

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2026-27) ODD SEMESTER

Name of Teacher: Aashi Mittal

Designation: Assistant Professor

Subject: Physics

Class: B.Sc.(Physical Sciences) 1st Sem

Months	Topics to be covered
August	Fundamentals of Dynamics: Rigid body, Moment of Inertia, Radius of Gyration, Theorems of perpendicular and parallel axis (with proof), *Moment of Inertia of ring, Disc, Angular Disc, Solid cylinder, Solid sphere, Hollow sphere, Rectangular plate, Square plate, Torque, Rotational Kinetic Energy, Angular momentum, Law of conservation of angular momentum, Rolling motion, condition for pure rolling, acceleration of body rolling down an inclined plane, Fly wheel, Moment of Inertia of an irregular body.
September	Elasticity: Deforming force, Elastic limit, stress, strain and their types, Hooks law, Module of elasticity Relation between shear angle and angle of twist, elastic energy stored/volume in an elastic body, Elongation produced in heavy rod due to its own weight and elastic potential energy stored in it, Poisson's ratio and its limiting value, Relation between Young modulus, Bulk modulus and Poisson ratio. Derive the Relation between Young's modulus, Bulk modulus and Modulus of rigidity. Torque required for twisting cylinder, Bending of beam, bending moment and its magnitude, Bending of cantilever (loaded by a weight W at its free end).
October	Special Theory of Relativity: Michelson's Morley experiments and its outcome, Postulate of special theory of relativity, Lorentz Transformation, Simultaneity and order of events, Lorentz contraction, Time dilation, Relativistic transformation of velocity, relativistic addition of velocities, variation of mass-energy equivalence. MID TERM EXAM
November	Gravitation and central force motion: Law of gravitation, Potential and field due to spherical shell and solid sphere. Motion of a particle under central force field, Two body problem and its reduction to one body problem and its solution, determination of g by means of bar pendulum, Normal coordinates and normal modes, Normal modes of vibration for given spring Assignment ,Revision and doubt class

Aashi

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2026-27) ODD SEMESTER

Name of Teacher: Ms. Aashi Mittal

Designation: Assistant Professor

Subject: Physics

Class: B.Sc-I(Major in Physics)

Months	Topics to be covered
August	Matrices: Normal Matrices, Orthogonal Matrices, Hermitian Matrices, Unitary Matrices, Symmetric and Anti-symmetric Matrices, Conjugate of A & Matrix, Anti-hermitian Matrices, Trace of Matrix, Eigen value, eigen vectors of Matrices, Diagonalization of Matrices, Theory of Errors: Systematic and Random errors, Propagation of errors, Normal law of errors, Standard and Probable error, error on slope and intercept of fitted line.
September	Differential Equations: First order differential equations of degree one and those reducible to this form, Method of separation of variables, Homogeneous Different: Equations, Linear Differential Equations, Exact and Inexact equations, Integrating Factor, Applications to physics problems, Linear Differential Equations of Second Order with constant Coefficients rating mass on a spring, Current in RC & LC Circuit
October	Vector Algebra: Properties of vectors, Scalar product and vector product, Scalar triple product and their interpretation in terms of area and volume respectively. Scalar and Vector fields. Vector Calculus: Vector Differentiation: Directional derivatives and formal derivative, Gradient of a scalar field and its geometrical interpretation. Divergence and curl of a vector field. Del and Laplacian operator MID TERM EXAM
November	Fourier series and Integrals: Introduction, Evaluation of coefficients of Fourier series, cosine series, sine series, Dirichlet's theorem, Graph representation of Even and odd functions, Extension of interval, complex form of Fourier series, Properties of Fourier series: Convergence, integration, Differentiation, Parseval's theorem, Physical applications of Fourier series analysis, square wave, Half wave rectifier, Full wave rectifier, A sawtooth wave, A triangular wave, Fourier Integrals, Starting with the Fourier series, deduction of expressions for the Fourier Transform inverse.

