KPR Institute of Engineering and Technology

Learn Beyond (Autonomous, NAAC "A")

Avinashi Road, Arasur, Coimbatore.

Department *of*
Chemical Engineering

AGGLOMERATION

NEWSLETTER

Academic year 2023 - 2024

Even Semester

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

Message from Head of the Department

Dr.S.Balasubramanian
Prof. & Head, ChemE

Greetings from the Department of Chemical Engineering!

The even semester of the academic year 2023-2024 has been a period of notable achievements and growth for our department. With a student strength of 267, we continue to foster academic excellence and research innovation. This semester, our faculty and students have contributed significantly to research, filing patents and publishing 5 papers, with the highest impact factor reaching an impressive 15.3. Additionally, a Memorandum of Understanding (MoU) was signed with Global Lab and Consultancy Services, strengthening our industry-academia collaboration.

Our department successfully hosted several knowledge-enriching events, including expert sessions on opportunities for higher education, career guidance, and navigating academic pathways. We organized a National Level Workshop on Sophisticated Instrumental Analysis for Environmental Research, sponsored by DRDO, providing students with hands-on exposure to cutting-edge technologies. A 30-day Entrepreneurship Training Program was also conducted, equipping students with skills in manufacturing household chemicals and herbal products.

In line with our commitment to holistic education, various competitions were conducted in collaboration with IIChE and our Department Association. Students enthusiastically participated in Technical Quiz, Blind Treasure Hunt, and Wealth from Waste Competition. The AIChE Student Chapter played a pivotal role in raising awareness about water conservation by organizing drawing and quiz competitions on World Water Day. We also conducted several webinars on key industry topics, including Carbon Capture and Utilization Technologies, Process Modeling and Simulation, Aspen HYSYS Simulation, LPG Bottling Plant Operations, and the Role of Project Managers in Industry.

Industry exposure remains a cornerstone of our curriculum, and we facilitated multiple industrial visits for both students and faculty. Faculty members visited Wafe Auxiliary Chemicals Pvt Ltd, Kavin Engineering and Services Pvt Ltd, ChemEnviro Systems Pvt. Ltd., and Britannia Industries, Arjuna Natural Pvt. Ltd. Students explored Pasteur Institute, Green Era Recyclers, City Compost Yard, Amirta University, and Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram. These visits provided valuable insights into real-world industrial applications.

We take immense pride in the selection our faculty member, Er. L Dharani's innovative idea among 397 proposals approved during the 7th Project Monitoring and Advisory Committee (PMAC) Meeting of MSME Innovative.The announcement was made at Vigyan Bhawan, New Delhi, in the presence of the Honorable Minister of MSME.

Our students showcased their academic prowess by presenting research papers at international conferences and participating in project competitions. We are thrilled to announce an impressive placement record of 98%, with the highest package at 8.5 LPA and an average package of 3.62 LPA, with most placements secured in core companies.

As we celebrate these accomplishments, we express our sincere gratitude to our management faculty, students, and stakeholders for their continuous support and dedication. Let us continue our journey of academic excellence and innovation, shaping the future of Chemical Engineering.

INSIDE NEWSLETTER

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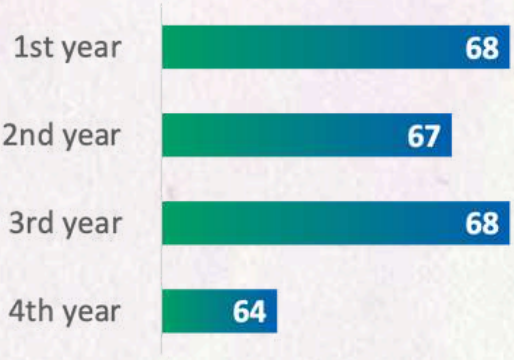
About Department

Students Enrollment 235



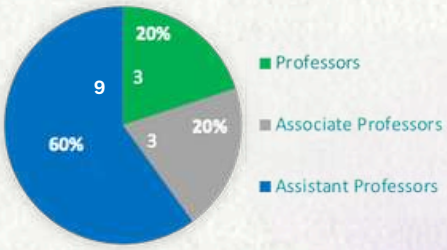
Faculty Strength 13

Students - Faculty Ratio 16.08

MoUs Signed 1

B. Tech. Chemical Engineering Started in the Year 2018

Faculty Cadre Distribution

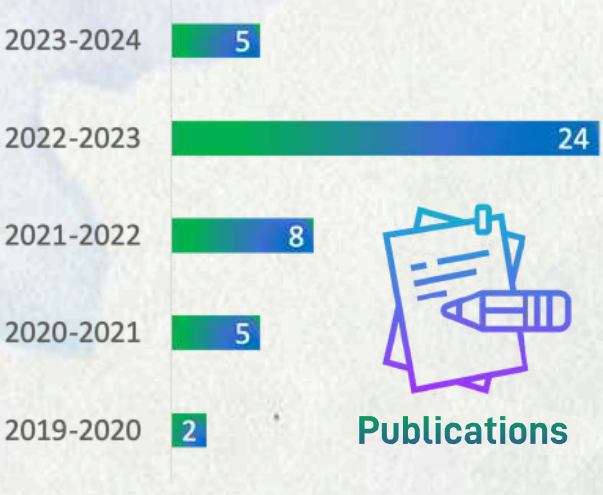


Faculty Research Area

1. Advanced Process Control
2. Biofertilizers
3. Bioremediation
4. Ceramic Membranes
5. Computational Fluid Dynamics
6. Crude Oil Fouling

Faculty Research Area

7. Industrial IOT
8. Microfluidics (Lab-on-a-Chip)
9. Nanomaterial
10. Perovskite solar cells
11. Process Modeling and Simulation
12. System Identification
13. Water and Wastewater Treatment



Publications

Paper Publications 05

Highest Impact Factor 15.3

Average Impact Factor 08.64

Oppurtunities for Higher Education

Events Department

Dr. T. Rameshkumar addressing 3rd and 4th year Chemical Engineering students on opportunities for higher education abroad during a session at Dhanam Hall.

A session was organized on 4th January 2024 for the 3rd and 4th year students of the Department of Chemical Engineering in Dhanam Hall. The session featured Dr. T. Rameshkumar from KPR International as the resource person. Dr. Rameshkumar delivered an insightful lecture on the opportunities for higher education abroad specifically tailored for Chemical Engineering graduates. The session provided valuable guidance and information for students aspiring to pursue advanced studies overseas, equipping them with essential knowledge for their future academic endeavors.

Study Oppurtunities in Europe

The Department of Chemical Engineering organized a guest lecture on "Study Opportunities in Europe" for Chemical Engineering students on 10th January 2024. Mrs. Sindhu Muthukrishnan, Senior Counsellor at Bluestone Overseas Consultants, Coimbatore, was the resource person. She provided valuable insights into the various academic programs and opportunities available in Europe, guiding students on how to navigate the application process and choose the best fit for their higher education aspirations.

Navigating Higher Education

Events
Department

Dr. S. Balasubramanian delivering the lecture

The Department of Chemical Engineering, KPR Institute of Engineering and Technology, Coimbatore, organized a session on "Higher Study Opportunities for Chemical Engineering Graduates in India and Abroad" on 24th April 2024. Dr. S. Balasubramanian, Professor and Head, delivered an insightful lecture covering pathways for higher studies, competitive exams, and application procedures for foreign universities. He also highlighted top recruiters globally, in India, and at KPR. The interactive session allowed students to clarify doubts, earning positive feedback. Students expressed enthusiasm for similar events, finding the session highly beneficial.

Career and Higher Studies

The Department of Chemical Engineering, KPR Institute of Engineering and Technology, Coimbatore, organized a session on "Career and Higher Study Opportunities for Chemical Engineering Students" on 15th April 2024. Mr. K. Murugesan, Assistant Professor – Sr. Grade, delivered an engaging talk covering government and private sector job opportunities and higher education pathways. He provided insights on the GATE exam, top global companies, and KPR's esteemed recruiters.

Er. K. Murugesan, Interacting with our studens in the orientation session on the career and Higher Study Opportunities for Chemical Engineering students

National Level Workshop

Sophisticated Instrumental Analysis for Environmental Research

Events Department

Principal Dr. M. Ramasamy delivering the welcome address in the workshop

Prof. Dr. S. Balasubramanian delivering the presidential address in the workshop

Principal Dr. M. Ramasamy honouring the chief guest

Dr. K. Kadirvelu delievring the session

Entrepreneurship Training Program

Events Department

The Department of Chemical Engineering at KPRIET successfully organized a 30-day entrepreneurship training program focused on the manufacturing of household chemicals and herbal products. The program saw enthusiastic participation from over 30 aspiring entrepreneurs, equipping them with the knowledge and skills needed to launch their own startups. The training program covered practical sessions on formulating and producing household cleaning agents, herbal cosmetics, and eco-friendly products. Participants also received guidance on business planning, marketing strategies, and securing funding to kickstart their entrepreneurial journey.

TRINITY MIRROR 5.2.24

SPICMACAY's intention inspire one to become a 1000 cities, touching the college campus.

MSME conducts entrepreneurship training at KPRIET

Coimbatore, Feb 5: KPR Institute of Engineering and Technology (KPRIET), Coimbatore, conducted a 30-day training on manufacturing household chemicals and herbal products under the Entrepreneurship Skill Development Programme in association with the Micro, Small and Medium Enterprises, Government of India.

Individuals, irrespective of educational background and age, participated and received certificates for completing the training

opportunities, marketing, their own ventures. shampoo, balm, agarbatti,

A snapshot from the training program as featured in Trinity Mirror. Participants proudly exhibited the products they developed during the 30-day program on the final day.

