

Department of Chemical Engineering organized a guest lecture on the topic *Accident Prevention in Chemical Process Industries* delivered by **Mr. G.K.Anand, Advisor, IL & FS Environmental services Pvt. Limited, Hyderabad** . The lecture provided technical insights to the students into the safety aspects which need to be understood and studied in the industry and its importance in prevention of accidents in chemical process industries. Various case studies were discussed by the speaker which provided greater understanding about the dynamics of process principles, industry procedures and the methods to prevent accidents in chemical industries. The Flixborough accident which took place in England was discussed in detail and he explained the various reasons for the accident which led to large number of fatalities.



Mr. G.K. Anand, Guest delivering lecture



Students during Guest Lecture



Felicitation of Guest in the hands of Dr. M. MukundaVani, H.O.D

Department of Chemical Engineering organized a guest lecture on the topic *Modeling and Simulation of Heat Exchangers* delivered by **Dr.T. Sunil Kumar, Associate Professor, Dept. of Chemical Engg.,NIT, Warangal**. The lecture provided technical insights to the students into the Modeling equations of heat exchangers which need to be understood and studied in the industry and its importance in simulation of heat exchangers in chemical process industries. Various softwares for simulation was discussed along with detailed information regarding COMSOL software which provided greater understanding about the dynamics of process principles in chemical industries.



Felicitation of Guest in the hands of Dr.M. MukundaVani, H.O.D



Students during Guest Lecture



Felicitation of Guest in the hands of Dr. M. MukundaVani, H.O.D

Department of Chemical Engineering organized a guest lecture on the topic **Mathematical Modeling for dissolution of Lithium Ion battery** delivered by **Dr. Balaji Krishnamurthy, Associate Professor, Dept. of Chemical Engg., BITS Pilani, Hyderabad campus**. The lecture provided technical insights to the students into the Modelling equations of lithium ion battery which need to be understood and studied in the industry and its importance in chemical process industries. Important concepts related to batteries were explained in detail. Career for chemical engineers in industries and in academics was explained to students.



Lecture delivered by Guest



Students and faculty during Guest Lecture



Felicitation of Guest in the hands of Dr. M. MukundaVani, H.O.D

Department of Chemical Engineering organized a guest lecture on the topic **Industrial applications of Chemical Engineering** delivered by **Mr. Vijaya Kumar, Process Engineer, Sr. Consultant, Invensys**. This lecture provided technical insights to the students into the concepts related to the actual necessity of industry and as a chemical engineer what need to be exactly studied and learned to be absorbed into the chemical industry. And also he also explained about the various courses which need to be learned before a student appears for the interview and what are the varied opportunities available for chemical engineers in India and also in abroad. Students were enlightened with his lecture as they cleared many of their doubts related to salaries for process engineers, design engineers etc. It was a truly interactive session and students got exposure related to what exactly happens in industries.



Speaker during lecture



INDUSTRIAL VISIT TO “*Healthy Heart Foods, Lohiya Industries*”.

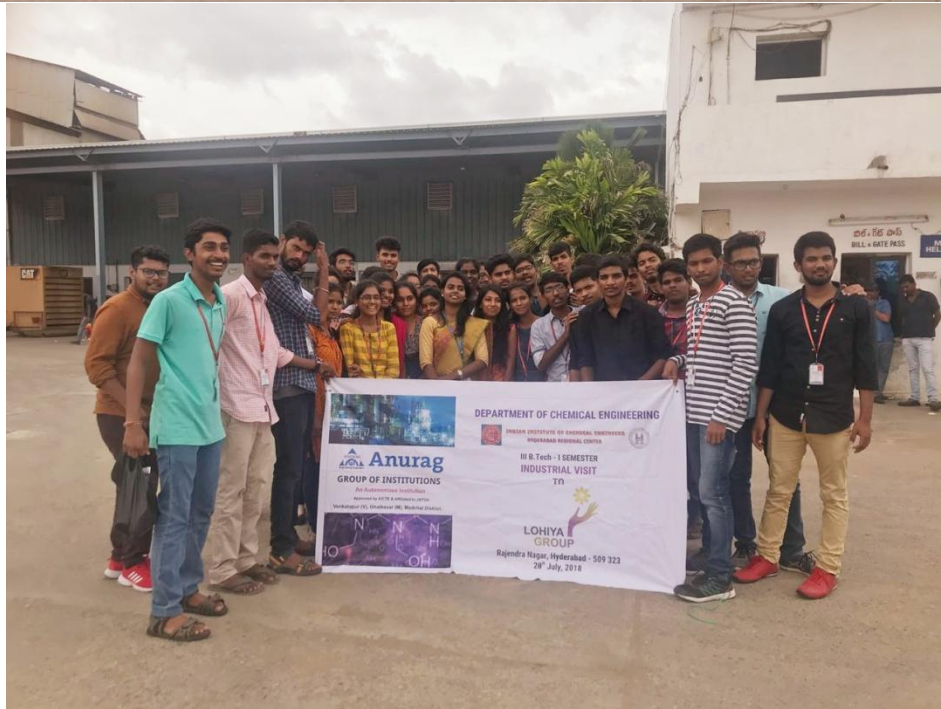
Date: 28th July, 2018, Saturday

B.Tech Chemical Engineering III year I semester, 2018-2019

Highlights of the Visit:

