



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

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

ISO-9001-2008 Certified)

**Department of Chemical Engineering**

# MOMENTUM

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## 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 Accredited Twice by NBA
- ◆ 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
- ◆ Excellent Self-Study Material



## **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 socioeconomic 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.

## EVENTS

### Parents Meet

Parents Meet is the platform where parents and teachers understand each other well and hence be together for providing better educational exposure to the students. When both teachers and parents are clear about their aims of education, exchange of ideas can take place. This will enable parents and teachers to come closer and work together for the overall development of the students. With the same intention the Parents' Meet-2014 was organized on Jan.12,2014 at institute level. Parents of the Chemical Engineering students visited the department, laboratories, library & expressed satisfaction for the infrastructural & laboratory facilities available to their ward.



### Expert Lectures

SSBT's COET realizes the importance of giving additional inputs to the students in the form of expert lectures in addition to academic knowledge being imparted during class room lectures. The departments regularly arrange lectures of eminent personalities from academics & from industry, to impart additional knowledge of a particular topic.

Expert Lecture of Shri Sandeep Kabra, , Director, Suhans Chemicals Pvt.Ltd., MIDC, Jalgaon on the topic "**Expectations from Fresh Chemical Engineers in Chemical Industries**" was held on Jan.25,2014 under MOU between Suhans Chemicals Pvt.Ltd. and Chemical Engineering Department.

An Expert Lecture of Dr Paul James, Australia was held on Feb.26, 2014 on the topic "**Studies in Australia**". After his speech, he interacted with the chemical engineering students and replied about the queries of the students. After the interaction with the faculty & students he visited laboratories of the department & expressed his satisfaction for the facilities provided by the institute and the department for the overall development of the students.



A Expert Lecture of Prof. S.L.Bhagat of COEIT, Akola on the topic "**Mechanical Operations**" was arranged on Jan.20,2014.





## DEPARTMENTAL EVENTS

### Book Review (Non Technical)

A book review is both a description and an evaluation of a book. It should focus on the book's purpose, contents, and authority. For departmental students Book Review (Non Technical) was conducted on Jan.18,2014. Students of the department participated in the event with their viewpoint on different books.



### Mock GATE

With the pattern change in 2013 and now the online tests, the GATE exam has changed completely. Mock Tests are important as these test helps to improve the speed. Time management is one of the most valuable lesson that is given through the mock tests. The strengths and weaknesses can also be identified. Mock GATE test was conducted for B.E.Chemical Engineering Students on 25/01/2014.



### Aptitude Test

The definition of aptitude is an innate, learned or acquired ability. The purpose of the aptitude test is to test work related perceptions, judgement and reasoning. Aptitude Test for S.E.,T.E.& B.E.Chemical Engineering Students was conducted on 15/02/2014. Aptitude tests are play a vital role in assessing intelligence and knowledge of an individual.



### Workshop on ASPEN HYSYS

Aspen Hysys is a comprehensive process modeling system used by the worlds leading oil & gas producers, refineries and engineering companies to optimize process design & operations. Aspen Hysys is an easy-to-use process modeling environment that enables optimization of conceptual design and operations & has a broad array of features and functionalities that address the process engineering challenges of the energy industry.

For final year Chemical Engineering & Biotechnology students a workshop on ASPEN HYSYS software was conducted on 9<sup>th</sup> March2014 to 10<sup>th</sup> March2014.

Dr. I.D.Patil, HOD Biotechnology, Dr. V.R. Diware HOD, Chemical Engg. and the staff members and students of both the departments were present. Shri. A. R. Lokhande & Sharanappa A coordinated the event. The workshop ended with distribution of certificates to the participants.

