A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

DEPARTMENTAL NEWSLETTER - CHEMICAL ENGINEERING

VOLUME-2, Issue-02

(January – April 2023)

Academic Year-2022-23

GHARDA INSTITUTE OF TECHNOLOGY

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

Volume 2: Issue 02 (Jan to April-2023)

DEPARTMENTAL NEWSLETTER - CHEMICAL ENGINEERING

VOLUME 2: ISSUE 04 I (Jan to April-2023)

Academic Year 2022-23

****

Editorial Team

Student Editor: Ms. Vaishnavi Deshmukh

Faculty Editor: Prof. Nitish D. Galande

****

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

INDEX

Vision of the Chemical Engineering Department:

- "Produce employable graduates through a multidisciplinary approach, equipping them with chemical engineering knowledge and research skills, for the welfare of society."

Mission of the Department

- **M1:** Impart knowledge and understanding of the diverse fields of chemical
- engineering profession through curriculum.
- **M2:** Develop chemical engineering professional and research skills to become
- technically competent professionals.
- **M3**: Inculcate the importance of social and life-long learning.

Program Educational Objectives (PEOs)

- **PEO1:** Graduates of the program will apply chemical engineering principles in engineering practice.
- **PEO2:** Graduates of the program will have technical or professional careers in chemical engineering or in the diverse fields of chemical engineering such as biochemical engineering, energy and environmental engineering etc.
- **PEO3:** Pursue higher study and / or continuously upgrade the knowledge with personal and professional growth for collective advancement of society.

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

Programme specific outcomes (PSOs)

POS1: Create Chemical Engineering solutions for problems and processes while taking into account separation operations, reaction kinetics, environmental issues, waste treatment, modelling and simulation.

PSO 2: Foster the industrial chemical production process through efficient design and modifications by applying the principles of Chemical Engineering.

PSO 3: Demonstrate responsible professional behaviour by integrating ethical considerations, promoting safety, communicating effectively, and engaging in

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

Program Outcomes (POs) as per NBA

Program Outcomes (POs) are as follows:

1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, and engineering fundamentals to solve complex chemical engineering problems.
2. **Problem Analysis:** Identify, formulate, and analyze complex engineering problems to reach substantiated conclusions using principles of mathematics, natural sciences, and engineering sciences.
3. **Design/Development of Solutions:** Design solutions for complex engineering problems that meet specified needs with appropriate consideration for public health, safety, and environmental concerns**.**
4. **Investigation of Complex Problems:** Conduct research-based investigations, including designing experiments, analyzing data, and synthesizing information to provide valid conclusions.
5. **Modern Tool Usage:** Select, apply, and adapt appropriate techniques, resources, and modern engineering tools, including prediction and modeling, to solve complex engineering activities.
6. **The Engineer and Society:** Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal, and cultural issues relevant to professional engineering practice.
7. **Environment and Sustainability:** Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics, responsibilities, and norms of the engineering practice.
9. **Individual and Team Work:** Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and society at large through reports, presentations, and documentation.
11. **Project Management and Finance:** Demonstrate knowledge of engineering and management principles to manage projects in multidisciplinary environments.
12. **Life-long Learning:** Recognize the need for, and engage in, independent and lifelong learning in the broadest context of technological change.

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

Message from the Principal

It gives me great pleasure to present the **Volume 2, Issue 4** of the **Departmental Newsletter – Chemical Engineering** for **January–April 2023**. This newsletter is a testament to the academic excellence, research contributions, and innovative mind-set of our students and faculty members.

Chemical Engineering is a dynamic field that continuously evolves to address global challenges in energy, sustainability, and advanced materials. Our department has been at the forefront of fostering technical skills, critical thinking, and industry collaborations to prepare students for future challenges.

I congratulate the entire team of faculty, students, and editors for their dedication in curating this insightful publication. I encourage all students to actively participate in research, technical events, and industrial collaborations to enhance their knowledge and professional growth.

