Sri Venkateswara College of Engineering

DEPARTMENT OF CHEMICAL ENGINEERING

NEWSLETTER

THE CATALYST

ACCELERATING YOUR GROWTH

Volume - 3, Issue - II, February, 2024

Sri Venkateswara College of Engineering

Newsletter

The Catalyst

(Accelerating your Growth rate)

Department of Chemical Engineering

Vision

To be a leader in Chemical Engineering Education and Research by providing balanced learning and fostering research to enable the learners to meet the challenges of process industries and societal needs.

Mission

M1: To produce graduates practicing Chemical Engineering professionally and ethically.

M2: To produce Chemical Engineering graduates contributing to the betterment of society in the competitive global environment.

M3: To focus on the development of Chemical Engineers to foster innovation through proficiency and effective communication.

Motivation: Alumni page

Ms. Keerthiga Ravi

B-Tech Chemical Engineering

Batch 2015-2019

Process Engineer

Dow chemicals International Pvt Ltd

Chennai.

Dear young budding engineers,

Reflecting on my four-year journey at SVCE fills me with gratitude and excitement for the path ahead. Being graduated from our esteemed institution in 2019, I'm humbled by the bond we share as aspiring minds. I'm sure that this four-year journey wouldn't just only make you gain technical knowledge from books but also help you dive deeper to get profound practical knowledge using the well-established lab infrastructure and an extensive library which makes SVCE stand apart.

Being brought up in a rural industrial area, a relentless curiosity about the mysteries of chemical industries rooted in 'why' and 'how', fueled my decision to pursue bachelor's in chemical engineering. Now, as we stand on the cusp of the world's opportunities, let's embrace our potential to shape industries, innovate technologies, and pioneer groundbreaking ventures. Who knows what innovations are ahead? Some among you may also pioneer new technologies or establish groundbreaking firms.

Beyond academia lies a realm brimming with career prospects far beyond our initial imaginations. My own journey has taken me down various paths, leading me from my beginning as a run plant engineer to a process design engineer, is a testament to the myriad of paths awaiting us. The dynamic nature of chemical engineering opens doors to endless possibilities.

However, great opportunities come with challenges. The professional world demands resilience and perpetual learning. Each obstacle is a chance to hone our skills and refine our problem-solving prowess, sculpting us into capable professionals.

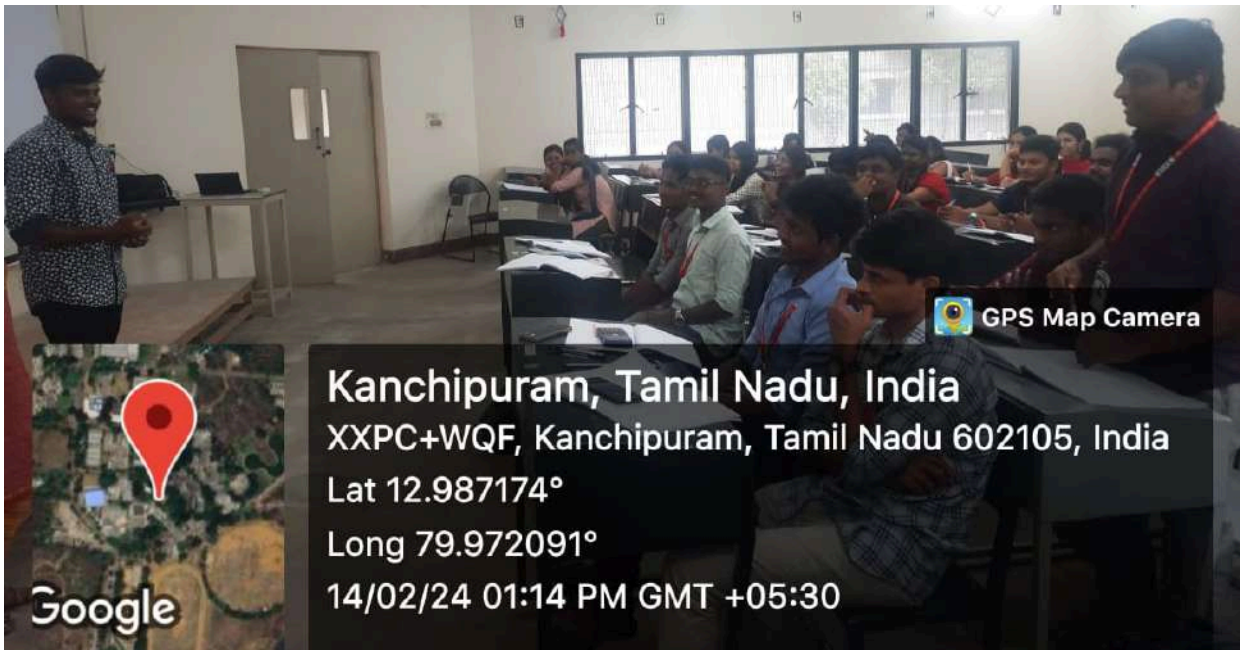
As you embark on your journey, remember to nourish your foundational knowledge, and cultivate curiosity. Embrace and actively participate in co-curricular and extracurricular activities to nurture your interpersonal skills, recognizing their value alongside technical proficiency in the professional arena.

