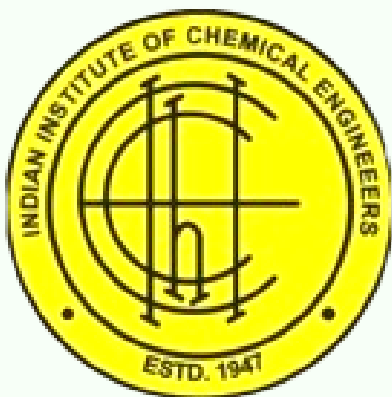


IICHE-MRC E-NEWSLETTER



- NRK Quiz 2025
- ChEMATHON-2025
- CHEMCON 2024
- SCHEMCON 2024
- Design Project Award
- Proc. Engg. Cert. Course
- Article on Sustainability
- Seminar on Sustainability



INDIAN INSTITUTE OF CHEMICAL ENGINEERS
Mumbai Regional Center, B-18 Vardhman Complex,
Gr Floor, Opposite Home Town & 247 Park, LBS Marg,
Vikhroli (West), Mumbai - 400 083

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FROM CHAIRMAN'S DESK

Prof. Sanjay Mahajani
Chairman IChE-MRC



My Dear Friends, Greetings!

I am deeply grateful to reflect on the remarkable achievements of the MRC. I extend my heartfelt appreciation to each member for their unwavering dedication, time, and effort, which have been instrumental in making MRC a vibrant and dynamic organization. Despite the usual challenges and constraints, MRC has successfully conducted record number of events and meetings in alignment with the IChE HQ Guidelines.

We remain steadfast in our mission to foster strong industry-academia collaborations, which are vital for sustainable progress and professional growth. In line with this vision, we have launched the "**Process Engineering Certification Course**" for under graduate students at IIT Bombay from February 8, to April 13. The program featured industry experts and consultants as faculty, further strengthening our industry-academia partnerships. Given its overwhelming success and positive student response, we are excited to announce the second edition of this course, scheduled to commence in **June 2025**.

One of our latest event this year was hosting the Prof. N.R. Kamath Memorial Quiz on March 15 at Thadomal Shahani Engineering College (TSEC). The event saw enthusiastic participation from many renowned institutions DMCE, GIT, ICT, IITB, MGM CET, SSJCOE, BVCOE and TSEC. It was a remarkable showcase of knowledge, enthusiasm, and the spirit of chemical engineering. We are deeply grateful to TSEC for their commitment to providing state-of-the-art facilities, and unwavering support. Special thanks to esteemed Principal, Dr. G.T. Thampi, and Dr. Neeta Mehta, Head Chemical Engg. for graciously hosting this event and contributing to its success.

[Continued ...](#)

FROM CHAIRMAN'S DESK

(Continued ...)

We firmly believe that industry-academia partnerships are the cornerstone of innovation, addressing real-world challenges. We are also committed to broadening our engagement with industries and collaborating with other regional centres to create an impactful network. Effective communication remains a priority, and we will continue to leverage both digital and traditional channels to keep our members informed about our initiatives and progress.

I sincerely hope that our efforts will inspire member community to collaborate, innovate, and rededicate themselves to sustainable development. Together, we can achieve greater heights and make a meaningful impact. I look forward to engaging with you all and fostering interesting interactions in the days to come.

I am pleased to inform all members that IICHE-MRC has been selected to host **CHEMCON 2026 in Mumbai**, the annual technical mega event of the Indian Institute of Chemical Engineers. This event also incorporates the Annual Session of the Institution of Engineers. Your active participation and support are essential to the successful organization and execution of this significant event. We look forward to your valuable contributions.

I am also pleased to let you know that IICChE-MRC is planning to hold several events in the next few month. They include, PEC course 2.0, Seminar on Green Hydrogen, Best design project award for undergraduates, Outstanding Young Chemical Engineering Award and so on. We expect to have your support and participation in these and other activities of IICChE.

Regards,

(Prof. Sanjay Mahajani)

IICHE-MRC EXECUTIVE COMMITTEE

2023-25

Prof. Sanjay Mahajani

Hon. Chairman

Shri Jagdish Nageshri

Hon. Vice Chairman

Shri Dhawal Saxena,

Hon. Secretary

Shri Mahendra Patel

Hon. Treasurer

Dr Pradnya Ingle

Hon. Joint Secretary

Shri Rajesh Jain

Hon. Joint Treasurer

Dr. M.P. Jain

Member

Dr. Alpana Mahapatra

Member

Dr. T.L. Prasad

Member

Dr. Aparna Nitin Tamaskar

Member

Dr. Debashis Raha

Member

Shri Ankur Chaturvedi

Member

Shri Akash Shinde

Student Co-ordinator

Prof. Sunil Potale

Co-opted Member

Dr. Parasu Veera Uppara

Co-opted Member

Dr. Rahul Nabar

Co-opted Member

Disclaimer

IChE-MRC has made every effort to ensure that the information in this E-Newsletter is correct & helpful to IChE members. IChE-MRC Executive Committee or Editor of the e-Newsletter do not assume and hereby disclaim any liability to any party for any loss, or damage caused by errors or omissions, whether such errors or omissions result from negligence, accident, or any other cause. The views and opinions expressed in the articles belong solely to the authors and do not necessarily reflect the official policy or position of IChE-MRC.

EDITOR'S CORNER



Dear Fellow IICHE-MRC Members,
Warm Greetings!

It is with great pleasure that we present to you this edition of the IICHE-MRC E-Newsletter, highlighting the recent events, and initiatives undertaken by IICHE-MRC. Your valuable feedback on previous issues has been a driving force in shaping our efforts, and we are thrilled to share that we are working towards transitioning the newsletter into a magazine.

Under the dynamic leadership of Prof. Sanjay Mahajani, MRC has successfully organized a series of impactful events, including the *Process Engineering Certification Course*, the *Prof. N.R. Kamath Quiz Contest*, and a seminar on *Sustainable Chemical Manufacturing*. These initiatives reflect our commitment to fostering collaboration, and knowledge-sharing within the chemical engineering community.