Best wishes to all for continued success in academic and professional pursuits.

Dr. Sachin K.Patil

I/C Principal

****

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

Message from the Head of the Department

Dear Readers,

I am delighted to present **Volume 2, Issue 2** of the **Departmental Newsletter – Chemical Engineering** for **January–April 2023**. This newsletter highlights the **remarkable achievements, research contributions, and industry collaborations** that reflect our department's dedication to **academic excellence and innovation**.

Our faculty and students continue to excel in **research, industrial training, and skill development**, making significant contributions to the field of **Chemical Engineering**. The various **guest lectures, industrial visits, workshops, and student achievements** showcased in this edition demonstrate our commitment to **holistic education and professional growth**.

I extend my heartfelt appreciation to the editorial team, faculty members, and students for their dedication in compiling this newsletter. Let us continue working together to foster a culture of **innovation, learning, and excellence** in Chemical Engineering.

Dr. Shyam Tekade

Head of the Department

****

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

Message from the Faculty Editor

Dear Readers,

It is with great enthusiasm that I present **Volume 2, Issue 2** of the **Departmental Newsletter – Chemical Engineering** for **January–April 2023**. This edition serves as a testament to the dedication and hard work of our **faculty and students**, showcasing their achievements in **research, industry collaborations, and academic excellence**. The diverse range of **guest lectures, industrial visits, workshops, and student accomplishments** featured in this issue reflects our department's commitment to **holistic learning and professional development**. Each initiative and achievement contributes to strengthening our foundation of **innovation and technical expertise**. I extend my sincere appreciation to the **editorial team, faculty members, and students** for their invaluable contributions in compiling this newsletter. I hope this edition inspires everyone to continue their journey of **knowledge-sharing, skill enhancement, and innovation** in the field of **Chemical Engineering**.

Prof. Nitish D. Galande

Faculty Editor

****

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

Message from the Student Editorial Coordinator

Message from the Student Editorial Coordinator

Dear Readers,

I am honored to present **Volume 2, Issue 2** of the **Departmental Newsletter – Chemical Engineering** for **January–April 2023**. This newsletter highlights the **remarkable achievements, research contributions, and industry collaborations** undertaken by our department during this period.

It is truly inspiring to witness the dedication of our **faculty and students** in advancing their knowledge and skills through **guest lectures, industrial visits, workshops, and academic excellence**. The continuous pursuit of **innovation and professional growth** is evident in every initiative showcased in this edition.

I would like to express my heartfelt gratitude to the **editorial team, faculty members, and fellow students** for their hard work in compiling this newsletter. I hope this edition serves as a source of **motivation and inspiration**, encouraging all to strive for greater success in **Chemical Engineering**.

Ms. Vaishnavi Deshmukh

Student Editorial Coordinator

****

1. GUEST LECTURE ON "TECHNICAL ASPECTS REQUIRED FOR ENERGY INDUSTRIES"

A **guest lecture** on **"Technical Aspects Required for Energy Industries"** was delivered by **Mr. Jagdish Sutar, Manager R&D, Abhitech Energy Con Ltd., Mumbai**, on **13th January 2022**. The session was attended by **SE, TE, and BE students**, providing them with valuable insights into the **fundamental and advanced technical requirements of the energy sector**.

During the lecture, Mr. Sutar elaborated on **emerging technologies, process optimization, and the latest industry trends** essential for engineers aspiring to work in the **energy industry**. He also emphasized the significance of **research and development** in enhancing energy efficiency and sustainability.

The session was highly engaging, with students actively participating in discussions and gaining a deeper understanding of **real-world applications**. This lecture was a significant learning opportunity, equipping students with **industry-relevant knowledge** and preparing them for future career prospects in the energy sector.

