

SoP courses: Vasantha 2026

	First year			Second year		
	Code	Course details		Code	Course details	
	Course code	Course Name Course structure		Course code	Course Name Course structure	
	PHY 121	Electromagnetism (NEP) 3104 Dr. Tuhin S Maity		PHY 301	Mathematical Methods I (NEP) 3103 Dr. Dipankar Roy	
	PHY 122	Experiments in Optics, Electricity and Magnetism (NEP) 0031 Dr. Suhesh Kumar Singh		PHY 313	Electronics (Minor for 2nd year students) (NEP) 3003 Dr. Bikas C Das	
				PHY 314	Quantum Mechanics I 3003 (Minor for 2nd year) Dr. Anil Shaji	
				PHY 317	Mechanics - II 3003 Dr. Soumen Basak	
				PHY 315	Advanced Physics Lab I 0093 Dr. Ravi Pant	

Third year			
Code	Course details	Other information	
Course code	Course Name Course structure	Mention if Minor	
PHY 321/ MSP 421/PHY3210	Statistical Mechanics 3003 Dr. Souvik Paul	Minor (3 credits)	
PHY 321ab	Introduction to Statistical Mechanics 3002 Dr. Souvik Paul	Minor (2 credits)	
PHY402/MSP402/ PHY602	Classical Electrodynamics 3003 Prof. Suraj Hegde		
PHY401/MSP401/ PHY601	Electrodynamics 3003 Dr. Abhimanyu Susobhanan	Elective for i2P 3rd yr. students	
PHY 415 / MSP 415/ PHY4150	Advanced Physics Lab III 0093 Dr. Deepshikha Jaiswal Nagar	Elective for i2P 3rd yr. students	

PHY 4205/PHY6205/ MSP 429	Electronic Devices and computer interfacing (minor) 3003 Dr. Vinayak Kamble	Minor (3 credits) for 3rd year BS MS and IPhD 2nd yr	
PHY4110/ PHY6110/ I2P411	Experimental Methods 3003 Dr. S. Kumaragurubharan	Core for I2P Elective for BSMS Minor	
PHY 403/MSP403	Mathematical Methods II 3003 Dr. Sreedhar Dutta		
PHY 404/MSP404	Quantum Mechanics III 3003 Dr. Tanumoy Mandal		
PHY 5132/PHY 6132/ AOE 5132	Statistics and Data Analysis in Physical Sciences 3003 Dr. Shabnam Iyyani	Open elective/DSE	
PHY 4120/PHY6120/I2P 412	Semiconductor Physics and Technology 3 0 0 3 Prof. Joy Mitra	Core for I2P Elective for BSMS PHY Major	

Fourth year			
Code	Course details	Other information	
Course code	Course Name Course structure	Mention if Minor/Open-elective	
PHY421/PHY4210/ PHY6210/	Computational Techniques and Programming Languages (Non NEP) 3 0 0 3 Dr. Solingyur Zimik Kachui	4th year BSMS core (Non-NEP)	
PHY 422/ PHY 622/ I2P/ MSP 422	Atomic & Molecular Physcs (Non NEP) 3 0 0 3 Dr. Krishnendu Gope	4th year BSMS core (Non-NEP) (Elective for I2P students)	
PHY5212/PHY6212	Quantum Field Theory I (Non NEP) 3 0 0 3 Dr. Bindusar Sahoo		
I2P522/ PHY4238	Machine Learning for Physical Sciences (Non-NEP) 2 0 1 3 Prof. Deepak Mishra	Core for I2P (4th yr)	
I2P423	Device Technology (Non-NEP) 0 0 9 3 Dr. Manoj Namboothiry	Core for I2P (4th yr)	

I2P425 / PHY 4237	Finite Element Modelling 2 0 3 3 Dr. Amal Medhi	Core for I2P (4th yr-Non NEP) Core for I2P (3rd yr-NEP)	
PHY4218/ PHY6218	Nonlinear Dynamics (Non-NEP) 3 0 0 3 Dr. Senthilkumar DV		
PHY5209/PHY6209	Particle Physics 3 0 0 3 Dr. Mathew Arun Thomas		
PHY5123/PHY6123	Nanoscale Physics 3 0 0 3 Dr. M. M. Shajumon	(Elective for i2P 4th yr students)	
PHY5235/PHY6235	Magnetism & Magnetic Materials 3 0 0 3 Dr. Ramesh C Nath		
PHY4204/PHY6204	Nonlinear Optics and Photonics 3 0 0 3 Dr. Rajeev N Kini		

I2P422	Optoelectronic Devices 3 0 0 3 Dr. Madhu Thalakulam	Core for I2P (4th yr) Elective for BSMS PHY Major	
I2P424	Thermal Transport and Thermoelectrics 3 0 0 3 Dr. Biju R. Sekhar	Core for I2P (4th yr) Elective for BSMS PHY Major	
PHY 5127/ PHY 6127	Fluid Dynamics 3 0 0 3 Dr. Sreedhar Dutta	(Elective for i2P 4th yr and PhD/IPhD)	
PHY5237/PHY6237	Soft Condensed Matter Physics 3 0 0 3 Dr. Tanmoy Sarkar	(Elective for i2P 4th yr and BSMS 4th year students and PhD/IPhD)	
I2P4202	Energy Materials Laboratory (1 credit) Dr. Vinayak Kamble	(Elective for i2P students) Time tabling not required	
I2P4203	Battery & Fuel Cell Laboratory (1 credit) Dr. M. M. Shaijumon	(Elective for i2P students) Time tabling not required	
I2P4204	Organic Photovoltaic Devices Laboratory (1 credit) Dr. Manoj Namboothiry	(Elective for i2P students) Time tabling not required	

