

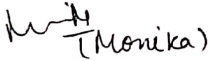
Lesson Plan (2025-26)

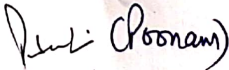
Name of teacher- Monika Dhariwal

Class: B.Sc. II Physical Science- 2nd Sem.

Name of paper-C24PHY201T (Electricity and magnetism)

January 2026 -May 2026	
	Topic Covered (DSC)
Week 1(23 rd Jan to 24 th Jan.)	Gradient of scalar, divergence and curl of vector and their physical significance
Week 2 (27 th Jan to 31 st Jan)	Gauss Divergence Theorem, Stokes Theorem, Electrostatic potential and potential difference
Week 3(2 nd Feb to 7 th Feb)	Laplace and poisson equation , Gauss Law and application of Gauss Law
Week 4(9 th Feb to 14 th Feb)	Biot savart law and its applications, current loop as magnetic dipole, ampere circuital Law and its application
Week 5(16 th Feb to 21 st Feb)	Force on dipole in external field, types of magnetic materials, Magnetization vector, magnetic intensity, susceptibility and permeability
Week 6(23 rd Feb to 28 th Feb)	Relation between B, M, H, .
1 st Mar – 8 th Mar	HOLI VACATIONS
Week 7(9 th Mar-14 th Mar.)	Electronic theory of paramagnetism, hysteresis loop
Week 8 (16 th Mar-21 st Mar.)	Electromagnetic induction, Faraday law of induction and Lenz's law, Self and mutual inductance
Week 9(24 th Mar – 28 th Mar)	Energy stored in magnetic field, Maxwell equation, displacement current
Week 10(30 th Mar – 4 th April)	Electromagnetic waves, transverse nature of EM waves, energy transported by EM waves
Week 11(6 th April –11 th April)	Poyntind vector and pointing theorem, Propagation of EM waves in dielectrics and free space
Week 12(13 th April-18 th April)	Electrical current and current density, Ohms Law, Kirchoff laws, Analysis of RL, RC and LC circuit
Week13 (20 th April-25 th April)	Thevenin theorem, norton theoremand superposition theorem, series and parallel LCR
Week14(27 th April- 3 rd May)	Revision


(Signature of
Subject teacher)


(H.O.D)


12/02/26
(Principal)

Lesson Plan (2025-26)

Name of teacher- **Monika Dhariwal**

Class: **B.Sc. II Physical Science- 2nd Sem.**

Name of paper- **C24VAC119T (Electronic Components and measuring Instruments)**

January 2026 -May 2026	
Topic Covered (MDC)	
Week 1 (29 th Jan to 24 th Jan.)	Resistance, Capacitor and Inductor
Week 2 (27 th Jan to 31 st Jan)	Transformers, Fuses, types of fuses and their application
Week 3 (2 nd Feb to 7 th Feb)	Junction diode, rectifying diodes, forward and reverse bias
Week 4 (9 th Feb to 14 th Feb)	Varactor diode, light emitting diode and photo diode
Week 5 (16 th Feb to 21 st Feb)	Photo transistors, Rectifiers
Week 6 (23 rd Feb to 28 th Feb)	Zener diode and zener diode as voltage regulator
1 st Mar - 8 th Mar	HOLI VACATIONS
Week 7 (9 th Mar-14 th Mar.)	Multimeter, CRO
Week 8 (16 th Mar-21 st Mar.)	Signal generator, frequency counter
Week 9 (24 th Mar - 28 th Mar)	LCR meter, Thermocouple
Week 10 (30 th Mar - 4 th April)	Digital storage oscilloscope, DC Power supply
Week 11 (6 th April - 11 th April)	RF power supply, Network and spectrum Analyser
Week 12 (13 th April-18 th April)	Hall effect meter, Telecommunications test set
Week 13 (20 th April-25 th April)	Thermocouple and temperature sensors
Week 14 (27 th April- 3 rd May)	Revision

Monika (Monika)

(Subject Teacher)

P. S. Verma (P.S. Verma)

(H.O.D.)

