



# AISSMS

## COLLEGE OF ENGINEERING

ज्ञानम् सकलजनहिताय  
Accredited by NAAC with "A+" Grade



The newsletter of Department of Chemical Engineering

### CHEMIXIR

June 2021 to November 2021

Month Of Release: December 2021

Principal: Dr.D.S.Bormane

Head of Dept.: Dr. P.N Dange

Editor: Prof.P.S.Tadkar

### Editorial Board

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**Dr P N Dange**

**Prof.P.S.Tadkar**

Student Members:

**Mr. Gole Pritesh**

**Mr. Lanke Himanshu**

**Mr. Patil Chetan**

### *From Principal's Desk:-*



It is good to see the latest edition of news letter of Chemical Engineering Dept. On this occasion of publication of this news letter I introduce to you an entirely new approach of learning in our college. An approach, where traditional methods of learning go hand in hand with modern learning techniques, keeping with the current trends and technology.

We facilitate our students to excel academically and to develop their personalities in diverse fields.

To this end, we have complemented academics with other developmental activities such as performing arts, sports, hobbies and technical clubs, to name a few.

Each student is encouraged to explore their areas of interest and to develop their talent to the maximum.

Our teaching staff is dedicated and knowledgeable in their subjects.

They have a passion to pass on this enthusiasm to each student and to inculcate in them the spirit of curiosity and learning.

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## **Form Editors Desk....**

It gives us great pleasure to hand over to you "CHEMIXIR" the newsletter of Chemical engineering department.

The department has 19 staff members and more than 220 students. All of us are involved in number of activities and working for development of the department. We thought it would be proper to come out with a newsletter to highlight these activities. In an engineering learning this activity adds common platform to showcase the talents. It also provides for showcasing of achievements and efforts taken by one and all which contribute towards department strengths. It is our attempt to get maximum contribution from staff and students to come together and interact through this newsletter. We try to pick the moments of guest lectures conducted by dept., various site visits carried out, competitions organized, various achievements and participation by students and staff. We hope this news letter will help us in its own way to achieve our goal & realize our vision progressively.

Hope you will find this newsletter informative. Your suggestions for improvement in the newsletter are welcome.

### **Editors**

#### **1. Programmes:**

UG : BE ( Chemical Engg.)  
PG : ME (Chemical Engg.)

#### **2. Faculty position:**

Professors : 03  
Asso. Professors : 01  
Asst. Professors : 12

#### **3. Supporting Staff :06**

## **From HOD's Desk...**



Department of Chemical Engineering was established in the year 1996, with an intake capacity of 60 students for UG and 18 students for PG. The Department has, well-qualified and experienced faculty with an average experience of 8-10 years. Faculty is also involved in research & professional activities inside & outside the campus. They are encouraged to upgrade their knowledge and qualifications. The department was successful in giving consistently good academic results in last three years and motivating the students to involve in extra curricular and co-curricular like paper presentation, Project competition etc. leading towards all-round development of our students. The Department has well-established laboratories with sophisticated equipments & instrument. We have organized number of workshops and seminars for the students and staff.



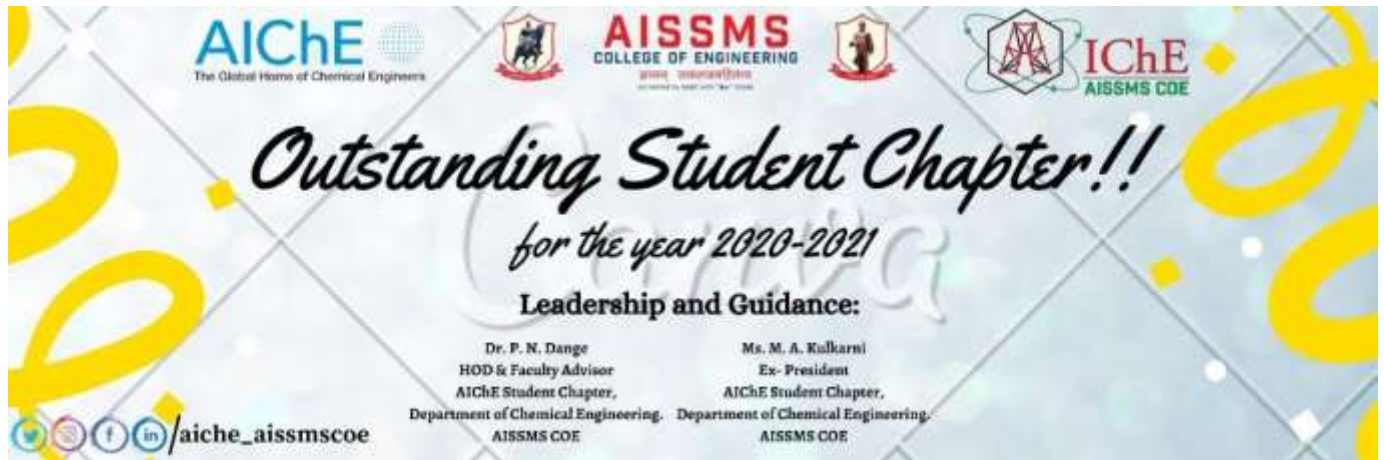
**STRUGGLE TODAY  
FOR A BETTER TOMORROW,  
HARD WORK PAYS  
YOU SHOULD ALWAYS KNOW.  
NO MATTER HOW TOUGH  
MAY SEEM THE CLIMB  
KEEP MOVING, KEEP FIGHTING  
ONE WIN AT A TIME.  
PERSEVERANCE AND PATIENCE  
GO A LONG WAY,  
BECAUSE FOR THE SUNRISE, EVEN  
THE LONGEST NIGHT MAKE WAY...**