- Students were educated on how **Vegetable Oil** was manufactured from Crude oil.
- Two types are produced simultaneously that is sunflower oil and rice bran oil. Both of them follow the same refining procedure.
- Sunflower oil refining involves removal of bitterness, colour and odour.
- First the oil is heated at temperatures between 40 degrees then its mixed with an alkaline substance like sodium carbonate or sodium hydroxide. The oils are degummed by treating them with heated water at temperature between 85 degrees and 95 degrees or with acidified water.
- This precipitates out most of the gums usually phosphatides.
- Then centrifugation is done to use for cooking is obtained by filtering it through activated carbon, activated clay or through adsorbs the pigmented substance from the oil.
- However, the oil subjected for solid dressing refrigeration, oil is obtained through winterizing by rapidly chilling and filtering to remove waxes.
- This is the procedure applied to prevent solidification of the oil in the refrigerator. The final step involves deodorizing the oil by passing the steam over hot oil placed in vacuum at temperatures between 225 degrees and 250 degrees.
- This allows the volatile components responsible for the taste and odour to evaporate from oil, one percent citric acid is added to oil to inactivate any trace metals present, hence preventing oxidation within the oil, thereby prolonging the shelf life of the oil.

This Visit has helped students in knowing the insights of the industry, It has enhanced the students' insight, build confidence, empowered their theoretical knowledge, providing real life views on one of their possible future workplace environment.



INDUSTRIAL VISIT TO “CLAIR INDUSTRIES”, HYDERABAD

B.Tech Chemical Engineering III year II semester, 2018-2019

Date: 9th January, 2019.

Highlights of the Visit:

- CLAIR Industries is dedicated to curb the air pollution from various industries and to supply the required Air Pollution and Control equipment like Electrostatic Precipitators and Gas Conditioning systems to said industries. Application Industries includes Steel ,Power ,Sugar & Distilleries, Paper & Pulp, Chemical Industries. The Control equipment include
- ESPH (Electrostatic Precipitators)
- RABH (Reverse Air Bag Houses)
- PJBFB (Pulse Jet Bag Filters)
- Industrial Fans
- Heat Exchangers
- And Gas conditioning systems.



INDUSTRIAL VISIT TO “Nuclear Fuel Complex”.

B.Tech Chemical Engineering II year II semester, 2018-2019

Date: 21stFebruary, 2019, Thursday

Highlights of the Visit:

- Students were educated on how Nuclear bundles were prepared which will be further used in Nuclear reactors as Nuclear fission reaction is an alternative source of energy generation.
- Two types of fuels Zirconium dioxide and Uranium dioxide are produced in Nuclear Fuel Complex.
- Various stages / steps involved in Preparation of Zirconium dioxide and uranium dioxide are explained and shown to the students during plant visit.

This Visit has helped students in knowing the insights of the industry. It has enhanced the students' insight, build confidence, empowered their theoretical knowledge, providing real life views on Nuclear fuels, one of their possible future workplace environment.



Students and Faculty during visit

INDUSTRIAL VISIT TO National Remote Sensing Centre (NRSC) HYDERABAD

B.Tech Chemical Engineering III year II semester, 2018-2019

Date: 1st March, 2019

National Remote Sensing Centre (NRSC) has the mandate for establishment of ground stations for receiving satellite data, generation of data products, dissemination to the users, and development of techniques for remote sensing applications including disaster management support, geospatial services for good governance and capacity building for professionals, faculty and students.

NRSC Ground station at Shadnagar acquires Earth Observation data from Indian remote-sensing satellites as well as from different foreign satellites. NRSC is also engaged in executing remote sensing application projects in collaboration with the users. The Aerial Services and Digital Mapping (ASDM) Area provides end-to-end Aerial Remote Sensing services and value-added solutions for various large scale applications like aerial photography and digital mapping, infrastructure planning, scanner surveys, aeromagnetic surveys, large scale base map, topographic and cadastral level mapping, etc.

Regional Remote Sensing Centers (RRSCs) support various remote sensing tasks specific to their regions as well as at the national level. RRSCs are carrying out application projects encompassing all the fields of natural resources. RRSCs are also, involved in software development, customization and packaging specific to user requirements and conducting regular training programs for users in geo-spatial technology, particularly digital image processing and Geographical Information System (GIS) applications.



