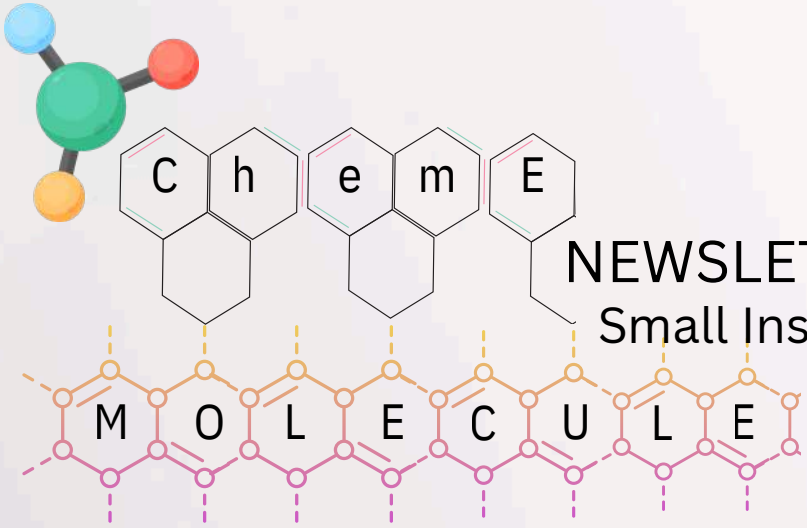
KPR Institute of Engineering and Technology

Learn Beyond (Autonomous, NAAC "A")

Avinashi Road, Arasur, Coimbatore.

Department *of* Chemical Engineering



NEWSLETTER

Small Insights, Big Impact

4 Issue

April - June, 2025

Vision and Mission
Institute

Vision

To become a premier Institute of academic excellence by imparting technical, intellectual, and professional skills to students for meeting the diverse needs of industry, society, the nation and the world at large.

Mission

- Commitment to offer value based education and enhancement of practical skills
- Continuous assessment of teaching and learning processes through scholarly activities
- Enriching research and innovative activities in collaboration with industry and institute of repute
- Ensuring the academic processes to uphold the culture, ethics and social responsibility

Vision and Mission
Department

Vision

To be a center of academic and research excellence in chemical engineering to cater to the diverse needs of industry, society and the global community.

Mission

- Provide quality education that integrates values and practical skills to ensure effective learning outcomes
- Promote research, innovation, and collaboration with industries and institutions of repute
- Inculcate professionalism, ethics, lifelong learning and social responsibilities

INSIDE NEWSLETTER

Parent - Teacher Meet

Events Department

A Parents-Teachers Meeting was organized on 5th April 2025. The event was aimed at strengthening the bond between parents, teachers, and mentors to ensure holistic development of students. Dr. S. Balasubramanian addressed the gathering and highlighted academic progress, departmental initiatives, and student development activities. Parents actively participated in interactive sessions where their valuable feedback and expectations were shared. Later, individual Parents-Mentors Classroom Interactions were conducted by faculty. The meet successfully created a collaborative platform to enhance academic and personal growth of students with collective support from faculty and parents.

The session also provided an opportunity to review student performance, curricular achievements, and co-curricular engagements. Faculty members shared strategies being adopted to improve academic outcomes and overall discipline, while parents appreciated the transparent communication and supportive learning environment offered by the department. Several constructive suggestions were recorded to further improve teaching methodologies, student mentoring, and career guidance initiatives. The meeting concluded on a positive note with a shared vision of nurturing students into responsible professionals equipped with values, skills, and confidence to excel in their future endeavors.

One Credit Course on “Insights into Chemical Plants”

Events Department

A one-credit course on Insights into Chemical Plants was conducted from 21st to 25th April, 2025. A total of 66 students enthusiastically participated in this program, gaining valuable exposure to the fundamentals of chemical industries. The course featured 10 eminent experts from various industries who delivered insightful sessions on foundational topics, bridging the gap between academic learning and industrial practices. This initiative provided students with practical perspectives on chemical plant operations, preparing them for future professional challenges in the field.

The lectures covered a wide range of themes including plant design, safety protocols, process optimization, sustainability practices, and emerging technologies in chemical engineering. Students had the opportunity to interact directly with professionals, ask queries, and understand the practical applications of concepts learned in classrooms. Case studies from real-world industrial scenarios were also discussed, helping students appreciate the importance of problem-solving and decision-making in plant environments.