In conclusion, "With passion and purpose, there is no limit to what we can achieve."
I wish you all the best on your academic and professional endeavors. May you find fulfillment and success in every step of your journey.

Best wishes for a future filled with achievements and meaningful contributions!

Alumni Interaction: *Backbencher's tale*

Alumnus of 2017-2021 batch of B.Tech Chemical engineering Mr. Gajendra Prabhu, has shared his life experiences at SVCE, which molded his career to accept job offer as Junior Engineer - Risk & Safety, from Bureau Veritas, Kuwait.



Memorandum of Understanding (MoU): strengthening the roots

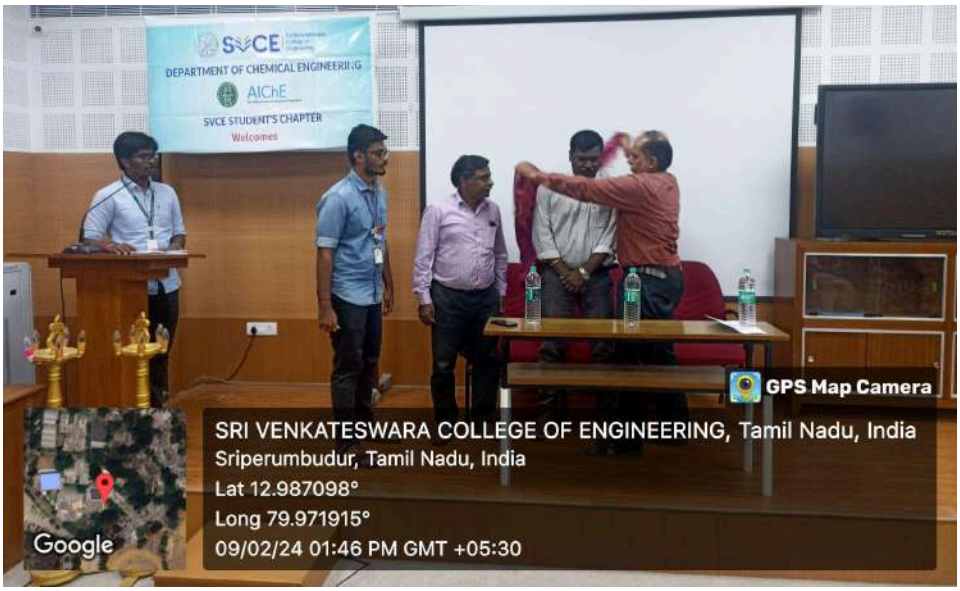
On 05th February 2024, a Memorandum of Understanding (MoU) was signed between Sri Venkateswara College of Engineering, Sriperumbudur, and M/s. Kaleeswari Refineries Limited, Chennai.

Under this MoU for training and research corporations, the following disciplines are identified.

1. **Chemical Technology**
2. **Process Plant Simulation**
3. **Computational Fluid Dynamics Studies**
4. **Debottlenecking studies**
5. **Process Equipment Design**
6. **Process Plant Safety Studies**
7. **Environmental Sciences**

IIChE - AIChE ACT Student Chapter: Guest Lecture

On 09th February 2024, a Guest lecture was conducted to make awareness of "Are we truly transitioning from a Linear to Circular Economy, Global perspective on MSW Management." for II, and III year B.Tech Chemical Engineering students. Dr. Mahesh Ganesapillai, Professor, School of Chemical Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu has shared his valuable insights, as a researcher and as a forward thinker.



