



**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.01, July 2011-June 2012*

## *Our Inspiration*



**Hon. Smt. Pratibhatai Patil  
&  
Hon. Dr. Devisinghji Shekhawat**



**Shri Raosaheb Shekhawat  
Trustee**

## 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:*

- 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
- Excellent Self-Study Material

## Chemical Engineering Department

Department of Chemical Engineering came into existence in 1996, engaged in Teaching and Research in Chemical Engineering and related areas. Department caters to needs of B.E. Chemical engineering course as prescribed by the North Maharashtra University, Jalgaon (M.S.). The Department is having highly qualified and experienced faculty and modern infrastructural facilities. The Department is re-Accredited for 5 Years from 19.07.2008. The Department occupies 1270 sq.m area on the Ground floor and First floor annex to main building. Department is having eleven spacious & well equipped laboratories with modern & sophisticated equipments, machinery and software including Aspen HYSYS. A research laboratory is proposed for undertaking research activity for societal benefits.

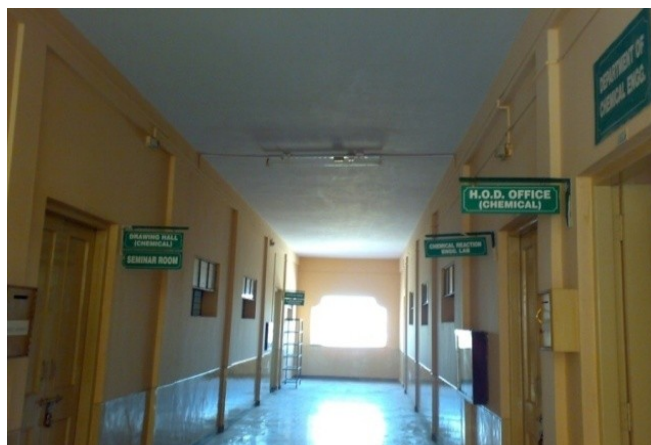
### Departmental Objectives

1. To achieve 100% results in examinations.
2. To create academic ambient facilities.
3. To motivate and guide students.
4. To promote overall development of the staff.
5. To create research facilities.

### Laboratory Facilities in Department

Sr.No.	Name of the Laboratory
01	LAB-1 : Mass Transfer-I
02	LAB-2 : Mass Transfer-II
03	LAB-3 : Unit Operation-I
04	LAB-4 : Unit Operation-II
05	LAB-5 : Instrumentation
06	LAB-6: Process Control
07	LAB-7 : Project Lab
08	LAB-8 : Computer Lab
09	LAB-9:Chemical Reaction Engineering
10	LAB-10:Chemical Technology
11	LAB-11:Research Lab

### 1<sup>st</sup> Floor



### Ground Floor



### Laboratory Facilities





## DEPARTMENTAL EVENTS

### Expert Lecture



Expert Lecture on “Chlorinated Polyvinyl Chloride (C-PVC)” was delivered on 2<sup>nd</sup> September, 2011 by Shri Anand Pandya., Sr. Sales Executive, Lubrizol Advanced Materials India Pvt. Ltd. & our Alumni. He explained the requirements, selection criteria, industrial importance of C-PVC products of Lubrizol and the temperature range in which they can be employed.



### Teacher's Day

Teacher's day was celebrated on 5<sup>th</sup> September, 2011. The program started with Saraswati Poojan followed by garlanding photo of Dr. Sarvapalli Radhakrishnan. Teachers were felicitated by students. Speeches were delivered by students as well as teachers.

### Fresher's Welcome (Swagat 2K11)



Fresher's Day was celebrated on 10<sup>th</sup> September, 2011. The programme started with Saraswati Poojan. Fresher's introduced themselves to audience and participated in different activities. The fresher's were given warm welcome by the students of the department giving memento as token of love. Dhananjay More was felicitated as Mr. Fresher 2011 by Shri.N.Y.Ghare.