A snashot from the session by Mr. S. Stalin

A snashot from the session by Mr. Venkat Ragavan

A snashot from the session by Mr. T. K. Prem Kumar

A snashot from the session by Mr. Venkata Subramanian

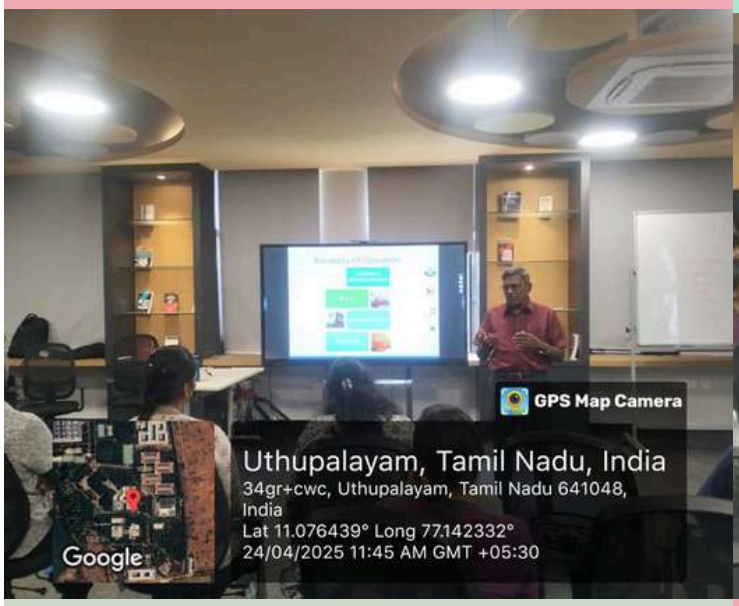
One Credit Course on “Insights into Chemical Plants”

Events Department

The program was highly appreciated by the participants, as it not only enhanced their technical knowledge but also instilled confidence to pursue careers in core industries. Faculty members emphasized that such industry-integrated courses play a vital role in equipping students with employability skills and preparing them to meet the evolving demands of the chemical sector. The course concluded with positive feedback from both students and experts, reaffirming the department’s commitment to providing holistic and practice-oriented learning experiences.

A snashot from the session by Mr. Nagaraj

A snashot from the session by Mr. Venkata Subramanian



A snashot from the session by Mr. Nachiappan

A snashot from the session by Mr. Ramadoss

International Trip to Vietnam

Events Department

The Department of Chemical Engineering organized an international educational trip to Vietnam from 25th May to 1st June 2025. The tour was led by Lt. Dr. A. K. Priya, Professor, who accompanied the students throughout the enriching experience. During the visit, students had the opportunity to explore Ho Chi Minh City University of Technology and engage with Prof. Dr. Trịnh Quang Vinh, Vice Director, Office of International Study Programs, Faculty of Electrical and Electronics Engineering.

In addition to academic interactions, the itinerary included culturally and historically significant sites such as the War Remnants Museum and the Cu Chi Tunnels, offering students valuable insights into Vietnam's heritage and history. This international exposure fostered global learning, cultural exchange, and professional networking, making it a memorable and impactful experience for all participants.

International Trip to Vietnam

Events Department

The visit to the Cu Chi Tunnel offered students a glimpse into the remarkable underground network built during the Vietnam War. The tunnels, stretching over 250 kilometers, were used for living, communication, and defense, showcasing extraordinary engineering and resilience.

IEI Seminar on “Integrating Artificial Intelligence for Energy Efficiency and Sustainability in Chemical Processes”

Events Department

A One Day Seminar on "Integrating Artificial Intelligence for Energy Efficiency and Sustainability in Chemical Processes" by The Institution of Engineers (India), Coimbatore Local Centre (under the aegis of CHDB, IEI) on 25th April 2025. The resource person for session I was Dr. Murali Rangarajan, Professor, Dept of Chemical Engineering & Materials Science, Amrita Vishwa Vidyapeetham, Coimbatore. The topic he discussed was Utilizing Artificial Intelligence for Designing Efficient and Sustainable Chemical Processes. Session 2 was handled by Dr. Virivinti Nagajyothi, Assistant Professor, Department of Chemical Engineering, National Institute of Technology, Tiruchirapalli on the topic “Fuzzy Logic and Neural Networks in Chemical Process Systems”.

Session 1 by Dr. Murali Rangarajan, Professor, Department of Chemical Engineering & Materials Science, Amrita Vishwa Vidyapeetham, Coimbatore.

Session 2 on “Fuzzy Logic and Neural Networks in Chemical Process Systems” by Dr. Virivinti Nagajyothi, Assistant Professor, Department of Chemical Engineering, National Institute of Technology, Tiruchirapalli.

IEI Seminar on “Integrating Artificial Intelligence for Energy Efficiency and Sustainability in Chemical Processes”

Events Department

Session 3 on “AI for Environment and Energy Applications” by Dr. Nandeesh Kumar, Chief Operating Officer at Navigate Labs, Coimbatore.

