

Shahid Matangini Hazra Government General Degree College for Women
NEP Lesson Plan for the academic session 2023-2024(even Semester)

Department: **PHYSICS**

Semester: Second

B.Sc. Single Discipline Honours

(Major 2 & SEC)

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Parna Roy	UNIT – I: Preliminary Classical Mechanics	Introduction	20.06.2024	05	60
		Dynamics of a system of particles		05	
		Rotating frame of reference		04	
		Motion under central forces		10	
		. Scattering		02	
		Mechanics of Continuum		06	
Mahadeb Pal	UNIT – II: Basic Electricity & Magnetism	Electric Field and Electric Potential	20.06.2024	08	60
		Electrostatic energy& Capacitor		04	
		Method of Images		03	
		Dielectric Properties of Matter		04	
		Lorentz force		03	
		Magnetic Field		06	
		Magnetic Properties of Matter		03	
Sayan Bag	Basic Instrumentation (SEC)	Basic ideas of measurement	20.06.2024	03	45 (Theory + Practical)
		Resistances		03	
		Analog and digital voltmeter and ammeter		10	
		Digital multimeter		04	
		Introduction to electrical household wiring		25	

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Department: **PHYSICS**

Semester: Second

B.Sc. Single Discipline Honours

Minor-2

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Mahadeb Pal	Part-1 Thermal Physics	Thermodynamic Description of system	20.06.2024	15	45
		Thermodynamic Potentials		10	
		Kinetic Theory of Gases		07	
Piyasi Biswas	Part-2 Statistical Mechanics	Theory of Radiation		06	
		Phase space, Macrostate and Microstate		01	
		Entropy and Thermodynamic probability		02	
		Maxwell-Boltzmann law		02	
		Quantum statistics		02	

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Department: **PHYSICS**

Semester: Second

B.Sc. Multi Discipline Honours

Major-A2 and SEC

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Mahadeb Pal	Part-1 Thermal Physics (Major -A2)	Thermodynamic Description of system	20.06.2024	15	45
		Thermodynamic Potentials		10	
		Kinetic Theory of Gases		07	
Piyasi Bisawas	Part-2 Statistical Mechanics (Major -A2)	Theory of Radiation		06	
		Phase space, Macrostate and Microstate		01	
		Entropy and Thermodynamic probability		02	
		Maxwell-Boltzmann law		02	
		Quantum statistics		02	
Sayan Bag	Basic Instrumentation (SEC)	Basic ideas of measurement		20.06.2024	
		Resistances	03		
		Analog and digital voltmeter and ammeter	10		
		Digital multimeter	04		
		Introduction to electrical household wiring	25		

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Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2023-2024(Even Semester)

Department: **PHYSICS**

Semester: Fourth

B.Sc. Honours

Core Course (CC)

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Sayan Bag	Mathematical Physics III (C8T)	Complex Analysis	01.03.2024	16	64
		Integrals Transforms		18	
		Matrices		15	
		Eigen-values and Eigenvectors		15	
Parna Roy	Elements of Modern Physics (C9T)	Plank Quantum theory		16	64
		Position Measurement		15	
		Quantum Mechanics		17	
		Radioactivity		16	
Mahadeb Pal	Analog Systems and Applications (C10T)	Semiconductor Diodes		9	64
		Two-terminal Devices and their Applications		15	
		Bipolar Junction transistors		15	
		Field Effect transistors		10	
		Amplifiers	15		

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Lesson Plan for the academic session 2023-2024(Even Semester)

Department: **PHYSICS**

Semester: Fourth

B.Sc. Honours

Skill Enhancement Course (SEC)

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Piyasi Biswas	Basic Instrumentation Skills (SEC2T)	Basic of Measurement	01.03.2024	2	16
		Electronic Voltmeter		2	
		Cathode Ray Oscilloscope		2	
		Signal Generators and Analysis Instruments		3	
		Impedance Bridges & Q-Meters		2	
		Digital Instruments		3	
		Digital Multimeter		2	

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Shahid Matangini Hazra Government General Degree College for Women
Lesson Plan for the academic session 2023-2024(Even Semester)