### Engineers Day

Engineers Day was observed on 15<sup>th</sup> September, 2011. Ms. Priyanka Kulkarni briefed the students about the life sketch of Sir M. Visvesvaraya & the contribution of Sir M. Visvesvaraya in the development of modern India.



## Soft Skills Training Program

Soft Skill Training Program was conducted for the Final Year B.E. Student from 19<sup>th</sup> September, 2011 to 24<sup>th</sup> September, 2011 for improving communication and presentation skill.

## ASPEN-HYSYS Workshop



ASPEN HYSYS workshop was organized on 1<sup>st</sup> & 2<sup>nd</sup> October, 2011 for B.E. students of Chemical Engineering & Biotechnology Department. Dr. Nilesh Teli, Director, Naturally Yours Biotech, inaugurated the Workshop on 1<sup>st</sup> October, 2011. Dr. K. S. Wani, Principal, Dr. I.D. Patil, HOD Biotechnology Dept., Dr. V.R. Diware HOD, Chemical Engg. and the staff members and students of both Departments were present. Shri. A. R. Lokhande presented the vote of thanks. Total 33 students attended the workshop and the certificates were distributed to the participants.

## Toppers of the Department in University Examination Results Nov/Dec 2011-12

### B.E. Chemical

Rank	Name	%
1	Rahul	74.93
2	Ashish S Saksule	73.73
3	Bankar Vikram V	72.53

### T.E Chemical

Rank	Name	%
1	Atul G Shinde	69.33
2	Vijay M. Mahale	67.86
3	Jitendra C. Bisen	63.33

### S.E Chemical

Rank	Name	%
1	Kawale Anagha	75.06
2	Chate Ganesh	65.86
3	Sahare Sagar	63.60

## Industrial Visit at Goa and Kerala

The students of Final year visited the following Chemical Industries, during their visit to Goa & Kerala



M/s Nellattukudiyil Rubber  
Manufacturing Industry Kerala 10<sup>th</sup>  
January, 2012



M/s Omni Impex Pvt Ltd. Plot No. 65, Pissurlem Industrial Area, Honda-Sattari,  
Valpoi, Goa – 403 530 on 7<sup>th</sup> January 2012





M/s Kanan Devan Hills Plantations Company Private Limited,  
Munnar , Kerala on 11<sup>th</sup> January, 2012



The students during visit closely observed the various unit processes and unit operations involved.



## Sports



List of Students Participated in Inter College/Inter Group/Inter University Sports events 2011-12  
List of Participants in Inter – College events

Student Name	Place	Position
<b>Chess</b>		
Lavand Krishnaji (T.E.)	DDSP ,ASC, College, Erandol	Winner
<b>Table Tennis</b>		
Bhore Akshay (B.E.)	C.O.E.T., Bambhori	Winner
Priyabrat Kashyap (T.E.)	C.O.E.T., Bambhori	Winner
Bhore Akshay (B.E.)	Dhanajinana A,C. & S. College, Faizpur	2 <sup>nd</sup> Place
Priyabrat Kashyap (T.E.)	Dhanajinana A,C. & S. College, Faizpur	2 <sup>nd</sup> Place
Bore Akshay A. (B.E.)	R.T.M. University, Nagpur	Participant
<b>Cricket</b>		
Bore Akshay A. (B.E.)	M.M.College , Pachora	Winner
<b>Hockey</b>		
Ganesh Chate (S.E.)	C.O.E.T., Bambhori	Winner
<b>Foot Ball</b>		
Patel Jigar S. (T.E.)	ASC, College, Chopda	Runner
<b>Badminton</b>		
Bhore Akshay (B.E.)	BP Arts, Comm. & Sci. Coll. Chalisgaon	Runner
<b>Kho Kho</b>		
Shinde Atul (T.E.)	MTU Patil Arts College	4 <sup>th</sup> Place
Ganesh Chate (S.E.)	MTU Patil Arts College	4 <sup>th</sup> Place