Valedictory address by Mr. Senthil Kumar Natesan

"The best way to predict the future is to create it." – Peter Drucker

Peter Drucker, a renowned management consultant, educator, and author, is widely regarded as the father of modern management thinking. This quote encapsulates the essence of entrepreneurship—taking initiative and shaping the future through innovation and action.

Competitions Hosted by Department Association and IIChE

Events Department

The Department of Chemical Engineering recently organized a series of engaging events, including a Technical Quiz and a Blind Treasure Hunt, hosted by the Department Association. In parallel, the Indian Institute of Chemical Engineers (IIChE) student chapter held two creative competitions: Wealth from Waste and Carving. These events were designed to challenge students' knowledge, creativity, and teamwork, while also fostering a sense of camaraderie and healthy competition among participants.

Technical Quiz and Blind Treasure Hunt

The Technical Quiz tested participants' knowledge in various aspects of chemical engineering, pushing them to think critically and quickly. The Blind Treasure Hunt, on the other hand, combined problem-solving skills with teamwork, as participants navigated a series of clues and challenges to find hidden treasures.

Wealth from Waste Competition

The Wealth from Waste competition encouraged students to demonstrate their creativity by transforming discarded materials into useful or decorative items, highlighting the importance of sustainability.

Students actively participating in Blind Treasure Content

Technical Quiz Competition

Students competing enthusiastically in Technical Quiz to showcase their Knowledge and Skills

World Water Day 2024

Events Department

On March 22, 2024, the AIChE KPRIET Student Chapter celebrated World Water Day by organizing a drawing competition aimed at raising awareness about the importance of water conservation and sustainable water management. The event provided a creative platform for students to express their thoughts and ideas on the theme of water, highlighting the critical role it plays in our lives and the environment.

Participants showcased their artistic talents through various interpretations of water-related themes, including the significance of preserving water resources, the impact of water scarcity, and the need for sustainable practices. The competition not only encouraged creativity but also fostered a deeper understanding of the global water crisis among students.

The event was well-received, with enthusiastic participation from students across different disciplines. The AIChE KPRIET Student Chapter plans to continue promoting environmental consciousness through similar initiatives in the future, contributing to the global efforts to protect and conserve our precious water resources.

Students showcasing their drawing skills as a part of World Water Day 2024

World Water Day 2024

Events Department

On March 22, 2024, the AIChE KPRIET Student Chapter commemorated World Water Day by organizing a quiz competition focused on raising awareness about water conservation and sustainable water management. The event aimed to engage students in a fun and educational way, testing their knowledge on various water-related topics and encouraging them to think critically about the global water crisis.

Participants answered questions covering a wide range of subjects, including the importance of water in everyday life, the impact of water scarcity, and strategies for preserving this vital resource. The quiz competition sparked lively discussions and helped students gain a deeper understanding of the challenges and solutions related to water conservation.

Quiz Competition conducted as a part of World Water Day 2024

"Thousands have lived without love, not one without water." – W. H. Auden

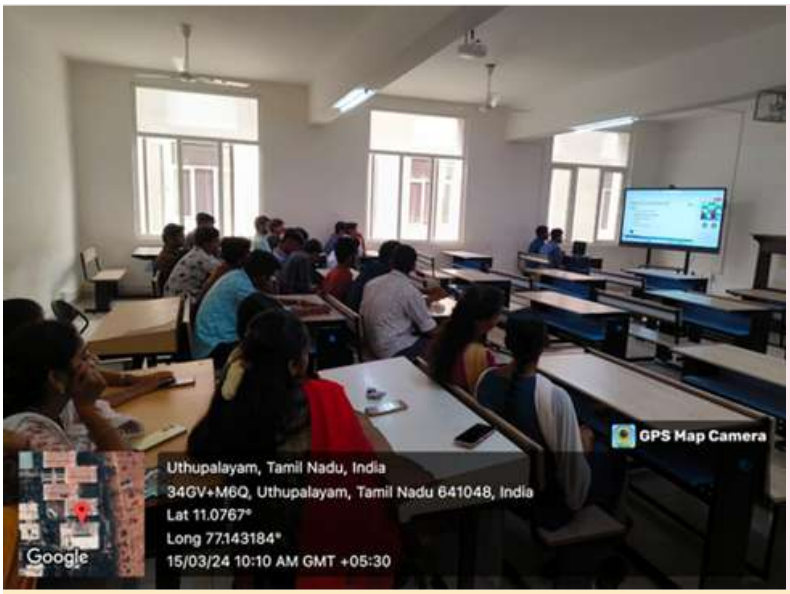
This quote by poet W. H. Auden emphasizes the fundamental necessity of water for life, highlighting its irreplaceable value.

About World Water Day

World Water Day is observed annually on March 22 to highlight the importance of freshwater and advocate for the sustainable management of water resources. Established by the United Nations (UN) in 1993, the day aims to raise awareness about the global water crisis and promote actions to address water scarcity and sanitation issues.

Each year, World Water Day has a specific theme, focusing on different aspects of water conservation and access. It also supports Sustainable Development Goal 6 (SDG 6): Ensure availability and sustainable management of water and sanitation for all.

L & T EduTech Course Expert Session



On March 15, 2024, the Department of Chemical Engineering organized an online expert session in collaboration with L&T Edutech, exclusively for third-year chemical engineering students. This session was designed to provide students with advanced insights and practical knowledge directly from industry experts. The expert from L&T Edutech covered a range of topics relevant to modern chemical engineering practices, with a focus on the latest industry trends.

The session aimed to bridge the gap between academic learning and industry expectations, equipping students with the skills and knowledge required to excel in their future careers. Students actively participated in the session, engaging with the expert during the interactive Q&A portion, where they had the opportunity to clarify doubts and gain a deeper understanding of complex topics.

This collaboration with L&T Edutech is part of the department's ongoing efforts to provide students with access to high-quality industry-focused education, ensuring that they are well-prepared for the challenges and opportunities of the Chemical Engineering field.

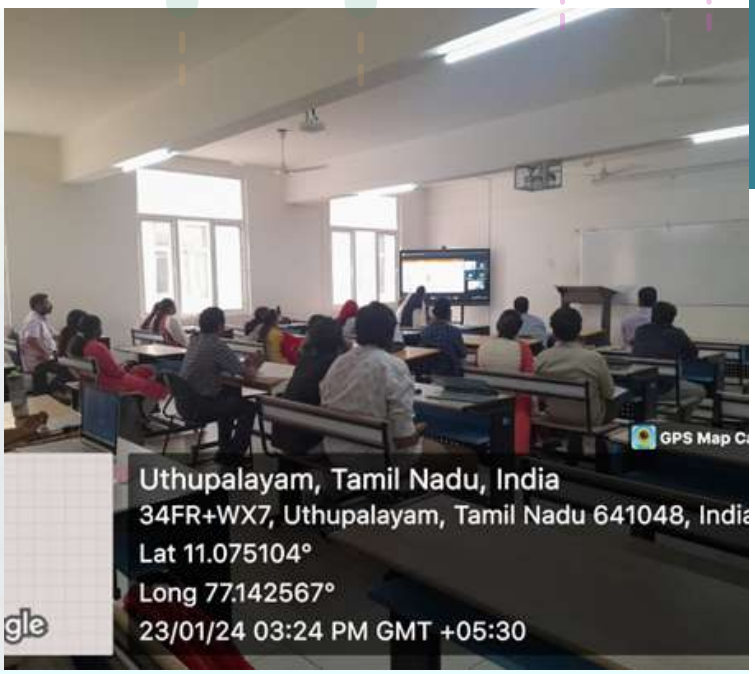
IQAC Internal Audit

IQAC Audit by Er. Kavin along with our faculty Dr. R. Umapriya and student Mr. Jimkoriyar of IV B.Tech.CHemical Engineering

On March 15, 2024, the Department of Chemical Engineering conducted an internal audit as part of the Internal Quality Assurance Cell (IQAC) process. The audit focused on teaching methodologies, research initiatives, student support, and administrative efficiency. It aimed to ensure continuous improvement and adherence to quality standards. The findings will help implement best practices and enhance the educational experience. This audit reflects the department's commitment to excellence and accountability.