P. S. Verma (P. S. Verma)

(Principal)

Lesson Plan (2025-26)

Name of teacher- Monika Dhariwal
 Class: B.A - 2nd Sem.
 Name of paper-C24MDDC223T (Fundamentals of Physics II)

January 2026 - May 2026	
	Topic Covered (VAC)
Week 1 (24 th Jan to 24 th Jan.)	Light nature and properties
Week 2 (27 th Jan to 31 st Jan)	Reflection of light- types of reflection and their importance in daily life
Week 3 (2 nd Feb to 7 th Feb)	Laws of reflection, multiple reflection by mirror and their application
Week 4 (9 th Feb to 14 th Feb)	Refraction of light, refraction through Prism
Week 5 (16 th Feb to 21 st Feb)	Formation of rainbow, twinkling of stars, advance sunrise and delayed sunset
Week 6 (23 rd Feb to 28 th Feb)	Scattering of light and blue color of sky
1 st Mar - 8 th Mar	HOLI VACATIONS
Week 7 (9 th Mar-14 th Mar.)	Total internal reflection and its application
Week 8 (16 th Mar-21 st Mar.)	Electric charge, frictional electricity and electricity by conduction and electric current
Week 9 (24 th Mar - 28 th Mar)	Conductors and insulators, Ohms law
Week 10 (30 th Mar - 4 th April)	Electric potential and potential difference
Week 11 (6 th April - 11 th April)	Series and parallel combination of resistance
Week 12 (13 th April-18 th April)	Electrical wiring in house and electrical safety (fuse, hot wir, neutral, ground and short circuit)
Week 13 (20 th April-25 th April)	Electrical power and power transmission, Heating effect of current
Week 14 (27 th April- 3 rd May)	Revision

Monika
 (Monika)
 (Subject teacher)

P. S. Panam
 (H.O.D)

[Signature]
 12/02/26
 (Principal)

Lesson Plan (2025-26) Even Semester

Name of Professor: Ms. Poonam Devi

Class: B.Sc. II Physical Science- 4th Sem.

Subject: Discipline Specific Course-II

Name of paper-C24PHY401T Optics

January 2026 -April 2026	
	Topic Covered
Week 1(6 th Jan to 10 th jan)	Interference: Division of amplitude and division of wave front,
Week 2(12 th Jan to 17 th Jan)	Young's Double Slit experiment, Fresnel's Biprism,
Week 3(19 th Jan to 24 th Jan.)	Phase change on reflection: Stokes' treatment.
Week 4 (27 th Jan to 31 st Jan)	Interference in Thin Films: parallel and wedge-shaped films
Week 5(2 nd Feb to 7 th Feb)	Newton's Rings: measurement of wavelength and refractive index (for reflected wave).
Week 6(9 th Feb to 14 th Feb)	Diffraction: Fresnel Diffraction: Fresnel's Assumptions,
Week 7(16 th Feb to 21 st Feb)	Fresnel's Half-Period Zones for Plane Wave, Rectilinear Propagation of Light,
Week 8(23 rd Feb to 28 th Feb)	Theory of a Zone Plate and its application, Multiple Foci of a Zone Plate, UNIT TEST & ASSIGNMENT
1 st Mar – 8 th Mar	HOLI VACATIONS
Week 9(9 th Mar-14 th Mar.)	Fraunhofer diffraction: Single slit, Double slit multiple slits and 'n' multiple slits,
Week 10 (16 th Mar–21 st Mar.)	Diffraction grating (Only Qualitative), Resolving power of Grating, Rayleigh Criteria of the limit of resolution and Resolving Power of a telescope.
Week 11(24 th Mar – 28 th Mar)	Polarization: Polarization by reflection, refraction and scattering, Malus Law,
Week I (30 th Mar – 4 th April)	Phenomenon of double refraction, Analysis of polarized Light. Nicol prism, Quarter wave plate and half wave plate,
Week 13(6 th April –11 th April)	production and detection of (i) Plane polarized light (ii) Circularly polarized light and (iii) Elliptically polarized light
Week 14(13 th April-18 th April)	Optical activity, Fresnel's theory of optical rotation, Specific rotation. Fiber Optics: Optical Fibers - Construction and working
Week 15 (20 th April-25 th April)	Critical angle of propagation, Acceptance angle, Numerical Aperture, Modes of propagation, Types of optical fibers,
Week 16 (27 th April- 30 th April)	Attenuation. Advantages and applications of Optical Fiber.
	Revision

Poonam Devi
Subject teacher.