IIChE - AIChE ACT Student Chapter: Guest Lecture

On 20nd February 2024, a Guest lecture was conducted to emphasize the "Opportunities in Production/Operations in Chemical Process Industries" for IIIrd year B.Tech Chemical Engineering students. Mr. Dhanush Kodi Engineer, Thirumalai Chemicals Limited, Ranipet, Tamil Nadu, has shared his personal timeline and appraised on what is important to be a chemical engineer at industrial area, as an alumni view point.

IIChE - AIChE ACT Student Chapter: Guest Lecture

On 29th February 2024, a Guest lecture was conducted to demonstrate the "Laboratory Safety Awareness to Staff and Students." for II, and III year of B.Tech Chemical Engineering students and Supporting Staff(s). Dr. Kallarpiran, Proprietor and Mrs. Rajalakshmi, Director, SEED for Safety. Nanmangalam, Chennai, has demonstrated the safe laboratory setup and precautionary steps, as a safety expert.

Experience SVCE - *seed to aspire* .

Target Audience: General public and Parents of prospective students.

On 03th February 2024, Dr. R. Palani, Associate Professor and Dr. D. Sivakumar, Assistant Professor has explained the importance of chemical engineering in the society and how Sri Venkateswara College of Engineering, is leading the educational activities of chemical engineering at undergraduate level.

Industrial Visit: *Learning beyond classroom*

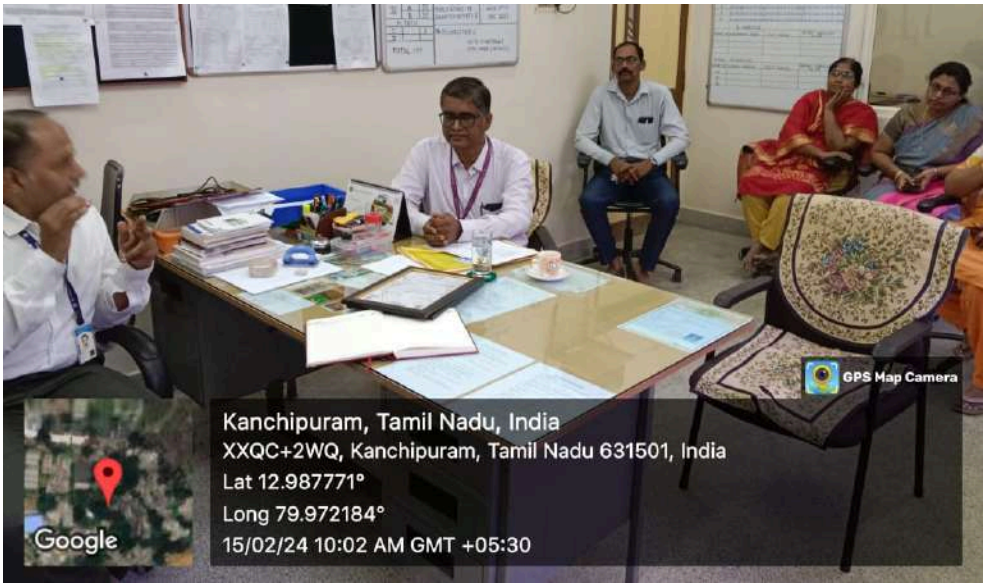
On 05th February 2024, 40 students of second year Chemical Engineering students visited the Kaleesuwari Refinery Private limited. Indeed it was a nice experience for the students where they learned the procedure of unloading crude edible oil. Students were also exposed to different unit operations and unit processes such as neutralization reaction, centrifugation, bleaching etc., Students also visited the automatic loading and packing process and their warehouse. They have also seen safety procedures that the refinery plant followed during the Plant operation and learned the importance of ISO certification to maintain the International Standards.

