

**School of Physics**  
**Course list-Vasanth 2024**

Sl. No.	Course Code	Course Name	Assigned Faculty Name (s)
1.	PHY121	Electromagnetism (4 credits)	Prof. Anil Shaji, Prof. Joy Mitra
2.	PHY221	Thermal and Statistical Physics	Dr. Sreedhar Dutta, Dr. Arun Mathew Thomas
3.	PHY122	Experiments in Optics, Electricity and Magnetism (1 credit)	Prof. Ramesh C. Nath
4.	PHY222	Experiments in Heat and Thermodynamics	Dr. Deepshikha Jaiswal-Nagar
5.	PHY/MSP321/PHY3210	Statistical Mechanics	Dr. Souvik Paul
	PHY321ab	Introduction to Statistical Mechanics (2 credits) (Minor)	Dr. Souvik Paul
6.	PHY/MSP322/PHY3220	Condensed Matter Physics I (Minor)	Dr. Tuhin S. Maity
7.	PHY/MSP323/PHY3240	Electrodynamics & Special Theory of Relativity	Dr. Soumen Basak
8.	PHY325/3250/MSP325	Advanced Physics Experiments II (Elective for i2P 3rd yr. students)	Dr. Bikas C. Das
9.	PHY421/4210/PHY6210/I2P 421	Numerical Methods (I2P421 for i2P 6 <sup>th</sup> sem students)	Dr. D. V. Senthilkumar
10.	PHY422/4220/6220	Atomic & Molecular Physics	Dr. Krishnendu Gope
11.	PHY 4204/6204	Nonlinear optics and Photonics (Elective 6th/8th sem)	Dr. Rajeev Kini
12.	PHY4206/6206	Astrophysics (Elective 6th/8th Semester)	Dr. Shabnam Iyanni
13.	PHY4218/6218	Nonlinear Dynamics (Elective 6th/8th sem)	Prof. G. Ambika
14.	PHY/AOE4222	Introduction to Atmospheric Science (Elective 6th/8th sem)	Dr. Anand Narayan Sarma
15.	PHY4219/6219/I2P321	Electrochemical Energy Systems (Core for i2P, Elective 6th/8th sem)	Prof. M. M. Shaijumon
16.	I2C421	Soft Matter & Polymers (For i2P 6 <sup>th</sup> semester students)	Coordinator: Prof. Kana M. Sureshan
17.	I2P422/PHY4235	Optoelectronic Devices (Core for i2P, Elective 8th sem)	Prof. Manoj Namboothiry Dr. Ravi Pant
18.	I2P423	Device Technology	Prof. Manoj Namboothiry Dr. Ravi Pant
19.	I2P424/PHY4236	Thermal Transport & Thermoelectrics (Elective 8th sem)	Dr. Vinayak B Kamble

20.	I2P425	Finite Element Modelling	Dr. Pramitha M
21.	I2P522/PHY4238	Machine Learning for Physical Sciences (Core for i2P, Elective 8th sem)	Dr. Chandrakala Meena
22.	PHY620	Research methodology (Only for Ph.D.)	Dr. Deepshikha Jaiswal-Nagar
23.	MSP/PHY326	Seminar (IPhD/MSc/BS MS)	Dr. Bikas C Das
24.	PHY4211/6211/AOE4211	Materials Growth and Processing Techniques (OE, Elective 8th sem)	Dr. S. Kumargurubaran
25.	PHY4217/6217	Quantum Information Theory (Elective 6 <sup>th</sup> /8th sem)	Dr. Debashis Saha
26.	PHY5101/6101/i2P5101/ AOE5101	Digital Image Processing (OE, Elective 8th sem)	Dr. Suhesh Kumar Singh
27.	PHY5209/6209	Particle Physics (Elective 8th Semester)	Dr. Tanumoy Mandal
28.	PHY5229/6229	Quantum Many-body Theory (Elective 8th sem)	TBA
29.	PHY5213/6213	Quantum Field Theory I (Elective 8th sem)	Dr. Bindusar Sahoo
30.	PHY5215/6215	Quantum transport (Elective 8th sem)	Dr. Madhu Thalakulam
31.	PHY5231/6231	Solar Physics (Elective 8th sem)	Dr. Nitin Yadav
32.	I2P4202	Energy Materials Laboratory (1 credit) (Elective for i2P students)	TBA
33.	I2P4203	Battery & Fuel Cell Laboratory (1 credit) (Elective for i2P students)	TBA
34.	I2P4204	Organic Photovoltaic Devices Laboratory (1 credit) (Elective for i2P students)	TBA

\* TBA-To be announced