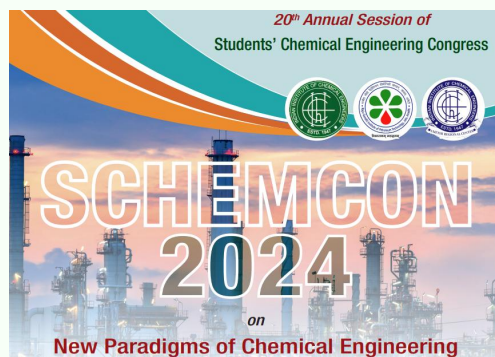
The *Process Engineering Certification Course* has been a resounding success, bringing together industry and academia. We extend our heartfelt gratitude to the dedicated industry faculty members for their time, expertise, and effort. Special thanks to Viraj Banadikar and his team for their planning and execution. The *Prof. N.P. Kamath Quiz Contest* was another highlight, with enthusiastic participation. The event showcased the competitive spirit and exceptional knowledge of the participants, making NRK ChEQ-2025 a truly memorable.

We also extend our sincere appreciation to the MRC members and office bearers for their active participation in *Chemcon-2024*, *S-Chemcon-2024*, *Chemathon-2025* etc. A special note of thanks to Dr. Pradnya Ingle for her insightful article on *Sustainability in the Chemical Industry*, which has been a valuable addition to our newsletter. I extend my sincere gratitude to the editorial team and the IICHE-MRC Chairman for their unwavering support in bringing this newsletter to life.

Wishing you all a happy and insightful read!
Regards,

Jagdish Nageshri
Chief Editor, IICHE-MRC e-Newsletter

IIChE-MRC Recent Events at a Glance



Process Engineering Cert. Course

February 8, 2025 to April 13, 2025

IICHE-MRC Launches Second Edition of Process Engineering Certification Course Following Resounding Success:

The IICHE-MRC remains steadfast in its mission to foster strong industry-academia collaborations, recognizing their critical role in driving sustainable progress and professional growth. In line with this vision, IICHE-MRC successfully launched the *Process Engineering Certification Course* for third- and fourth-year students at IIT Bombay earlier this year.

On February 8, 2024, IICHe-MRC embarked on an exciting initiative - the Process Engineering Course. This pioneering program brings together 10 esteemed companies to mentor undergraduate Chemical Engineering students.

The inauguration program and few classes were also attended by MRC-EC members. A detailed, date-wise schedule has been prepared. We're thrilled to see a strong response from students across several colleges. This achievement wouldn't have been possible without the tireless efforts of our team, particularly Shri Viraj Benadikar, whose dedication and perseverance have been instrumental in shaping this initiative. IICHe-MRC is confident that this program will have a profound impact on the careers of young Chemical Engineers.

IICHe MRC

Process Engineering Course

Bridging Academia & Industry for Future Chemical Engineers

About the Course

The Process Engineering Course 2025, organized by IICHe Mumbai Regional Centre (MRC), is designed to equip final-year undergraduate Chemical Engineering students with practical skills and industry knowledge to excel in their careers.

This 2.5-month intensive program bridges the gap between academic learning and industrial applications, offering students hands-on exposure to real-world engineering concepts, tools, and problem-solving approaches.



Continued ...

Process Engineering Cert. Course

February 8, 2025 to April 13, 2025

The inaugural edition of the course, which ran from February 8th to April 13th, 2024, saw an overwhelming response, with over 50 students enrolling in the program. Designed to bridge the gap between theoretical knowledge and practical industry applications, the course focused on core chemical engineering fundamentals, process intensification, and industrial applications. What set this program apart was its faculty, comprising industry experts and consultants who brought real-world insights and hands-on experience to the classroom.

The *Process Engineering Certification Course* has been hailed as a resounding success, not only for its academic rigor but also for its role in strengthening industry-academia partnerships. By bringing together students, academicians, and industry professionals, the course created a dynamic platform for knowledge exchange and collaboration. IICHE-MRC extends its heartfelt gratitude to the dedicated industry faculty members who generously contributed their time, expertise, and effort to make this course exceptional.

Given the overwhelming response and positive feedback from students and stakeholders alike, IICHE-MRC is thrilled to announce the second edition of the *Process Engineering Certification Course*, scheduled to commence in September 2025. Building on the success of the inaugural edition, the upcoming course aims to further enhance its curriculum and expand its reach.

This initiative underscores IICHE-MRC's commitment to empowering the next generation of chemical engineers with the skills and knowledge needed to address real-world challenges and drive innovation in the industry. By creating opportunities for students to engage with industry leaders, the program not only enhances their professional growth but also contributes to the sustainable development of the chemical engineering sector.

As IICHE-MRC continues to champion industry-academia partnerships, it invites broader engagement from industries, academic institutions, and regional centers to collaborate on future initiatives. Together, we can shape a brighter future for chemical engineering and create a lasting impact on society.

[Continued ...](#)

Process Engineering Cert. Course

February 8, 2025 to April 13, 2025

What Makes This Course Unique?

- Taught by industry experts from top EPCs, Specialty Chemical Companies & Process Consultancies (Indian & MNCs)
- Covers essential technical skills required in process engineering roles
- Hands-on exposure to Aspen HYSYS process simulation software
- HR Talks on CV writing, interview preparation, and career growth
- Industry Connect Days: "Process Day" and "Procurement Day" with real-world insights from professionals

Who Should Apply?

Final-year B.E./B.Tech Chemical Engineering students who:

- Want to gain practical, job-ready engineering skills
- Aspire to work in process engineering, EPC, design, or plant operations
- Are looking to strengthen their technical expertise & industry exposure

