



**SSBT's College of Engineering & Technology, Bambhori, Jalgaon.**

(Included under section 2 (f) and 12(B) of the UGC Act, 1956

With NBA Accredited Courses & ISO-9001-2008 Certified)

**Department of Chemical Engineering**

(NBA Re Accredited)

# MOMENTUM

*News Letter Vol. No.03, January 2013-June 2013*

## VISION

Today we carry the flame of quality education, knowledge and progressive technology for global societal development; tomorrow the flame will glow even brighter.

## MISSION

To provide conducive environment for preparing competent, value added and patriotic chemical engineers of integrity of par excellence to meet global standards for societal development.

### *Salient Features of Chemical Engineering Programme:*

- ◆ Experienced, Qualified & Research Oriented Faculty
- ◆ Program Re-Accredited by NBA For 5 Years
- ◆ Modern and Well Equipped Laboratories
- ◆ Excellent Results
- ◆ Research Facilities
- ◆ Departmental Library with Internet Facility
- ◆ Long Tradition of Gold Medalist in University Exams
- ◆ ASPEN HYSYS Software
- ◆ Consultancy for Chemical Engineering & Allied Processes
- ◆ Teacher Guardian Scheme



## **Program Educational Objectives (PEO's) of Chemical Engineering Department**

### **1. Core Knowledge**

To provide the quality education in the field of basic sciences, mathematics, chemical engineering and allied technologies to pursue higher education and research for global socio-economic development.

### **2. Employment**

To motivate the students for gaining value added knowledge and real world exposure by industrial training, visits and workshops.

### **3. Professional Competency**

To build a chemical engineer of integrity and par excellence with professional and ethical values.

## **Program Outcomes (PO's) of Chemical Engineering Department**

- ◆ An ability to execute knowledge of basic science, mathematics and engineering.
- ◆ An ability to display the research by designing, conducting, interpreting and analyzing experimental data for preparing reports.
- ◆ An ability to demonstrate the caliber of product designing according to the standards.
- ◆ An understanding to demonstrate the ability to perform the task with multidisciplinary teams.
- ◆ An ability to identify, formulate, design and provide the solution to various chemical engineering problems.
- ◆ An ability to demonstrate the understanding of professional and ethical responsibilities.
- ◆ An ability to communicate formally and informally.
- ◆ An ability of designing the product to meet economical and societal requirements.
- ◆ A commitment to reveal self education, social values by providing the services to society through lifelong learning.
- ◆ An ability to understand the environmental issues and to provide solutions for green and clean technologies.
- ◆ An ability to demonstrate the computational skills using engineering software.

## Refresher Course on SAFETY AWARENESS

One day refresher course for non teaching- staff on “**Safety Awareness**” was organized on 09/01/2013 by the chemical engineering department. Principal Dr.K.S.Wani explained the importance of Safety Measures & guided on how efficiency of work can be increased by taking due care using safety tools. Shri Rajesh Kulkarni, Director, Fire Control Services, Jalgaon delivered his lecture on Types of Fires and demonstrated the use of fire fighting equipments for controlling fire.



In first session Head of Chemical Engineering Department Dr. V.R.Diware delivered lecture on “Safety in Our Hand”

Dr. S.A. Thakur delivered lecture on the topic “Safety First”

Shri.V.P.Sangore aware about “Precautions and Safety Measures in Chemical laboratories”

At the concluding session Shri.A.R.Lokhande delivered lecture on “Security & safety Measures in Office”

Around fourty non teaching staff members of the college participated in this refresher course. Shri.S.J.Jamadar proposed vote of thanks.



## DEPARTMENTAL EVENTS

### Elocution Competition

To improve confidence of students for formal speaking in pronunciation , grammar, style and tone a Elocution Competition was organized on 2/2/2013 for S.E,T.E & B.E Chemical Engineering students. Around sixteen students of the department express their views on the topic “**Save the Girl Child**”.

Faculty of chemical engineering department Shri.N.Y.Ghare and Miss. Sapana Madan were the judges for the competition.

Winners of the competition are declared as:

- I : Miss. Priyanka Kulkarni (T.E. Chem.Engg.)
- II: Sagar Patil ( S.E. Chem.Engg.)