HoD address and Memento to our resource persons

Visit to Our Department

Events Department

Dr. P. K. Panda, Retd., Scientist, National Aerospace Laboratories (NAL), Bangalore visited the department and interacted with out faculty on 16th May 2025. He engaged in an interactive session with the faculty, sharing his expertise and insights from his illustrious career.

Farewell Party

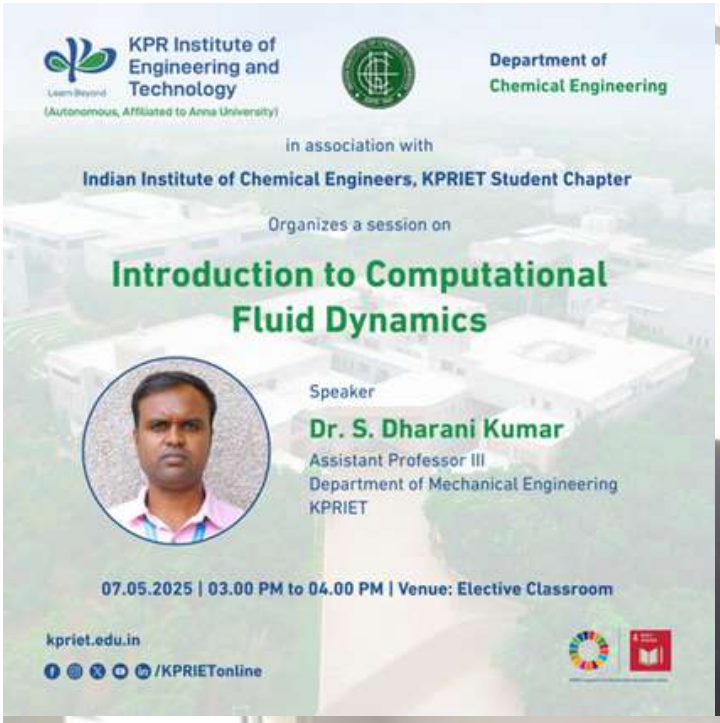
Events Department

A farewell party was organized on 29th April 2024 for the outgoing Batch of 2021–2025. The event was filled with emotions as students, faculty, and juniors came together to celebrate memories and bid a warm goodbye. The Head of the Department addressed the gathering, appreciating the contributions of the graduating batch and extending best wishes for their future endeavors. Faculty mentors also conveyed their heartfelt messages, motivating students to pursue their careers with confidence and determination.

The juniors showcased their talents through lively performances including dance and mime, adding color and joy to the evening. Fun-filled interactions, sharing of experiences, and expressions of gratitude made the occasion truly memorable. The event concluded with a note of hope, as the department wished the graduates success in their professional journeys while cherishing their bond with the institution.

Guest Lecture on “Introduction to Computational Fluid Dynamics”

Events Department



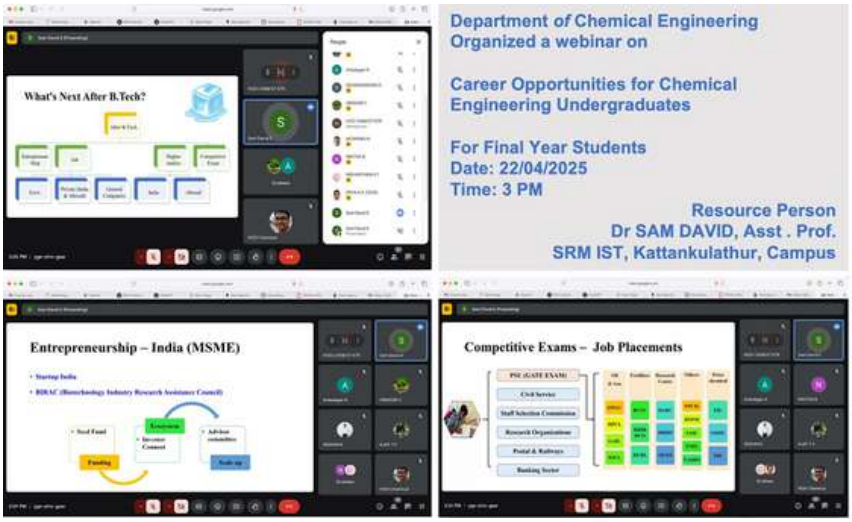
The Department of Chemical Engineering organized a guest lecture on “Introduction to Computational Fluid Dynamics” on 7th May 2025. The session was delivered by Dr. S. Dharani Kumar, Assistant Professor III, Department of Mechanical Engineering.