Course Certification & Refundable Fees

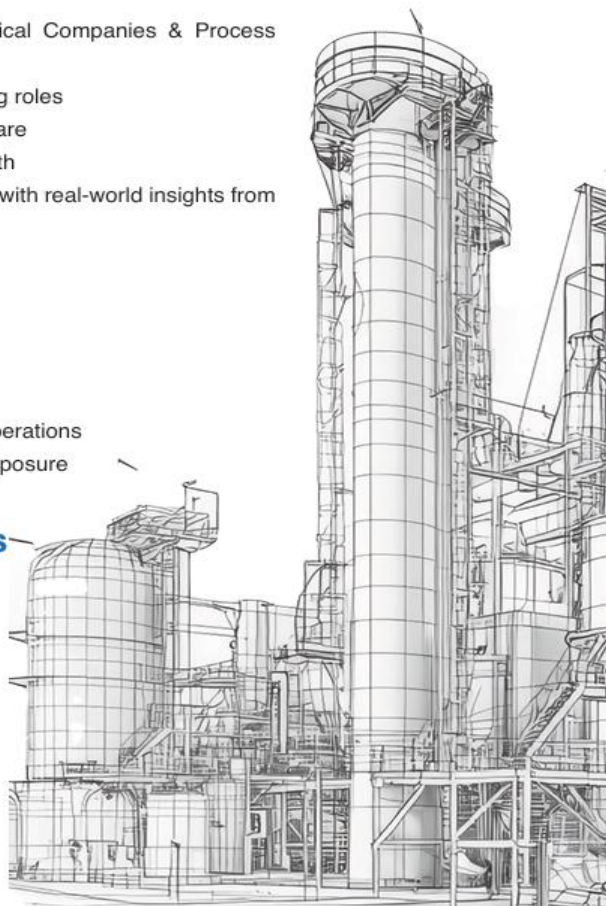
Course Fee:

₹5,000/- for non- IIT-Bombay students

₹4,000/- for IIT-Bombay students (if opting for certification & materials)

Fee Refund Eligibility:

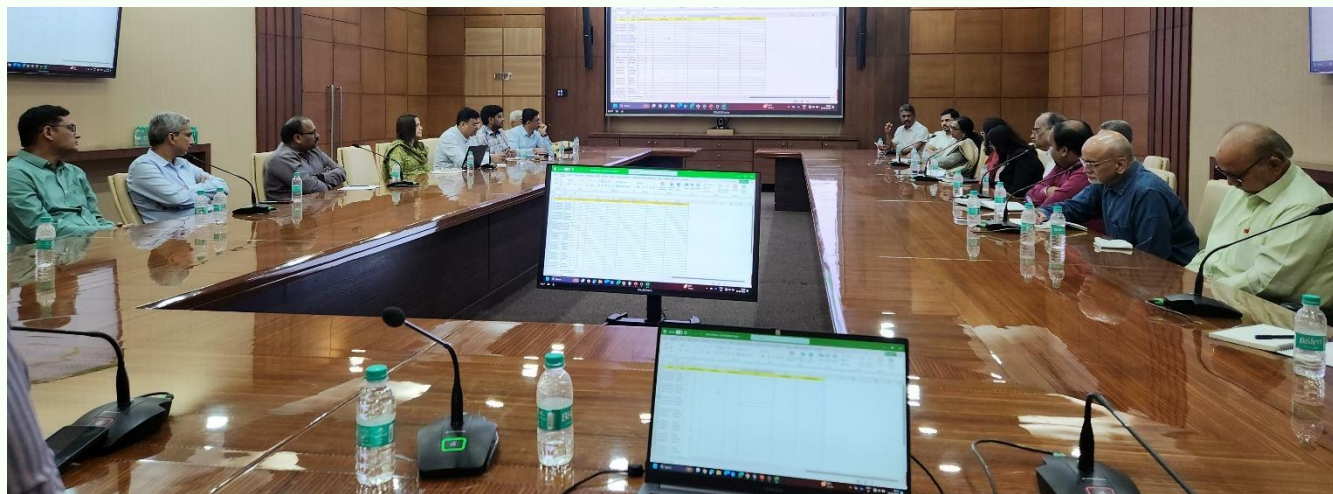
Students who **attend at least 70%** of the sessions and **score 65% or more in the final exam** will be eligible for a full refund of their course fee!



IChE-MRC Open Discussion Forum

January 11, 2025

IChE MRC Open Discussion Forum: A Resounding Success the forum witnessed enthusiastic participation from over 15 representatives of 10 leading core chemical industry companies. The collective effort focused on crafting the syllabus for IChE MRC's forthcoming "Process Engineering Certification Course". The industry response was overwhelmingly positive, paving the way for the course to commence lectures from 8th February. This promising start underscores the strong collaboration between IChE-MRC and the chemical industry.



CHEMCON 2024



IIChe- CHEMCON 2024

Indian Chemical Engineering Congress 2024

77th Annual Session Indian Institute of Chemical Engineers

IIChe-CHEMCON 2024

Role of Chemical Engineering towards Sustainable Development and Atmanirbhar Bharat

December 27-30, 2024 | Dr. B R Ambedkar National Institute of Technology, Jalandhar

Organized by: Indian Institute of Chemical Engineers Doaba Regional Centre NIT Jalandhar

MEET OUR EMINENT & CHEMCON DISTINGUISHED SPEAKERS

 Shri A K Singh Patentee L&L Ltd.	 Prof A B Pandit Vice-Chancellor IIT Mumbai	 Mr A S Bhat HIMES, Bhatinda	 Prof Ajay Bansal NIT Jalandhar	 Prof Amarjeet Bassil Chemical and Biochemical Engineering	 Prof Ajay Dalai University of Saskatchewan	 Dr Anne Gaffney Idaho National Lab, USA	 Prof Amar Mohanty University of Guelph, Canada	 Mr Ashish Dwivedi Aditya Birla Group, Mumbai	 Arvind Kumar Director IGC	 Prof Chiranjit Bhattacharjee PVC, Jalpaiguri	 Prof Debashish Kulkarni NCIST University	 Dr Goutam Dalapati National University of Singapore
 Prof Jagannath Satyanarayana Endowed Chair in Renewable Energy Research	 Dr Joseph Smith AICHE President, NGAT IL, MO, India	 Prof Jochen Lauterbach University of South Carolina	 Prof K K Pant Director IIT Bombay	 Dr K J Sreeram Director CLRI, Chennai	 Prof Kulamani Parida Anna University	 Dr Manohar Murthy L&C Science and Technology	 Prof Manju Mishra University of Guelph	 Shri O P Singh Director ONGC Ltd.	 Dr Partha P. Maitra Reliance Industries	 Mr Parthasarathi Chatterjee L&T Energy and Hydro Carbon, Mumbai	 Prof P K Mishra IIT BHU	 Mr Pankaj Mehta Aarti Industries, Mumbai
 Prof M R Kulkarni	 Prof M R Kulkarni	 Mr M R Kulkarni	 Mr M R Kulkarni	 Prof M R Kulkarni	 Prof M R Kulkarni	 Prof M R Kulkarni	 Prof M R Kulkarni	 Mr M R Kulkarni	 Prof M R Kulkarni	 Mr M R Kulkarni	 Prof M R Kulkarni	 Mr M R Kulkarni