## DEPARTMENTAL EVENTS

### Sketch Competition

Various events are frequently organized by the department to inculcate awareness in students for social, economical and environmental issues. With the idea to attract the students for adopting safety precaution during their working a Sketch Competition was conducted on 9/2/2013 for S.E,T.E & B.E Chemical Engineering students. The theme of the competition was technical one and related with chemical engineering.

The topic for the sketch competition was **“Safety in Chemical Process Industries”**

Many students from the department participated in the event.

The results was declared and are as:

I: Miss. Vrushali Bhole (T.E.Chem.Engg.)

II: Vishal Mahajan (T.E.Chem.Engg.)

III: Sagar Patil (S.E.Chem.Engg.)



### Expert Lecture

Experts lectures related with Chemical Engineering and other interdisciplinary topics are regularly arranged by the department to initiate consciousness in students about diverse fields. With the same intent an expert lecture of Dr. Mahesh Yenkie, Pro Vice Chancellor, RSTM, Nagpur University, Nagpur was conducted on the topic **“Design and Substrate Mass Balance in High Performance Aerobic Bioreactors”** at A/C seminar hall of college on 9.3.2013. Principal Dr. K.S.Wani, HODs of Chemical, Biotechnology and Civil department were present along with faculty, staff and students of chemical & biotechnology department. After expert lecture Dr. Mahesh Yenkie visited the chemical engineering department and expressed satisfaction for the infrastructure and facilities available for research to both faculty & students.



## TECHNICAL PAPER PRESENTATION

### Milestone 2k13

The college regularly arrange various co curricular and extra curricular activities for the students including Technical Paper Presentation.

The purpose of MS2K series is to encourage Undergraduate & Postgraduate students to present technical papers and to improve their skills in the techniques of presentation. Thus it provides a platform where students across various colleges & places are invited to share their information and ideas about various new concepts and technologies in engineering & technology.

This year also National Level Paper Presentation for students **Milestone 2k13** was held on 2<sup>nd</sup> March, 2013 on various topics related with chemical engineering discipline as:

- ◆ Advances In Reaction Engineering
- ◆ Advanced Separation Technology
- ◆ Transport Phenomenon
- ◆ Heat And Mass Transfer
- ◆ Alternative Fuel
- ◆ Modeling Simulation of Chemical Processes

Technical Papers were presented by students coming from various institutes and places for both Undergraduate and Post-graduate level.

Dr.V.S.Patil, Professor, UICT, NMU, Jalgaon and Dr.S.A.Thakur, Asst Prof. Chemical Engineering Dept. evaluated the research papers which were presented by participants through power point presentations.

Winners of this Milestone 2K13 National Level Conference for students are declared as :

Sr.No	Authors Name(UG)	Remarks
1	Priyanka Kulkarni	Ist Prize
2	Ganesh Chate & Nishant Vyas	II nd Prize
3	Bhupendra Dewangan	Consolation Prize

Sr. No.	Authors Name (PG)	Remarks
1	Kakasaheb Nandiwale	Ist Prize





## Guest Lecture

Guest Lecture on Health & Happiness was organized on 1/02/2013 by the international faculty of art of living Shri. Chirag Patil. He explained how to relief stress, breathing exercise, meditation technique which is need for us in day to day life.



## Essay Competition

Essay Competition was conducted on 16/3/2013 for S.E,T.E & B.E Chemical Engineering students on the topic “**Benefits & Harms of Social Networking Sites**”



For this essay competition eleven students were appeared. The views and thoughts of the participants were evaluated by Shri. N.Y.Ghare & Miss. Sapana Madan & they declared result of the competition as:

- I: Ganesh Chate (T.E.Chem.Engg.)
- II: Nikhil Gupta (T.E.Chem.Engg.)

## Group Discussion

Group discussion is an important tool which improve the employability of students because it helps in choosing socially suitable candidate among the academically superior achievers. With the same intent Group Discussion was conducted on 23/3/2013 for S.E,T.E & B.E Chemical Engineering students. The event was participated by twelve students.



- The result were declared for GD as:
- I: Mahendra Suryawanshi(T.E.Chem.Engg.)
  - II: Pankaj Pawar(S.E.Chem.Engg.)