Dr. Dharani Kumar provided an overview of the fundamentals of Computational Fluid Dynamics (CFD), its governing equations, numerical methods, and applications in engineering problem-solving. The lecture also highlighted the role of CFD in design optimization, process improvement, and research, enabling students to understand its significance in both academic and industrial contexts.

The engaging session enhanced the participants’ technical knowledge and sparked interest in exploring CFD tools for future projects and research activities.

Webinar on “Career Opportunities for Chemical Engineering Undergraduates”

Events Department



A webinar on Career Opportunities for Chemical Engineering Undergraduates was organized on 22nd April 2025. The resource person was Dr. Sam David, Assistant Professor, SRM Institute of Science and Technology, Kattankulathur Campus, Chennai. The session provided valuable insights into diverse career paths available for chemical engineering graduates, highlighting opportunities in core industries, research, higher education, and emerging interdisciplinary fields.

Webinar on “ Engineering the Fututre”

A webinar on Engineering the Future was conducted on May 3, 2025. The session was delivered by Mr. V. Anand Krishna, Senior Process Engineer, Bio Energy Business, Praj Industries, Pune. The insightful talk provided participants with an understanding of emerging trends and opportunities in engineering, with a special focus on innovations in the bioenergy sector.

A webinar on “Introduction to Process Simulation”

Events Department

The Department of Chemical Engineering organized a webinar on “Introduction to Process Simulation” on 10th May 2025. The session was delivered by Mr. V. Pavithra Kumar, Assistant Manager, Process Simulation, Utthunga Technologies, Bengaluru. The webinar provided valuable insights into the fundamentals of process simulation, its industrial applications, and emerging trends in the field. Participants gained a better understanding of simulation tools and their role in optimizing process design and performance.

Internship Review

Events
Department

The Winter Internship Review for the Academic Year 2024–2025 was conducted on 26th April 2025 by Dr. G. Surendran and Dr. S. Pranav. The session provided a platform for students to present their internship experiences, share key learnings, and reflect on the skills they acquired during their industrial training. Faculty members offered constructive feedback on project outcomes, technical execution, and report preparation, encouraging students to explore innovative approaches and align their learning with industry requirements. The review not only helped assess students' progress but also served as a valuable opportunity to strengthen academic–industry collaboration and inspire peers to actively participate in future internship programs.

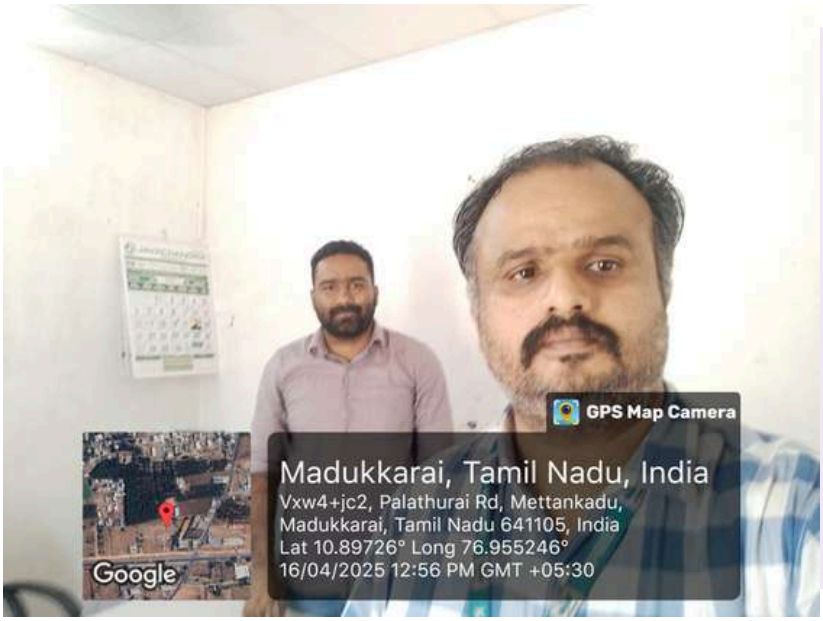
Students presented a wide spectrum of internship projects, ranging from process optimization and plant safety practices to environmental sustainability initiatives and research-oriented assignments. Each presentation highlighted practical insights that complemented classroom learning, enabling students to connect theory with real-time industrial applications. The faculty appreciated the efforts taken by students to adapt to professional environments and encouraged them to develop problem-solving, analytical, and communication skills that are highly valued by employers.

The review also emphasized the importance of technical report writing, professional ethics, and teamwork as essential takeaways from internships. Many students shared how their training enhanced their confidence to work in multidisciplinary environments and provided clarity on future career choices. The interactive discussions sparked enthusiasm among junior students, motivating them to plan for internships in reputed organizations.