CHEMCON 2024

20-21 September 2024

Indian Chemical Engineering Congress
IICHe-CHEMCON 2024

Role of Chemical Engineering towards Sustainable Development
and Atmanirbhar Bharat

December 27, 2024 to December 30, 2024

AND

77th Annual Session Indian Institute of Chemical Engineers

Organized by
Indian Institute of Chemical Engineers
Doaba Regional Centre

VENUE

Dr. B R Ambedkar National Institute of Technology, Jalandhar



CHEMCON 2024

20-21 September 2024

CHEMCON 2024, the 77th Annual Session of the Indian Institute of Chemical Engineers was held during December 27-30, 2024 at NIT Jalandhar. The annual technical jamboree of IIChE, CHEMCON, continued to encourage academic activities to help students as well as teachers to continuously develop their skills to meet the demands of the present society. CHEMCON 2024 also brought together stakeholders of Chemical Engineering profession, researchers and industrialists to discuss current trends and future developments in the field of Chemical Engineering. The theme of CHEMCON 2024 was “Role of Chemical Engineering towards sustainable development and Atmanirbhar Bharat”.



CHEMCON 2024

20-21 September 2024

The Indian Institute of Chemical Engineers (IIChE) is the apex professional body of Chemical Engineers in the country instituted in the year 1947 and presently has more than 25,000 corporate members on its roll. The activities of the Institute are spread across the country through its 47 Regional Centers and 186 Student Chapters, apart from the HQ located at the Jadavpur University Campus, Kolkata. The IIChE has been conducting the Associate Membership Examination since 1960 and publishes an esteemed quarterly Journal “The Indian Chemical Engineer” since 1959.



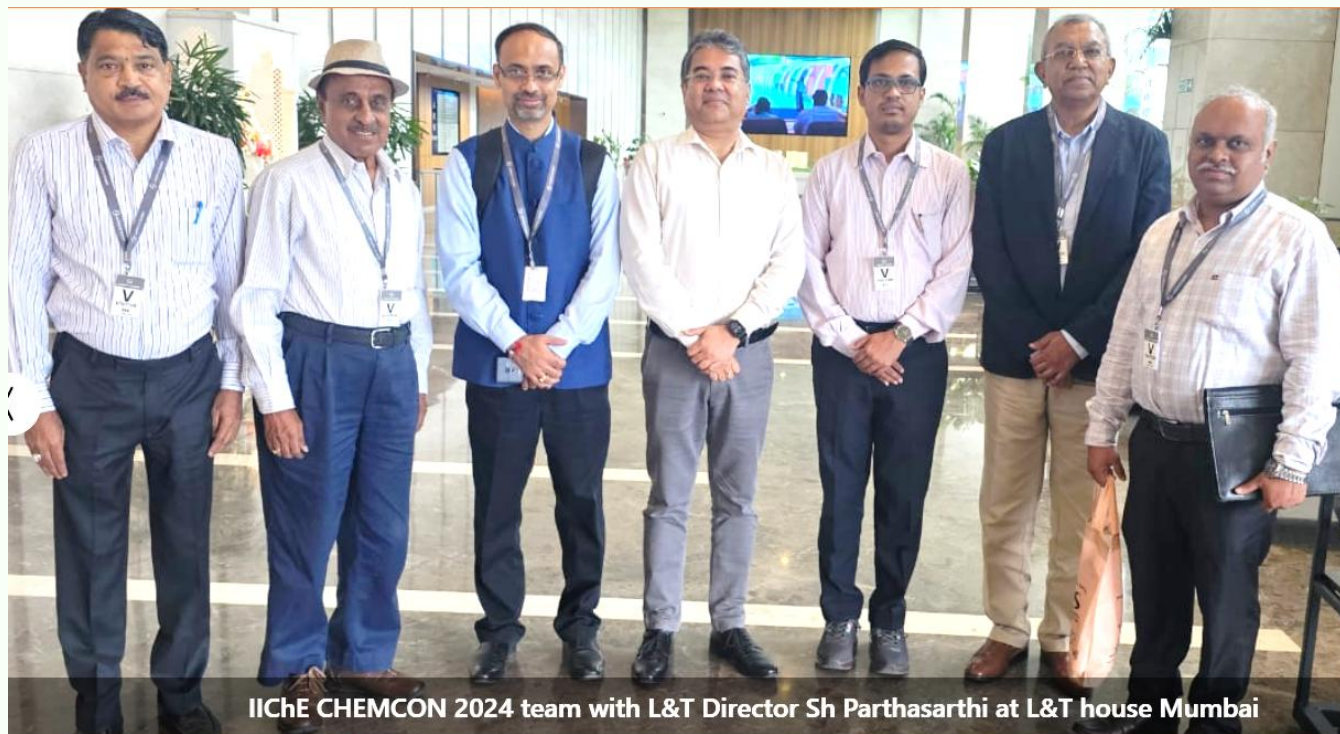
20-21 September 2024

The congress's technical sessions explored diverse themes like advanced materials, sustainability, catalysis, and AI in chemical engineering, through presentations and lectures. Awards were given given for top oral and poster presentations within these sessions.

CHEMCON 2024 feature a "Shri Dhirubhai Ambani Commemoration Day" on December 28th, honoring the visionary leader. The event includes international symposiums aligned with the conference's theme, fostering global collaboration. An exhibition was organized to showcase chemical engineering technologies, safety solutions, and related services, providing industry insights. Student delegates participated in a GATE 2024 syllabus-based quiz competition for prizes. The event aimed to blend industry showcases, educational activities, and tributes to significant figures in the field.



