Lecture Plan B.Sc. 1st year (27July2024 onwards)

Mechanics PHYS101TH

Units	Contents	Week wise Distribution	Remarks
Unit I	Ordinary Differential equations	I1st week of August Tutorial : Assignment	Expect to complete 90% syllabus by lastweek of September
	Co-ordinate systems and motion of particle	2nd week of August Tutorial : Assignment	
	Space time symmetry and conservation laws	3rd &4th week of August Tutorial : Assignment	
	Frames of reference	1st week of September Tutorial: Class test	
Unit II	Gravitation and inverse square law	2nd &3rd week of September Tutorial : Assignment	
Unit III	Rotation motion and kinematics of elastic and Inelastic collisions	4th week of September Tutorial : Class Test	
Unit IV	Special theory of relativity and effects of relativity	1st&2nd week of October Tutorial : Ppt Presentation	

Lecture Plan B.Sc. 1st year (27July2024 onwards)

Electricity, Magnetism and EMT
PHYS102TH

Units	Contents	Week wise Distribution	Remarks
Unit I	Vector Analysis	3rd week of October Tutorial : Assignment	Expect to complete 90% syllabus by last week of December
	Electrostatics	4th week of October Tutorial : Class Test	
	Electric Current and Fields of Moving charges	1st week of November Tutorial : Assignment	
Unit II	Magnetism	2nd&3rd week of November Tutorial : Seminar	
	Field of Moving Charges		
	Surface current density	4th week November	
Unit III	Electrostatic Fields in Dielectrics	1st week of December	
	Magnetic Fields in Matter	2nd week of December Tutorial : Class Test	
Unit IV	Maxwell`s equations and Electromagnetic wave propagation	3rd&4th week of December Tutorial : Ppt Presentation	

Note:-Month of February is reserved for revision of entire syllabus

Lecture Plan B.Sc. 2nd year (27July2024 onwards)

Statistical and thermal physics
PHYS201TH

Units	Contents	Week wise Distribution	Remarks
Unit I	Basic Ideas of Statistical Physics	I1st week of August Tutorial : Assignment	Expect to complete 90% syllabus by last 2nd week of October
	Distribution of Particles in Compartments	2nd week of August Tutorial : Assignment	
Unit II	Types of Statistics in Physics	3rd &4th week of August Tutorial : Assignment	
	Bose Einstein and Fermi Dirac Statistics	1st &2nd week of September Tutorial : Assignment	
Unit III	Entropy and Laws of Thermodynamics	3rd &4th week of September Tutorial: Class test	
	Statistical Interpretation of entropy		
Unit IV	Maxwell`s equations and Electromagnetic wave propagation	1st & 2nd week of October Tutorial: Assignment	
	Applications of thermodynamics relations		

Lecture Plan B.Sc. 2nd year (July-2024)

Wave and Optics
PHYS202TH

Units	Contents	Week wise Distribution	Remarks
Unit I	Simple harmonic motion	3rd week of October Tutorial : Assignment	Expect to complete 90% syllabus by last week of December
	Damped SHM		
Unit II	The Forced Oscillator	4thweek of October Tutorial : Seminar	
	Coupled Oscillators		
	Wave Motion	1st week of November Tutorial : Assignment	
Unit III	Wave Optics Interference	2nd & 3rd week of November Tutorial : Class Test	
Unit IV	Diffraction	4th week of November Tutorial : Assignment	
	Polarization	1st week of December Tutorial : Assignment	

Note:-Month of February is reserved for revision of entire syllabus

Lecture Plan B.Sc.3rd year (July-2024)

Solid state physics and electronics
PHYS302TH

Units	Contents	Week wise Distribution	Remarks
Unit I	Crystal Structure and Crystal Bonding	Ist week of August Tutorial : Assignment	Expect to complete 90% syllabus by last week of October
	Elementary Lattice Dynamics	2nd & 3rd week of August Tutorial : Class Test	
Unit II	Free electron theory of metals	4th week of August Tutorial : Seminar	
	Band Theory of Metals	1st & 2nd week of September Tutorial : Seminar	
	Superconductivity	3rd week of September Tutorial : Class Test	
Unit III	Junction diodes	4th week of September Tutorial : Class Test	
	Transistors	1st& 2nd week of October Tutorial : Class Test	
Unit IV	Amplifiers	3rd week of October	
	Oscillators	Tutorial : Ppt Presentation	