The program concluded with an acknowledgment of the industry mentors and organizations that provided training opportunities, underscoring the department's strong ties with the industrial sector. The Winter Internship Review was thus a meaningful initiative that not only evaluated student learning outcomes but also reinforced the department's commitment to nurturing industry-ready graduates equipped with both knowledge and practical exposure.

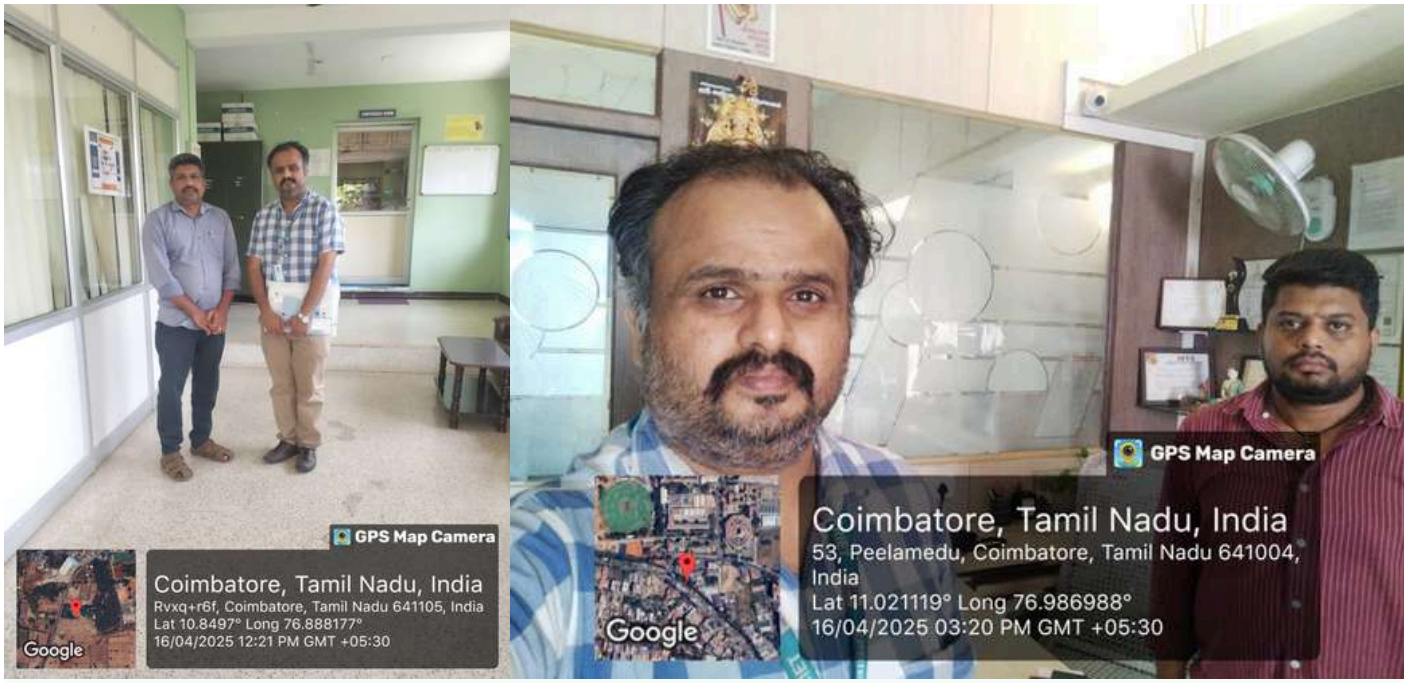
Senthil Papain and Food Products (P) Ltd, Coimbatore

Events Department



Dr. S. Pranav, Assistant Professor II, visited Senthil Papain and Food Products (P) Ltd., Coimbatore on 16th April 2025 as a part of the Industry–Institute Interaction. The visit facilitated discussions on industrial processes, collaboration opportunities, and avenues for student internships and project-based learning.

Priyadharshini Chemicals, Coimbatore



Dr. S. Pranav, Assistant Professor II, visited Priyadharshini Chemicals, Coimbatore, on 16th April 2025 as a part of the Industry–Institute Interaction. The visit provided an opportunity to gain insights into chemical manufacturing practices and explore potential collaborations for student training, industrial projects, and research-oriented activities.

Ekki Water Technologies

Events Department

Dr. R. Umapriya, Assistant Professor III, arranged an Industrial Visit to Ekki Water Technologies on 10th May 2025. During the visit, students gained practical insights into advanced water pumping solutions, manufacturing processes, and quality control measures adopted by the company. The team also learned about the latest innovations in sustainable water management and the role of engineering in developing efficient pumping systems.