## International Conference on Sustainable Development

Sustainable development is a systems approach to growth and development & is the organizing principle for sustaining finite resources necessary to provide for the needs of future generations of life on the planet. It is a process that envisions a desirable future state for human societies in which living conditions and resource-use continue to meet human needs without undermining the "integrity, stability and beauty" of natural biotic system. Sensing the importance and need of the hour a two day International Conference on "Sustainable Development" was organized by Chemical & Civil Department on February 25-26, 2014. The conference was inaugurated by Dr Paul James, Director, Global Compact City Program, Sydney, Australia and he delivered his keynote speech on "**Building Sustainable Cities**". Apart from that keynote speakers Dr S Deshmukh, Head, Department of Biotechnology, Mumbai University, Dr J S Pandey, Head of Climate Change Section, NEERI, Dr.R.S.Sapkal, Professor, Pulp & Paper Technology, Sant Gadge Baba Amravati University, and Dr Ratnamala Bendre, Professor School of Chemical Sciences, North Maharashtra University delivered keynote speech on the Sustainable Development theme in technical sessions. Academicians, Research Scholars from various fields & places participated & presented their research papers on the theme. Around 75 participants from various universities participated in the conference. The Conference also included a visit to Ajanta Caves. The conference ended with distribution of certificates to the participant. Guests come for the international conference also visited the laboratories of chemical engineering department and expressed their satisfaction for the facilities provided by the institute & the department to the students for their overall development.



## NBA Peer Team Visit

The Peer Team of National Board of Accreditation New Delhi visited the Department during March 28-30, 2014. The team was chaired by Prof Ranjan Bhattacharya, Vice Chancellor, West Bengal University of Technology, Kolkata, Prof G.P.Karmakar, Professor, Pandit Dindayal Petroleum University, Gandhinagar and Prof.T.K.Bhattacharya, University of Kolkata assessed the department. They appreciated the credits and gave some suggestions to enrich the program. They interacted with faculty, staff, students, alumni, parents and industrialists. They also interacted with the Academic Advisory Board. They verified the official documents and inspected the laboratories.



### Milestone 2k14

National Level Paper Presentation for students **Milestone 2K14** was held on 08<sup>th</sup> March, 2014. Technical Papers presented by students coming from various institutes and places are judged by Dr.V.S.Patil, Professor, UICT, NMU, Jalgaon & Mr. A.R.Lokhande, Asst. Professor, Chemical Engineering Department, COET, Bambhori, Jalgaon. The judges evaluated the research papers which were presented by participants through power point presentations. Mr.Ganesh Chate & Miss. Vrushali Sonawane was awarded the first prize of Rs. 1000/- for their paper entitled “Bimetallic Heterogeneous Photocatalyst for Dye Detoxification”. Second prize of Rs.750/- was awarded to Mr.Nirav Lekinwala form UICT, NMU, for his paper entitled “A Review on Aerogel as Super Insulator”. While a consolation prize of Rs. 250/- was given to Mr. Vispute Saurabh & Mr. Thakur Harshal for their paper entitled “Ink Preparation”



### SHODHPRAKALP PRATIYOGITA-2014

For motivating students for research, a university level Project Exhibition “SHODHPRAKALP PRATIYOGITA-2014” was organized by Innovation and Entrepreneurship Development Centre (IEDC) of the college on 22/03/2014. The objective, importance & usefulness of the project work was judged by Shri. U.V.Mahajan, Proprietor, KABATECH INDUSTRIES, M.I.D.C., Jalgaon. In SHODHPRAKALP-2014, students of B.E. Chemical Engineering with 09 projects participated with experimental setup, power point presentations and charts. They have been evaluated on different parameters by the judges. First prize of Rs. 2500/- was awarded to Ganesh Chate, Nilesh Bhilmal, Nishant Vyas & Sagar Sahare for their project entitled “Photocatalytic Degradation of Detergents: Kinetic Study Under Slurry Phase Reactor” . The project was carried out under the guidance of Dr.V.R.Diware & Dr.M.Hussain. Second prize of Rs. 2000/- was awarded to Neha Patil, Priyanka Kulkarni, Nikhil Gupta & Bhargav Paury for their project entitled “Enzyme Production by Solid State Fermentation” . The project was carried out under the guidance of Dr.S.A.Thakur. Third prize of Rs. 1500/- was awarded to Anjali Narode, Chaitali Kirmire & Anagha Kawale for their project entitled “Extraction of Caffeine” . The project was carried out under the guidance of Shri.A.R.Lokhande. Shri.V.P.Sangore, coordinated the event.



### Gold Medalist

Congratulations Mr. Rupesh Chintalwar for Receiving **GOLD MEDAL** from Dr.A.P.J. Abdul Kalam, Former President, India in 22nd Convocation Ceremony at NMU, Jalgaon for securing First Rank in B.E. Chemical Engineering May 2013 University Examinations.



