theory
14	PHD512	Nonlinear Optics	3-0-0	Theory
15	PHD513	Semiconductor Physics & Technology	3-0-0	Theory
16	PHD514	Ultrafast Optical Science and Technology	3-0-0	Theory
17	PHD515	Nuclear Astrophysics	3-0-0	Theory
18	PHD571	Advanced Mathematical Methods in Physics	3-0-0	Theory
19	PHD572	Laser and Nonlinear Optics	3-0-0	Theory
20	PHD573	Physics of Semiconducting Materials and Devices	3-0-0	Theory
21	PHD574	Advanced Materials and Energy Devices	3-0-0	Theory

Details of Open Elective (OE) Courses

Open Elective (OE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	PHO300	Sensors and Transducers	3-0-0	Theory
2	PHO301	Low Temperature Physics & Superconductivity	3-0-0	Theory
3	PHO302	Introduction to Astrophysics and Astronomy	3-0-0	Theory
4	PHO303	Physics for Society	3-0-0	Theory
5	PHO400	Nanoelectronics and Nanophotonics	3-0-0	Theory
6	PHO401	Introduction to Quantum Devices	3-0-0	Theory
7	PHO403	Energy Storage Technologies	3-0-0	Theory
9	PHO502	Introduction to Biophysics	3-0-0	Theory
10	PHO503	Physics of Nanomaterials	3-0-0	Theory
11	PHO504	Optoelectronic Materials and Devices	3-0-0	Theory
12	PHO505	Quantum Physics	3-0-0	Theory
13	PHO571	Materials Characterization	3-0-0	Theory
14	PHO572	Photonics and Fibre Optics	3-0-0	Theory