<b>Kabaddi</b>		
Patil Mayur D. (F.E.)	DDSP A, C. & S. College, Erandol	3 <sup>rd</sup> Place
Patil Mayur D. (F.E.)	Baban Baheti A & C. College, Jalgaon	4 <sup>th</sup> Place
<b>Volley Ball</b>		
Vyas Nishant (S.E.)	R.L. Arts, Comm. & Sci. College, Parola	4 <sup>th</sup> Place
<b>Swimming</b>		
Patil Prashant K (S.E.)	SSVPs Science College, Dhule	Participant

### SSB T's COET Annual Sports 2011-2012

Student Name	Games	Position
Lavand Krishnaji (TE)	Chess	Runner
Akshay Bhore (B.E.)	Table Tennis	Winner
Mohsin Khan (B.E.)	Table Tennis	Runner
Akshay Bhore (B.E.) Ankit Sharma (S.E.)	Table Tennis (Double)	Winner
Priyabhat Kashyap (T.E.) Gaurav Deshmukh (S.E.)	Table Tennis (Double)	Runner
Akshay Bhore (B.E.) Bhavesh Patel (T.E.)	Badminton (Double)	Runner
Atul Shinde (T.E.)	Kho-Kho	Winner
Ganesh Chate (S.E.)	Kho-Kho	Runner

## National Level Conference on Green and Clean Technology



The Chemical Engineering Department along with Civil Engineering Department organized National Level Conference on the theme Green and Clean Technology to create, enhance and spread awareness of Green and Clean Technology. Conference was held on 11<sup>th</sup> March, 2012. Dr. Ajay Dalai, Professor, Canada Research Chair and Associate Dean Research and Partnership, Department of Chemical Engineering University of Saskatchewan had inaugurated the conference and delivered the invited talk on “Biofuels Production and Processing and Meeting Climate Change Issues in the 21<sup>st</sup> Century”. Scientists and Engineers shared and exchanged problems, experiences, technology, and their views through the technical papers on environment related issues. The various authors contributed by participating in 55 different papers. The e-proceeding of the national conference on Green and Clean Technology was released.

### Expert Lecture

Expert Lecture on “Hetrogeneous Catalysis” was delivered on 11<sup>th</sup> March, 2012 by Dr. Ajay Dalai., Associate Dean, Research and Partnerships, Professor and Canada Research Chair in Bioenergy and Environmentally Friendly Chemical Processing, College of Engineering, University of Saskatchewan Saskatoon, SK Canada.



### Milestone 2K12

National Level Paper Presentation for students **Milestone 2K12** was held on 30<sup>th</sup> March, 2012. Technical Papers were presented by students coming from various Institutes. Mr. S.N.Dhake, MD of Ganga Inks Ltd. Jalgaon and Mr. Shirish Wani of Marico Industries Ltd. Jalgaon were felicitated by Shri.S.A.Thakur The judges evaluated the research papers which were presented by participants through power point presentations.







Mr. Aashish Saksule was awarded the first prize of Rs. 1000/- for the paper entitled “Adsorbents from Karanja seed oil cake and applications”. Second prize of Rs. 750/- was awarded to Mr. Ninad Deshmukh & Mr. Priyabrat Kashyap for their paper “Alternative Fuels”. While a consolation prize of Rs. 250/- was given to Ms. Krutika Suryawanshi for her paper “A novel approach for human identification through finger prints”

## SHODHPRAKALP Pratiyogita 2012



For motivating final year students of the Department for research, Department annually organizes Project Exhibition. This year also Department organized a project exhibition “SHODHPRAKALP PRATIYOGITA 2012” on Monday 2<sup>nd</sup> April, 2012. The objective, importance & usefulness of the project work were judged by Dr. K. J. Patil, Visiting Professor, School of Chemical Sciences, N.M.U., Jalgaon and Prof. S. A. Raut, School of Chemical Technology, N.M.U., Jalgaon.