Pre-CHEMCON-2024 Meetings



S-CHEMCON 2024

20-21 September 2024

20th Annual Session of
Students' Chemical Engineering Congress



S-CHEMCON 2024

on

New Paradigms of Chemical Engineering

Organized by

IICHe-RGIPT Student Chapter

Department of Chemical and Biochemical Engineering

Rajiv Gandhi Institute of Petroleum Technology

in association with

Indian Institute of Chemical Engineers

Amethi Regional Centre

Sponsored by

Gas Authority of
India Limited



Mangalore Refinery and
Petrochemicals Limited



S-CHEMCON 2024

20-21 September 2024

20th Annual Session of Students' Chemical Engineering Congress (**SCHEMCON-2024**) On “**New Paradigms of Chemical Engineering**” was organized by IChE-RGIPT Student Chapter, Department of Chemical and Biochemical Engineering, Rajiv Gandhi Institute of Petroleum Technology in association with Indian Institute of Chemical Engineers Amethi Regional Centre.

Students' Chemical Engineering Congress (SCHEMCON) is an annual event organized by the Institutes having Student Chapter (SC) of the Indian Institute of Chemical Engineers (IChE) under one of its Regional Centers (RC). It serves as a premier platform for Chemical Engineering students, offering opportunities to explore, learn, and gain insights into the realm of chemical engineering.

The theme emphasized the evolving nature of the field, emphasizing the importance of innovation, interdisciplinary collaboration, and sustainable solutions to address societal needs and minimize environmental impact. The cornerstone of chemical engineering has always been innovation - the relentless pursuit of novel solutions to address societal needs while minimizing environmental impact for sustainable development. Today, however, this pursuit is taking us into uncharted territories, where traditional boundaries are blurred, and interdisciplinary collaboration is paramount. Key event highlights include the M.P. Chary Award, which recognizes outstanding young chemical engineers (under 35 or recent PhD graduates) for their research.

The Rajiv Gandhi Institute of Petroleum Technology, Jais, Amethi, Uttar Pradesh was established by the Ministry of Petroleum and Natural Gas (MoPNG), Government of India by an Act of the Parliament in 2007. The institute is co-promoted as an energy domain specific institute by six leading oil public sector units (ONGC, IOCL, OIL, GAIL, BPCL, and HPCL) in association with the OI DB. IChE-ARC was established in the December 2021 at RGIPT, Jais. The center is committed to promoting Chemical Engineering activities in the region.

Glimpses of S-CHEMCON 2024

20-21 September 2024



Prof. N.R. Kamath Memorial Quiz

NRK CHEQ 25

15 March 2025

One of our standout achievements this year was hosting the *Prof. N.R. Kamath Memorial Quiz* on March 15th at Thadomal Shahani Engineering College (TSEC). The event saw enthusiastic participation from eight renowned institutions, including DMCE, GIT, ICT, IITB, MGMCET, SSJCOE, BVIT and TSEC. It was a remarkable showcase of knowledge, enthusiasm, and the spirit of chemical engineering.

We are deeply grateful to TSEC for their commitment to providing an exceptional learning environment, state-of-the-art facilities, and unwavering support. Special thanks to the esteemed Principal, Dr. G.T. Thampi, and team for graciously hosting this event and contributing to its success.



Continued ...

Prof. N.R. Kamath Memorial Quiz

15 March 2025

Prof. N. R. Kamath



8/9/14 - 9/7/83

Prof. N R Kamath, known for his remarkable achievements in the fields of plastics, paints, polymers & shellac, was also the first ever Head of the Department of Chemical Engineering, IIT Bombay. Prof. N R Kamath completed his BSc (Hons.) degree, followed by BSc (Tech.) in Chemical Engineering from the Bombay University. He went on to complete his Post Graduate Diploma in Chemical Engineering from the University College, London. In the 7 years he spent at the London Shellac Research Bureau, he went on to bring out 18 publications on the utilization of lac. He joined IIT-Bombay in 1958 as a professor in the Department of Chemical Engineering. He then went on to become its first HOD & also the Deputy Director of the Institute. He has served on several committees of the govt. & has been a recipient of several honours & awards. After retiring in 1974, he worked as an advisor to several industries. He even served as the President of IICChE during 1974-75.

About ChEQ



Initiated by IITB and UICT 35 years ago, the N.R.Kamath Memorial Chemical Engineering Quiz (ChEQ), surely has had a legacy of its own. The quiz restarted its course in the year of 2006 under the supervision of IICChE (Indian Institute of Chemical Engineers). The quiz has henceforth been held in various colleges across Mumbai and has seen wide-spread participation of students from Mumbai, Pune, Lonere, Nashik under the rolling trophy format. With many expectations and anticipations from the student and teaching faculty alike, we are glad to present you with the ChEQ-2025.



Continued ...

Prof. N.R. Kamath Memorial Quiz

15 March 2025

The *Prof. N.P. Kamath Quiz Contest* was another highlight, with enthusiastic participation from colleges across Mumbai University and beyond. The event showcased the competitive spirit and exceptional knowledge of the participants, making ChEQ-2024 a truly memorable experience. Congratulations to the winners and all participants for their outstanding contributions. The legacy continues! The Prof. N. R. Kamath Memorial Quiz – CheQ 2025 witnessed an intense battle of knowledge, speed, and strategy. From challenging problem-solving to rapid-fire buzzer rounds, participants showcased exceptional brilliance in this prestigious 17th edition! A huge congratulations to our winners: 🏆 1st Winners – Team IIT Bombay, 🥈 2nd 1st Runner-up – Team BVCOE, 🥉 3rd 2nd Runner-up – Team ICT



Prof. N.R. Kamath Memorial Quiz

15 March 2025

IICHE



Indian Institute Of Chemical Engineers (IICHE) is a confluence of streams of professionals from academia, research institute and industry. It provides them the appropriate forum for joint endeavours, hand-in- hand, to work through applications of Chemical Engineering and allied sciences. It also ensures them a platform to Indian Chemical & Allied Industry, Academia & Research for continuous education, professional excellence, networking and attaining global recognition.

Thadomal Shahani Engineering College



Established in 1983, Thadomal Shahani Engineering College (TSEC), founded by Hyderabad (Sind) National Collegiate Board, is recognized by Government of Maharashtra, approved by All India Council for Technical Education (AICTE) and Affiliated to University of Mumbai. TSEC is NBA and NAAC accredited. TSEC is hugely successful in creating an academic ambience where learners increasingly succeed in unleashing their potential. TSEC follows a gender agnostic and all-inclusive academic ambience and practices where pupils thrive and emerge as productive entities over a period of four years of engagement.