2. GUEST LECTURE ON "INTENSIFIED SYNTHESIS OF MATERIALS USING CAVITATION AND ITS APPLICATION"

A **guest lecture** on **"Intensified Synthesis of Materials Using Cavitation and its Application"** was conducted by **Dr. K. Rajkumar, Scientist, Indian Rubber Manufacturers Research Association, Thane**, on **23rd March 2022**. The session was attended by **SE, TE, and BE students**, providing them with valuable knowledge on advanced material synthesis techniques.

Dr. Rajkumar explained the **principles of cavitation** and its role in **enhancing chemical and material synthesis**. He also highlighted various **industrial applications**, including **rubber manufacturing, nanomaterial synthesis, and process intensification**. The lecture provided students with insights into the **cutting-edge advancements** in material science and engineering.

The interactive session allowed students to engage in discussions, understand **real-world industrial challenges**, and explore **research opportunities** in this field. The lecture was highly informative and instrumental in broadening students' perspectives on **innovative synthesis techniques and their practical applications**.

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

3. GUEST LECTURE ON "OPPORTUNITIES IN SURFACTANT INDUSTRIES FOR CHEMICAL ENGINEERS"

A guest lecture on "Opportunities in Surfactant Industries for Chemical Engineers" was delivered by Mr. Yatin Shet, General Manager, Galaxy Surfactants Ltd., Mumbai, on 23rd March 2022. The session was attended by SE, TE, and BE students, providing them with insights into the surfactant industry and career prospects for chemical engineers.

During the lecture, Mr. Shet discussed the role of surfactants in various industries, including cosmetics, pharmaceuticals, and cleaning products. He also explained the manufacturing processes, advancements in formulation technologies, and sustainability trends in the surfactant sector. The session highlighted the growing demand for skilled chemical engineers in this field and the diverse career opportunities available.

The session was interactive, with students engaging in discussions on industry challenges, R&D innovations, and process optimization. This lecture provided a valuable learning experience, broadening students' understanding of industrial applications and job prospects in the surfactant industry.

4. GUEST LECTURE ON "INTENSIFIED SYNTHESIS OF MATERIALS USING CAVITATION AND ITS APPLICATION"

A guest lecture on "Intensified Synthesis of Materials Using Cavitation and Its Application" was delivered by Dr. P.R. Gogate, Professor, Department of Chemical Engineering, Institute of Chemical Technology, Matunga, Mumbai, on 25th March 2022. The session was attended by SE, TE, and BE students, providing them with in-depth knowledge of cavitation technology and its role in material synthesis.

Dr. Gogate explained the fundamentals of cavitation phenomena and how it can be utilized to enhance chemical processes, improve reaction rates, and optimize material properties. He also discussed various industrial applications, including nanomaterial synthesis, wastewater treatment, and process intensification in chemical industries.

The session was highly interactive, with students gaining insights into emerging research areas, industrial advancements, and potential career opportunities in this field.

This lecture provided an excellent opportunity for students to explore innovative techniques in chemical engineering and their practical applications.

5. **Student Achievement – Azeotropy 2023**
   Student Name: Pawankumar Prasad
   Event Name: Azeotropy 2023
   Venue: Indian Institute of Technology (IIT) Bombay
   Date of Participation: 19 – 20 March 2023
   Participation Category: Chem-o-Philia Zonal
   Award: 1st Rank

We are proud to announce that **Pawankumar Prasad** has secured the **1st Rank** in the **Chem-o-Philia Zonal** competition at **Azeotropy 2023**, the premier **Chemical Engineering symposium** organized by **IIT Bombay**.

This remarkable achievement showcases his **technical expertise, problem-solving skills, and dedication to excellence** in the field of **Chemical Engineering**. Events like **Azeotropy** provide students with an invaluable platform to apply their knowledge, interact with industry experts, and explore innovative engineering solutions.

The department congratulates **Pawankumar Prasad** on this outstanding accomplishment and encourages all students to participate in such **prestigious technical competitions** to enhance their learning and professional growth. Keep up the great work!