The visit provided an excellent platform for bridging classroom learning with real-world applications, enhancing students' industry exposure and technical understanding. Students actively interacted with industry experts, clarifying their doubts and gaining valuable career-oriented knowledge. Overall, the visit served as a motivating experience, inspiring students to explore innovative solutions for future water challenges.

Co-Curricular

Vruksham ‘25

Ms. B. Uma Maheswari of IV B.Tech. Chemical Enigneering receiving the Institute Topper Award at Vruksham 2025 in the presence of our Chairman, Secretary, Principal and Chief guest.

The 16th Annual Day “Vruksham 25” was conducted on 28th April 2025. The Department of Chemical Engineering was so happy to witness our student Ms. B. Umamaheswari of IV B.Tech. Chemical Engineering as Institute Topper. It was the second consecutive time that our student is securing the award. Ms. G. Harsha Vardhini of III B.Tech. Chemical Engineering was awarded as Best Students in Co-curricular and Extracurricular activities. Ms. K. Akshaya of IV B.Tech. Chemical Engineering as Best Outgoing Student. These accolades stand as a testimony to the consistent excellence and all-round performance of our students.

RVS College of Engineering and Technology, Coimbatore

Co & Extra - Curricular

Mr. S. Arjun, Mr. S. Vishnuseshan and Mr. M. Tamilkumaran of II B.Tech. Chemical Engineering won first prize in Paper presentation competition conducted as a part of Technical Symposium conducted by RVS College of Engineering and Technology, Coimbatore.

Mr. R. Remo Joyson of II B.Tech. Chemical Engineering won first prize in Badminton.

Mr. K. Surya Prashanth of II B.Tech. Chemical Engineering Secured first prize in chess competition.

Ms. S. M. Deepika of II B.Tech. Chemical Engineering got II Prize in Technical Quiz.

Ms. R. Indra Gandhi of II B.Tech. Chemical Engineering got first prize in Onsight photography

Co-Curricular

Coimbatore Institute of Technology

Ms. S. Annalakshmi, Ms. T. Padma Priya and Ms. J. Vanitha of III B.Tech. Chemical Engineering secured 3rd position in the Paper Presentation Competition at AAVISHKAR 2025 hosted by Coimbatore Institute of Technology, Coimbatore. Their presentation highlighted innovative approaches in chemical engineering applications and was well appreciated by the judges. This achievement brought pride to the department and encouraged their peers to actively participate in future technical events.

Naan Mudhalvan Niral Thiruvizha 2.0.

Mr. M. S. Sathyaprakash and Mr. R. Naresh of IV B.Tech. Chemical Engineering, along with Mr. A. Aravindhan of IV B.E. Civil Engineering, secured a cash prize of Rs. 10,000 at Naan Mudhalvan Niral Thiruvizha 2.0.

The team presented their innovative solution under the theme: “How might we create an effective and sustainable solution to reuse or recycle worn-out solar panels, minimizing waste and maximizing the recovery of valuable materials for future use?”.

Their work focused on developing practical strategies for recycling and material recovery from used solar panels, aligning with the goals of sustainable technology and resource management.

Coimbatore Institute of Technology

Co-Curricular

Ms. A. S. Shalini and Ms. V. S. Prashitha of III B. Tech. Chemical Engineering secured the 2nd position in the poster presentation at AAVISHKAR 2025, hosted by Coimbatore Institute of Technology, Coimbatore. Their presentation highlighted innovative ideas in chemical engineering, showcasing the creativity and technical knowledge of the students at a competitive platform.

Academic Toppers

Ms. B. Uma Maheswariof IV B. Tech. Chemicicak Engineering, Ms. V. Dhanusri of II B. Tech. Chemical Engineering and A. S. Shalini of I B. Tech. Chemical Engineering were awarded academic topper certificates by Dr. D. Saravanan, Principal, KPRIET.

Co-Curricular

INNOVSENSE

The Department of Chemical Engineering is proud to secure 2nd and 3rd place in INNOVSENSE 2025 and win 45000 seed money for the projects of our students. The team members of Agro NPK - Smart Leaf Analyzer were Ms. G. Harsha Vardhini guided by Lt. Dr. A. K. Priya and Modern Bioreactor for Sustainable Biofertilizer porduction were Ms. S. Vidula guided by Dr. S.Karunakaran.

NEP SARATHI

Ms. A. S. Shalini of III B.Tech. Chemical Engineering has been selected as NEP SARATHI for the Academic Year 2024–2025, in recognition of her active participation and contribution towards promoting the objectives of the National Education Policy. This achievement highlights her leadership qualities and commitment to academic and professional excellence.

