

Beyond Classrooms : Experiential Learning

- The advanced learners were encouraged to attend seminars, workshop and conferences and present papers therein. This initiative was taken to avail them of greater exposure to some new platforms of higher learning.
- They were encouraged to pursue value-added and add-on courses.
- Special coaching sessions were organized for aspiring students on career guidance.
- Industrial visits, internships, excursions.

Activity of Chemistry Department

2023-24

Govt. V. Y. T. PG. Autonomous College, Durg (C.G.) had organized an industrial visit and training on 16th January 2024 to Jindal Steel Plant located in Raigarh Chhattisgarh India for the students of M.Sc. Chemistry. The objectives of student's industrial visit and training in a steel plant are to provide practical exposure to the manufacturing processes, technology and operations involved in the steel industry. This experience aims to enhance students understanding of theoretical concept and reduce gap between classroom knowledge and real world applications.



Govt. V. Y. T. PG. Autonomous College, Durg (C.G.) had organized an Academic visit on 30th March 2024 to Indira Gandhi National Tribal University (IGNTU), Amarkantak, M.P., India for the students of M.Sc. Chemistry. The objectives of an Academic visit to a university science department can vary depending on the specific goals of the visit and the interests of the participants.



This report encapsulates the insights gained during the visit and outlines its implications for M.Sc. Chemistry students aspiring to pursue careers in the industrial sector. Govt. V. Y. T. PG. Autonomous College, Durg (C.G.) had organized an Industrial visit on 17th February 2024 to Bhilai steel Plant, Bhilai C.G. India, for the students of M.Sc. Chemistry. Encourage more industrial visits for students to bridge the gap between theoretical knowledge and practical applications. Promote research collaborations between academic institutions and industries to address challenges in materials science and environmental sustainability.



This report encapsulates the observations, learnings, and implications of the industrial visit to Maa Laxmi Food Industry's Bakery and Confectionery Division for BSc Industrial and Biochemistry students of Government V.Y.T. PG Auto College, Durg. (C.G.) College had organized an Industrial visit on 31 jan 2024 to Birkoni, Mahasamund, C.G. The visit provided practical insights into the application of industrial and biochemistry principles in food manufacturing. Highlighted career opportunities in food technology, quality assurance, and research and development within the food industry. Emphasized the significance of ethical and sustainable practices in food production and consumer health.



This report summarizes the observations, learnings, and implications of the industrial visit to Boramdeo Sahakari Shakkar Karkhana Maryadit, Kawardha, (C.G.) for BSc Biochemistry students of Government V.Y.T. PG Auto College, Durg, (C.G.) on 7th February 2024. Boramdeo Sugar Factory covers a vast area and consists of several departments dedicated to different stages of sugar processing. There was cane reception area where freshly harvested sugarcane is unloaded from trucks and transported for further processing. The cane undergoes cleaning and washing to remove impurities before being sent for crushing. The crushed sugarcane is fed into milling machines where juice is extracted through a series of crushing rollers. The extracted juice undergoes clarification and filtration processes to remove suspended solids and impurities. Different chemicals and filtration equipment are used to achieve clear juice suitable for further processing. The clarified juice is concentrated through evaporation to form syrup, which is then crystallized to produce raw sugar crystals.

The raw sugar crystals are separated from the syrup using centrifugal machines. The dried sugar crystals are then sent for grading and packaging.



The observations, insights, and conclusions from the industrial visit to Rajaram Maize Products located in Rajnandgaon are summarized in this report which had organized for BSc. (Industrial chemistry) students of Govt. V.Y.T. Auto. College Durg (C.G.). on 28th march 2024. Rajaram Maize Products is located in Rajnandgaon district and is a leading manufacturer of maize-based products in the region. The facility covers a significant area and consists of several departments dedicated to different stages of maize processing and product manufacturing. The industrial visit to Rajaram Maize Products provided valuable insights into the maize processing industry. We gained a comprehensive understanding of the various

stages like cleaning, drying, milling, grinding and packaging involved in maize product manufacturing, from raw material reception to final packaging. The visit was informative and engaging, allowing us to appreciate the importance of quality control and efficiency in food processing operations.