## International Conference on Advances in Energy Technology

The Chemical Engineering Department along with Civil Engineering Department organized International Conference on **Advances in Energy Technology**, to create, enhance and spread awareness about recent development taking place in energy and environment friendly clean technologies. The Conference was held on 29<sup>th</sup> March , 2013 and Inaugurated by honorable Management Trustee Shri. Raosaheb Shekhawat (MLA, Amaravati)

Dr. M.N.A.Hawalader Professor, International Islamic University , Kuala Lumpur, Malaysia had inaugurated the conference and delivered keynote speech on “Utilization of Energy Resources” . During his keynote address he emphasized the need to use waste heat for low temperature applications such as in power plants & energy use in buildings. Er.M.S.Hiwale, Chief Engineer (Production), ONGC, New Delhi, delivered special talk on “Emerging Technology in the Energy Market and its Impact on the Environment”.

In second session Ms. Saroj Rangnekar, Head, Department of Energy MANIT, Bhopal delivered her keynote address on “Direct and Indirect Energy Storage Technologies for Power Electronics Applications”.

Scientists, Engineers and Academicians shared and exchanged problems, experiences, technology, and their views through the technical papers on energy related topics. The authors from different places presented 28 different papers on the theme. The proceeding of the International conference was released by the auspicious hands of the guests . Member GB & senior journalist Shri V.R.Phadnis, Principal Dr. K.S.Wani are present on the dias.





## Shodprakalpa Pratiyogita-2013

For motivating final year students of the Department for research, Department annually organizes Shodhprakalp Pratiyogita. This year also Department organized “SHODHPRAKALP PRATIYOGITA 2013” on 6<sup>th</sup> April, 2013. The objective, importance & usefulness of the project work carried out by students was judged by Dr. V. S. Patil, Prof., U.I.C.T., NMU, Jalgaon and Shri. S. N. Dhake, Director, Ganga Inks Ltd. MIDC, Jalgaon.

In SHODHPRAKALP 2013, 30 students of B.E. Chemical Engineering with 09 projects participated with experimental setup, Power-Point presentations and charts. They have been evaluated on 10 different parameters by the judges.

First Prize of Rs.1200/- was received by Payal Bhautik, Rupali Kaware, Sujata Bhadre and Vaishali Pawar, for their project entitled “Production of Lactic Acid from Rice Straw using SSF”. The project was carried out under the guidance of Dr.S.A.Thakur.

The Second Prize of Rs.800/-was received by Jitendra C. Bisen, Prafulla Patil, Vijay Mahale and Pramod Sonawane, for their project entitled “Extraction of Sweetener from Stevia Plant”. This Project was guided by Shri.A.R.Kokhande.

The students of the Department visited project exhibition and gained knowledge about the selection, objectives and execution of Project. Shri. V.P.Sangore, coordinated the event.





### Achievement:

**Dr.S.A.Thakur**, has received Ph.D. (Management) degree under the guidance of Dr.R.H.Gupta, GB & LMC Member SSBT's COET, Jalgaon from North Maharashtra University, Jalgaon.



**Mr. Ashish Saksule** has been awarded Gold Medal by North Maharashtra University, Jalgaon for securing First Rank in B.E. Chemical Engineering, May 2012 Exam.



### Publications in International Journal

**Dr K.S.Wani** "Nano Filtration for Recovery of Heavy Metal Ions from Waste Water – A review", International Journal of Research in Environmental Science & Technology Vol. 3 Issue 1, Page no. 29-34. ISSN: 2249-9695

**Dr V R Diware** "Carbon Credit Gains Due to Reuse of Fly Ash in Concrete Technology", International Journal of Engineering Research & Technology (IJERT) Vol. 2 Issue 2, February- 2013 ISSN: 2278-0181

### Publications in International Conference

**Dr K.S.Wani** "Magnetic field conditioning: an energy efficient method for crude oil transportation" Published in International Conference on "Advances in energy technology" organized by SSBT's College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no.89-92, Proceedings

**Dr K.S.Wani** "Perspectives and challenges of hydrogen storage by metal organic frameworks" Published in International Conference on "Advances in energy technology" organized by SSBT's College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no.101-107, Proceedings.

### Publications in International Conference

**Dr K.S.Wani,A.R.Lokhande** "Advance technology in renewable energy" Published in International Conference on "Advances in energy technology" organized by SSBT's College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no.127-131, Proceedings.

**Dr K.S.Wani, A.R.Lokhande** "Design criterion for extended aeration system" Published in International Conference on "Advances in energy technology" organized by SSBT's College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no.114-117, Proceedings.

**Dr.V. R. Diware** "Generation of Energy from distillery waste water" Published in International Conference on "Advances in energy technology" organized by SSBT's College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no. 7-12, Proceedings.