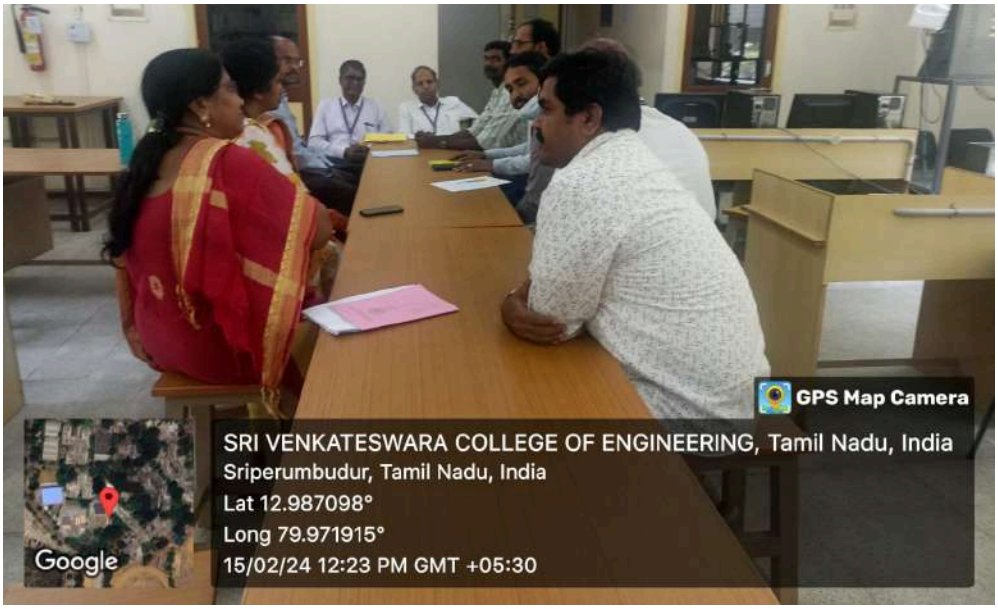
Internal Academic and Administrative Audit (IAAA):

To check and correct the academic and administration, an internal audit was carried out on 06th February 2024, and the internal team from the Department of Applied Physics, elaborated their observations.

External Academic and Administrative Audit (EAAA):

To assess, appraise and to improvise the academic and administration, an external audit was carried out on 15th &16th February 2024, where the Department of Chemical Engineering, able to showcase the strengths and had received suggestions for improvement.





Events participated by Faculty: *Train the trainer.*

Dr. N. Meyyappan, Professor & HOD/CHE, and Mr. Arun Prem Anand & Dr.N.P. Kavitha, Assistant Professor attended "5-Days Online FDP on Modelling AI/ML in Chemical Engineering and Bioengineering" during 05/02/2024 to 09/02/2024, organized by Coimbatore Institute of Technology, Coimbatore, Tamil Nadu.

COIMBATORE INSTITUTE OF TECHNOLOGY
Coimbatore- 641 014
(Government Aided Autonomous Institution Affiliated to Anna University)

DEPARTMENT OF CHEMICAL ENGINEERING

MODELLING, AI/ML IN CHEMICAL ENGINEERING AND BIOENGINEERING

CERTIFICATE OF PARTICIPATION

This certificate is presented to

Dr./Mr./Ms. N Meyyappan of
Sri Venkateswara College of Engineering, Pennalur, Sriperumbudur for
active partic ipation in the 5-day Online Faculty Development Programme on
"Modelling, AI/ ML in Chemical Engineering and Bioengineering" organised by the
Department of Chemical Engineering, Coimbatore Institute of Technology,
Coimbatore from 05-02-2024 to 09-02-2024

Ms.Nisha Subash, Dr.T.Sivakumar — Co-ordinator(s)
Dr.M.Thirumarimurugan — Head of the Department
Dr.A.Rajeswari — Principal

COIMBATORE INSTITUTE OF TECHNOLOGY
Coimbatore- 641 014
(Government Aided Autonomous Institution Affiliated to Anna University)

DEPARTMENT OF CHEMICAL ENGINEERING

MODELLING, AI/ML IN CHEMICAL ENGINEERING AND BIOENGINEERING

CERTIFICATE OF PARTICIPATION

This certificate is presented to

Dr./Mr./Ms. N. Arun Prem Anand of
Sri Venkateswara College of Engineering for
active partic ipation in the 5-day Online Faculty Development Programme on
"Modelling, AI/ ML in Chemical Engineering and Bioengineering" organised by the
Department of Chemical Engineering, Coimbatore Institute of Technology,
Coimbatore from 05-02-2024 to 09-02-2024.