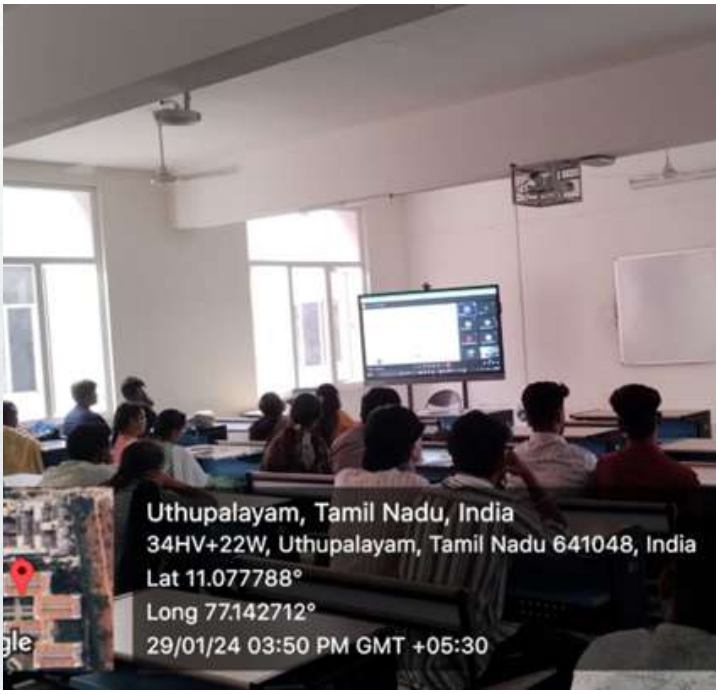
Webinar
23rd January 2024

Events
Department



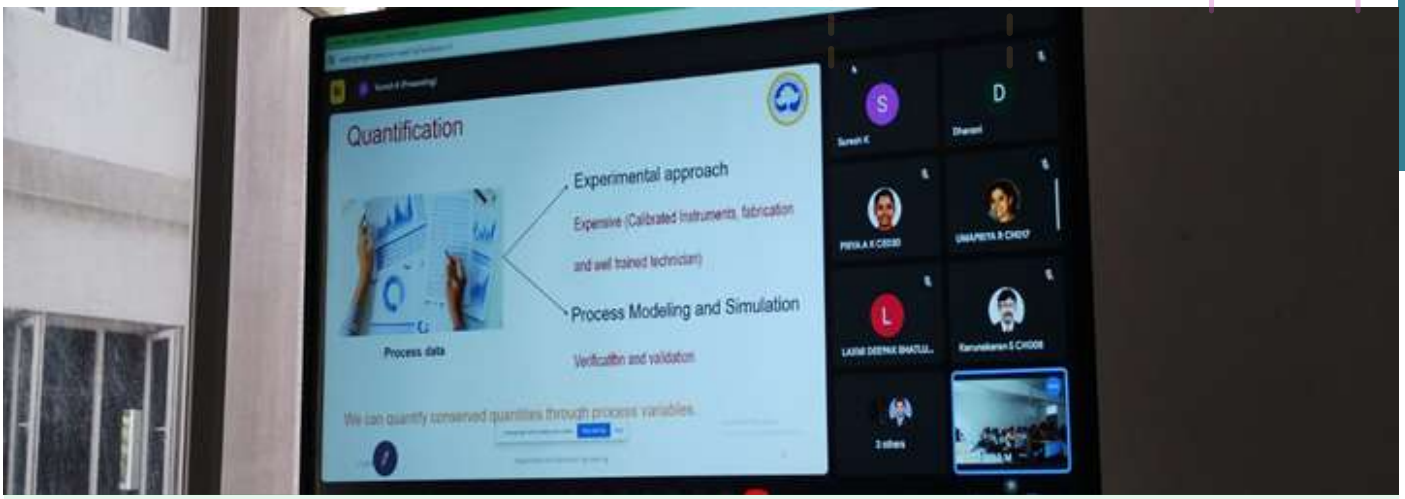
The Department of Chemical Engineering organized a webinar on "Carbon Capture and Utilization Technologies" on 23rd January 2024. The session featured Dr. B. Uma Maheswari, Assistant Professor in the Department of Chemical Engineering at Coimbatore Institute of Technology (CIT), Coimbatore, as the speaker. Dr. Maheswari delivered an insightful talk on the latest advancements in carbon capture and utilization, highlighting their importance in mitigating climate change and promoting sustainable practices within the industry.

Webinar
29th January, 2024



Webinar
29th January, 2024

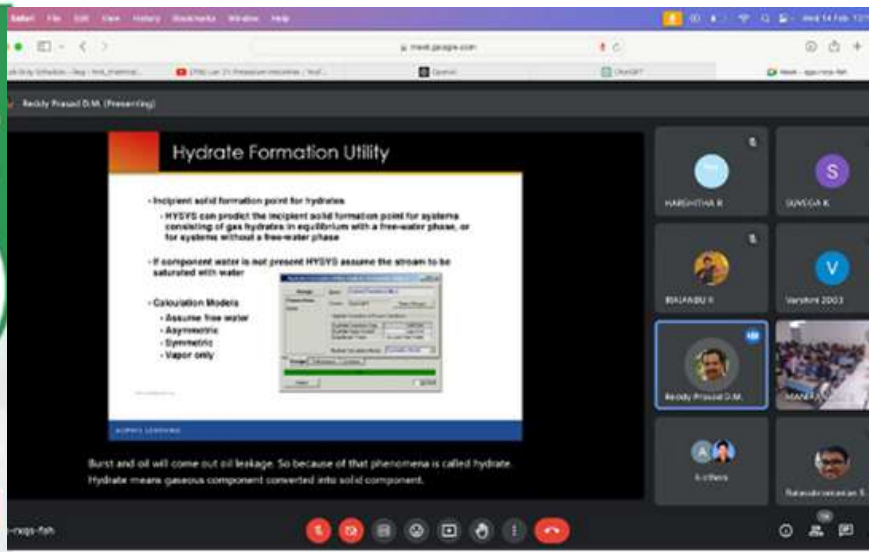
Events Department



A Snapshot from the webinar

The Department of Chemical Engineering organized a webinar on "Process Modeling and Simulation in Chemical Engineering" on 29th January 2024. The session was led by Dr. K. Suresh, Associate Professor and Head of the Department of Chemical Engineering at SRM Institute of Science and Technology (SRMIST), Kattankulathur. Dr. Suresh presented an in-depth talk on the significance of process modeling and simulation in optimizing chemical engineering processes, providing students and faculty with valuable knowledge on cutting-edge tools and techniques used in the industry.

Webinar
14th February, 2024



Webinar
14th February, 2024

Events Department

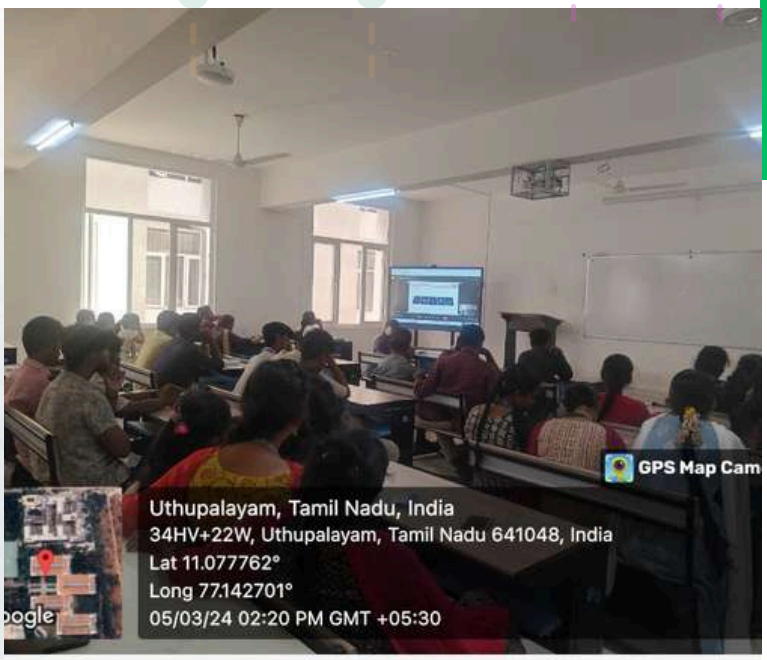
The Department of Chemical Engineering organized an insightful online guest lecture on "Elevating Aspen HYSYS Simulation: A Tribute to the Significance of Process Engineers" on February 14, 2024. The lecture was delivered by Dr. Reddy Prasad, Associate Professor in the Petroleum and Chemical Engineering program at the Faculty of Engineering, Universiti Teknologi Brunei, Brunei. His expertise provided valuable knowledge to participants.

Webinar
22nd February, 2024

The Department of Chemical Engineering hosted a webinar on "Simulation Tools and Their Applications in Chemical Industries" on February 22, 2024. Dr. C. Gomadurai, Associate Professor in the Department of Chemical Engineering at Kongu Engineering College, led the session. His presentation provided participants with valuable insights into the practical use of simulation tools within the chemical industry. The webinar highlighted the significance of simulation tools in optimizing processes, reducing costs, and improving efficiency in chemical operations. Participants actively engaged in the Q&A session, gaining clarity on implementing these tools in real-world scenarios.

Webinar
5th March, 2024

Events
Department



The Department of Chemical Engineering successfully organized an informative webinar on "LPG Bottling Plant: Operations and Fire Fighting Arrangements" on March 5, 2024. The session aimed to provide students and faculty with a comprehensive understanding of the critical processes involved in LPG bottling operations and the essential safety measures required to prevent and combat fires in such facilities.

The webinar featured an expert speaker from the industry, who shared valuable insights into the operational aspects of LPG bottling plants, including the handling, storage, and distribution of liquefied petroleum gas. The discussion also covered the various fire fighting arrangements that are crucial for ensuring safety in these high-risk environments, emphasizing the importance of preparedness and quick response in the event of an emergency.

Participants had the opportunity to engage in an interactive Q&A session, where they could deepen their understanding of the topics discussed and explore real-world applications of the knowledge gained. The webinar was well-received, with attendees appreciating the relevance and practicality of the information presented. This event is part of the ongoing efforts to bridge the gap between academic learning and industry practices, providing students with the knowledge and skills necessary to excel in their future careers.

"Oil and gas are not just commodities; they are the lifeblood of global economies and modern infrastructure." – Daniel Yergin

Daniel Yergin, a Pulitzer Prize-winning author and energy expert, emphasizes the fundamental role of oil and gas in driving economic growth and technological advancement.

Webinar
15th March, 2024

Events
Department

The Department of Chemical Engineering successfully organized a webinar on March 15, 2024, focused on the "Role of Project Managers in Industry." The session featured an insightful presentation by the Manager of Projects at PRIMETECH, Chennai, who shared valuable expertise on the critical role project managers play in driving success across various industrial sectors.