[Signature]
PRINCIPAL
12/02/26

Lesson Plan (2025-26)

Name of Professor: Ms. Poonam Devi
 Class: B.Sc. II Life Science- 4th Sem. Minor Course)
 Name of paper-C24VOC433T Introduction to Optics
 Lesson Plan: 6th January to 30th April 2026

Class: B.Sc. I Life Science- 2nd Sem.
 Name of paper-C24MIC233T Fundamental of Electronics- II
 Lesson Plan: 27th January to 30th April 2026

January 2026 -April 2026	
Topic Covered	Topic Covered
Week 1(6 th Jan to 10 th Jan)	Interference:Division of amplitude & division of wave front
Week 2(12 th Jan to 17 th Jan)	Young's Double Slit experiment, Interference in Thin Films: parallel and wedge-shaped films
Week 3(19 th Jan to 24 th Jan.)	Newton's Rings: measurement of wavelength
Week 4 (27 th Jan to 31 st Jan)	Diffraction: Fresnel Diffraction: Fresnel's Assumptions,
Week 5(2 nd Feb to 7 th Feb)	Fresnel's halfperiod zones for plate wave, Fraunhofer diffraction: single slit
Week 6(9 th Feb to 14 th Feb)	Double slit multiple slits & 'n' multiple slits diffraction grating(only Qualitative)
Week 7(16 th Feb to 21 st Feb)	Resolving power of Grating, Rayleigh Criteria of the limit of resolution and Resolving Power of a telescope.
Week 8 (23 rd Feb to 28 th Feb)	Polarization: Polarization by reflection, UNIT TEST & ASSIGNMENT
1 st Mar – 8 th Mar	HOLI VACATIONS
Week 9(9 th Mar-14 th Mar.)	refraction & scattering, Malus Law, Analysis of polarized Light: Nicol prism,
Week 10 (16 th Mar-21 st Mar.)	Quarter wave plate & half wave plate, production & detection of (i)Plane polarized light
Week 11(24 th Mar – 28 th Mar)	(ii)Circularly polarized light & (iii)Elliptically polarized light specific rotation
Week 1 (30 th Mar – 4 th April)	Fibre Optics: Optical fibers-Construction & working
Week 13(6 th April –11 th April)	Critical angle of propagation, Acceptance angle, Numerical Aperture,
Week 14(13 th April-18 th April)	Modes of propagation ,types of optical fibers, Attenuation
Week 15 (20 th April-25 th April)	Advantages and applications of Optical Fiber.
Week 16 (27 th April- 30 th April)	Revision

Poonam Devi

Subject Teacher.


 27/02/26
 PRINCIPAL

Lesson Plan Even Semester 2025 -26

Name: Dr. Kavita

Subject: Physics

Class: B.Sc III Non medical & Non Medical with Computer Science

Papers : Solid State Physics & Quantum Mechanics

Month: January 2026

Week 1: Winter Holiday

Week 2: Wave function and its physical significance, Properties of wave function, Orthogonality and Normalisation of wave function, Time dependent Schrodinger wave equation.

Crystalline and glassy forms, liquid crystals, Crystal structure, Productivity, lattice and bases.

Week 3: Time independent Schrodinger equation, Momentum and Energy Operators, Hermitian Operators, Eigenvalue and Eigen functions, Commutator relations of various operators.

Crystal translational vectors and axes, Unit cell and Primitive cell, Wigner Seitz primitive cell

Week 4: Stationary States, Probability and Normalisation, Probability current density and its relation to wave function, Expectation values of dynamical quantities.

Symmetry operations for two dimensional crystal, Bravais lattices in two and three dimensions, crystal planes and Miller indices, Interplaner spacing.

Week 5: Particle in one dimensional infinite square well (Energy levels and general wave fun.)

Crystal structure of zinc sulphide, silicon, sodium chloride and Diamond .

Month: February 2026

Week 1: Application of Schrodinger Wave Equation: Solution of Schrodinger Equation for the Finite Potential Well.

X-ray diffraction, Bragg's Law and experimental X-ray diffraction methods, K-space and reciprocal lattices and its physical significance, reciprocal lattice vectors.