**Dr.V. R. Diware** "Use of geothermal energy for production of electricity" Published in International Conference on "Advances in energy technology", organized by SSBT's College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no. 27-31, Proceedings.

**Dr.V. R. Diware** "Energy recovery from Municipal Solid" Published in International Conference on "Advances in energy technology" organized by SSBT's College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no. 51-54, Proceedings.

**Dr.S.A.Thakur** "Biodiesel as an alternative fuel" Published in International Conference on "Advances in energy technology" organized by SSBT's College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no. 37-45, Proceedings.

**V.P.Sangore** "Treatment of dairy wastewater using UASB reactor and generation of energy" Published in International Conference on "Advances in energy technology" organized by SSBT's College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no. 46-50, Proceedings.

## Publications in International Conference

**N.Y.Ghare** “ Cost effective method of recovery of  $Zn^{2+}$  ions from binary mixtures with  $Na^+$ ,  $Mn^{2+}$ ,  $Mg^{2+}$ ,  $Ca^{2+}$ ,  $Ba^{2+}$  and  $Sr^{2+}$  using an ion exchanger loaded with chelating molecules of 8-hydroxyquinoline-5-sulphonic acid” Published in International Conference on “Advances in energy technology” organized by SSBT’s College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no. 55-59, Proceedings

**S.S.Madan** “A new concept for an osmotic energy converter-Concentration of noni juice by osmotic membrane distillation ” Published in International Conference on “Advances in energy technology” organized by SSBT’s College of Engineering and Technology, Bambhori, Jalgaon held on March 29<sup>th</sup>, 2013, page no.63-68, Proceedings

## Poster Published in National Conference

**V.P.Sangore** “Importance of Thermodynamic and Transport Properties of Liquid Mixtures in Chemical Process Industries” Published in National Conference on “Innovation in Chemistry – Laboratory to Society” organized by School of Chemical Sciences, North Maharashtra University, Jalgaon held on March 11<sup>th</sup>, 2013, Proceedings.

## Students Participation in Conferences:

**Sagar Patil, Mayur Patil** participated in Chemcoalesce 2K13 organised by Visvesvaraya Institute of Technology, Nashik on 30 -31<sup>th</sup> January 2013

**Ninad Deshmukh, Priyabrat Kashyap, Chetan Ambekar, Rupesh Chintalwar, Lavand Krishnaji, Ganesh Patil, Payal Bhautik, Jitendra Bisen, Vijay Mahale,** all Presented Paper in Milestone 2k13, a National Level Paper Presentation event for students held at C.O.E.T., Bambhori, Jalgaon on 30<sup>th</sup> March, 2013

## Students Participation in Sports:

**Prashant Patil** (T.E. Chemical) represented North Maharashtra University in Swimming and he was winner.

**Krishnaji Lavand, Bhavesh Patel, Mayur D.Patil, Ravindra Langote, Priyabrat Kashyap, Ganesh Chate,** have Participated in Sports events Volley Ball, Cricket, Table Tennis, Kho-Kho, Hockey, Carrom, Badminton at various levels and Won individual and Team Awards at College, Inter Collegiate and Zonal level .

## Industrial Visit

B.E. Chemical Engineering Students Visited following industries during Industrial Visit

- (1) Henkel Ltd, Parwanoo (H.P.) on 11/01/2013
- (2) Ansys Company Parwanoo (H.P.) on 11/01/2013
- (3) Shreeji Resins and Polymers, Amritsar on 05/01/2013





## The Roles and Responsibilities of Chemical Engineers

Chemical Engineers are considered to be "Universal Engineers." They use chemistry, physics, biology, microbiology, biochemistry and mathematics to design programs, machines and processes that turn raw materials into valuable products for human use and for use in the environment.

Chemical Engineers play a very important role in making modern society. Many Chemical Engineers design and operate large-scale and complex chemical production facilities to supplying diverse chemical products to society. In performing these functions, a Chemical Engineer will likely assume a number of roles during a career.

The Chemical Engineer is involved in raw materials extraction, intermediate materials processing, or production of pure chemical substances; in each activity, the minimization and management of waste stream will have important economic and environmental consequences.