During the webinar, the speaker provided an in-depth overview of the responsibilities of project managers, including project planning, execution, resource management, risk mitigation, and team leadership. The session also highlighted the skills and competencies required to excel in project management, emphasizing the importance of effective communication, strategic thinking, and adaptability in a dynamic industrial environment.

Participants had the opportunity to engage with the speaker through a lively Q&A session, where they discussed real-world challenges and best practices in project management. The webinar was well-attended by students and faculty, who appreciated the practical insights and the relevance of the topic to their academic and professional pursuits.

This event is part of our ongoing efforts to bridge the gap between academic learning and industry practices, equipping our students with the knowledge and skills necessary to succeed in their future careers.

The session received positive feedback for its practical approach and relevance to current industry trends. Such initiatives continue to enhance the department's commitment to fostering industry-academia collaboration and preparing students for leadership roles in the Chemical Engineering field.

Webinar
19th March, 2024

Events
Department

On March 19, 2024, the Indian Institute of Chemical Engineers (IIChE) KPRIET Student Chapter, in collaboration with the Association of Chemical Engineering, organized an insightful webinar on "Applications of MATLAB in Process Control." The session featured Dr. M. Chakkarapani, Assistant Professor in the Department of Electronics & Instrumentation Engineering at Assam Energy Institute, Sivasagar, as the expert speaker. The webinar provided an in-depth exploration of how MATLAB, a powerful computational tool, can be effectively utilized in process control within Chemical Engineering.

Dr. Chakkarapani shared his expertise on the practical applications of MATLAB for modeling, simulation, and optimization of process control systems. The session was tailored to help students and faculty understand the relevance of MATLAB in solving complex engineering problems and improving process efficiency.

Mathematics

"Pure mathematics is, in its way, the poetry of logical ideas." – Albert Einstein
This quote highlights the elegance and creative logic behind mathematics.

Chemical Engineering

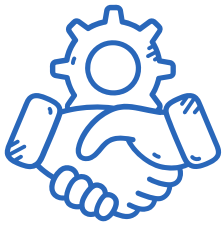
"Chemical engineering is about transforming raw materials into valuable products while balancing innovation, efficiency, and sustainability." – Robert S. Langer

Robert Langer, a renowned chemical engineer, emphasizes the field's crucial role in modern industry and sustainability.

MoU Signed by Department of ChemE

Events Department

On February 13, 2024, the Department of Chemical Engineering formalized a significant partnership by signing a Memorandum of Understanding (MoU) with Global Lab and Consultancy Services, Salem. This collaboration aims to foster innovation and provide enhanced learning opportunities for students and faculty. The MoU focuses on joint research projects, skill development programs, and industrial training to bridge the gap between academia and industry. This partnership is expected to open new avenues for knowledge sharing and technical advancements in the field of Chemical Engineering.



A Memorandum of Understanding (MoU) is important for an undergraduate program, as it fosters collaboration between academia and industry. Such agreements bridge the gap between theoretical knowledge and practical application, providing students with valuable industry exposure. MoUs facilitate internships, industrial visits, and hands-on training, allowing students to gain real-world experience. They also open doors for collaborative research projects, enabling advancements in areas like process engineering, sustainability, and materials science.

Additionally, MoUs support skill development initiatives by offering specialized training programs, workshops, and certifications that enhance students' technical and professional competencies. Guest lectures and expert sessions conducted through these partnerships provide insights into industry trends and emerging technologies. Furthermore, such agreements improve job prospects by creating direct recruitment pathways and increasing placement opportunities

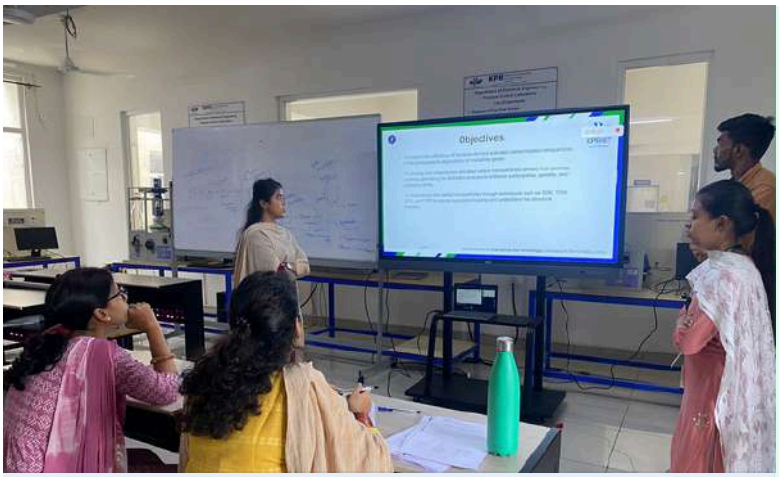
.

MoUs also encourage entrepreneurship by connecting students with incubators and startup ecosystems, fostering innovation in Chemical Engineering applications.

By forming strategic collaborations, a Chemical Engineering department ensures its undergraduate students receive a well-rounded education that aligns with industry requirements, ultimately enhancing their career prospects and professional growth.

Major Project Reviews

Events Department



Students presenting their ideas in the zeroth review in front of the examiners Dr. Nitu Kumari and Er. L. Dharani

The Zeroth Review for the final year students was held on 8th January 2024. During this session, students presented their innovative ideas, which are set to be developed into tangible outcomes. This initial review served as a crucial platform for students to receive feedback and refine their projects, setting the stage for the successful completion of their final year endeavors.

The final year students presented their project progress during the first review on 29th February, 2024 an integral part of their curriculum. The review was conducted in the presence of internal examiners Er. L. Dharani, Er. N. Arun Kumar, and Dr. S. Balasubramanian. The session provided an opportunity for students to showcase their advancements and receive valuable feedback to guide their projects towards successful completion.

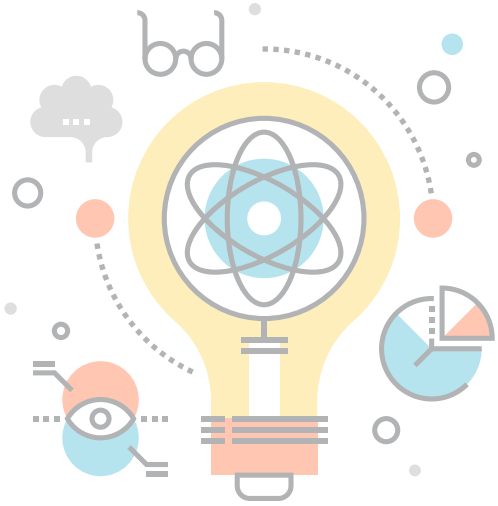
Snapshot of a student presenting his project progress in the first review.

Dr. S. Karunakaran, Associate Professor, Department ofChemE discussing with with Project Students during 3rd review regarding project status and presentation

The Department of Chemical Engineering conducted a review session with final-year project students to assess progress and prepare for the third review. Faculty provided constructive feedback on meeting milestones, refining presentations, and documenting research effectively. Key aspects like clarity, technical accuracy, and communication were emphasized. Students were encouraged to implement the feedback for successful project completion. The session fostered productive discussions, ensuring students are aligned with expectations and equipped to excel in their final presentations.

Students presenting their project to reviewes Dr. N. Arunkumar, Assistant Professor (Sr.G), Department of Biomedical Engineering, Dr. S.Karunakaran and Dr. M. Laxmi Deepak Bhatlu of ChemE

The Department of Chemical Engineering has successfully completed the first review of Innovsense'24 on 24th February, 2024 an in-house project expo showcasing student ideas. This initial review highlighted innovative concepts and set the stage for further development and presentation of student projects.



Innovation and Chemical Engineering

Innovation plays a crucial role in the field of Chemical Engineering, driving advancements in processes, materials, and technologies that shape industries and improve everyday life. As a discipline that integrates principles of chemistry, physics, and engineering, Chemical Engineering constantly evolves to address global challenges such as sustainability, energy efficiency, and environmental protection.

The development of novel materials, cleaner production methods, and advanced separation techniques has revolutionized industries ranging from pharmaceuticals to petrochemicals. Innovations in process optimization and automation have enhanced efficiency, reduced waste, and minimized environmental impact. Breakthroughs in biotechnology and nanotechnology have further expanded the scope of Chemical Engineering, enabling advancements in drug delivery systems, renewable energy solutions, and smart materials.

Chemical engineers play a vital role in fostering innovation by designing processes that enhance productivity while ensuring safety and sustainability. Emerging fields such as green chemistry, waste valorization, and carbon capture technology are reshaping the future of the industry. By integrating research, technology, and creative problem-solving, Chemical Engineering continues to push boundaries, offering solutions to some of the world's most pressing challenges.

With continuous advancements and interdisciplinary collaborations, innovation in Chemical Engineering is shaping a more sustainable and technologically advanced future, contributing to societal progress and industrial growth.

Birthday Celebration

Events Department

Team Chemical Engineering celebrating the birthday of Dr. S. Karunakaran, Associate Professor, ChemE

Appreciation

Our faculty gathered to celebrate the birthdays of our esteemed colleagues in a joyous and heartfelt event. Faculty members came together to honor and appreciate those who marked another year of life. Faculty members enjoyed engaging conversations, laughter, and moments of reflection as they shared stories and well-wishes. Tokens of appreciation were also presented, adding to the celebratory spirit. The event was a wonderful reminder of the strong sense of community within our faculty. A heartfelt thank you to everyone who contributed to making this celebration a success, from the organizers to those who participated. We look forward to many more joyous occasions in the future! Once again, happy birthday to our amazing faculty members!