INVITED LECTURE-

Indian Institute of Chemical Engineers - Hyderabad Regional Centre (IICHe – HRC) Invited Lecture titled “Mixed Oxides and Nanocomposites as Recyclable Catalysts for Synthesis and Water Treatment” by Dr. Sreekantha B. Jonnalagadda, Senior Professor of Chemistry, University of KwaZulu – Natal, South Africa on 18th January 2019 (Friday) at 10.30 hrs. Venue International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Balapur, Hyderabad .The lecture provided the Conforming to green principles, bimetallic mixed oxides and their nanocomposites as heterogeneous catalysts offer wide range of benefits, including their thermal stability, easy recovery and reusability. Other rewards are shape selectivity, non-toxic crystalline solid structure, easy handling, with scope to modify to their structure and surface properties. Use of such catalysts in multi-component reactions is promising with excellent atom efficiency, selectivity and yields under moderate conditions and in shorter reaction times.

Ozone driven oxidative degradation of non-biodegradable and refractory compounds gained significant popularity in water treatment, due its potentially green starting materials and less toxic by-products. To improve ozone’s performance, various advanced oxidation processes (AOPs) in combination with H₂O₂, Fenton agent, UV/Visible light and/or varied catalysts etc. have been suggested. The aim of such approaches was to surge the ozone reactivity and production of highly reactive hydroxyl radicals in the medium. Hydroxyl radicals are highly reactive, but less selective. Considering the harsh environmental legislations and ever-increasing spectrum of pollutants, heterogeneous catalysts are perfect choice in water purification, particularly at tertiary level.

Built on our experience, the details of protocols for ozone initiated advanced oxidation processes for degradation of organics and multicomponent reactions for value added conversions will be discussed.



One Week Faculty Development Programme On Design & Analysis Of Experiments & Optimization Techniques” at Anurag Group of Institutions

One week Faculty development programme was organized by department of chemical engineering, Anurag group of Institutions on “ Design & analysis of experiments & Optimization Techniques” from 13th November 2018 to 17th November 2018.

Eminent persons from different organization like Osmania University, IIT- Hyderabad, and Dr. Reddy’s Laboratories were invited as resource speakers who enlightened the participants with informative lectures. Dr. N. Ch. Batracharyulu, Associate Professor, Dept. of statistics, University College of Science, Osmania University, Dr. K. S. Rao, Director, Anurag Group of Institutions, Dr. M. MukundaVani, Head of the Dept., Chemical Engineering, Anurag Group of Institutions Inaugurated the FDP event on 13th November 2018. Dr. N. Ch. Batracharyulu spoke on the necessity of Design and analysis of experiments and optimization and application in Engineering fields, Various DAE topics and optimization techniques Also had hands on session on SPSS software with various applications. Dr.KishalayMitra, Associate Professor, Department of chemical engineering, IIT- Hyderabad, spoke on Optimization with evolutionary algorithms and application related to Engineering fields. Mr. D. Ravi Kumar, Statistician, Dr. Reddy’s Laboratories spoke on Response surface methodology and its application on different types of Factorial Designs. Over 29 Participants (Faculty & Research scholars) from different Institutions like University college of Technology, Osmania University, B. V. Raju Institute of Technology, Narsapur, Hyderabad, CSIR-IICT, Hyderabad, SNIST, Hyderabad, St. Martin’s college engineering, Hyderabad and 33 in house Participants from different departments participated inthe faculty development programme.











NATIONAL LEVEL TECHNICAL FEST

RASAYANIKA 2K18

19th & 20th DECEMBER 2018

Department of Chemical Engineering, Anurag Group of Institutions organized Two-Day National Technical Fest “RASAYANIKA 2K18” on 19th & 20th December 2018 with the theme “Emerging Technologies for Service of Humanity: Innovations & Opportunities”. Various Technical and Non-Technical Events like Paper Presentation, Model Making, Poster Presentation, Compound Preparation, Technical Quiz, Just A Minute (JAM), Treasure Hunt and General Quiz competitions were conducted. Many students from various colleges in and around Hyderabad i.e B.V. Raju Institute of Technology, Osmania University, RVR & JC Engg. College, Guntur, Ace Engineering College participated in various events and made the event a grand success. The Convenor for this event was Dr. M. Mukundavani, H.O.D (Chemical Dept.) and the Co-Convenor was Mrs.P.L.V.N.Saichandra. Student organizers were Surya Tej, Vishali, Aashish, Hemanth and Veena Reddy.