Aashi

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2026-27) ODD SEMESTER

Name of Teacher: Aashi Mittal

Designation: Assistant Professor

Subject: Physics

Class: Minor Physics- 1st Sem

Months	Topics to be covered
August	Fundamentals of Dynamics: Rigid body, Moment of Inertia, Radius of Gyration, Theorems of perpendicular and parallel axis (with proof). Moment of Inertia of ring. Disc, Solid Sphere.
September	Elasticity: Deforming force, Elastic limit, stress, strain and their types, Hooks law, Module of elasticity Relation between shear angle and angle of twist, Poisson's ratio and its limiting value
October	Special Theory of Relativity: Galilean Transformation, Michelson's Morley experiments and its outcome, Postulate of special theory of relativity, Lorentz Transformation, Lorentz contraction, Time dilation MID TERM EXAM
November	Gravitation and central force motion: Law of gravitation, Motion of a Particle under Central Force Field. Kepler's Laws for planetary motion (Statements Only). Assignment, Revision and Doubt Class

Aashi

Lesson Plan

Ms. Priyanka

Course: Thermodynamics and Statistical Physics

Extension Lecturer(Physics)

3rd Sem B.Sc. (PS) 2026

August	Laws of Thermodynamics: Thermodynamic Description of system: Zeroth Law of thermodynamics. First law of thermodynamics and internal energy, conversion of heat into work, Various Thermodynamical Processes, Applications of First Law: Work Done during Isothermal and Adiabatic Processes, Compressibility, and Expansion Coefficient, Reversible and irreversible processes, Second law of thermodynamics, Entropy, Carnot's cycle & Carnot's theorem. Entropy changes in reversible and irreversible processes, Entropy-temperature diagrams, Third law of thermodynamics, Unattainability of absolute zero.
September	Thermodynamic Potentials: Enthalpy, Gibbs, Helmholtz and Internal Energy functions, Maxwell's relations and applications Joule-Thompson Effect, Clausius- Clapeyron Equation, Expression for (C_p/C_v) , C_p/C_v , TdS equations.
October	Basics idea of probability. Priori probability, Statistical probability, permutation and combination, distinguishable and indistinguishable particles Distribution of N (for $N = 2, 3, 4$) distinguishable and indistinguishable particles in two boxes of equal size, microstates and macrostates, thermodynamical probability, constraints and accessible states, statistical fluctuations, entropy and probability: Concept of phase space, division of phase space into cells, postulates of statistical mechanics; Classical and quantum statistics, basic approach to these statistics, Maxwell-Boltzmann statistics applied to an ideal gas in equilibrium-energy distribution law, Maxwell's distribution of speed & velocity (derivation required), most probable speed, average and r.m.s. speed, mean energy for Maxwellian distribution.
November	Need of Quantum statistics- classical versus quantum statistics, Bose-Einstein energy distribution Law, Application of B. E. Statistics to Planck's radiation law, Fermi-Dirac energy distribution Law, Fermi energy and Fermi temperature: F. D. energy distribution Law for electron gas in metals, zero point energy, average speed (at 0 K) of electron gas

Lesson Plan

Ms. Priyanka

Extension Lecturer(Physics)

Course: Thermodynamics

3rd Sem B.Sc. (Physics Minor) 2026

August	Thermodynamic Description of system: Zeroth Law of thermodynamics and temperature. First law and internal energy, conversion of heat into work, Various Thermodynamical Processes, Applications of First Law: Work Done during Isothermal and Adiabatic Processes, Compressibility and Expansion Coefficient, Reversible and irreversible processes. Second law, Entropy, Carnot's cycle & theorem, Entropy changes in reversible and irreversible processes, Entropy-temperature diagrams, Third law of thermodynamics, Unattainability of absolute zero.
September	Enthalpy, Gibbs, Helmholtz and Internal Energy functions, Maxwell's relations and applications Joule-Thompson Effect, Clausius Clapeyron Equation, Expression for $(C_P - C_V)$, C_P/C_V , TdS equations.
October	Assumption of Kinetic theory of gases, pressure of an ideal gas (with 11 derivation), Kinetic interpretation of Temperature, Ideal Gas equation, Degree of freedom, Law of equipartition of energy and its application for specific heat of gases, Real gases, Vander wall's equation, Brownian motion(Qualitative).
November	Maxwell's distribution of speed and velocities (derivation required). Experimental verification of Maxwell's law of speed distribution: most probable speed, average and r.m.s. speed, Mean free path, Transport of energy and momentum, Diffusion of gases.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2026-27) ODD SEMESTER

Name of Teacher: Dr. Manju Sharma **Subject:** Classical Mechanics, MCC-5 (B23PHY303)
Designation: Assistant Professor **Class:** B.Sc. Major (Physics) (3rd Sem)