From Left to Right: Ms. S.Kowsalya, Junior Assistant, Dr. R. Umapriya, Assistant Professor (Sl.G), Er. L. Dharani Assistant Professor, Dr. S. Balasubramanian, Mr. J. Jimkoriyar, IV B.Tech. Chemical Engineering, Dr. E. Nakkeeran, Associate Professor and Mr. D. Naveen, Lab technician

We are pleased to recognize and appreciate the generous contribution made by Mr. J. Jimkoriyar, a fourth-year student from the Department of Chemical Engineering, who recently donated nine valuable books to our department library. Mr. Jimkoriyar's thoughtful donation reflects his commitment to enriching the learning resources available to his fellow students. The books, covering a range of essential topics in chemical engineering, will be a significant asset to the library and will benefit students for years to come.

As a token of our gratitude, the department has awarded Mr. Jimkoriyar an appreciation certificate for his contribution. His gesture not only enhances the library's collection but also sets a commendable example of giving back to the academic community. We extend our heartfelt thanks to Mr. Jimkoriyar for his generosity and encourage other students to follow in his footsteps by contributing to the continuous improvement of our department.

Industrial Visit

Events Department

Wafe Auxiliary Chemicals Pvt Ltd

Dr. S. Karunakaran and Dr. Nitu Kumari discussing with Managing Director Mr. Ramakrishnan

On February 24, 2024, Dr. S. Karunakaran and Dr. K. Nitu Kumari from the Department of Chemical Engineering visited Wafe Auxiliary Chemicals Pvt Ltd. The visit provided valuable insights into industry practices and fostered opportunities for future collaborations.

Kavin Engineering and Services Pvt Ltd, Coimbatore

Dr. G. Suendran and Dr. E. Nakkeeran, Associate Professors from the Department of Chemical Engineering with Mr. Kanagaraj, Manager. Kavin Engineering Services

On March 11, 2024, Dr. E. Nakkeeran and Dr. G. Surendran from the Department of Chemical Engineering visited Kavin Engineering Services Pvt. Ltd. to strengthen ties between our institution and the industry. The visit was part of the ongoing efforts of the Industry Institute Partnership Cell (IIPC) to foster collaboration and explore potential opportunities for student placements and industry-driven projects.

During the visit, Dr. Nakeeran and Dr. Surendran met with Mr. Kanagaraj, the Manager at Kavin Engineering Services, to discuss ways in which both the industry and the institution can benefit from a closer partnership. The discussions focused on aligning academic curricula with industry needs, facilitating internships, and enhancing job placement opportunities for our students. The insights gained and the connections established during this meeting are expected to result in meaningful collaborations that will benefit both our students and the industry

Industrial Visit

Events Department

ChemEnviro Systems Pvt. Ltd. and Britannia Industries

Dr E. Nakkeeran and Dr G. Surendran visited ChemEnviro Systems Pvt. Ltd. and Britannia Industries as part of the ongoing efforts by the Industry Institute Partnership Cell (IIPC) to strengthen industry-academia ties and enhance placement opportunities for our students.

The visit focused on exploring potential collaborations, discussing industry needs, and identifying opportunities for student internships, projects, and placements. Engaging with these leading companies allowed our faculty to gain valuable insights into the latest industry trends and requirements, which will be instrumental in aligning our academic programs with the evolving demands of the chemical engineering field.

The discussions were productive, with both ChemEnviro Systems and Britannia Industries expressing interest in further collaboration with our institution. This visit marks another significant step in our commitment to providing students with practical exposure and career opportunities in top-tier industries.

We look forward to nurturing these relationships and creating more pathways for our students to succeed in their professional careers.

Arjuna Natural Pvt. Ltd

Dr. G. Surendran with MD Arjuna Natural Pvt. Ltd., Mr. P. J. Kunjachan

The Department of Chemical Engineering organized an industrial visit to Arjuna Natural Pvt. Ltd., Aluva, on April 8, 2024, as part of its efforts to enhance placement opportunities for final-year students. The visit provided students with valuable exposure to the company's advanced production processes and state-of-the-art facilities, renowned for manufacturing innovative natural ingredients.

Industrial Visit

Events Department

Pasteur Institute, Coonoor

On March 20, 2024, Dr. A. K. Priya, along with her students from the Department of Chemical Engineering, visited the Pasteur Institute in Coonoor

The visit aimed at providing students with first-hand exposure to the operations and research activities conducted at one of the leading biomedical research institutions in the country.

During the visit, Dr. Priya and her students had the opportunity to tour the facility, observe the production and quality control processes of vaccines, and learn about the various research projects underway at the institute.

This experience was invaluable for the students, allowing them to connect their theoretical knowledge with practical applications in the field of biotechnology and biomedical engineering. It also served as an inspiration for those interested in pursuing careers in research and development within the pharmaceutical and healthcare sectors.

Green Era Recyclers, Coimbatore

Dr S Balasubramanian with the founder, Er. Prasanth O and his brother, in their e-waste management facility at Coimbatore

On June 20, 2024, the Head of the Department of Chemical Engineering visited Green Era Recyclers, a leader in sustainable e-waste management solutions. The visit provided valuable insights into innovative recycling practices and reinforced the department's commitment to promoting environmental responsibility and sustainability.

Visit to Amrita University , Coimbatore

From Left to Right: Dr. T. Daniel Thangadurai, Professor & Associate Head, CFRD -KPIET, Dr. S. Balasubramanian, Professor & Head, ChemE, Dr. M. Ramasamy, Principal, Dr. A. Bazila Banu, Professor & Head, CSE, Dr. R. Manjula Devi, Head- IQAC, KPRIET

On 29th February, 2024 a delegation from our Institution, led by Prof. M. Ramasamy, Secretary and Principal of KPRIET, visited Amrita University to gain insights into their best practices in education, research, and institutional management. The visit aimed to explore and understand the innovative approaches adopted by Amrita University, which has established itself as a leader in higher education.

During the visit, Prof. M. Ramasamy and the accompanying team engaged in discussions with key faculty members and administrative leaders at Amrita University. The exchange of ideas covered various aspects, including curriculum development, research initiatives, industry collaborations, and student engagement strategies. The delegation also had the opportunity to tour the university's state-of-the-art facilities, which showcased the integration of cutting-edge technology in both academic and research environments. The collaboration between the two institutions marks a step forward in our efforts to foster excellence in higher education, benefiting both our faculty and students.

Industry Visit: Bridging Academia and Practical Learning

Industry visits play a vital role in enhancing the learning experience for both faculty and students by providing exposure to real-world industrial operations. These visits bridge the gap between theoretical knowledge and practical applications, allowing participants to gain firsthand insights into modern engineering practices, process optimization, and safety protocols.

For faculty members, industry visits offer an opportunity to stay updated with the latest technological advancements, industrial trends, and challenges faced by the sector. This exposure helps in refining teaching methodologies and aligning the curriculum with industry expectations. Additionally, faculty interactions with industry experts foster research collaborations and potential project opportunities.

For students, visiting industries provides practical knowledge about chemical processes, equipment handling, and production techniques used in sectors such as petrochemicals, pharmaceuticals, food processing, and environmental management. Observing these operations in a live setting helps them understand the complexities of large-scale manufacturing, process control, and quality assurance. Engaging with professionals during these visits also enhances their understanding of career opportunities and skill requirements in the field.

Overall, industry visits create a valuable learning experience, fostering innovation, professional development, and industry-academia partnerships. By integrating these experiences into their education, students and faculty gain a deeper appreciation of real-world challenges and the evolving landscape of Chemical Engineering.

Workshop & Seminar

Events Department

Dr. R. Umapriya,
Assistant Professor,
Department of Chemical Engineering
along with
Er. Suganya Devi,
Assistant Professor (Sr. G),
Department of Electronics and Communication Engineering, KPRIET

On March 23, 2024, Dr. R. Umapriya, from the Department of Chemical Engineering, participated in a workshop titled "Network of Women: Inspire, Empower, and Thrive," held at Kumaraguru Tech Park, Coimbatore.

The workshop was designed to bring together women professionals from various fields to share experiences, foster connections, and discuss strategies for empowerment and career growth. It featured keynote speakers, panel discussions, and interactive sessions focused on inspiring women to take leadership roles, overcome challenges, and thrive in their respective careers.The insights gained from the workshop will undoubtedly contribute to her ongoing efforts to mentor and inspire students and colleagues alike.

Stage set for Seminar

Dr. Ramesh Babu, Head, MechE and aDr. S Balasubramanian, Head, ChemE attending the Seminar at CEG, Guindy, Chennai.

Dr. S. Balasubramanian, Head of Chemical Engineering, and Dr. Ramesh Babu, Head of Mechanical Engineering, participated in an Engineering Education Seminar organized by Anna University in collaboration with the American Society of Mechanical Engineers (ASME). The seminar, titled "Empowering Next Generation Engineers," took place on 24th January 2024 at the College of Engineering (CEG), Guindy, Chennai. The event focused on enhancing the skills and knowledge required to prepare future engineers for the evolving demands of the industry.

MSME Grant

We are proud to announce that Er. L. Dharani, assistant professor of our department, has had her innovative idea selected among the 397 proposals approved during the 7th Project Monitoring and Advisory Committee (PMAC) Meeting of MSME Innovative. This prestigious event was held on February 15, 2024, and the selected ideas were formally announced by the Hon'ble Minister of MSME during the CPSE Conclave at Vigyan Bhawan, New Delhi, on February 29, 2024.

Er. L. Dharani's proposal, titled "Women's Entrepreneurship at Home: Building a Community and Mobile App Platform for Homemaker Women," is a visionary project aimed at empowering women by providing them with a digital platform to engage in entrepreneurship from the comfort of their homes. This platform will create a supportive community where homemaker women can connect, share resources, and grow their businesses, thereby contributing to the economic and social development of their communities. We congratulate Er. L. Dharani on this remarkable achievement and look forward to seeing the positive outcomes of her project.