# Faculty Achievement

Term One		
S N	Name of Faculty	Awards & Recognition
1	Dr P N Dange	Invited as a member of the committee for granting extension of 'Research Centre' at VIT Pune and VIIT Pune, 2021.
2	Mr R S Raut	Production of 1000 lit sanitizer to fight against COVID-19

Term Two		
SN	Name of Faculty	Awards and recognition
1	Dr A S Jadhav	Awarded PhD –Birla Institute of Technology Mesra Ranchi on 23 March 2021
2	Dr S B Ghugare	Subject Chairman for AT Exam at University level
3	Mrs H L Kamble	Subject Chairman at University Level
4	Mr. P M Warke	Subject Chairman for CED II, SPPU, Pune (Examination October 2020)

# Moments



*"We are what our thoughts have made us; so take care about what you think.*

*Words are secondary. Thoughts live; they travel far" - Swami Vivekananda*

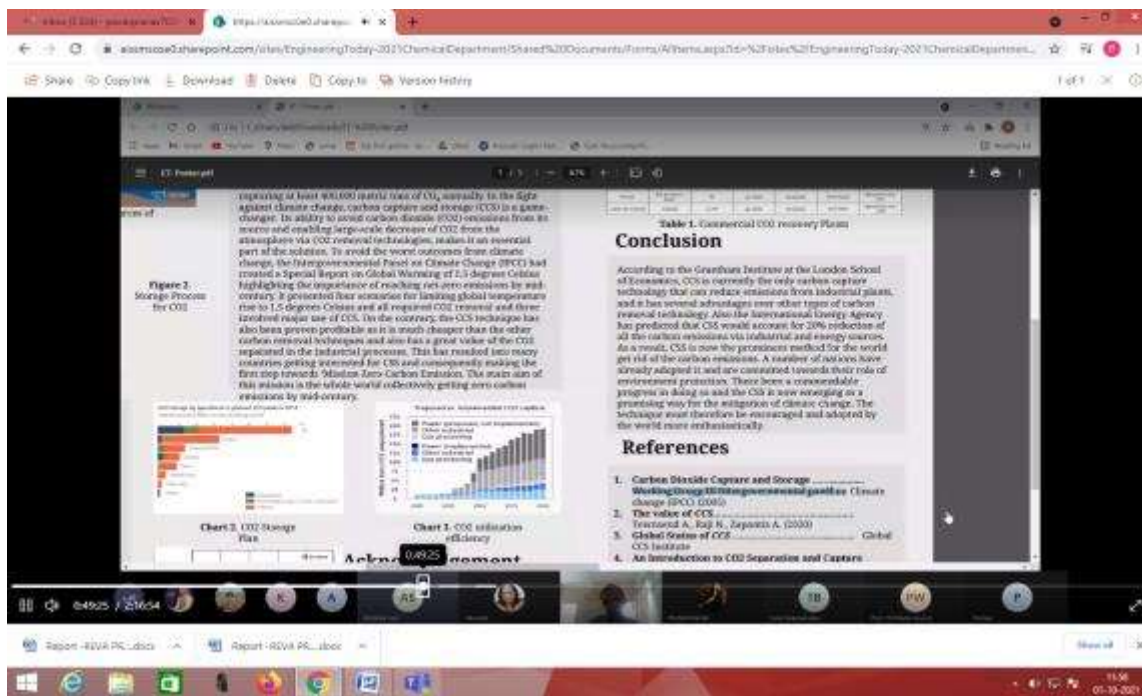


ET-2021

## CHEMIXIR

### REPORT-1

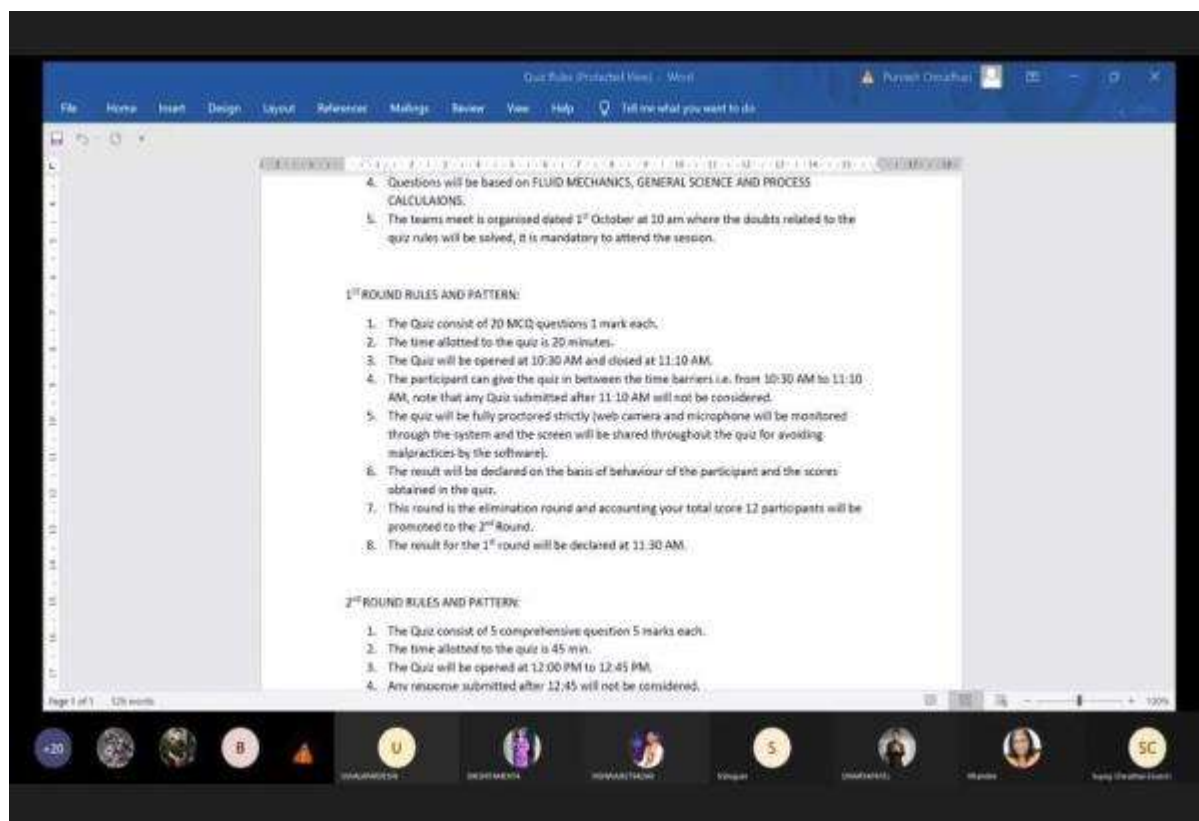
IEI Student Chapter "Chemical Engineering" conducted Engineering Today "CHEMIXIR" event Poster Presentation Competition on 30th Sept 2021 from 10AM to 1AM. Total 6 Poster Presentation were given by the participants. Students from different colleges participated in this competition. They get a good technical platform to present their technical skills. Mr. Sameer Sathe (Appttrain System, Vadodara, Consultant- Chemical Engineer and trainer) is the Guest of Honour and also Judge for this event. He gives the brief about