

Lesson Plan Format 2019-2020 (Even semester)

Name of Assistant Professor: Dr. Samiksha Verma

Class: B.SC II (Sem-IV) Non-Med (1-3)

Subject: Physics, Paper II (Wave and Optics PH-402)

Week	Date	Topic
1	1 Jan 2020	Unit-I (Wave and Optics, PH-402) Chapter I: Introduction: Polarization
2	6 Jan 2020	Polarization by reflection,
	7 Jan 2020	Polarization by refraction and scattering
	8 Jan 2020	Malus law
3	13 Jan 2020	phenomenon of double refraction
	14 Jan 2020	Calcite Crystal, Analysis of polarized light,
	15 Jan 2020	Nicol prism
4	20 Jan 2020	Huygen's wave theory of double refraction (Normal)
	21 Jan 2020	Huygen's wave theory of double refraction (oblique incidence)
	22 Jan 2020	Quarter wave plate and half wave plate Production
5	27 Jan 2020	Production and detection of plane polarized light
	28 Jan 2020	Production and detection of circularly polarized light
	29 Jan 2020	Production and detection of elliptical polarized light
6	3 Feb 2020	Revision & Numerical Problems
	4 Feb 2020	Class Test Unit I (PH-402)
	5 Feb 2020	Chapter II: Introduction: Polarimetry
7	10 Feb 2020	Optical rotation, Fresnel's theory of optical rotation
	11 Feb 2020	Fresnel's theory of optical rotation, Specific rotation
	12 Feb 2020	Half shade polarimeter
8	17 Feb 2020	Biquartz Polarimeter
	18 Feb 2020	I st Assignment, Revision & Numerical Problems
	19 Feb 2020	Unit-III (PH-402) Chapter II: Geometrical optics I : Matrix methods in paraxial optics,
9	24 Feb 2020	Effects of translation and refraction
	25 Feb 2020	Derivation of thin lens and thick lens formulae,
	26 Feb 2020	Unit plane, nodal plane, System of thin lenses
10	2 March 2020	Unit-IV (PH-402) Chapter I: Geometrical optics II : Chromatic,
	3 March 2020	spherical, coma, Astigmatism and distortion aberrations and their remedies
	4 March 2020	Class test of Geometrical Optics
11	9 March 2020	HOLIDAYS
	10 March 2020	
	11 March 2020	
12	16 March 2020	Unit-IV (PH-402) Chapter II: Introduction: Optical fiber, Critical angle of propagation, Mode of propagation, Acceptance angle Fractional refractive index change

	17 March 2020	Numerical aperture, Types of optical fiber, Normalized frequency,
	18 March 2020	Pulse dispersion, Attenuation, Applications, fiber optic communication, advantages
13	23 March 2020	Class Test Unit IV Chapter II (PH-402)
	24 March 2020	Unit-II (PH-402) Fourier theorem and Fourier series, Evaluation of fourier coefficients,
	25 March 2020	importance and limitations of Fourier theorem
14	30 March 2020	Even and odd functions,
	31 March 2020	Fourier series of functions $f(x)$ between (i) 0 to two pie (ii) pie to pie
	1 April 2020	Fourier series of functions $f(x)$ between (iii)0 to pie (iv)-L to L, Complex form of fourier series,
15	6 April 2020	<i>Holiday (Mahavir Jayanti)</i>
	7 April 2020	Application of fourier theorem for analysis of complex waves for triangular waves,
	8 April 2020	Application of fourier theorem for analysis of complex waves for rectangular waves
16	13 April 2020	Half and full wave rectifier outputs, Parseval identity for fourier series, fourier integrals
	14 April 2020	<i>HOLIDAY (Ambedkar Jayanti)</i>
	15 April 2020	Class Test Unit II (PH-402)
17	20 April 2020	Unit-III (PH-402) Chapter I: Fourier transforms and properties,
	21 April 2020	Application of fourier transform (i) for evaluation of intergrals
	22 April 2020	Application of fourier transform (ii) for solution of ordinary differential equations
18	27 April 2020	Application of fourier transform (i) for evaluation of functions $f(x)$, $X < a$
	28 April 2020	(ii) for evaluation of functions $f(x)$, $X > a$, Revision & Numerical Problems
	29 April 2020	Class test Unit-III (PH-402) Chapter I, Revision
19	4 May 2020	Examinations

SIGNATURE OF TEACHER

SIGNATURE OF PRINCIPAL