IICHe-ChEMATHON 2025

February 28 to March 02, 2025

First Edition of IICHe-TI Hardware Hackathon

IICHe-ChEMATHON 2025

Theme: Redefining Progress Through Sustainable Solutions

Venue: KONGU ENGINEERING COLLEGE, Perundurai, Tamil Nadu

Organized by
Indian Institute of Chemical Engineers (IICHe) - Training Institute
IICHe-KEC-Student Chapter & Erode Regional Centre

In Association with
Indian Chemical Society (ICS)

28th Feb to 2nd March, 2025

Innovative Hardware Solutions invited under United Nations' Sustainable Development Goals (SDG6, SDG7, SDC9, SDG11, SDG12, SDG13)

President - ICS & National Science Chair-SERB, Govt. of India
Padmashri. Prof.G.D.Yadav
(Chief Patron - IICHe ChEMATHON)

Vice Chairman - AICTE & Chief Innovation Officer, Ministry of HRD, Govt. of India
Dr. Abhay Jere
(Chief Guest - IICHe ChEMATHON)

First Prize: Rs. 1 Lakh
Second Prize: Rs. 50 K
Third Prize: Rs. 30 K

Website: <https://chemathon2025.kongu.edu>
Contact No: +91-9842823432, +91-9750383957
E mail: chemathon2025@kongu.edu, director.ti@iiche.org.in

KEY DATES

Idea Submission Opening	26.02.2024
Idea Submission Closing	15.03.2025
Problems for CHEMATHON*	17.03.2025
Shortlisted Announcement	29.03.2025
Registration Opening	29.03.2025
Registration Closing	31.03.2025
Grand Finale	28.02.2025 - 02.03.2025

First edition of IICHe-TI Hardware Hackathon (IICHe-ChEMATHON-2025) organized by Indian Institute of Chemical Engineers (TI) and Indian Chemical Society at Department of Chemical Engineering, Kongu Engineering College, Perundurai, Erode from 28th Feb to 2nd March, 2025. Bhumistha Infra services (BIS) and Central Institute of Petrochemicals Engineering & Technology (CIPET) sponsored ₹1 Lakh for the first prize. The event was attended by Prof. (Dr.) Shishir Sinha, Director General – CIPET, Mr. Dhawal Saxena Group CEO & CTO - Bhumistha Infra, Prof. Ajay Bansal, President-IICHe, Prof. Dr Mithilesh Kumar Jha, Director General-IICHe-TI, Dr. Avijit Ghosh, Director-IICHe-TI, and Dr. Kannan Kandasamy, Chairman-IICHe-ChEMATHON 2025.

INDIAN INSTITUTE OF CHEMICAL ENGINEERS (IICHe)-TI
IICHe - Kongu Engineering College - Student Chapter

IICHe - Erode Regional Centre

In Association with
Indian Chemical Society (ICS)

VALEDICTORY FUNCTION OF
First Edition of IICHe-TI Hardware Hackathon

IICHe - ChEMATHON 2025

02nd March 2025, 04.30 pm - 06.00 pm
Venue : Maharaja Auditorium

Chief Guests

Mr.C.Chandrasekar
Managing Director,
Eco Protection Engineers Pvt. Ltd., Chennai

Mr.Dhawal Saxena
Group CEO & CTO,
Bhumistha Infra Services, Navi Mumbai

Glimpses of Networking Visit

The Great Escape Water Park
29 September 2024



Memorial Meet

October 5, 2024



ICT Mumbai hosted a Memorial Meet on October 5, 2024, at the ICT campus. Representatives from IICChE attended the service, including: Shri Dhawal Saxena (Registrar), Shri Praveen Saxena (Vice President, 2021), Shri Avijeet Ghosh (Secretary), Professor M.K. Jha (President, 2021), and Shri Bajpeyee. (Organizing Secretary, 2024).

Dr. Keki Hormusji Gharda, a legend in chemical engineering who revolutionized the industry with his groundbreaking innovations, forever changing the landscape of Indian chemicals manufacturing, passed away on 30 September 2024. Dr Gharda, a Padma Shri awardee, was the founder, chairman, and managing director (CMD) of Gharda Chemicals Ltd, a research-driven company specializing in agro-chemicals, polymers and high-performance pigments. "Earn a lot but.. very honestly.. live economically.. and spend generously and maximally for the community around, especially underprivileged one," is, in a nutshell, the philosophy practiced by Dr Gharda.

64th Annual General Meeting 2023-24

Warm welcome filled the air as the Chairman Prof. Sanjay Mahajani graciously received MRC members and esteemed guests alike. The proceedings commenced with a comprehensive overview of the organization's accomplishments throughout the year, highlighting the remarkable success of various events and providing an exciting glimpse into the promising initiatives on the horizon.

The subsequent presentation by the Member Secretary Shri Dhawal Saxena offered a detailed chronicle of the organization's endeavors, inviting insightful questions and valuable suggestions from the attentive audience. A transparent financial overview was presented by the Treasurer Shri Mahendra Patel and Joint Treasurer Shri Rajesh Jain, who unveiled the audited accounts for the fiscal year 2023-2024. As the evening drew to a close, the Vice Chairman Jagdish Nageshri expressed sincere gratitude to all members for their unwavering support and contributions, culminating in a delightful invitation to share a convivial dinner.



Sustainability in the Chemical Industry: Innovations, Challenges, and Future.

Dr Pradnya Ingle

The chemical industry, a cornerstone of modern civilization, provides essential products and materials that underpin countless aspects of daily life. However, the environmental footprint of chemical manufacturing has long been a cause for concern, given its intensive resource consumption, greenhouse gas emissions, and potential for pollution. In recent years, sustainability has emerged as a central focus for researchers, policymakers, and industry leaders worldwide, seeking to minimize the environmental impact of chemical production without compromising economic growth and societal benefits.

Decarbonization of Chemical Production

One of the most pressing challenges for the chemical industry globally is the decarbonization of production processes. Traditional chemical manufacturing heavily relies on fossil fuels, contributing significantly to global carbon dioxide emissions. In their groundbreaking study, Magda H. Barecka and Joel W. Ager (2022), explore the potential of electrolysis-based manufacturing powered by renewable energy. The authors argue that large-scale deployment of electrolysis could significantly reduce emissions, particularly in energy-intensive sectors such as ammonia and methanol production. However, the study highlights a critical challenge: the current pace of renewable energy expansion is insufficient to meet the energy demands of full-scale electrolysis.