6. **Student Achievement – Azeotropy 2023**
   Student Name: Vedant Berde
   Event Name: Azeotropy 2023
   Venue: Indian Institute of Technology (IIT) Bombay
   Date of Participation: 19 – 20 March 2023
   Participation Category: Chem-o-Philia Zonal
   Award: 2nd Rank

We are delighted to announce that **Vedant Berde** has secured the **2nd Rank** in the **Chem-o-Philia Zonal** competition at **Azeotropy 2023**, one of the most prestigious **Chemical Engineering symposiums** hosted by **IIT Bombay**.

This achievement reflects his **technical proficiency, analytical thinking, and problem-solving abilities** in the field of **Chemical Engineering**. Participating in such national-level competitions enhances students' **technical exposure, industry insights, and innovation-driven approach**.

The department extends heartfelt congratulations to **Vedant Berde** on his commendable performance and encourages all students to actively engage in **technical competitions** to further enrich their knowledge and skills. Keep striving for excellence!

7. Student Participation – Azeotropy 2023

Student Name: Mandar Rahate
Event Name: Azeotropy 2023
Venue: Indian Institute of Technology (IIT) Bombay
Date of Participation: 19 – 20 March 2023
Participation Category: Chem-o-Philia Zonal

We are pleased to acknowledge the participation of **Mandar Rahate** in **Azeotropy 2023**, a renowned **Chemical Engineering symposium** organized by **IIT Bombay**. His involvement in the **Chem-o-Philia Zonal** competition demonstrates his enthusiasm for **technical learning, problem-solving, and innovation in Chemical Engineering**.

Participation in such prestigious events provides students with **valuable exposure, industry insights, and hands-on experience in tackling engineering challenges**. The department commends **Mandar Rahate** for his active engagement and encourages him to continue striving for excellence in future competitions. Keep up the great work!

8. Student Participation – Azeotropy 2023

Student Name: Nikhil Chandlekar
Event Name: Azeotropy 2023
Venue: Indian Institute of Technology (IIT) Bombay
Date of Participation: 19 – 20 March 2023
Participation Category: Chem-o-Philia Zonal

We are proud to recognize **Nikhil Chandlekar** for his participation in **Azeotropy 2023**, the premier **Chemical Engineering symposium** organized by **IIT Bombay**. His engagement in the **Chem-o-Philia Zonal** competition highlights his dedication to **technical excellence and problem-solving in the field of Chemical Engineering**.

Participation in national-level competitions like Azeotropy provides students with an opportunity to **apply theoretical knowledge, develop critical thinking, and gain exposure to industry-oriented challenges**. The department appreciates **Nikhil**

Chandlekar's efforts and encourages him to continue pursuing academic and professional excellence in future endeavors. Well done!

9. Student Participation – Azeotropy 2022

Student Name: Gauri Kanade
Event Name: Azeotropy 2022
Venue: Indian Institute of Technology (IIT) Bombay
Date of Participation: 19 – 20 March 2023
Participation Category: Luminescence – Lecture Series

We are pleased to acknowledge **Gauri Kanade's** participation in **Azeotropy 2022**, the prestigious **Chemical Engineering symposium** hosted by **IIT Bombay**. As part of the **Luminescence – Lecture Series**, she had the opportunity to engage with **renowned industry experts, researchers, and academicians**, gaining valuable insights into cutting-edge advancements in **Chemical Engineering**.

Attending such technical lecture series enhances students' **knowledge, critical thinking, and professional networking**, fostering their growth in the field. The department commends **Gauri Kanade** for her initiative in expanding her learning horizons and encourages all students to participate in similar knowledge-enriching events. Keep up the great work!

A/P: LAVEL, TAL.KHED, DIST.RATNAGIRI.
Tel.: 02356 - 273134, Fax: 02356 – 262980
Website: www.git-india.edu.in, Email: principal@git-india.edu.in

EDITORIAL TEAM

- **Editor-in-Chief:** Prof. Nitish Galande
- **Student Coordinators:** MS. Vaishnavi Deshmukh

Department of Chemical Engineering

Academic Year 2022-23.