Inaugural Ceremony took place on 19th December, 2018 at 11.00 am and Dr. J.V.N. Reddy, Associate President- Corporate – EHS, AurobindoPharma Limited was the chief guest and Mrs. Sheela, Chairperson- IChE, Deputy Chief Secretary- Safety- Nuclear Fuel Complex (NFC) was the Guest of Honour. Among the other dignitaries present during Inaugural ceremony were Dr. BhagvanthRao, Former Sr. Director, Anurag Group of Institutions, Dr. VasudhaBakshi, Dean- School of Pharmacy, Dr. Venkat Reddy, H.O.D (Mechanical Dept.), Dr. SateesKumaran, H.O.D (ECE Dept.), Dr. Vimala, H.O.D (Civil Dept.), Dr. Anil Reddy, H.O.D (EEE Dept.), Dr. Mallesha, NSS Coordinator, Mr. Srinivas, Academic Coordinator.

After Lightening the lamp Chief Guest Dr.J.V.N. Reddy spoke about the various opportunities present for chemical engineers in the pharmaceutical industry and also research has to be done addressing the various problems in chemical and pharma companies. He also said students should take this opportunity to enhance their skills. Mrs. Sheela, Chairperson- IChE addressing the gathering said that every student being a chemical engineer should contribute for addressing the issues related to pollution which every individual is facing in day to day life basis. She also wished the organizing team a grand success for this event. Souvenir was released by the organizing committee. Guest Lecture was conducted by Dr. J.V.N. Reddy on the topic “Environmental Challenges in Pharmaceutical Manufacturing”.

On 20th December 2018, Valedictory ceremony took place at 3.30 pm in E- Block Auditorium for which Dr. BhagvanthRao, Former Sr. Director, Anurag Group of Institutions was the Chief Guest. Winners and Runners from various Technical and Non-technical events received prizes in the hands of Dr. BhagvanthRao and also Dr. G. Vishnu Murthy, Deputy Director, Anurag Group of Institutions. Speaking to the audience Dr. G. Vishnu Murthy, Deputy Director,

Anurag Group of Institutions congratulated students for organizing such a mega event and encouraged them to organize such many more events in the future. Dr. BhagvanthRao addressing the students said he is very happy to be a part of this event and his support and motivation will always be there for the students.



Lightening of Lamp during Inaugural Ceremony in the hands of Dr. J.V.N. Reddy and Mrs. Sheila



The organizing committee of “Rasayanika 2K18” with Guest of Honor and Chief Guest



Guest Lecture by Dr.J.V.N. Reddy



Souvenir was released by the organizing committee and guests



Prof.M. BhagyanthRao addressing the students

National Conference on Emerging Trends in Mechanical and Chemical Engineering (NCETMCE)

24th & 25th January 2019

- National conference was successfully organized on 24th and 25th January -2019 by department of Chemical Engineering and Mechanical Engineering. The programme received an overall response with 66 registrations.
- The programme was inaugurated at E-Block auditorium on 24th January 2019 at 10.00 a.m. by chief guest Dr.G.Madhusudan Reddy, Associate Director, DMRL, Hyderabad, Dr. P. Rajeshwar Reddy, Chairman, Anurag group of Institutions, Prof.K.S.Rao Director, Anurag group of Institutions and Dr.G.Vishunumurthy, Dy. Director, Anurag group of Institutions.





The best paper selected as

S.No	Paper Code	Title of Paper	Name of College
1	NCETMCE 802	Physiochemical Characterization of Pulp & Paper- A Comparative Study Madhuri. P, Adusumalli R. B.	BITS, Hyderabad
2	NCETMCE 805	Kinetics of Methylene Blue degradation in waste water using Oxidative Photo Catalysis Ajitkumar Tallapaka, Jyothi Thati, Sailu Chintha	University College of Technology, OU





ANURAG GROUP OF INSTITUTIONS
Forming a Group of Engineering
Institutions
Uttarakhand Engineering Council, Dehradun, India. Telangana 500005

Department of Mechanical Engineering
&
Department of Chemical Engineering

Welcome the Delegates
To
CONFERENCE ON EMERGING TRENDS IN
MECHANICAL ENGINEERING (NCETMCE)
January 2019

Convener
Dr. R. S. ...
Professor

Dr. M. Mukunda Vant
Assoc. Prof. & HOD, CHE

Spherical Agglomeration

Spherical agglomerates are produced in situ during crystallization by the agglomeration of the small crystals into a spherical form

Good solvent: Methanol	Anti solvent: Water	Bridging liquid: Water-immiscible organic solvents	Method: Spherical agglomeration
Dissolve the compound	Precipitation or Crystallization of drug	Preferential wetting of crystals and forms liquid bridges	



Valedictory Function

Chief Guest: Dr.V.VenkataBasavaRao, Head, Department of ChemicalEngineering,OUCT,Former Director, IIIT Ongole, RGUKT.