In India, similar efforts are underway, particularly in industrial hubs like Gujarat and Maharashtra. The government promotes green industrial clusters, encouraging chemical industries to adopt shared waste management systems, centralized treatment plants, and circular economy principles. India's Zero Effect, Zero Defect (ZED) certification also incentivizes industries to improve their environmental performance.

Addressing Environmental Impacts

Pollution and energy consumption remain central concerns in the chemical industry's sustainability efforts worldwide. A 2023 study provides comprehensive analysis of sustainability reports from 25 major chemical companies. The research reveals that carbon emissions, water usage, waste generation, and hazardous chemical management are consistently ranked as the most environmental impacts by global industry leaders.



In India, the Ministry of Environment, Forest and Climate Change (MoEFCC) has introduced stricter norms for emissions and waste management specific to chemical industries. Programs like the National Water Mission emphasize water conservation within the sector, promoting sustainable water usage in chemical manufacturing facilities.

Innovations in Recycling Technologies

Resource efficiency and waste reduction are also crucial components of sustainable chemical production worldwide. Emerging recycling technologies are making significant strides toward closing the loop on material usage. A 2025 article, *Recycling of Rare Earth Metals and Other Solutions for a Sustainable Future: Meet the Scientists Making It Happen*", discusses the development of ionic liquid-based methods for recovering rare earth metals from electronic waste.

In India, companies are innovating in plastic and chemical waste recycling, with the government supporting extended producer responsibility (EPR) frameworks. Indian startups are also focusing on chemical recycling processes to convert plastic waste into reusable raw materials, promoting a circular economy within the sector.



Regulatory and Economic Considerations

Beyond technological innovations, regulatory frameworks play a pivotal role in driving sustainability within the chemical industry. In regions like Germany, industry leaders have called for reforms to streamline regulatory processes and foster a growth-oriented environment that supports sustainable innovation. Reducing bureaucratic hurdles, addressing high energy costs, and expediting approval processes are critical for maintaining competitiveness while advancing climate neutrality goals.

In India, the government has set ambitious sustainability targets for the chemical sector under the broader framework of its National Action Plan on Climate Change (NAPCC) and the Chemical Policy of India. Key objectives include reducing carbon emissions intensity by 33–35% by 2030 (compared to 2005 levels) and promoting the adoption of cleaner production technologies. Additionally, initiatives like the Production Linked Incentive (PLI) scheme aim to encourage green manufacturing practices and enhance resource efficiency across the sector. Strengthening environmental regulations, investing in renewable energy infrastructure, and providing financial incentives for sustainable innovation are central to India's strategy for fostering a greener chemical industry.



Conclusion: A Global and Indian Roadmap for Sustainable Chemical Production

Sustainability in the chemical industry requires a comprehensive, multi-pronged approach that integrates technological innovation, supply chain optimization, regulatory reform, and collaborative efforts across sectors. From decarbonizing energy-intensive processes to embracing circular economy principles through recycling and resource efficiency, the industry is undergoing a transformative shift toward sustainability both globally and in India. Collaborative efforts among researchers, policymakers, and industry leaders will be vital to ensuring a greener, more resilient future for chemical manufacturing.



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of Engineering, Dombivli.

IIChE forthcoming events



21st Annual Session of Student's Chemical Engineering Congress

SCHEMCON-2025

Sustainable Development in Energy and Environment

SEPTEMBER 2nd - 3rd, 2025

Organised by

School of Chemical Engineering
Indian Institute of Chemical Engineers
Vellore Regional Centre
Vellore Institute of Technology, Vellore

IChE forthcoming events



Second Announcement

Indian Chemical Engineering Congress

IChE CHEMCON 2025

**"AI Driven Chemical Engineering Processes –
Transformation and Sustainability"**

78th Annual Session of IChE



INDIAN INSTITUTE OF CHEMICAL ENGINEERS

December 27-30, 2025

Organized by

Indian Institute of Chemical Engineers

Annamalai Regional Centre

at

FIST Sponsored

Department of Chemical Engineering

**Faculty of Engineering & Technology, Annamalai University,
Annamalainagar - 608 002, Tamilnadu, India.**

Website: www.chemcon2025.com



Indian Institute of Chemical Engineers (IIChE)

IIChE began its journey on 18th May 1947 with burning nationalistic fervor as India was on the cusp of gaining its independence in August 1947. Ever since its inception, the mission of IIChE was to contribute to the nation-building through dissemination of knowledge and enhancement of skill in Chemical Engineering and its allied fields. While the path has not been easy, IIChE has been steadfast in its role.

Today it has emerged as a premier body of Chemical Engineering education and profession in India, having several thousands members across the country. The Platinum Jubilee of IIChE is a means to salute its 75-year long journey through many successes and a few setbacks. As a matter of fact, IIChE is always molding itself and playing a proactive role to keep up with the dynamic needs of the economy and the society. The administration of the Institute is governed by an all-India Council. The activities of the Institute are spread across the country through its 46 Regional Centers and more than 181 Student Chapters. The Regional Centers promote and complement the activities and objectives of the Institute.



IIChE Mumbai Regional Center (MRC)

IIChE-MRC is also confluence of streams of professionals from academia, research institute and industry. It provides them the appropriate forum for joint endeavors, hand-in-hand, to work for human being through application of chemical engineering and allied sciences. If you are interested about, attached to or involved in chemical engineering related activities - whether as a student as a seasoned professional - you shall find the programme of IICHE immensely beneficial, opening up doors of new possibilities and existing possibilities

IIChE-MRC is one of the regional centers of the Indian Institute of Chemical Engineers (IIChE), the apex professional society of Chemical Engineers in India. The Mumbai Regional Centre (MRC) is the biggest of them with respect to the all-India membership. Many members of the Institute serve on various technical committees of the Government of India and of chemical and allied industries.