NPTEL

Department of ChemE is happy to congratulate Dr. S.Balasubramanian, Professor and Head for successfully completing the 4 weeks NPTEL course on "Teaaching And Learning in Engineering (TALE)" and scoring Elite with a consoldated score of 71% during the period January - February, 2024

Staff Training Programme on Biogas Technology

MINISTRY OF NEW AND RENEWABLE ENERGY
GOVERNMENT OF INDIA, NEW DELHI
&
TAMIL NADU AGRICULTURAL UNIVERSITY
DEPARTMENT OF RENEWABLE ENERGY ENGINEERING
AGRICULTURAL ENGINEERING COLLEGE & RESEARCH INSTITUTE
COIMBATORE - 641 003

CERTIFICATE

This is to certify that

Dr.A.K.PRIYA,

Professor (Chemical Engineering), KPR Institute of Engineering and Technology, Coimbatore has successfully completed the Staff Training Programme on BIOGAS TECHNOLOGY FOR SUSTAINABLE FUEL AND ORGANIC MANURE held between 11.03.2024 and 14.03.2024 at Biogas Development and Training Centre, Agricultural Engineering College and Research Institute, Tamil Nadu Agricultural University, Coimbatore.

Programme Co-ordinator
Biogas Development and Training Centre

Dean
Agricultural Engg. College & Res. Institute

MINISTRY OF NEW AND RENEWABLE ENERGY
GOVERNMENT OF INDIA, NEW DELHI
&
TAMIL NADU AGRICULTURAL UNIVERSITY
DEPARTMENT OF RENEWABLE ENERGY ENGINEERING
AGRICULTURAL ENGINEERING COLLEGE & RESEARCH INSTITUTE
COIMBATORE - 641 003

CERTIFICATE

This is to certify that

Dr.M.LAXMI DEEPAK,

Assistant Professor (Chemical Engineering), KPR Institute of Engineering and Technology, Coimbatore has successfully completed the Staff Training Programme on BIOGAS TECHNOLOGY FOR SUSTAINABLE FUEL AND ORGANIC MANURE held between 11.03.2024 and 14.03.2024 at Biogas Development and Training Centre, Agricultural Engineering College and Research Institute, Tamil Nadu Agricultural University, Coimbatore.

Programme Co-ordinator
Biogas Development and Training Centre

Dean
Agricultural Engg. College & Res. Institute

We are pleased to announce that Dr. A. K. Priya and Dr. Laxmi Deepak Bhatlu from the Department of Chemical Engineering have successfully completed a specialized staff training programme on "Biogas Technology for Sustainable Fuel and Organic Manure." The training took place from March 11 to March 14, 2024, and was organized by the Biogas Development and Training Centre at Tamil Nadu Agricultural University, Coimbatore.

The programme provided in-depth knowledge on the principles and applications of biogas technology, focusing on its role in sustainable energy production and organic waste management. Dr. Priya and Dr. Bhatlu gained valuable insights into the latest advancements in biogas production, the design and operation of biogas plants, and the conversion of organic waste into renewable energy and high-quality manure.

Their participation in this training reflects our faculty's commitment to staying at the forefront of sustainable technologies and bringing cutting-edge knowledge back to our institution. This expertise will contribute to the ongoing development of our curriculum and research initiatives, ensuring that our students are equipped with the skills needed to address contemporary challenges in the field of Chemical Engineering.

We congratulate Dr. Priya and Dr. Bhatlu on this achievement and look forward to the positive impact their newly acquired knowledge will have on our academic community.

Students Participation

Vikram Sarabhai Space Centre (VSSC) in Thiruvananthapuram, Kerala

Snapshot of group photo taken during the visit to Vikram Sarabhai Space Centre (VSSC) inThiruvananthapuram, Kerala

On February 28, 2024, our sophomore students from the Department of Chemical Engineering had the privilege of visiting the prestigious Vikram Sarabhai Space Centre (VSSC) in Thiruvananthapuram, Kerala. VSSC, a key center of the Indian Space Research Organisation (ISRO), plays a crucial role in the design and development of satellite launch vehicles and other significant space technology. The visit provided our students with a unique opportunity to gain insights into the cutting-edge research and development activities undertaken at VSSC. This experience not only broadened their understanding of the practical applications of chemical engineering in space technology but also inspired them to explore interdisciplinary fields. It was a day filled with learning, inspiration, and a glimpse into the future of space exploration.

Paper Presentation

S.No.	Student Name	Year	Event Name
1	Ms. S. Priyadharshini	III B.Tech. Chemical Engineering	7th International Conference on Recent Innovations in Modern Science and Technology
2	Ms. A. S. Sushmitha	III B.Tech. Chemical Engineering	7th International Conference on Recent Innovations in Modern Science and Technology

Students Achievements

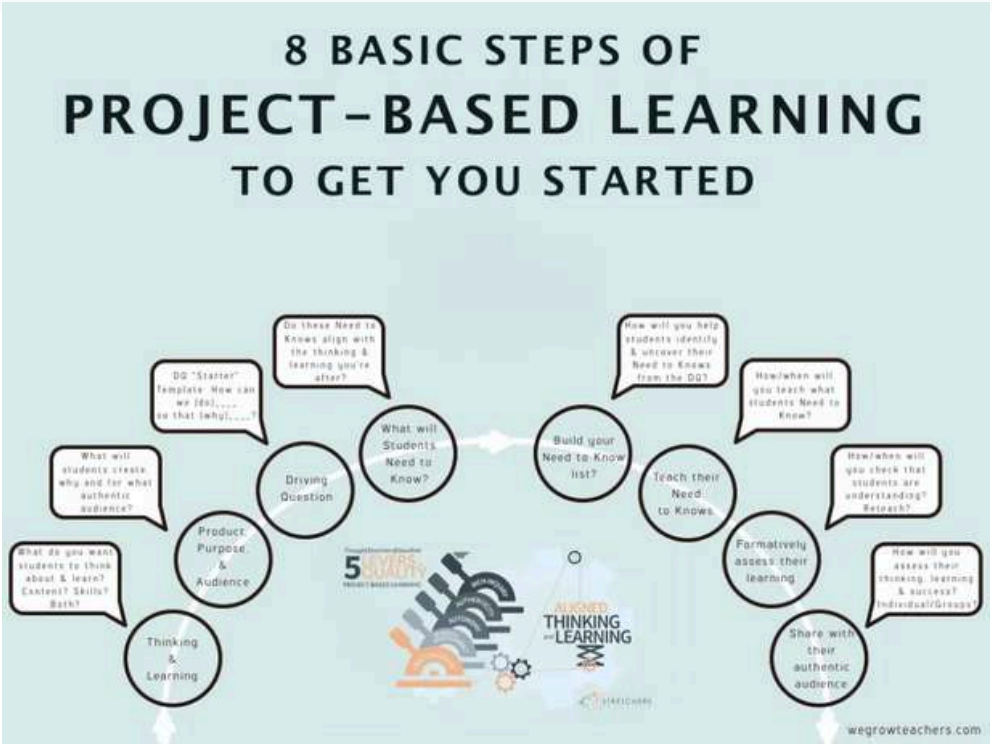
Project Competition

From Left to Right:
Harasha Varthan S., II, B.E, Mechatronics Engineering
Jimkoriyar J., IV, B.Tech, Chemical Engineering
Prakash Raj P. K., IV, B.Tech, Chemical Engineering
Bibek Chaudhary, II, B.Tech, Artificial Intelligence and Data Science

We are proud to announce that our students achieved remarkable success at AAVISHKAAR 2024, held at Veltech Hightech Engineering College. The event saw the participation of over 1,500 students from various institutions in and around Chennai, showcasing their innovative projects. Our team, comprising students from different disciplines, presented their project titled "MEDIVENT" and emerged as the winners of the 1st prize. This outstanding achievement highlights the interdisciplinary collaboration and innovation fostered within our institution.

Team Members: Jimkoriyar J., IV, B.Tech, Chemical Engineering
Prakash Raj P. K., IV, B.Tech, Chemical Engineering
Harasha Varthan S., II, B.E, Mechatronics Engineering
Bibek Chaudhary, II, B.Tech, Artificial Intelligence and Data Science

The project "MEDIVENT" stood out for its innovative approach and practical application, impressing the judges with its potential to make a significant impact in the medical field. The team's dedication, creativity, and teamwork were key factors in their success. This victory not only brings pride to our institution but also exemplifies the excellence and talent of our students. We congratulate the team for their exceptional achievement and look forward to their continued success in future endeavors.



1. Thinking and Learning
2. Product Purpose and Auidance
3. Driving Question
4. What will students need to know
5. Build your need to know list?
6. Teach their need to know
7. Formative assessment
8. Share with the Auidance

Students Achievements

Line Follower Competition at Vallabhbhai National Institute of Technology (SVNIT), Surat

We are excited to announce that our students achieved a remarkable second place in the Line Follower competition at Mindbend 2024, held at Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, from March 15 to March 17, 2024. This prestigious technical fest brought together talented students from across the country to showcase their skills in various engineering challenges.

Our team, composed of students from different engineering disciplines, demonstrated exceptional technical expertise and teamwork, earning them the second prize, along with a cash award of ₹10,000.

Team Members:
Haresh, III, B.Tech, Chemical Engineering
Naresh R, III, B.E, Electronics and Communication Engineering (ECE) B
Raghupathi R, III, B.E, Electronics and Communication Engineering (ECE) B
Kishore, III, B.E, Mechanical Engineering A

The Line Follower competition required the team to design and program a robot that could autonomously navigate a predefined path with precision and speed. Our students' innovative approach and problem-solving abilities were key to their success in this challenging event.