the recruitment scenario in the Chemical Industries. Mr Pranav Pawar, and Mr. Vishwajeet Yadav IEI Student Chapter Coordinator, Introduced the speaker profile. Dr. P N Dange (Head of The Department Chemical Engineering) welcomes the Guest for the event. Prof. P M Warke requests Mr. Sameer Sathe to give the speech. Mr. Pranav Pawar and Mr. Vishwajeet Yadav conducted the event successfully.



## Report 2

The AIChE Student Chapter, Department of Chemical Engineering AISSMS COE Pune, organized a Quiz competition on 1st October 2021 under 16th AISSMS Engineering Today 2021, "CHEMIXER". The quiz was organized to challenge and broaden the mind of the participants. The Quiz was organized by Student Coordinators – Dhairya Patel and Suyog Choudhari under the guidance of Faculty Coordinators, Dr. S B Ghugare and Prof H L Kamble.




The quiz was conducted in 2 rounds. Quiz questions were based on Fluid Mechanics, Process Calculations, and general Science. The first round (elimination round) was based on Multiple choice questions. Among several participants, 12 participants were promoted to the second round based on merit. The second round of the competition was based on the comprehensive question and answers. Winners for the competition were decided based on marks obtained in the second round. Mr. Darshan Desadla and Ms. Dikshita Mehta were declared as the winner and runner-up of the quiz competition respectively.