## 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.

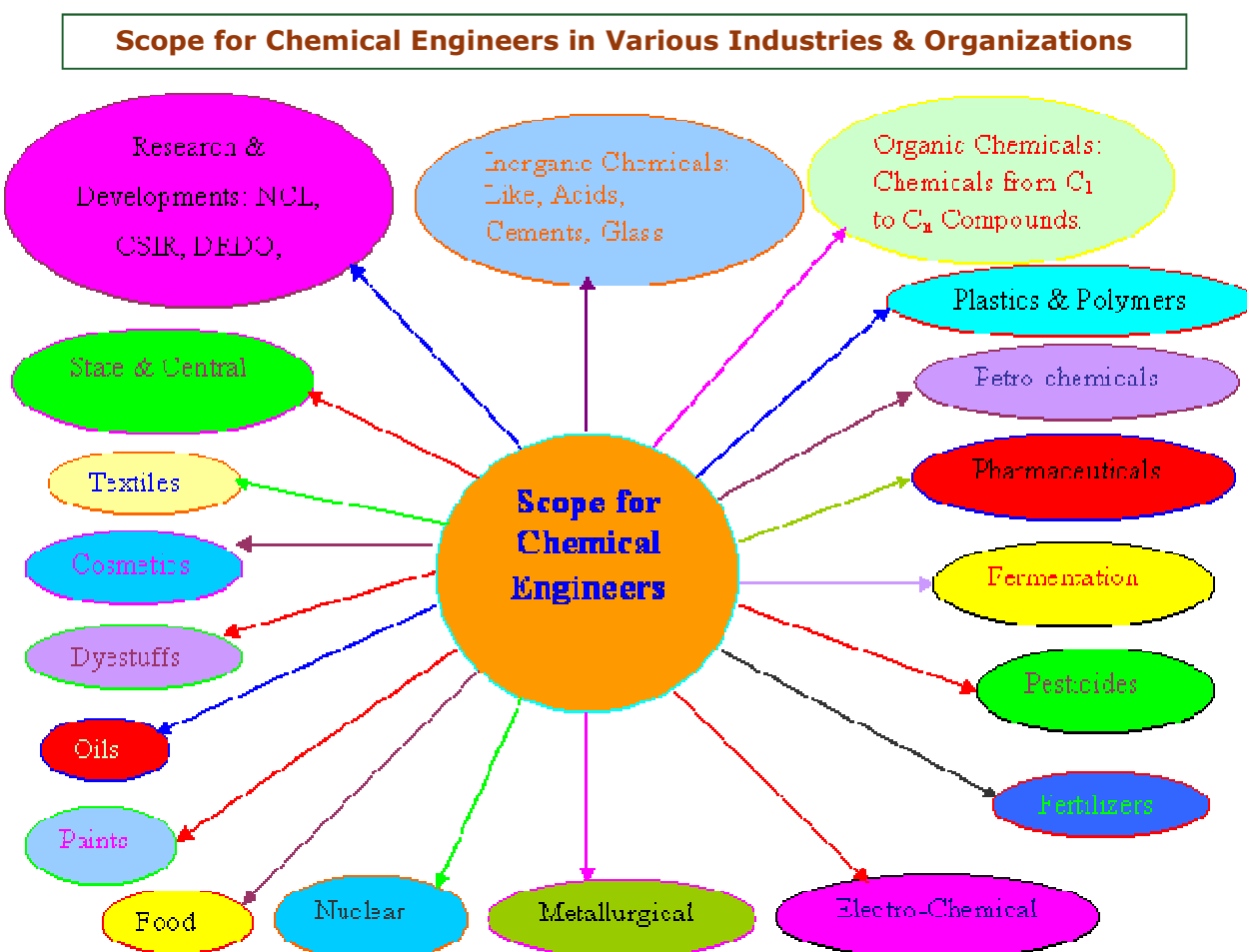
The Chemical Engineer is involved in raw materials extraction, intermediate materials processing, or production of pure chemical substances; in each activity, the minimization and management of waste stream will have important economic and environmental consequences.

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.



## 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.**

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