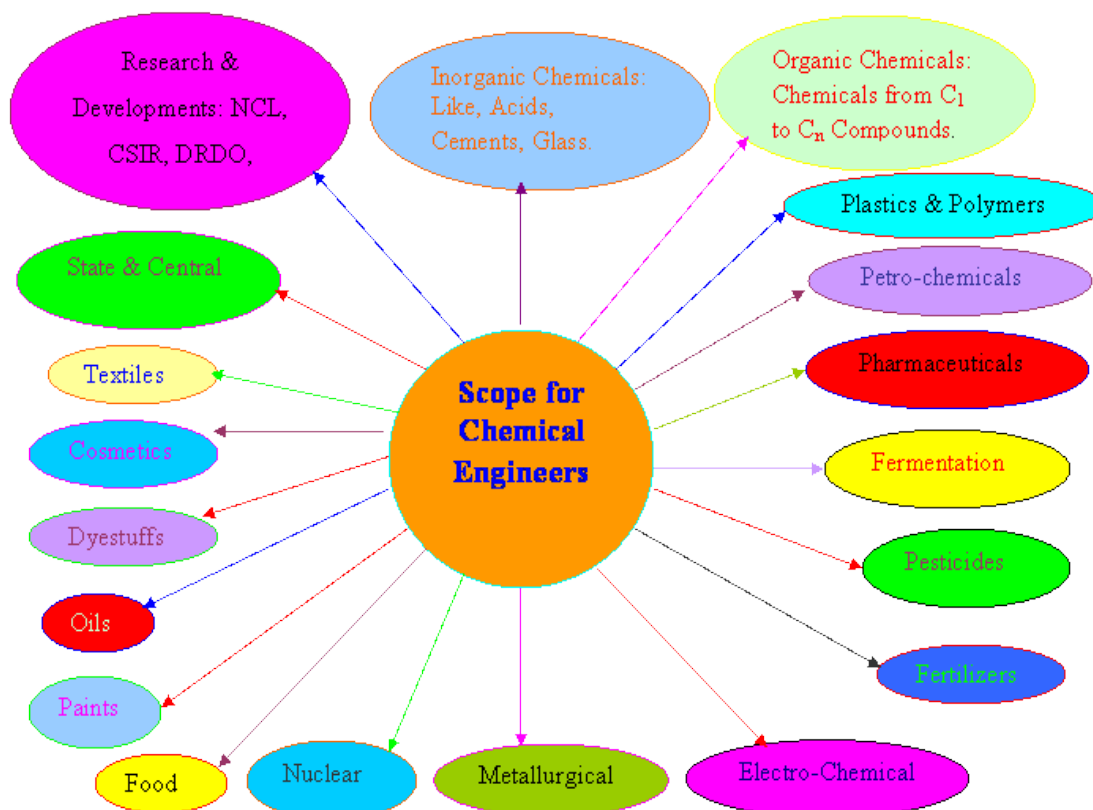
Chemical Engineers are involved in the production of bulk and specialty chemicals, petrochemicals, integrated circuits, pulp and paper, consumer products, minerals, and pharmaceuticals.

Chemical Engineers also find employment in research, consulting organizations, and educational activities. The Engineer may perform functions such as process and production engineering, process design, process control, technical sales and marketing, community relations, and management. As Chemical Engineers assume such diverse roles, it is increasingly important that they should be aware of their responsibilities to the general public, colleagues and employers, the environment, and also to their profession.

One of the central role of Chemical Engineers is to design and operate chemical processes yielding chemical products that meet customer specifications and that are profitable, another important role is to maintain safe conditions for operating personnel and for residents in the immediate vicinity of a production facility.

Finally, chemical process designs need to be protective of the environment and of human health. Environmental issues must be considered not only within the context of chemical production but also during other stages of a chemical's life cycle, such as transportation, the use of chemicals by customers, recycling activities, and ultimate disposal.

### Scope for Chemical Engineers in Various Industries & Organizations



## Photo Gallery



**Dr. V.R. Diware**  
Head, Chemical Engineering



**Shri Sanjay P. Shekhawat**  
Director Academics



**Prof. Dr. K. S. Wani**  
Principal

**Shram Sadhana Bombay Trust's College of Engineering & Technology, Bambhori, Jalgaon.**

Website- [www.ssoetjalgaon.ac.in](http://www.ssoetjalgaon.ac.in)  
Phone No. (0257) 2258393.

Email: [sscoetjal@gmail.com](mailto:sscoetjal@gmail.com)  
Fax No. (0257) 2258392.