In SHODHPRAKALP 2012, 16 students of B.E. Chemical Engineering with 06 projects participated with experimental setup, PowerPoint presentations and charts. They have been evaluated on 10 different parameters by the judges.

First Prize of Rs. 1200/- was received by Mr. Aashish Saksule and Ms. Pallavi Kude, for their project entitled “Adsorbents from Karanja Seed Oil Cake and Application”. The project was carried out under the guidance of Shri. A.R. Lokhande. The Consolation Prize of Rs. 800/- was received by Mr. Vikram Bankar, Mr. Harshal Nagpure and Mr. Rahul, for their project entitled “Photocatalytic Degradation of Paper Mill Waste Water”. This Project was guided by Prof. Dr. K.S. Wani. 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.



## Aptitude Test

Aptitude test was conducted by the Department on 7<sup>th</sup> April, 2012 in which 40 students from S.E to B.E Chemical Engg. has participated. The Result of the test is:

Rank	Name	Class
1	Atul Shinde	T.E.
2	Vijaya Laxmi	B.E.
3	Bhagwan Pagare	T.E.

## Group Discussion

Group Discussion was held on 7<sup>th</sup> April, 2012 in the Department organized by CHESA. The topic for Group Discussion was "Policy of Indian Cricketers Regarding their Voluntary Retirement". Total 8 groups participated in the event amongst these following ranks were declared:

Rank	Name
1	Jignesh Dholkiya & Group
2	Nishant Vyas & Group
3	Vijaya Laxmi & Group

## GATE Qualified Students GATE 2012



Ms. Vijaya Laxmi Jha



Ms. Jayashree More

## Toppers of the Department: University Examination Results May 2012

### B.E Chemical

Rank	Name	%
1	Ashish Saksule	73.40
2	Rahul	72.46
3	Bankar Vikram	71.36

### T.E Chemical

Rank	Name	%
1	Atul G. Shinde	73.06
2	Vijay M. Mahale	69.66
3	Jitendra C. Bisen	65.66

### S.E Chemical

Rank	Name	%
1	Kawale Anagha	75.13
2	Chate Ganesh	66.80
3	Gupta Nikhil	65.80

## Gold Medalist



**Mr. Nadeem Mansoori** has been awarded Gold Medal by North Maharashtra University, Jalgaon for securing First Rank in B.E. Chemical Engineering, May 2010 Exam.

## Farewell to Final Year Students



Farewell to final year students was organized by the department on 27<sup>th</sup> April, 2012. Students shared their memories and experiences with the faculty and students.

## Faculty Participation

- Dr. K. S. Wani, Dr. V. R. Diware, Shri. S. A. Thakur, Shri. V. P. Sangore, Shri. N. Y. Ghare and Shri. A. R. Lokhande from Chemical Engg. Department participated in three days national level workshop on **Research Methodology** which was jointly organized by Department of Mechanical Engineering and MBA Department of SSBT's COET, Bambhori. from 17<sup>th</sup> to 19<sup>th</sup> Oct. 2011.
- Shri. V. P. Sangore participated in two weeks ISTE workshop on **"Introduction to Research Methodologies"** conducted by IIT Bombay from 25<sup>th</sup> June, 2012 to 4<sup>th</sup> July, 2012 at SSBT's COET, Jalgaon.



