



## Durgapur Government College

J.N.Avenue,Durgapur,District-PaschimBardhaman,WestBengal,Pin-713214

Website: <https://www.durgapurgovtcollege.ac.in/>

E-mail: [dpggovtcollege@gmail.com](mailto:dpggovtcollege@gmail.com)

Research Laboratory Visits conducted by Departments (Academic Session: 2023-24)

1. September 08, 2023: Research Laboratory Visit to CSIR-Central Mechanical Engineering Research Institute (CMERI), Durgapur: Organizing Department: Physics and Chemistry ; under the DBT STAR COLLEGE SCHEME





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- February 23, 2024, Laboratory Visit to Department of Environmental Science, The University of Burdwan; Organizing Department: Conservation Biology

### Introduction

The laboratory visit was organized for second semester students pursuing Conservation Biology as part of their course curriculum in MSCCONBC206 paper. The primary objective was to explore and gain practical knowledge about sophisticated instruments used in environmental research. The visit took place at the Department of Environmental Science, The University of Burdwan on 23<sup>rd</sup> February 2024.

### Instruments Explored

During the visit, students had the opportunity to observe and learn about the following advanced instruments:

- Spectrophotometer:** Students were introduced to the principles and applications of spectrophotometry. They learned how this instrument measures the absorption or transmission of light by a sample, aiding in quantitative analysis of various environmental parameters.
- Gas Chromatograph (GC):** The GC is a powerful analytical tool for separating and identifying volatile compounds in environmental samples. Students explored its working principles, sample preparation, and data interpretation.
- Scanning Electron Microscope (SEM):** SEM allows high-resolution imaging of surfaces at the nanoscale. Students observed environmental samples, such as soil particles, pollutants, and biological specimens, using SEM.
- Chemical Oxygen Demand (COD) Analyzer:** Students gained insights into water quality assessment by understanding COD analysis. This instrument measures the amount of oxygen required to oxidize organic and inorganic substances in water samples.
- Rotary Evaporator:** Students learned about solvent evaporation techniques using the rotary evaporator. It is commonly used for concentration, purification, and solvent recovery in environmental chemistry.
- Atomic Absorption Spectrophotometer (AAS):** AAS is essential for detecting and quantifying trace metals in environmental samples. Students explored its applications in environmental monitoring and pollution studies.

### Key Takeaways

The laboratory visit provided several valuable insights:

- Hands-on Experience:** Students gained practical experience by operating the instruments under expert guidance.



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- **Understanding Instrumentation:** They learned how these instruments contribute to environmental research, monitoring, and analysis.
- **Real-world Applications:** Students saw how these tools are used in environmental studies, pollution assessment, and biodiversity research.

### Concluding Remark

The laboratory visit was a success, enhancing students' understanding of environmental instrumentation. It reinforced the importance of bridging theoretical knowledge with practical skills. As future conservationists, their exposure to these instruments will undoubtedly contribute to their research endeavours.



Dept. of Conservation Biology (P.A.)  
Durgapur Govt. College  
Durgapur-14, Paschim Bardhaman, West Bengal

1<sup>st</sup> Semester, Session-2023-2024

Name of Students.	Sign of students with date.
1. REMA MONDAL	Reema Mondal 23.02.2024
2. SNEHA NANDI	Sneha Nandi 23.02.2024
3. NEHA DEY	Neha dey 23.02.2024

Name of Faculty  
1) ALOK K. MUKHERJEE

Allok K. Mukherjee 23.02.2024



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Ref. No. Envsc/2024/Misc-2

Date: 23/02/2024

From

**Dr Apurba Ratan Ghosh**  
**Professor & Head**

To Whom It May Concern

The bonafied students namely Rima Mondal, Sneha Nandi and Neha Dey of SEM I, Session 2023-'24 of Department of Conservation Biology (PG) of Durgapur Government College, Durgapur, Paschim Bardhaman visited the sophisticated laboratory of Department of Environmental Science, The University of Burdwan, Burdwan on 23rd of February 2024. Students were very much enthusiastic and motivated by observing and handling the sophisticated instruments that we have and installed in our laboratory like Atomic Absorption Spectrometer, Gas Chromatograph, Haematoanalyser, Enzymolyser, Uranium & Fluoride Meter, Microtome, Carbon Analyser. Students are assisted by the Mentor Dr Alope Kumar Mukherjee, Faculty Member of Conservation Biology, Durgapur Government College.

Sincerely yours,

[Apurba Ratan Ghosh]

**Professor & Head**  
**Environmental Science**  
**The University of Burdwan**  
**Burdwan**



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3. August 05, 2024; Research Laboratory Visit to National Institute of Technology, Durgapur;  
Organizing Department: Chemistry ; under the DBT STAR COLLEGE SCHEME



4. August 07, 2024; Research Laboratory Visit to National Institute of Biomedical Genomics (NIBMG), Kalyani; Organizing Department: All Departments; under the DBT STAR COLLEGE SCHEME

**Total Participants: 40**





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5. August 17, 2024, Research Laboratory Visit to AICTE IDEA Lab, Dr. B. C. Roy Engineering College, Durgapur ; under the DBT STAR COLLEGE SCHEME





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