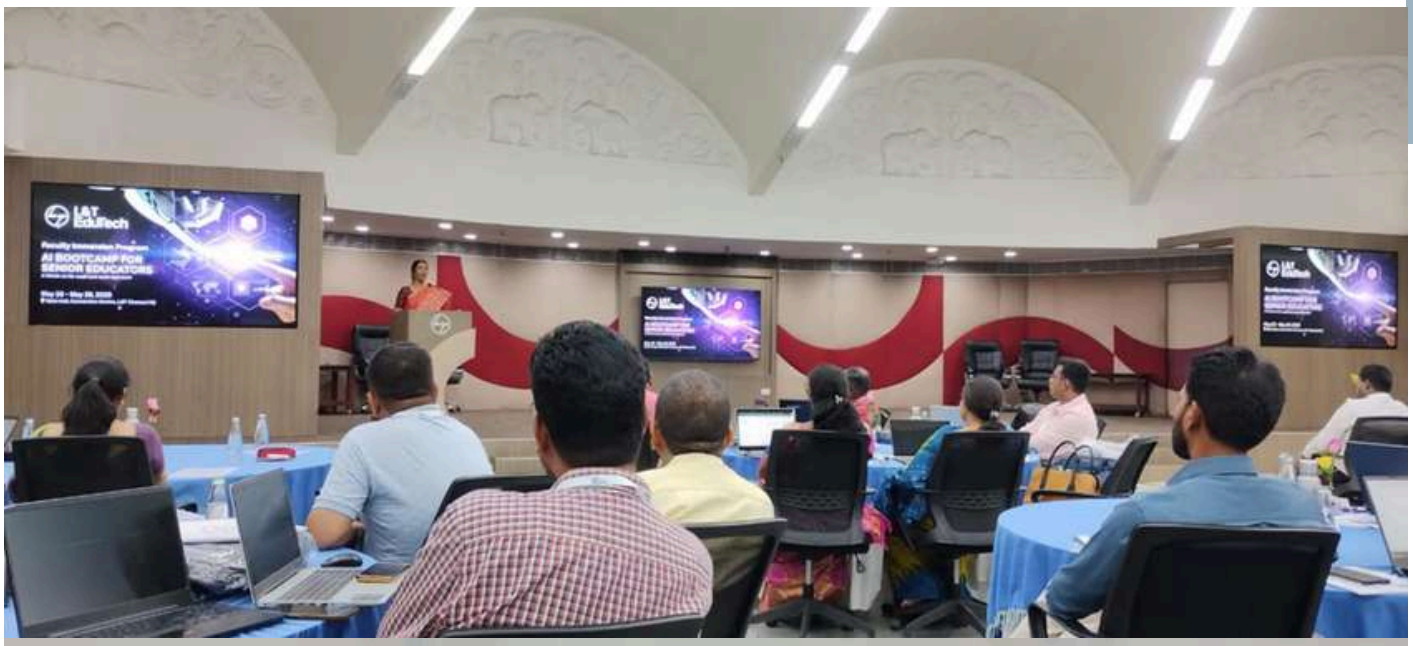
Sports

CIT Alumni Trophy

Ms. K. Kanchana Devi and Ms. B. Saranya of II B.Tech. Chemical Engineering won the First Prize in the CIT Alumni Trophy held on 7th April 2025. Their remarkable performance brought laurels to the department and showcased the talent and competitive spirit of our students.

LnT Edutech Faculty Immersion Program

Faculty

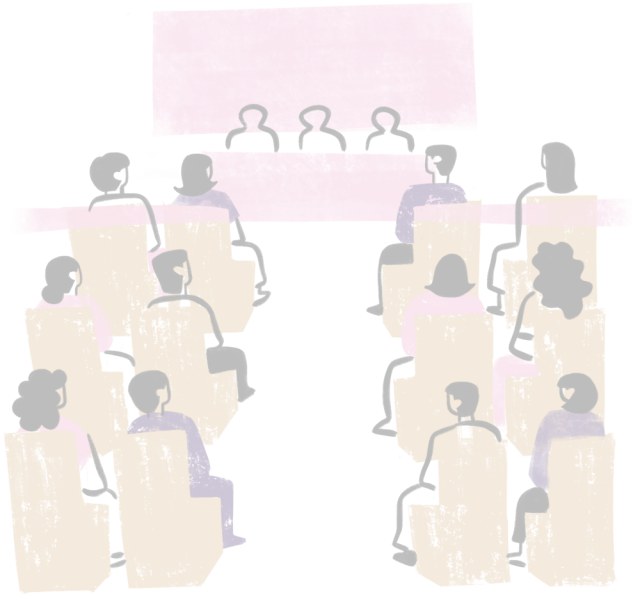


On 28th May, Dr. S. Balasubramanian participated in the LnT EduTech Faculty Immersion Program on Artificial Intelligence held at the Larsen & Toubro Chennai Headquarters. The program aimed to equip faculty members with the latest knowledge and practical insights in AI applications, fostering innovation and enhancing teaching methodologies. The sessions featured expert-led discussions, hands-on demonstrations, and collaborative interactions, providing participants with valuable exposure to cutting-edge AI technologies.