Months	Units/Topics to be covered	Remarks if any,
August	Unit- I INTRODUCTORY IDEAS OF CLASSICAL MECHANICS Newton's Laws of Motion, Space-time reference system; Mechanics single particle-Conservation Laws of linear momentum, Angular moment and mechanical energy, Mechanics of a system of particles- Concept external and internal forces, concept of centre of mass and centre of mass frame of reference, Conservation laws of linear momentum, Angular momentum and mechanical energy, relation between angular momentum and angular momentum about the Centre of Mass.	Videos of the related topics will be shown on smart board. Class Test/Quiz shall be conducted after the completion of the unit.
September	Unit-2: LAGRANGIAN DYNAMICS Basics concepts about coordinate system, Degrees of freedom; Constraints Their classification, properties and examples; Generalized coordinates, Transformation equations, Generalized Displacement, Velocity, Acceleration, Momentum, Force and Potential; Principle of Virtual Work & D'Alembert's Principle, Lagrange's equations of motion from D'Alembert's Principle; Concept of symmetry-Homogeneity and isotropy. Problems using Lagrange's equation of motion: spring mass system, Atwood's machine, simple pendulum	
October	Unit- 3 HAMILTONIAN DYNAMICS Generalized Momentum, Cyclic or ignorable coordinates, Integrals of motion, Conservation Theorem, Hamilton's Function and Hamilton's equations of motion, Properties of Hamiltonian and Hamilton's equations of motion; Hamilton's equation in different coordinate system. Formation of Hamiltonian and Hamilton's equation of motion-for-Linear Harmonic oscillator, Atwood's machine, simple pendulum.	
November	Unit-4: MOTION UNDER CENTRAL FORCE Definition and properties of the central force, two body central force problem-reduction to equivalent one body problem (Lagrangian and Lagrange equations of motion), differential equation for an orbit, general features of the orbit, stability of the orbit under central force and conditions for closed orbits Inverse square law Kepler's law of planetary motion and their derivation.	

*Vacation as per university calendar

- Assignment and unit test will be taken as per schedule.

16/8

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2026-27) ODD SEMESTER

Name of Teacher: **A. ANKITA**

Subject: Modern Physics, CC-5, MCC-9 (B23PHY501)

Designation: **Ext. Lect.**

Class: B.Sc. Physical Science & Major(Physics) (5th Sem)

Months	Units/Topics to be covered	Remarks if any,
August	Unit-1 Introductory Quantum Mechanics: Need of Quantum Mechanics, Planck's quantum hypothesis and Black body Radiation (Qualitative only), photoelectric effect, Compton effect, de-Broglie hypothesis, de-Broglie wave, wave packet, phase and group velocities, Time-dependent and time-independent Schrodinger equations, Properties of wave function, particle confined in a one-dimensional infinite box: energy eigen functions and eigenvalues. Heisenberg's Uncertainty Principle (Qualitative Idea)	Videos of the related topics will be shown on smart board. * Class Test/Quiz shall be conducted after the completion of the unit.
September	Unit-2: Solid State Physics: Crystalline state, crystal lattice, basis, lattice translation vectors, primitive and non-primitive unit cells, Bravais lattices in two and three dimensions, Miller Indices, crystallographic planes, interplanar spacing, simple crystal structures: NaCl, diffraction of waves by crystals, Bragg's law, Idea of Reciprocal Lattice	
October	Unit-3 Atomic and Molecular Physics: Bohr model, Sommerfeld theory (qualitative), Larmor's theorem (qualitative), Vector Atom Model, electron spin, space quantization, spin-orbit Interaction energy, LS and JJ coupling, Zeeman effect, Lande's g-factor.	
November	Unit-4: Nuclear and Particle Physics: Composition of nucleus, stability of nucleus, nuclear properties, nuclear size, spin, parity, magnetic moment, quadrupole moment, binding energy of nucleus, Semi-empirical Mass formula, classification of fundamental particles, Quark and Lepton, Hadrons, Baryons, Mesons, different types of nuclear interactions.	* Class Test/Quiz

*Vacation as per university calendar

- Assignment and unit test will be taken as per schedule.

