

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

Department: **PHYSICS**

Semester: First

B.Sc. Single Discipline Honours

(Major 1 & 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 Math. Methods	Vector Analysis	01.09.2023	05	60
		Vector Integration		05	
		Orthogonal Curvilinear Coordinates		04	
		Analytic functions		10	
		Differential Equation		02	
		Partial Differential Equation		06	
Mahadeb Pal	UNIT – II: Introduction to Thermodynamics	Basics of Kinetic Theory	01.09.2023	08	60
		Thermodynamic Description of system		04	
		First law of thermodynamics		03	
		Second Law of Thermodynamics		03	
		Entropy		04	
		Third law of thermodynamics		03	
		Theory of Radiation		06	
Piyasi Biswas	Introduction to Python programming and Graph Plotting (SEC)	Introduction to programming in python	01.09.2023	11	45 (Theory + Practical)
		The python data types		12	
		Problems and Applications		12	
		Introduction of graph plotting		10	

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

Department: **PHYSICS**

Semester: First

B.Sc. Single Discipline Honours

Minor-1

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 Mathematical Physics	Differential equations	01.09.2023	05	45
		Vector Calculus		08	
		Fundamentals of Dynamics		05	
Sayan Bag	Part-2 Mechanics	Gravitation and central force motion		06	
		Rotational Dynamics		06	
		.Motion under central forces		05	
		General properties of matter		10	

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Department: **PHYSICS**

Semester: First

B.Sc. Multi Discipline Honours

Major-A1 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 Mathematical Physics (Major -A1)	Differential equations	01.09.2023	05	45
		Vector Calculus		08	
		Fundamentals of Dynamics		05	
Sayan Bag	Part-2 Mechanics (Major -A1)	Gravitation and central force motion		06	
		Rotational Dynamics		06	
		.Motion under central forces		05	
		General properties of matter		10	
Piyasi Bisawas	Basic Instrumentation (SEC)	Introduction to programming in python	01.09.2023	11	45 (Theory + Practical)
		The python data types		12	
		Problems and Applications		12	
		Introduction of graph plotting		10	

HOD, Dept. of Physics
Shahid Matangini Hazra Govt. General Degree College for Women
Purba Medinipur 721649

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

Department: **PHYSICS**

Semester: Third

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
Piyasi Biswas	Mathematical Physics (C5T)	Fourier Series	13.10.2023	10	64
		Frobenius Method and Special Functions		15	
		Some Special Integrals		9	
		Variational calculus in physics		15	
		Partial Differential Equations		15	
Parna Roy	Thermal Physics (C6T)	Introduction to Thermodynamics	13.10.2023	20	64
		Thermodynamic Potentials		12	
		Maxwell's Thermodynamic Relations		12	
		Kinetic Theory of Gases		20	
Mahadeb Pal	Digital Systems and Applications (C7T)	Integrated Circuits	13.10.2023	10	64
		Digital Circuits		10	
		Boolean algebra		10	
		Data processing circuits		8	
		Circuits		6	
		Timers		5	
		Shiftregisters		7	
		Counters (4 bits)		6	
		Computer Organization		2	

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

Department: **PHYSICS**

Semester: Third

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
Sayan Bag	Electrical Circuits and Network Skills (SEC1T)	Basic Electricity Principles	13.10.2023	2	16
		Understanding Electrical Circuits		2	
		Electrical Drawing and Symbols		2	
		Generators and Transformers		2	
		Electric Motors		2	
		Solid-State Devices		2	
		Electrical Protection		2	
		Electrical Wiring		2	

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

Department: **PHYSICS**

Semester: Third

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
Sayan Bag	Solid State Physics (GE3T)	Crystal Structure	13.10.2023	10	60
		Elementary Lattice Dynamics		10	
		Magnetic Properties of Matter		10	
		Dielectric Properties of Materials		10	
Mahadeb Pal		Elementary band theory		10	
		Superconductivity		08	
				08	

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

Department: **PHYSICS**

Semester: Third

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	Thermal Physics and Statistical Mechanics DSC-1C(CC3)	Thermodynamic Description of system	13.10.2023	12	64
		Thermodynamic Potentials		12	
		Kinetic Theory of Gases		12	
		Theory of Radiation		14	
		Statistical Mechanics		14	

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

Department: **PHYSICS**

Semester: Third

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
Parna Roy	Computational Physics SEC-1T	Introduction	13.10.2023	04	16
		Algorithms and Flowcharts		04	
		Scientific Programming		04	
		Control Statements		04	

13.10.2023

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

Department: **PHYSICS**

Semester: Fifth

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
Parna Roy	Quantum Mechanics and Applications (C11)	Schrodinger equation:	18.09.2023	16	64
		General discussion of bound states in an arbitrary potential		14	
		Quantum theory of hydrogen-like atoms		10	
		Atoms in Electric & Magnetic Fields		08	
		Atoms in External Magnetic Fields		06	
		Many electron atoms		10	
Sayan Bag	Solid State Physics (C12)	Crystal Structure	18.09.2023	10	64
		Elementary Lattice Dynamics		12	
		Magnetic Properties of Matter		12	
		Dielectric Properties of Materials		08	
		Ferro electric Properties of Materials		06	
		Elementary band theory		08	
		Superconductivity		08	

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

Department: **PHYSICS**

Semester: Fifth

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
Mahadeb Pal	Classical Dynamics DSE-1	Classical Mechanics of Point Particles	18.09.2023	20	64
		Small Amplitude Oscillations		10	
		Special Theory of Relativity		24	
		Fluid Dynamics		10	
Piyasi Biswas	Nuclear and Particle Physics DSE-2	General Properties of Nuclei	18.09.2023	08	64
		Nuclear Models		10	
		Radioactivity decay		08	
		Nuclear Reactions		08	
		Interaction of Nuclear Radiation with matter		08	
		Detector for Nuclear Radiations		08	
		Particle Accelerators		06	
		Particle physics		08	

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

Department: **PHYSICS**

Semester: Fifth

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 required to complete the assignment
Piyasi Biswas	Renewable Energy and Energy Harvesting Sec3	Fossil fuels and Alternate Sources of energy	18.09.2023	02	16
		Solar energy		02	
		Wind Energy harvesting		02	
		Ocean Energy		02	
Parna Roy	Renewable Energy and Energy Harvesting Sec3	Geothermal Energy		02	
		Energy:		02	
		Piezoelectric Energy harvesting		02	
		Electromagnetic Energy Harvesting		02	

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Semester: Fifth

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
Mahadeb Pal	Elements of Modern Physics DSE-1A	Planck's quantum	18.09.2023	08	64
		Problems with Rutherford model		08	
		Position measurement		08	
		Two slit interference experiment.		08	
Sayan Bag	Elements of Modern Physics DSE-1A	One Dimensional infinitely Rigid Box		08	
		Size and structure of atomic nucleus and its relation with atomic weight		08	
		Radioactivity		08	
		Fission and fusion		08	

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