PMS Conference

Faculty

Dr. R. Umapriya Assistant Professor III, Dr. E. Nakkeeran Associate Professor, and Mr. Mohammed Rashiq III B.Tech. Chemical Engineering participated in the PMS Conference on “Transforming Chemical Industries through Process Safety” held from 26th to 27th June 2025 at the Hilton Hotel, Chennai. The conference featured expert sessions, panel discussions, and case studies focusing on innovative approaches to enhance safety in chemical industries.



Financial Assistance from TNSCST

Faculty

Lt. Dr. A. K. Priya, Professor, Department of Chemical Engineering, has been conferred with the prestigious Indian Business Icon Award for her entrepreneurial venture, Mycoblooms Mushroomery Private Limited. She received the title "India's Best Mycoblooms Mushroom Farm", awarded by Ibthink Online Academy and Youngsters Time Organization.

This recognition celebrates her remarkable dedication, innovative practices, and commitment to sustainable farming in the mushroom cultivation sector. Her achievement stands as an inspiration to aspiring entrepreneurs and highlights the potential of combining academic expertise with business innovation. The award also reinforces the department's focus on fostering an entrepreneurial mindset among faculty and students. It stands as a proud moment for the institution, showcasing excellence beyond the academic sphere. Her success story further emphasizes the importance of integrating sustainability with enterprise.

Journal and Book Chapter

Journal Publications

1. Shamia, D., **Umapriya, R.**, Prasad, M. L. M., Chowdhury, R., Kumar, P., & Vishnupriya, K. (2025). Enhancing Skin Cancer Classification with Mixup Data Augmentation and Efficientnet. Journal of Electronics, Electromedical Engineering, and Medical Informatics, 7(2), 557-566.
2. Prakash, M. A., Das, A. M., Ravikumar, M., **Umapriya, R.**, Kistan, A., Velumayil, R., ... & Yokeswaran, R. (2025, April). Enhancing desalination efficiency with a multi-stage solar freshwater system: Integration of paraffin wax and photovoltaic heating. In AIP Conference Proceedings (Vol. 3270, No. 1, p. 020214). AIP Publishing LLC.
3. **Saravanan, K.**, Bharathi, M., Alyami, N. M., Alharbi, S. A., Hussein-Al-Ali, S. H., Arulselvan, P., & Ravichandran, N. (2025). Leveraging sodium alginate-nickel oxide-berbamine hybrid nanomaterials (HNMs) by assessing the cytotoxicity-mediated oxidative stress in Hep3B cell lines. Process Biochemistry, 153, 284-293.
4. **Priya, A. K.**, Yogeshwaran, V., Sudarsan, J. S., & Nithiyanantham, S. (2025). Removal and inactivation of coronavirus in water and wastewater treatments plants: a critical review—global perspective. Journal of Umm Al-Qura University for Engineering and Architecture, 1-10.
5. Kumarasamy, K., Ramachandran, R., Sundaradoss, M. V., & **Rohan, U**. (2025). Study of green-synthesized Ag–Ca–kaolin composite for hemostatic and antibacterial effect. Green Materials, 1-8.
6. Ramalingam, G., **Arunkumar, P.**, Alqahtani, M. D., & Elgarahy, A. M. (2025). Microwave-assisted in-Situ Synthesis of ZnS/g-C3N4 Heterojunction Composite for Efficient Photocatalytic Degradation of Malachite Green Dye. Water, Air, & Soil Pollution, 236(8), 481.
7. Karthick, A., & **Priya, A.** (2025). Review on utilization of electronic waste in construction industry as binder, mortar and concrete. Asian Journal of Civil Engineering, 1-14.

Book Chapter Publications

1. **Dharani, L.**, & Gomadurai, C. (2025). Microbial wastewater systems to target micropollutants in industrial effluent. In Microbial Biotechnology: Integrated Microbial Engineering for B3–Bioenergy, Bioremediation, and Bioproducts (pp. 351-366). Elsevier.

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Department *of* Chemical Engineering

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4 Issue

April - June, 2025