Ankita

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2026-27) ODD SEMESTER

Name of Teacher: Dr. Manju Sharma **Subject:** Nuclear Physics, MCC-10 (B23PHY502)
Designation: Assistant Professor **Class:** B.Sc. Major (Physics) (5th Sem)

Months	Units/Topics to be covered	Remarks if any,
August	Unit-1 Nuclear structure and general Properties of Nuclei: Constituents of Nucleus; Nuclear composition (p-e and p-n hypotheses), Nuclear properties; Nuclear size, spin, parity, statistics, magnetic dipole moment, Electric quadruple moment (shape concept). Nuclear mass and its determination by Bain-Bridge, Bain-Bridge and Jordan mass spectrograph. Nuclear charge and its determination by Moseley Law. Determination of size of nucleus by Rutherford Back Scattering. Binding energy, Average binding energy and its variation with mass number, main features of binding energy versus mass number curve, systematic of nuclear binding energy, nuclear stability, stability region.	Videos of the related topics will be shown on smart board. Class Test/Quiz shall be conducted after the completion of the unit.
September	Unit-2: Nuclear Radiation decay Processes & Nuclear Radiation Interaction • Nuclear Radiation decay Processes: Alpha, beta, and gamma decay, including energetics, quantum mechanical explanations, spectral properties, and the neutrino hypothesis. * Nuclear Radiation Interaction: Interaction mechanisms of heavy/light charged particles and gamma rays, including energy loss, range/straggling, Geiger-Nuttall law, photoelectric/Compton effects, pair production, and mass attenuation.	
October	Unit- Nuclear Accelerators: Linear accelerators: Principle, construction, theory, working and types. Tandem accelerator; Principle, construction, working, advantages and limitations. Cyclotron: Principle, construction, theory, working and its limitations. Betatron: condition, Principle, construction, theory, working and comparison with a transformer. Nuclear Radiation Detectors: Gas filled detectors; Ionization chamber, proportional counter, G.M. Counter (detailed study), Basic principle of organic and inorganic Scintillation detectors for γ and electron radiation, photomultiplier tube and Semiconductor Detector (Basic idea)..	
November	Unit-4: Nuclear Reactions: Nuclear reactions, Elastic and Inelastic scattering, Nuclear disintegration, photonuclear reaction, radiative capture, direct reaction, heavy ion reactions and spallation reactions, conservation laws, Q-value and reaction threshold. Nuclear Reactors: Nuclear Reactors, General aspects of reactors, Nuclear fission and fusion reactors, (Principle, construction, working and applications).	

*Vacation as per university calendar

- Assignment and unit test will be taken as per schedule.

16/11

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2026-27) ODD SEMESTER

Name of Teacher: Ms. Ankita
Designation: Extension Lecturer

Subject: DSE 2
Class: B.Sc. Major(Physics) (5th Sem)

Months	Units/Topics to be covered
August	Basic atmospheric physics: Introduction to the Atmosphere, Composition and Structure: Description of Air, Stratification of Mass, Thermal and Dynamical Structure, Trace Constituent. Concept of Albedo, solar constant, Heat budget of the earth atmospheric system. Atmospheric thermodynamics: Air (excluding and including water), Water paths, Ideal gas law, Atmospheric composition, Hydrostatic balance, Constant vertical gradient of temperature, Conservation of energy (dry case, moist case), Entropy and potential temperature, Parcel concepts, lapse rate (dry and moist adiabatic), tephigram, Cloud formation
September	Environmental physics: Definition, Physics in the environment: Human environment, Built environment, Urban environment, Global environment, Biological environment. Human environment: Introduction, Laws of Thermodynamics, Energy and metabolism, Thermodynamics laws and the human body, Second Law of Thermodynamics and the Gibbs free energy, Conduction, Convection, Radiation, Evaporation, Energy budget equation, Survival in the cold, Thermal comfort and insulation, Boundary layer Wind chill, Hypothermia, Survival in hot climates, Effect of heat on the human body. Built Environment: Introduction, Thermal regulation in buildings, Thermal insulation, Thermal conduction effects, Radiation effects, U values, Energy use in buildings, Air regulation in buildings, Ventilation requirements, Ventilation installations, Heat pumps, Water vapour, Humidity, Condensation in buildings.
October	Scope of Environmental Physics: Properties of Gases and Liquids- Gases and Water Vapor, Hydrostatic Equation, First Law of Thermodynamics, and Specific Heats, Latent Heat, Potential Temperature, Water Vapor and its Specification, Vapor Pressure, Dew-Point Temperature, Saturation Vapor Pressure Deficit, Mixing Ratio, Specific and Absolute Humidity, Virtual Temperature, Relative Humidity, Wet- Bulb Temperature. Liquid- Water Content and Potential, Liquid-Air Interfaces, Stable Isotopes
November	Transport of Heat, Mass, and Momentum: Transfer Equation, Molecular Transfer Processes, Momentum and Viscosity, Heat and Thermal Conductivity, Mass Transfer and Diffusivity, Diffusion Coefficients, Diffusion of Particles. Transport of Radiant Energy: Origin and Nature of Radiation- Absorption and Emission of Radiation, Full or Black Body Radiation, Wien's Law, Stefan's Law, Planck's Law, Quantum Unit, Radiative Exchange. Spatial Relations- Cosine Law for Emission and Absorption, Reflection, Radiance and Irradiance, Attenuation of a Parallel Beam.