Address: IIChE Mumbai Regional Centre B-18, Vardhman Complex, Gr Floor, Opp Home Town & 247 Park, LBS Marg, Vikhroli (West), Mumbai - 400 083. Phone: 022 4558 5485. Email: info@iichemrc.org

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IChE-MRC Best Undergraduate Design Project Award

Genesis : There are around 10-15 undergraduate Chemical Engineering Departments affiliated to IChE MRC. Every college has an undergraduate project as a part of its curriculum. More than 1000 students compulsorily do project as the requirement of their UG program. It is a team activity and considerable weightage is given for the efforts that students put into the project. It also has a strong presence in their CV and job interviews. It is proposed to introduce a popular prize to further motivate students and make them put in serious effort in this activity. Every year the best project will be selected for prize by following a very systematic and rigorous protocol.

Process: All the affiliated colleges will be invited to send their entries. Criteria for selection will be communicated every year in each participating college. Only one nomination per college, sent by the head of the department, will be entertained. An expert committee panel approved by EC-MRC will be formed. The panel members will go through the reports, and do a critical assessment to select the best project.

The committee will conduct a two-phase evaluation process. In the initial phase, nominees will receive comprehensive feedback on their project proposals, highlighting areas for enhancement and improvement. Following the submission of revised projects, the committee will undertake a thorough assessment to determine the final award recipients.

The award will be announced and given away in an event attended by sponsors, selected students and college teachers. Panel members would comment on the overall quality of the projects and give inputs. The winning team(s) will respond. The winners would receive awards worth more than or equal to 30k (first prize) and 20k (second prize). The names of the winners and the project abstract will be displayed on the IChE web page. A small article in chemical magazines will be published to popularize the achievement.

Prize Sponsors: The prize will be named after the sponsor organization: XYZ-IChE MRC Best Undergraduate Project Award. A prior publicity would be given to all the colleges among 1000 students in and around Mumbai, every year. The award will be given in the hands of the company nominated person in every annual event of IChE MRC. Post publicity of the event will be done on IChE website; LinkedIn, Facebook of MRC and also on various social media platforms and in Chemical magazines.

IChE-MRC Best Undergraduate Design Project Award



Ingenero - IChE MRC Best Design Project Award 2024



Winner Announcement

We

are thrilled to announce the winners of the Inaugural Best Design Project Award 2024 organized by the IChE Mumbai Regional Centre. This prestigious award recognizes the outstanding efforts and rigour demonstrated by final-year undergraduate students in Chemical Engineering.

The Award is shared by



Sarthak Agarwal

Manufacturing of m-Cresol
Institute of Chemical Technology, Mumbai



Craig Alistair Denis Desouza

Manufacturing of Maleic Acid
Institute of Chemical Technology, Mumbai

IICHE-MRC Best Undergraduate Design Project Award

Projects are expected to contain ...

Executive Summary: concise overview of the project goals, methodology, and key findings.

Chemical Focus: In-depth description of the chosen chemical, including its history, properties, applications, market specifications, global and Indian market size, import/export data.

Production Considerations: Detailed analysis of production routes, process selection rationale, and a clear description of the chosen production process.

Process Schematics: Inclusion of block diagrams, process flow diagrams, and piping and instrumentation diagrams along with descriptions of the equipment involved.

Material and Energy Balances: Presentation of mass and energy balances for the chosen process. Integration of a flow sheet generated using a specific software package (mentioning the chosen software and its property package).

Thermodynamic and Kinetic Analysis: Application of thermodynamic and kinetic principles to the chosen process.

Sensitivity Analysis: Exploration of how critical operating parameters affect the process performance.

Design Aspects: Detailed sections on process design, equipment design (including material selection for construction - MOC), mechanical design, and overall plant layout.

Reactor Design: Specific and detailed design considerations for the process reactor.

Site Selection: Justification for the chosen site based on factors like resource availability, production capacity, and profitability.

Process Control and Instrumentation: Selection and description of appropriate instrumentation and control systems for the process.

Safety and Environmental Considerations: Comprehensive assessment of Health, Safety, and Environment (HSE) aspects, including discussions on effluent treatment plant (ETP) considerations and a sample Hazard and Operability (HAZOP) study.

Cost Analysis: Detailed breakdown of equipment costs and overall production costs.

Economic Evaluation: Complete economic analysis of the plant, encompassing capital cost, revenue projections, break-even point, return on investment (ROI), cash flow analysis, and relevant financial ratio analysis.

Feasibility Assessment: Conclusion regarding the technical, economic, and ecological feasibility of the designed process.

Annexes:

List of Tables, List of Figures, List of Abbreviations, List of References, Sample Equipment Specification Sheet, Material Safety Data Sheet (MSDS) for both hazardous raw materials and the final product. This standardized format ensures a comprehensive and comparable evaluation of design projects from various engineering colleges during competitions.

Become IChE Member

The Indian Institute of Chemical Engineers (IChE) is the apex professional body of chemical engineers in India. It has a membership of about fifteen thousand including Corporate Members and Student Members. There are forty-one Regional Centers and forty-seven Student Chapters of the Institute in different parts of India. The Institute represents the chemical engineering profession in India. Many members of the Institute serve on various technical committees of the Government of India and of chemical and allied industries. Here are some of the benefits that a member of the Institute enjoys.

- Since IChE is the recognized forum, membership of the Institute itself is considered as a professional accomplishment of a person.
- Member can join numerous seminars, symposia, workshops, training programme, special lectures, industry visits and other professional activities. Participation in such programme is either free or may involve a subsidized fee.
- Corporate member is eligible to contest in the annual election to the 25-member Council, which is the highest policy-making body of the Institute.
- IChE has an active consultancy programme. An interested member may seek and get help from the Institute in his endeavor to offer consultancy services to potential industrial customers.
- Member can join the four-day Annual Professional Meet called CHEMCON at a subsidized fee. Various professional meets organized by IChE acts as a forum for interaction and networking of the professionals
- The student members may join as member of seminars specifically meant for them and can participate in a number of competitions. One of such popular seminar is SCHEMCON which is organized by one of the IChE Student Chapters.
- Corporate member may be nominated to various government and non-government bodies in different areas, if found suitable.

Details about types of membership, membership fees & subscriptions, membership card etc. are available on IChE website.

<https://www.iiche.org.in/joiniiche.php>

Online Application forms for Life Fellowship, Life Membership, Life Associate Membership, Student Membership, Organisational Membership are also available on IChE website.



IICHE-MRC E-NEWSLETTER

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