Lecture Plan B.Sc.3rd year (July-2024)

Quantum Mechanics
PHYS305TH

Units	Contents	Week wise Distribution	Remarks
Unit I	Time dependent Schrodinger equation	4th week of October Tutorial : Assignment	Expect to complete 90% syllabus by last week of December
	Time independent Schrodinger equation	1st week of November Tutorial : Class test	
Unit II	General discussion of bound states in an arbitrary potential	2nd &3rd week of November Tutorial : Seminar	
Unit III	Quantum theory of hydrogen-like atoms	4th week of November Tutorial : Class Test	
	Atoms in Electric and Magnetic Fields	1st week of December Tutorial : Class Test	
Unit IV	Atoms in External Magnetic Fields	Rest of December	
	Many electron atoms	Tutorial : Ppt Presentation	

Note:-Month of February is reserved for revision of entire syllabus

Lecture Plan B.Sc.2nd year (July-2024)

Computational Physics SEC1
PHYS204TH

Contents	Month wise Distribution	Remarks
Introduction, Scientific Programming	August month Tutorial:- Assignments and writing, debugging and running program on computer	Expect to complete 90% syllabus by last week of December
Control Statements		
Programming		
Scientific word processing: Introduction to LaTeX	September Month Tutorial:- Assignments and writing, debugging and running program on computer	
Introduction to electronic spreadsheet	1st &2nd week of October Tutorial : Class Test Assignments and hands on practice on computer	
Visualization	3rd &4th week of October Tutorial : Class Test Assignments and hands on practice on computer	

Lecture Plan B.Sc.2nd year (July-2024)

Electrical circuits and network skill exams
PHYS205TH

Contents	Week wise Distribution	Remarks
Basic Electricity Principles	Ist week of November Tutorial : Assignment	Expect to complete 90% syllabus by last week of December
Understanding Electrical Circuits	2nd week of November Tutorial : Assignment	
Electrical Drawing and Symbols	3rd week of November Tutorial : Seminar	
Generators and Transformers	4th week of November Tutorial : Assignment	
Electric Motors	1st week of December Tutorial : Assignment	
Solid-State Devices	2nd week of December Tutorial : Class Test	
Electrical Protection	3rd week of December Tutorial : Assignment	
Electrical Wiring	4th week of December Tutorial : Assignment	

Note:-Month of February is reserved for revision of entire syllabus

Lecture Plan B.Sc.3rd year (July-2024)

Radiation Safety SEC3
PHYS307TH

Contents	Week wise Distribution	Remarks
Basics of Atomic and Nuclear Physics	1st week of August Tutorial : Assignment	Expect to complete 90% syllabus by last week of September
Interaction of Radiation with matter: Types of Radiation	2nd week of August Tutorial : Assignment	
Interaction of Charged Particles	3rd &4th week of August Tutorial : Assignment	
Radiation detection and monitoring devices: Radiation Quantities and Units	1st &2nd week of September Tutorial: Assignment	
Radiation safety management	3rd week of September Tutorial :Class test	
Application of nuclear techniques	4th week of September Tutorial : Assignment	

Lecture Plan B.Sc.3rd year (July-2024)

Renewable energy and energy harvesting SEC4

PHYS307TH

Contents	Week wise Distribution	Remarks
Fossil fuels and Alternate Sources of energy	Ist week of October Tutorial : Assignment	Expect to complete 100% syllabus by last week of December
Solar energy	2nd week of October Tutorial : Assignment	
Wind Energy harvesting	3rd week of October Tutorial : Seminar	
Ocean Energy	4th week of October Tutorial : Class test	
Hydro Energy	1st week of November Tutorial : Assignment	
Piezoelectric Energy harvesting	1st week of November Tutorial : Class Test	
Electromagnetic Energy Harvesting	1st week of November Tutorial : Assignment	

Note:-Month of February is reserved for revision of entire syllabus