*Vacation as per university calendar
 Assignment and unit test will be taken as per schedule.

Ankita

LESSON-PLAN (Session 2026-27) ODD SEMESTER

Subject: DSE 3

Class: B.Sc. Major(Physics) (5th Sem)

Months	Units/Topics to be covered
August	Introduction to Renewable Energy: Overview of renewable energy sources, Importance of renewable energy in sustainable development, Comparison between renewable and non-renewable energy sources, Basic principles of energy conversion in renewable energy systems, Environmental and economic benefits of renewable energy.
September	Solar Energy Harvesting: Principles of solar energy conversion, Photovoltaic effect and solar cell technology, Types of solar panels and their efficiency, Solar thermal energy systems: principles and applications, Challenges and advancements in solar energy technology
October	Wind Energy Conversion and Geothermal Energy: Wind energy resources and distribution, Aerodynamics of wind turbine blades, Types of wind turbines and their applications, Power generation from wind energy, Wind energy integration into the electrical grid, Geothermal Energy and its sources, Geothermal power plants, its types and operation, Applications of geothermal heat pumps.
November	Biomass and Hydroelectric Energy: Biomass as a renewable energy source, Biomass conversion technologies: combustion, gasification, and anaerobic digestion, Hydroelectric power generation: principles and types of hydroelectric plants, Environmental and social impacts of biomass and hydroelectric energy, Future trends and innovations in biomass and hydroelectric energy.

*Vacation as per university calendar

Assignment and unit test will be taken as per schedule.

Lesson Plan

Ms. Ankita

Extension Lecturer(Physics)

Course: Exploring the journey of Indian Space Satellites

3rd Sem VAC 2026

August	Concept of Satellite, ideas and theories, Concept of Orbits, The transfer orbit, hurdles in launching a satellite, space scarcity in space. Indian space program, Objectives of the Indian Space Program, Organizational set-up.
September	Communication Satellite: Orbit and Description: A brief History of Satellite Communication, Satellite Frequency bands, Satellite Systems, Applications, Orbital Period and Velocity, Effects of Orbital inclination, Azimuth and Elevation, Coverage and Slant range, Eclipse, Orbital perturbations Placement of a Satellite in a Geo-Stationary Orbit
October	Space Centres and institutes, Genesis of Indian's space program, Indian 8 Satellites, Indian Communications satellites and their applications. Classification of Satellites based on Orbit Height. Indian remote sensing satellites, Indian National Satellites
November	Launch vehicle technology, Milestones in India's Space Programme.

Ankita

SEC-101 Electrical circuit network skills

Lesson plan- 2026-27

Extension lecturer Priyanka

Class-sec. physics

From 1st day of class 2026 :

Introduction to Electricity and Circuits: Basics of Electricity, Electric charges (positive and negative). Basic Electricity Principles: Voltage, Current, Resistance, and Power, Ohm's law, Series, parallel, and series-parallel combinations, AC Electricity and DC Electricity.

September 2026:

Understanding Electrical Circuits: AC and DC Voltage Sources, Current and voltage drop across the DC circuit elements, Kirchhoff's laws, Instruments to measure current, voltage, Preparation of extension board, Joints in electrical conductors, Techniques of soldering, Electrical Protection: Relays, Fuses and disconnect switches, Circuit breakers, Overload devices, Ground-fault protection, Grounding and isolating, Surge protection.

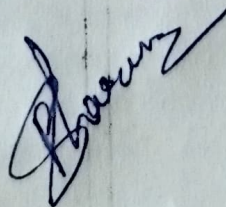
October 2026:

Smart Switches, Wi-fi enabled switches, Smart Bulbs, Ways to make smart home. Estimation of electric load, average electricity bill calculation, Electric Appliances: Fan, Bulb, LEDs, Working of Water Cooler, Working of Air Conditioner

NOVEMBER 2026:

Comparison of Inverter & Non Inverter Air Conditioners, Working of DC & AC Motor, Working of Water Pump, Inverter, Off-grid & on-grid Solar Systems for home, Ways to save electricity.