## Report

3

IChE Student Chapter "Chemical Engineering" in association with Indian Institute of chemical engineering successfully conducted "16TH ENGINEERING TODAY 2021 (Department of chemical engineering) CHEMIXIR Paper Presentation (CH-1)" which was first event under the banner of "CHEMIXIR" scheduled on 29 September 2021 on MICROSOFT TEAMS PLATFORM in online mode. Guest of Honor: Prof.(Dr) Vrashali S Kalyani PhD(chemistry) Assistant professor Mr Abhishek Kumbharde ,GS of Chemical Department, introduced our HOD Dr . P. N Dange sir .Dr P.N. Dange , HOD, formally addressed all the participants and gave his best wishes to them. Mr. Krunal Raut and Mr. Abhishek Ingale Event coordinator Introduced the Judge Dr.Vrashali Kalyani Mam.They also introduced ET Head of department ,Dr.AS Jadhav Sir, Faculty coordinator Dr. M S Deshpande Mam and Prof. K N Bawankar Mam. Mr .Krunal Raut briefly explained the event rules to all participants and then the event started .There were total 15 groups and 18 participants from colleges in Maharashtra and Tamil Nadu who participated in the event and presented their presentations in front of Dr. Kalyani Mam Judge and Guest of Honour for this event in the sequence allotted to them.

Digestion	Distillation	Titration
<p>The aim of digestion is to break all nitrogen bonds in the sample and convert all the organically bonded nitrogen into ammonium ions in the presence of <math>\text{CuSO}_4</math> and <math>\text{K}_2\text{SO}_4</math>.</p> <p><b>Nitrogenous organic compound</b> + <math>\text{H}_2\text{SO}_4 \rightarrow (\text{NH}_4)_2\text{SO}_4</math></p>  <p>(a) (b)</p> <p>Kjeldahl digestion (a) beginning (d) end</p>	<p>In distillation, the ammonium ions are converted into ammonia (<math>\text{NH}_3</math>) by adding alkali (<math>\text{NaOH}</math>). And ammoniated vapor is condensed and trapped into 4% boric acid solution (conical flask)</p> $(\text{NH}_4)_2\text{SO}_4 + \text{NaOH} \rightarrow 2\text{NH}_3 \uparrow + \text{Na}_2\text{SO}_4 + 2\text{H}_2\text{O}$  <p>Distillation</p>	<p>After distillation, the conical flask mixture was titrated with std 0.1 N HCL to get the end point, using methyl red as indicator.</p>  <p>Titration to get the end point</p>

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# ***students achievement***

## **Name of Student**

## **Details of Achievement**

**(State/University/ National/International Level)**

Pranav Pawar	GATE 2022 qualified
Vaibhav Shirshat	GATE 2022 qualified
Dhanjay Kumar Singh	GATE 2022 qualified
Suyog Choudhari	Donal F Othmer Sophomer Academic Excellence Award
Nupoor Upadhye Suyog Choudhari	Runner ups in the Student Technical presentation Competition - AIChE Student Regional Conference 2021
Nupoor Upadhye Suyog Choudhari	National level Chemical Engineering Students Conference Prakalp 2021, held at MAE Alandi Pune on September 11, 2021
Darshan Desadla	AIChE Freshman Recognition Award



## **Department Vision:**

To be a leader in Chemical Engineering education providing service to society

## **Department Mission:**

1. To prepare graduates for **responsible positions** in chemical industry, academia and research
2. To prepare graduates to **analyze and solve problems** of chemical industry, academia and research
3. To strengthen industry-institute interaction to develop **industry oriented attributes** like attitude, soft skills, team work and leadership

## **Program Educational Objectives (PEOs)**

1. **Competency:** To prepare competent graduates in Chemical Engineering so that they are successful in their professional career in industry, academia or research
2. **Problem Solving Skills:** To prepare graduates who can identify, analyze, research and solve Chemical Engineering problems of practical importance to industry, academia or research
3. **Leadership Skills:** To prepare graduates with effective communication, teamwork and leadership skills so that they can play effective role in industry, academia and research institutes.

## **Program Specific Outcomes (PSO) and Program Outcomes (PO)**

### **Program Specific Outcomes (PSO)**

#### **Chemical Engineering graduates will be able to:**

1. Identify, analyze, design and develop solutions to Chemical Engineering problems of practical importance to industry and society.
2. Demonstrate sound understanding of Chemical engineering fundamentals to solve problems through the use of modern experimental methods, computer aided design and simulation software

## Program Outcomes (PO)

Engineering Graduates will be able to:

- **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- **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.
- **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.
- **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.

- **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.
- **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.
- **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **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.
- **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.
- **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.