This achievement highlights the interdisciplinary collaboration and technical proficiency of our students, bringing pride to our institution. We congratulate the team on their outstanding performance and look forward to their continued success in future competitions.

Student Projects and Competition Participation: Driving Innovation and Excellence

Participation in projects and competitions plays a crucial role in shaping students' technical skills, creativity, and problem-solving abilities. Engaging in such activities allows students to apply theoretical knowledge to real-world challenges, fostering innovation and hands-on learning.

By actively engaging in projects and competitions, students not only gain valuable experience but also contribute to advancements in Chemical Engineering, demonstrating their potential as future innovators and industry leaders.

Students Achievements

Paper Presentation Competition

From Left to Right: Mr. Naveen Hubert IV B.Tech. Chemical Engineering, Mr. Ramkumar IV B.Tech. Chemical Engineering, Mr. Vasanth IV B.Tech. Chemical Engineering receiving the certificate from Chief guest

Final-year Chemical Engineering students P. Vasanth, K. Ramkumar, and A. Naveen Hubert showcased their academic excellence by winning the Second Prize in the Paper Presentation competition at JFINAGLES 2024, held at JCT College of Engineering and Technology, Coimbatore. Their innovative and well-articulated presentation received high praise from the judges for its technical depth and clarity.

This remarkable achievement reflects the dedication and talent of our students, as well as the department's commitment to fostering research and academic excellence. Congratulations to the team on their well-deserved success.

Poster Presentation Competition

From Left to Right:
Mr. R. Yaswanthraj,
Mr. K. Paveen Kumar,
Ms. G. Harsha Varshini,
Ms. K. V. Kayal of
II. B.Tech. Chemical Engineering reveiving the certifictae from Chiefe guest

Second-year B.Tech. Chemical Engineering students R. Yaswanthraj, K. Paveen Kumar, G. Harsha Varshini, and K. V. Kayal secured the First Prize in the poster presentation competition organized by the Department of Petrochemical Engineering, JCT College of Engineering and Technology. Their creative and insightful poster received accolades for its innovative approach and technical excellence.

Students Achievements

Oral Presentation Competition

Ms. D. Shreenithee, Ms. M. Pavithra and Mr. G. Kumaran of III B.Tech. Chemical Engineering won 2nd prize in oral presentation of the two days National level Conference on “Advanced Materials for Strategic Applications and Sustainable Future” (AMSAS 2024) sponsored by DRDO and conducted by the Department of Chemistry, KPRIET on 21st and 22nd March 2024.

Poster Presentation Competition

Ms. V. S. Hrishma Sri, Ms. G. Mythili, Ms. S. Shanmuga Priya, Ms. M.Swetha of IV B.Tech. Chemical Engineering won 2nd prize in oral presentation of the two days National level Conference on “Advanced Materials for Strategic Applications and Sustainable Future” (AMSAS 2024) sponsored by DRDO and conducted by the Department of Chemistry, KPRIET on 21st and 22nd March 2024.

Basketball Tournament

Phersia Jebaselin P. proudly holding the winner's trophy after leading the Coimbatore District Basketball Team to victory at the Tamil Nadu Junior State Championship for Girls, held at J.J. College of Arts and Science, Pudukottai.

Phersia Jebaselin P., Freshmen (1st Year) Chemical Engineering Student represented the Coimbatore District Basketball Team and led them to victory at the Tamil Nadu Junior State Championship for Girls. The championship was held at J.J. College of Arts and Science, Pudukottai, from December 26th to 30th, 2023. Congratulations to Phersia and her team on their outstanding achievement.

Throwball Game

The Throwball Chamionship - 2024 for women heldat SNS College of Technoogy on 15th February 2024 and our students Ms. Chellamirthini (Sitting in the left) from III B.Tech. Chemical Engineering and her team has won 4th position. We are happy to congratulate the team. Their hard work, teamwork, and perseverance were truly inspiring. We extend our heartfelt congratulations to the team for their achievement and wish them continued success in future tournaments.

Sports

Football Game

Mr. Eraja Srider of III B.Tech. Chemical Engineering (Sitting third from left), Mr. Suniston of III B.Tech. Chemical Engineering, (Sitting fourth form left), Mr. Arunvijayan of IV B.Tech. Chemical Engineering (Sitting eightth from left) and Mr. Harsh Mohan of IV B.Tech. Chemical Engineering (Sitting nineth from left)

We are indeed glad to announce that our college's Football (Men) team emerged as the winners of the 13th CENTIES Championship 2023-2024, held at Nehru Institute of Engineering and Technology from March 1 to March 4, 2024. This prestigious tournament saw participation from several top engineering colleges, making our victory a significant achievement. The triumph was a result of exceptional teamwork, determination, and skill displayed by our players throughout the tournament. We are particularly proud of the contributions made by students from the Department of Chemical Engineering, whose dedication and athleticism played a crucial role in securing the championship title.

This victory not only highlights the sporting talent within our institution but also underscores the importance of balancing academics with extracurricular pursuits. The team's success is a source of pride for the entire KPRIET community, and we congratulate all the players and coaches for their hard work and commitment.

Engineering is often perceived as a rigorous and demanding academic discipline, requiring students to dedicate significant time to coursework, projects, and research. However, the role of sports in an engineering student's life is equally important, contributing to overall well-being, cognitive function, and personal development.

Sports and physical activities play a crucial role in maintaining a balanced lifestyle. Engaging in sports helps students improve their physical fitness, reduce stress, and enhance their ability to focus. Regular physical activity has been linked to better problem-solving skills, increased creativity, and improved time management—qualities essential for an engineering student.

Campus Placements

Celebrating Students Placement Success

We take immense pride in celebrating the success of our students who have secured prestigious placements in leading industries. The achievements of our students is a testimony to their hard work, perseverance, and the quality of education imparted by the department and the Institution as whole.

Looking ahead, as we continue to enhance our placement support and academic programs, the Department of Chemical Engineering remains committed to empowering students with the skills and knowledge needed for a successful career. We take immense pride in our students' accomplishments and look forward to many more inspiring success stories in the years to come.

Congratulations to all our placed students—we wish you the very best in your future endeavors!

The Department of Chemical Engineering has consistently nurtured and guided its students toward exceptional career opportunities across diverse industries. Our graduates have demonstrated remarkable versatility, securing placements in some of the most prestigious companies in both core and non-core sectors. From leading chemical process industries to renowned IT and service-based firms, our students have flourished in dynamic and challenging professional environments.

Many of our students have been successfully placed in top-tier core companies such as ABB, SPIC, iFluids, L&T, Deccan Chemicals, Sanmar, and Tagros. These organizations are known for their cutting-edge technologies and large-scale operations in the fields of chemical manufacturing, process engineering, energy management, and industrial automation. The rigorous training imparted during their academic journey has enabled our students to seamlessly integrate into these industries, taking on roles in process optimization, safety engineering, plant operations, and research and development. Their ability to analyze complex chemical processes and implement innovative solutions has made them invaluable assets to these organizations.

In addition to excelling in core chemical industries, our graduates have also ventured into non-core sectors, proving their adaptability and multidisciplinary expertise. Companies such as Sutherland Global and Prochant have welcomed our chemical engineering alumni into their workforce, recognizing their problem-solving skills, analytical thinking, and technical proficiency. Many of our students have successfully transitioned into IT and consulting roles, where their strong foundation in data analysis, simulation techniques, and process modeling has allowed them to excel in software development, business analytics, and project management. Their ability to bridge the gap between engineering and business has made them highly sought-after professionals in the corporate world.

The success of our students in diverse career paths highlights the comprehensive and industry-oriented education provided by the Department of Chemical Engineering. Through a well-structured curriculum, hands-on training, and exposure to real-world industrial challenges, our students develop the expertise and confidence required to thrive in competitive job markets. Industrial visits, internships, guest lectures, and research collaborations with top companies further enhance their knowledge and prepare them for the evolving demands of the industry.
As chemical engineering continues to be a cornerstone of innovation and technological advancement, our graduates remain at the forefront of shaping industries, driving sustainability, and contributing to economic growth. Whether in traditional chemical plants, modern IT firms, or multinational corporations, they continue to make significant strides, upholding the legacy of excellence associated with our institution. The future holds immense promise for chemical engineering students, with boundless opportunities for growth, exploration, and success in various domains.

Dr . E. Nakkkeeran, Assos. Prof / CH

Chemical Engineering is an engineering discipline that came through a combined route of: Chemistry, applied chemistry and chemical technology. It quickly emerged with mathematics, physics and material science. The earliest classification was into the two main categories: Unit Operations (not involving chemical reactions) and Unit Processes (involving chemical reactions). This discipline formed mainly of: material and energy balances (principles of chemical engineering), Fluid mechanics, Transport phenomena, Mechanical operations, Mass transfer operations, Heat transfer operations, Mathematical modelling, Chemical reaction engineering, Plant design and economics, Process dynamics, instrumentation and control, Biochemical Engineering, etc.

This structure of Chemical Engineering became the back-bone of the curriculum in many universities around the world. Some universities who offered chemical engineering gave more emphasis to biological engineering (biochemical and biomedical), in other universities they gave more emphasis to Environmental Engineering and in others to materials engineering.

The departments that changed from Chemical to Chemical and Biological Engineering is the most successful when compared to the departments that changed to Chemical and Environmental engineering faced the challenge that Environmental Engineering is moving towards becoming a sub-system of Sustainable Development Engineering. Similarly the departments which moved to chemical and materials faced the challenge of nano-materials.