Note- assignment and Mid-term exam will be taken as per schedule.



P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
Lesson plan session 2026-27

Name of Teacher: Ankita
Designation: Ext. Lecturer
Subject: Physics
Class: Sec 3

Months	Topics to be covered	Remarks if any,
August	UNIT - 1 Basic of Measurements: Instruments accuracy, precision, sensitivity, resolution range etc. Errors in measurements and loading effects, Voltmeter, Ammeter. Multimeter: Principles of measurement of dc voltage and dc current, ac voltage, ac current and resistance. Specifications of a multimeter and their	
September	UNIT - 2 Electrical Instruments: Different types of conductors and cables, Voltage drop and losses across cables and conductors. Insulation. Solid and stranded cable. Resistance, Inductor, Capacitor, Transformer, Basics of wiring-Star and delta connection. Components in Series or in shunt. Response of inductors and capacitors with DC or AC sources	
October	UNIT - 3 Electronic Instruments: PN junction diode, Zenor Diode, LEDs, Solar Cell, Photocell, Soldering of electrical circuits having discrete components (R, L,C, diode) and ICs on PCB. Transistors, Rectifiers. Filter Circuits (Qualitative ideas only).	
November	UNIT - 4 Solar Energy: Solar Energy-Key features, its importance, Merits &demerits of solar energy, Applications of solar energy, Conversion of Solar energy into Electricity - Photovoltaic Effect, photovoltaic cell and its working principle, Different types of Solar cells, Series and parallel connections, Photovoltaic applications: Battery chargers, Load Calculation & Cost Calculation for installing Solar Panels, Domestic electricity, Solar Subsidy Schemes.	

Ankita

MDC - PHYSICS FUNDAMENTAL (1)

Lesson plan- 2026-27
Extension lecturer- Priyanka
Class-1st year (MDCPhysics)

From 1st day of class 2026:

Physics-nature, scope & excitement, major discoveries in physics, major contribution by Indian Physicists, Physics in relation to other sciences, Impact of Physics on society, latest developments in Science and Technology.

System of measuring Units-Need for measurement, measuring process, concept of mass,length, time; Fundamental and derive units, Accuracy and precision in measurement, least count and applications of measuring instruments- Verniercalliper and Screw Gauge.

September 2026:

Motion of objects in one dimension- position of object, origin/reference point, frame of reference, definition and example of motion in one, two and three dimensions, Scalar and Vector quantities description of motion against a straight line- distance and displacement, uniform motion and non-uniform motion, velocity- time graph.

Causes of motion- concept of force, Newton's 1st law of motion, inertia and mass; Newton's 2nd law of motion, momentum and force; 3rd law of motion, daily life applications of Newton's laws of motion.

October 2026:

Universal law of gravitation and its importance, acceleration due to gravity and free fall of a body; mass and weight of an object on earth and moon, concept of thrust and pressure and importance in daily life.

Work, energy, types of energy-Kinetic energy and Potential energy, P.E. of an object at a height

NOVEMBER 2026:

law of conservation of energy and its applications. Conservation of linear and angular momentum, collision (elastic and inelastic) and conservation laws in collisions- importance in daily life.

Note- assignment and Mid-term exam will be taken as per schedule.

Pravaz

Physics Lesson Plan (Session 2026–27)

Extension Lecturer: Priyanka

Paper – MDC 3(elements of modern physics)

From 1st Day of Class (2026)

Basics of semiconductor and semiconductor devices, Atomic structure, energy levels and energy bands, Conductors, semiconductors and insulators, Intrinsic & extrinsic semiconductors (p-type and n-type), P-N junction diode, depletion layer, Forward reverse bias, V-I characteristics, Half-wave and full-wave rectifiers

September 2026

Introduction to LASER, Properties and principle of laser, Light amplification, population inversion and pumping, Working of laser and schematic diagram, Applications of LASER

October 2026

Atomic nucleus, nucleons, isotopes, isobars, isotone, Nuclear binding energy, Liquid drop model, Radioactivity, Alpha, Beta and Gamma decay, Nuclear reactions and types

November 2026

Carbon dating, Nuclear fission and reactor, Applications and hazards of nuclear fission, Nuclear fusion, Source of stellar energy.

Assignment and Mid-term examination will be taken as per schedule.