Skill development program

1. Report on 7-Days Workshop in Tools and Techniques for M.Sc. Chemistry Students at Siddhachalam Laboratory, Raipur

Date of Workshop:

Location: Siddhachalam Laboratory, Raipur

The 7-day workshop in tools and techniques for MSc Chemistry students was organized at Siddhachalam Laboratory, Raipur, from [22.01.24 to 29.01.24]. The workshop aimed to provide hands-on experience and practical training in various analytical tools and techniques relevant to the field of chemistry.

The primary objectives of the workshop were:

- To familiarize M.Sc. Chemistry students with advanced analytical tools and techniques used in research and industry.
- To provide practical training in the operation and maintenance of analytical instruments.
- To enhance the students' proficiency in data analysis and interpretation. Workshop Sessions:
- The workshop consisted of the following sessions:

- **Introduction to Analytical Instruments:**

Overview of various analytical instruments such as spectrophotometers, chromatographs, and spectroscopes.

Explanation of the principles behind each instrument and their applications in chemical analysis.

Hands-on Training: Practical demonstrations and hands-on training sessions conducted on different analytical instruments. Participants were given the opportunity to operate the instruments under the guidance of experienced instructors.

- **Data Analysis and Interpretation:** Training sessions focused on data analysis techniques and software used for interpreting analytical results. Participants learned how to analyze experimental data, identify trends, and draw conclusions.

- **Safety and Maintenance Practices:** Workshops on safety protocols and best practices for handling hazardous chemicals and operating analytical instruments safely. Guidance on instrument maintenance and troubleshooting common issues.
- **Case Studies and Applications:** Presentation of case studies showcasing real-world applications of analytical techniques in various industries.

.Conclusion:

The 7-day workshop in tools and techniques for M.Sc. Chemistry students at Siddhachalam Laboratory, Raipur, was a valuable learning experience. Participants gained practical skills and knowledge in using advanced analytical instruments, data analysis, and safety practices. The workshop provided an excellent platform for students to enhance their understanding of analytical chemistry and its applications in research and industry.



2. Report on 3-Days Workshop in Tools and Techniques for M.Sc. Chemistry Students at The Assistant Soil Testing Officer.

Soil Testing Lab, Ruabandha, Bhilai (C.G.). Title: Report on Hands-On Training in Soil Testing .The hands-on training in soil testing was conducted from [2, 3 and 5 February 2024] with the aim of providing practical experience and proficiency in soil analysis techniques. The training aimed to equip participants with the necessary skills to assess soil quality, nutrient content, and other parameters relevant to agriculture, environmental science, and land management.





World Ozone Day (2023-24)

World ozone day was celebrated on 16-9-23. This program was jointly organized by chemistry and physics department. Ozone layer very important to us, so it is necessary for us to aware about this protective layer. In this occasion speech competition, PPT presentation, Drama was conducted. PG students actively participated in this programme.



Activities of Chemical Society

Under the umbrella of Chemical Society, a Guest Lecture was organized on 5.10.2023 by Chemistry Department, Govt. V.Y.T. PG Auto. College, Durg (CG).

The objective of chemical society is to provide a better understanding of chemistry to promote and improve education in chemistry, to acquaint individuals with current trends in chemistry. It also supports in teaching and learning for students by mentoring them through various lectures.

Chemistry department conducts a lot of activities during the academic year to inculcate curiosity and research temperament and interest in students in scientific matters through academic and extracurricular activities which also leads to overall development of the students.

For the academic year 2023-24, Chemical society was constituted as follows

1. Secretary: Riya Dewangan (Semester III)
2. Joint Secretary: Dron Kumar (Semester I)
3. Literary Secretary: Namrata Tirkey (Semester III)
4. Associate Secretary: Ku. Astha Pandey (Semester III)
5. Secretary for Social Activity: Ku. Preeti Singhare (Semester III)
5. Associate Secretary for Social Activity: Sataek Mirchan (Semester I)





Principal

Govt. V.Y.T. PG Autonomous College