It is very important nowadays for Chemical Engineers to realize the main characteristics that Chemical Engineering is going through such as (a) Extensive use of mathematical modelling, numerical techniques etc., (b) The extensive use of software without necessarily knowing the internals of the software while other Chemical Engineers will collaborate with programmers to build and develop such software like COMSOL, etc. (c) The multidisciplinary nature of all branches of Chemical/Biological Engineering. (d) The extreme importance of nano-technology and devel-oping it into nano-engineering as an integral part of chemical engineering. (e) The introduction of sustainable development to all aspects of chemical/biological engineering.

The present and future Chemical Engineers should witness extensive collaboration between experimental and mathematical modelling; between laboratory research and industrial applications as well the use of Renewable Energy Resources to achieve sustainable development using novel technologies. Chemical Engineers should be also strongly aware of all these to build their profession to rich and useful one.

Dr . M. Laxmi Deepak Bhatlu, Assistant Professor III / CH

As a researcher and academician, my journey has been guided by a passion for innovation and sustainable solutions. Whether it's developing eco-friendly nanomaterials, enhancing water treatment through bio-adsorbents, or exploring biochar for environmental remediation, I aim to align my research with global sustainability goals.

Over the years, I've been privileged to contribute to more than 20 publications, including impactful articles on green synthesis, supercapacitors, bio-adsorption, and nanocomposites, many of which are highly cited. Collaborating with dedicated peers and students, I focus on applying statistical optimization tools like RSM and CCD, which not only improve accuracy but also foster industry relevance.

My Message to Students and Young Researchers:

- Start with curiosity – Let every question lead to a deeper insight
- Be ethical in your approach – Integrity is the backbone of impactful science
- Don't fear failure – It's the most honest feedback you'll receive
- Collaborate generously – Ideas flourish in shared spaces

Our generation has both the privilege and the responsibility to build sustainable technologies and inclusive solutions. Let us embrace this opportunity with rigor, empathy, and resilience

My journey in academia has always been driven by curiosity and a deep-rooted desire to solve real-world problems through science. Whether it's working on eco-friendly bioethanol from seaweeds or synthesizing nanocatalysts for biodiesel production, I believe that research must serve society."

"Over the years, I've had the opportunity to explore diverse areas—from environmental biotechnology to powder metallurgy . I have come to realize that innovation often lies at the intersection of disciplines."

"What excites me the most is mentoring students. Guiding them through the process of experimentation and discovery is incredibly fulfilling. I always encourage them to ask questions, stay curious, and be fearless in trying new ideas."

Dr . S. Karunakaran, Assos. Prof / CH

Research in the Department

The Department of Chemical Engineering at KPR Institute of Engineering and Technology is actively engaged in diverse research areas, addressing key challenges in sustainable technologies and industrial applications. Dr. M. Laxmi Deepak Bhatlu, Assistant Professor III, is working on foam separation, an efficient technique for selectively isolating valuable compounds from complex mixtures. His research focuses on optimizing surfactant-based separation for applications in wastewater treatment, pharmaceuticals, and resource recovery.

In the area of adsorption, Dr. G. Surendran, Associate Professor, is exploring advanced adsorbents for removing contaminants from industrial effluents, particularly toxic heavy metals. Dr. E. Nakkeeran, Associate Professor, and Er. N. Arunkumar, Assistant Professor II, are also contributing significantly to adsorption studies, working on novel bio-based and nanomaterial adsorbents for environmental remediation and optimizing adsorption kinetics and thermodynamics for enhanced pollutant removal.

Dr. S. Karunakaran, Associate Professor, is conducting extensive research on biofertilizers and hydroponics, aiming to develop eco-friendly fertilizers that enhance soil health and promote sustainable agricultural practices. His work focuses on improving nutrient delivery systems and optimizing hydroponic techniques for better crop yields.

Dr. S. Balasubramanian, Professor and Head of the Department, is actively involved in process simulation, using computational models to optimize chemical processes, improve efficiency, and minimize waste in industrial operations.

Dr. R. Umapriya, Assistant Professor III, is focusing on membrane technology and hydroxyapatite materials, with research directed toward developing advanced membranes for water purification and biomedical applications. Her work on hydroxyapatite aims to enhance biomaterial performance for medical implants and regenerative applications.

In the field of photocatalysis and response surface methodology, Er. K. Murugesan, Assistant Professor II, is investigating photocatalytic materials for environmental cleanup, particularly for degrading organic pollutants in wastewater. His research also includes statistical modeling and optimization using response surface methodology to improve chemical process efficiency.

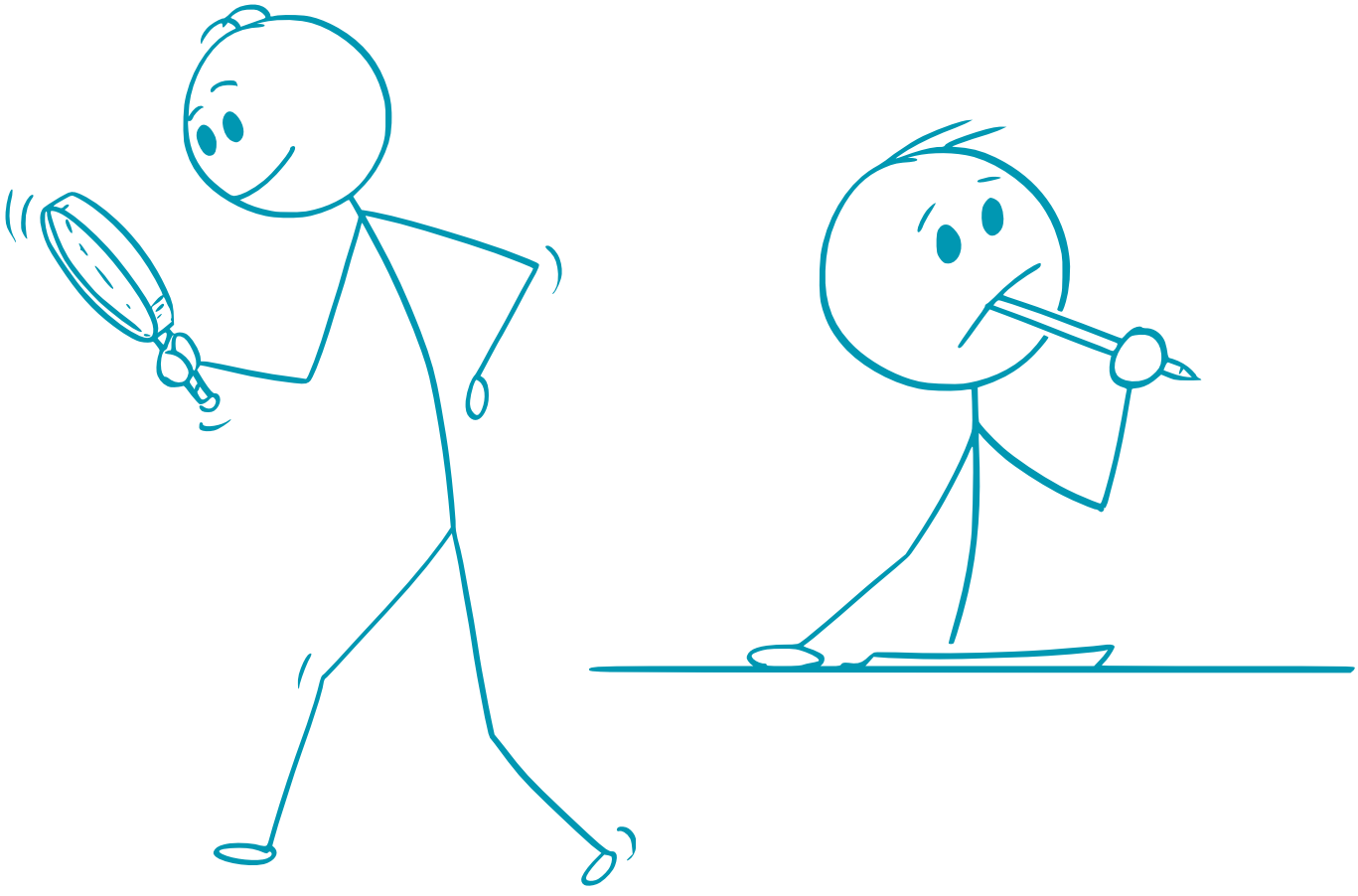
Diverse ChemE

EMPLOYMENT, RESEARCH AND ENTREPRENEURSHIP

Research in the Department

Lt. Dr. A. K. Priya is actively engaged in smart agricultural and environmental research, focusing on the development of Agribots, Smart Leaf Analyzers, and environmentally sustainable technologies. Her work on Agribots integrates robotics and automation in precision agriculture, aiming to improve farming efficiency and reduce resource consumption. The Smart Leaf Analyzer, another innovation, is designed to assess plant health in real-time, providing data-driven insights for optimized nutrient and water management. Additionally, her research extends to environmental applications, including monitoring and mitigating pollution through advanced sensing and control systems.

Overall, the department's research activities span across multiple frontiers, addressing crucial challenges in environmental sustainability, process optimization, and agricultural advancements. The faculty's contributions play a vital role in developing innovative solutions that align with industry needs and global sustainability goals.



Journal Publications

1. Rajput, P., Kumar, P., Priya, A. K., Kumari, S., Shiade, S. R. G., Rajput, V. D., ... & Rensing, C. (2024). Nanomaterials and biochar mediated remediation of emerging contaminants. Science of The Total Environment, 170064.

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