Week 2: One Dimensional Harmonic Oscillator Problem - Algebraic and Analytic solutions, Free particle and concept of group velocity, Tunneling through finite potential barrier.

Reciprocal lattice to a simple cubic lattice, BCC and FCC.

Week 3: Examples of Alpha decay and tunnel diodes (qualitative only) Generalised uncertainty principles for Position - Momentum and Energy.

Phonon concept, vibration of monoatomic and diatomic lattice.

Week 4: Larmor Precession Spectroscopic Terms and their notation, Selection rule, Orbital magnetic dipole moment (Bohr magneton).

Test 1

Acoustical and optical modes, Dispersion relation for phonons. Dulong and Petit's Law, Einstein and Debye theory of specific heat of solids, Debye T³ law.

Week 5: Coupling scheme LS or RS coupling scheme and JJ coupling scheme, Pauli principal, Hyperfine structure of spectral lines and its origin, isotopic effect

Assignment 1

Free electron gas models, Nearly free electron model, Bloch function .

Month: March 2026

Week 1: Holidays

Week 2: Atom in external magnetic field, Normal Zeeman effect

Kronig Penny model, Velocity and Effective mass of electron, Distinction between metals, semiconductors and insulators, Hall effect.

Week 3: Rotational spectra of diatomic molecules as rigid rotator, energy levels, Rotational spectra of diatomic molecules as non rigid rotator

Test 2

Dia-, Para-, Ferromagnetic materials

Week 4: Intensity of rotational lines, Vibrational spectra, vibration – Rotational, Raman and electronic spectra of molecules

Assignment 2

classical language theory of dia and paramagnetic domains, Curie's Law

Week 5: Vibrational energy of diatomic molecules, Molecules as Harmonic Oscillator.

Historical introduction, Survey of superconductivity, Superconducting systems, High temperature superconductors, isotopic effect.

Month: April 2026

Week 1: Revision of unit 1

critical magnetic field, Meissner effect, London theory and Penetration depth, classification of superconductor (type 1 and type 2), BCS theory of superconductivity, Flux quantization, Josephson effect (AC and DC), Practical applications of superconductivity and their limitations.

Week 2: Revision of Syllabus

Week 3: Revision of Syllabus

Week 4: Revision of Syllabus

Kavita
(Dr. Kavita)

Pooja Poonam
HOD

Su
12/02/26
Principal
& CW Inian

Lesson Plan (2025-26)

Even Semester

Name of Teacher- Dr. Kavita

Class: B.A - 2nd Sem. & B.Com 2nd Sem

Name of paper-C24MDC223T(Fundamentals of Physics II)

January 2026 -May 2026

January 2026

	Topic Covered
Week 4(19 th Jan to 24 th Jan.)	Electric charge, frictional electricity and electricity by conduction and electric current
Week 5 (27 th Jan to 31 st Jan)	Conductors and insulators, Ohms law

February 2026

Week 1 (2 nd Feb to 7 th Feb)	Electric potential and potential difference
Week 2 (9 th Feb to 14 th Feb)	Series and parallel combination of resistance
Week 3 (16 th Feb to 21 st Feb)	Electrical wiring in house and electrical safety (fuse, hot wire, neutral, ground and short circuit)
Week 4 (23 rd Feb to 28 th Feb)	Electrical power and power transmission, Heating effect of current

March 2026


Week 1 (1 st Mar – 8 th Mar)	Holi Vacation
Week 2 (9 th Mar-14 th Mar.)	Light nature and properties
Week 3 (16 th Mar-21 st Mar.)	Reflection of light- types of reflection and their importance in daily life
Week 4 (24 th Mar – 28 th Mar)	Laws of reflection, multiple reflection by mirror and their application
Week 5 (30 th Mar – 4 th April)	Refraction of light, refraction through Prism

April 2026

Week 1 (6 th April –11 th April)	Formation of rainbow, twinkling of stars, advance sunrise and delayed sunset
Week 2 (13 th April-18 th April)	Scattering of light and blue color of sky
Week 3 (20 th April-25 th April)	Total internal reflection and its application
Week4 (27 th April- 3 rd May)	Revision of Syllabus

Kavita
(Dr. Kavita)

P. S. (Poman)
HOD Physics


12/02/26
Principal.
GCU Hisar