Ms.Nisha Subash, Dr.T.Sivakumar — Co-ordinator(s)
Dr.M.Thirumarimurugan — Head of the Department
Dr.A.Rajeswari — Principal

COIMBATORE INSTITUTE OF TECHNOLOGY
Coimbatore- 641 014
(Government Aided Autonomous Institution Affiliated to Anna University)

DEPARTMENT OF CHEMICAL ENGINEERING

MODELLING, AI/ML IN CHEMICAL ENGINEERING AND BIOENGINEERING

CERTIFICATE OF PARTICIPATION

This certificate is presented to

Dr./Mr./Ms. Kavitha N P of

Sri Venkateswara College of Engineering for

active partic ipation in the 5-day Online Faculty Development Programme on "Modelling, AI/ ML in Chemical Engineering and Bioengineering" organised by the Department of Chemical Engineering, Coimbatore Institute of Technology, Coimbatore from 05-02-2024 to 09-02-2024.

Ms.Nisha Subash, Dr.T.Sivakumar
Co-ordinator(s)

Dr.M.Thirumarimurugan
Head of the Department

Dr.A.Rajeswari
Principal

On 23rd February 2024, Beacon Desyne Consultants, conducted Educational Organization Management System (EOMS) ISO 21001:2018, Auditor program, where Ms. A.C. Vijayalakshmi, Assistant Professor has been nominated to get trained from Department of Chemical Engineering.

Events participated as Team: *value addition.*

On 01st February 2024, our III year students and Dr. N. P. Kavitha, Assistant Professor, has attended a lecture on Biomass to value added products organized by PALS at IITM.

Placement: *life challenges accepted*

The decorated "Wall of Names" of final year students of B.Tech Chemical Engineering have reported to have achieved the campus job offer during placement drive in February 2024.

Programmes run by the Department of Chemical Engineering are,

- **B.Tech Chemical Engineering**
- **M.Tech Chemical Engineering**
- **Ph.D**

B.Tech CHEMICAL Engineering

***Programme* Educational Objectives**

PEO1: Equip students with the necessary skills and knowledge to prosper in their career in Chemical Engineering and related domains.

PEO2: Encourage students to Pursue advanced learning and engage in research with internationally acclaimed institutions and foster professional growth.

PEO3:Empower students with leadership qualities to succeed in diversified fields with ethical administrative acumen and adapt to the rapid technological advancements and innovations.

Programme Outcomes

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs

with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

P10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

P11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOME's

PSO1: Apply the knowledge of science and mathematics in the field of various transport processes to accomplish the contemporary needs of chemical and allied industries.

PSO2: Execute the chemical engineering principles and modern engineering tools to conduct experiments or design a system for developing quality chemical processes by considering the cost, safety and environmental aspects.

M.Tech CHEMICAL Engineering

Programme Educational Objectives

PEO1: Function effectively to solve complex industrial problems using Chemical engineering concepts and also in expanding areas of Energy and Environmental industries

PEO2: Pursue their careers in Research and Development towards an advanced degree in Chemical engineering and allied technical discipline.

PEO3: To become Professional Leaders in the complex work environment.

Programme Outcomes

PO1: Independently carry out research /investigation and development work to solve practical problems.

PO2: Write and present a substantial technical report/document.

PO3: Demonstrate a degree of proficiency over the area as per the specialization of the program. The proficiency should be at a level higher than the requirements in the appropriate bachelor program

PO4: Potential to analyze solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety.

PO5: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO6: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PROGRAMME SPECIFIC OUTCOME's

PSO1: Apply the knowledge of science and mathematics in the field of various transport processes to accomplish the contemporary needs of chemical and allied industries.

PSO2: Usage of modern engineering tools to design and conduct experiments to develop quality chemical processes by considering the cost, safety and environmental aspects.

Editorial Team: Dr. N. Meyyappan, HOD/CHE & Mr. S. Jai Ganesh, AP/CHE.