Department: **PHYSICS**

Semester: Fourth

B.Sc. Honours

Generic Elective (GE)

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Mahadeb Pal	Digital, Analog Circuits and Instrumentation (GE4T)	Digital Circuits	01.03.2024	10	40
		Semiconductor Devices and Amplifiers		12	
Operational Amplifiers (Black Box approach)		08			
Instrumentations		10			
Sayan Bag					

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Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2023-2024(Even Semester)

Department: **PHYSICS**

Semester: Fourth

B.Sc. General

Core Course-DSC

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Piyasi Biswas	Waves and Optics DSC-1D	Superposition of Two Collinear H.O.	01.03.2024	08	64
		Superposition of Two Perpendicular H.O.		08	
		Waves Motion-General		06	
		Fluids		08	
		Sound		06	
Parna Roy	Waves and Optics DSC-1D	Wave Optics		08	
		Michelson's Interferometer		04	
		Diffraction		08	
		Polarization		08	

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Lesson Plan for the academic session 2023-2024(Even Semester)

Department: **PHYSICS**

Semester: Fourth

B.Sc. General

Skill Enhancement Course (SEC)

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Mahadeb Pal	Electrical Circuits and Network Skills (SEC2)	Basic Electricity Principles	01.03.2024	04	32
		Understanding Electrical Circuits		04	
		Electrical Drawing and Symbols		04	
		Generators and Transformers		04	
		Electric Motors		04	
Sayan Bag	Electrical Circuits and Network Skills (SEC2)	Solid-State Devices		04	
		Electrical Protection		04	
		Electrical Wiring		04	

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Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2023-2024(Even Semester)

Department: **PHYSICS**

Semester: Sixth

B.Sc. Honours

Core Course (CC)

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Mahadeb Pal	Electromagnetic Theory (C13)	Maxwell Equations	01.02.2024	08	64
		EM Wave Propagation in Unbounded Media		14	
		EM Wave in Bounded Media		12	
		Polarization of Electromagnetic Waves		12	
		Wave guides		10	
		Optical Fibres		08	
Parna Roy	Statistical Mechanics (C14)	Classical Statistical Mechanics		12	64
		Classical Theory of Radiation		14	
		Quantum Theory of Radiation		14	
		Bose-Einstein Statistics		12	
		Fermi-Dirac Statistics		12	

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Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2023-2024(Even Semester)

Department: **PHYSICS**

Semester: Sixth

B.Sc. Honours

Discipline Specific Elective (DSE)

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Sayan Bag	Communication Electronics DSE-3	Electronic communication	01.02.2024	10	64
		Analog Modulation		12	
		Analog Pulse Modulation		12	
		Digital Pulse Modulation		12	
		Introduction to Communication and Navigation systems		10	
		Mobile Telephony System		08	
Piyasi Biswas	Experimental Techniques DSE-4	Measurements		08	64
		Signals and Systems		10	
		Shielding and Grounding		10	
		Transducers & industrial instrumentation		10	
		Digital Multimeter		06	
		Impedance Bridges and Q-meter		10	
		Vacuum Systems		10	

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Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Mahadeb Pal	Nuclear & Particle Physics SEC-4	General Properties of Nuclei	01.02.2024	02	16
		Nuclear Models		02	
		Radioactivity decay		02	
		Nuclear Reactions		02	
		Interaction of Nuclear Radiation with matter		02	
		Detector for Nuclear Radiations		02	
		Particle Accelerator		02	
		Particle physic		02	

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Lesson Plan for the academic session 2023-2024(Even Semester)

Department: **PHYSICS**

Semester: Sixth

B.Sc. General

Discipline Specific Elective (DSE)

Name of the teacher	Title of the teaching assignment	Dividing the assignment into number of units along with detailed lesson plan as per the university syllabus	Date of commencement of the assignment	Number of classes required to complete each unit	Total number of classes
Piyasi Biswas	Quantum Mechanics DSE-1B	Time dependent Schrodinger equation	01.02.2024	08	36
		Time independent Schrodinger equation		08	
		Atoms in Electric and Magnetic Fields		06	
		Atoms in External Magnetic Fields		08	
		Many electron atoms		06	

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