

Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2022-2023

Department: **PHYSICS**

Semester: Second

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|------------------------------------|---|--|-----------------------|
| Mahadeb Pal | Electricity and Magnetism (C3T) | Electric Field and Electric Potential | 09 | 64 |
| | | Dielectric Properties of Matter | 09 | |
| | | Magnetic Field | 09 | |
| Parna Roy | Electricity and Magnetism (C3T) | Magnetic Properties of Matter | 09 | |
| | | Electromagnetic Induction | 09 | |
| | | Electrical Circuits | 09 | |
| | | Network theorems | 10 | |
| Sayan Bag | Waves and Optics (C4T) | Superposition of Collinear Harmonic oscillations | 06 | 64 |
| | | Superposition of two perpendicular Harmonic Oscillations | 09 | |
| | | Wave Motion | 09 | |
| | | Velocity of Waves | 06 | |
| | | Superposition of Two Harmonic Waves | 06 | |
| Piyasi Biswas | Waves and Optics (C4T) | Wave Optics | 04 | |
| | | Interference | 09 | |
| | | Interferometer | 08 | |
| | | Diffraction and Holography | 08 | |

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Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2022-2023

Department: **PHYSICS**

Semester: Second

B.Sc. Honours

Generic Elective (GE)

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 | Number of classes required to complete each unit | Total number of classes required to complete the assignment |
|----------------------|---|---|--|---|
| Piyasi Biswas | Thermal Physics and Statistical Mechanics (GE2T) | Laws of Thermodynamics | 10 | 50 |
| | | Thermo dynamical | 08 | |
| Sayan Bag | | Kinetic Theory of Gases | 10 | |
| | | Theory of Radiation | 10 | |
| | | Statistical Mechanics | 12 | |

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Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2022-2023

Department: **PHYSICS**

Semester: Second

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|---|---|--|-----------------------|
| Mahadeb Pal | Electricity and Magnetism DSC-1B (CC2) | Vector Analysis | 10 | 50 |
| | | Electrostatics | 10 | |
| Parna Roy | Electricity and Magnetism DSC-1B (CC2) | Magnetism | 10 | |
| | | Electromagnetic Induction | 10 | |
| | | Maxwell's equations and Electromagnetic wave propagation | 10 | |

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Shahid Matangini Hazra Government General Degree College for Women
Lesson Plan for the academic session 2022-2023

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|--|---|--|-----------------------|
| Sayan Bag | Mathematical Physics III (C8T) | Complex Analysis | 16 | 64 |
| | | Integrals Transforms | 18 | |
| | | Matrices | 15 | |
| | | Eigen-values and Eigenvectors | 15 | |
| Mahadeb Pal | Elements of Modern Physics (C9T) | Plank Quantum theory | 16 | 64 |
| | | Position Measurement | 15 | |
| | | Quantum Mechanics | 17 | |
| | | Radioactivity | 16 | |
| Piyasi Biswas | 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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Shahid Matangini Hazra Government General Degree College for Women
Lesson Plan for the academic session 2022-2023

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|--------------------------------------|---|--|-----------------------|
| Parna Roy | Basic Instrumentation Skills (SEC2T) | Basic of Measurement | 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 2022-2023

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|--|---|--|-----------------------|
| Parna Roy | Digital, Analog Circuits and Instrumentation (GE4T) | Digital Circuits | 10 | 40 |
| | | Semiconductor Devices and Amplifiers | 12 | |
| | | Operational Amplifiers (Black Box approach) | 08 | |
| | | Instrumentations | 10 | |

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Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2022-2023

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|----------------------------------|---|--|-----------------------|
| Sayan Bag | Waves and Optics DSC-1D | Superposition of Two Collinear H.O. | 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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Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2022-2023

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|---|---|--|-----------------------|
| Mahadeb Pal | Electrical Circuits and Network Skills (SEC2) | Basic Electricity Principles | 04 | 32 |
| | | Understanding Electrical Circuits | 04 | |
| | | Electrical Drawing and Symbols | 04 | |
| | | Generators and Transformers | 04 | |
| | | Electric Motors | 04 | |
| Piyasi Biswas | 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 2022-2023

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|----------------------------------|---|--|-----------------------|
| Sayan Bag | Electromagnetic Theory (C13) | Maxwell Equations | 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 2022-2023

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|------------------------------------|---|--|-----------------------|
| Mahadeb Pal | Communication Electronics DSE-3 | Electronic communication | 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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Shahid Matangini Hazra Government General Degree College for Women

Lesson Plan for the academic session 2022-2023

Department: **PHYSICS**

Semester: Sixth

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 | Number of classes required to complete each unit | Total number of class |
|---------------------|-------------------------------------|---|--|-----------------------|
| Mahadeb Pal | Nuclear & Particle Physics SEC-4 | General Properties of Nuclei | 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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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 | Number of classes required to complete each unit | Total number of class |
|---------------------|----------------------------------|---|--|-----------------------|
| Sayan Bag | Quantum Mechanics DSE-1B | Time dependent Schrodinger equation | 08 | 36 |
| | | Time independent Schrodinger equation | 08 | |
| | | Atoms in Electric and Magnetic Fields | 06 | |
| | | Atoms in External Magnetic Fields | 08 | |
| | | Many electron atoms | 06 | |