## Research Publications

### Publications in International Journal

<b>Sharanappa A., K. S. Wani</b> , Pallavi Patil “Bioprocessing of Food Industrial Waste for Alpha Amylase Production by Solid State Fermentation”, published in “International Journal of Advanced Biotechnology and Research”. Vol 2, Issue 4, pp 473-480.
<b>A. R. Lokhande</b> , V. S. Patil, <b>Wani K. S.</b> “Preparation of Greases from Metal Soaps of Nontraditional Oil Using Waste Lubricating Oil”, published in “International Journal of Chemical Engineering Research”. Volume 4, Number 1 (2012), pp. 1-7.
<b>S. A. Thakur</b> , Dr. R. H. Gupta “Customer Satisfaction, Service Quality and Indian Life Insurance Industry”. International Journal of Social Sciences and Interdisciplinary Research. Indian Research Journals.com Krukshetra, Haryana, India, Vol. 1, April-June 2012, pp.39-42.
<b>V. R. Diware</b> , A. S. Goje and S. Mishra “ Study of profitability and breakeven analysis for glycolytic depolymerization of Poly (Ethylene Terephthalate) (PET) Waste during chemical recycling of value added monomeric products published in “Pratibha International Journal of Science, Sprituality, Business and Technology”, Vol.1,no.1, March 2012, pp.38-42.
M.Husain, <b>K.S.Wani</b> and S.P.Pawar. “Pollution Control: A Techno-Spiritual Perspective” published in “Pratibha International Journal of Science, Sprituality, Business and Technology”, Vol.1,March 2012, pp.82-85.

### Publication in National Journal

<b>S. A. Thakur</b> , Dr. R. H. Gupta “Customer Satisfaction and Perception of Life Insurance Agents” Indian Journal of Applied Research, Vol 1, No. 3, December 2011, pp. 32-34.
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## International Conference in Malaysia

**Shri. A. R. Lokhande** presented a paper on “Study of Lubricating Greases from Mahua Oil fatty acids using Waste Lubricating Oil” at International Conference from 27<sup>th</sup> to 29<sup>th</sup> May, 2011 at Glory Beach Resort, Port Dickson, Malaysia. The Conference was inaugurated on 27<sup>th</sup> May, 2011 at 9.00 a.m. by Malaysian Minister. Total 350 delegates from various countries were present.



The Chairperson of the session was Prof. Dr.B.H. Mehata, from Bombay University. Dr. D. V. Mane, Associate Professor and Research Guide, Department of Chemistry, Shri Chatrapati Shivaji College, Omerga, Dist Osmanabad and Rtn, PHF. Dr. S. Karthkeyan Assistant Professor of Chemistry, Chikkanna Govt Arts College, Thirpur were co-chairman. The presentation of Shri. A. R. Lokhande was appreciated by the Chairman with the remarks to house that, this paper has a commercial value and very much useful to the society.

### Publications in National Conference

L. Mahajan and <b>K. S. Wani</b> . “Study of Adsorption of Fly Ash for removal of Lignin” Published in National Conference on “Recent Advances in Chemical Engineering (RACE-2012)”, held on 4 <sup>th</sup> February 2012, organized by University Department of Chemical Technology, NMU, Jalgaon.
<b>V. R. Diware</b> , <b>S. A. Thakur</b> ” Hospital Waste Management for Akola City” in National Conference on” Green and Clean Technology” held on March 11, 2012 at SSBT’s College of Engineering &Technology, Bambhori, Jalgaon
<b>V.R.Diware</b> , <b>S. A. Thakur</b> ” Green and Clean Approach for Rain Water Harvesting” in National Conference on” Green and Clean Technology” held on March 11, 2012 at SSBT’s College of Engineering and Technology, Bambhori, Jalgaon,
Kishor B. Deshmukh, <b>V. P. Sangore</b> and <b>K. S. Wani</b> , “UASBR Technology for Treating Waste Water”, Published in National Level Conference on “Green and Clean Technology” held on 11 <sup>th</sup> March 2012, organized by SSBT’s College of Engineering and Technology, Bambhori, Jalgaon.
<b>Sharanappa, A., K .S. Wani, I. D. Patil</b> “Bioprocessing of Food Industrial, Agricultural and Vegetable waste for value added products by Solid State Fermentation” A one day National Conference on Biotechnology Advances, SSBT’s C. O. E. T. Bambhori on March 16,2012.

## Scope for Chemical Engineers in Various Industries & Organizations



### Indian Chemical Industries Scenario

The size of the Indian Chemical industry (Basic specialty and agricultural chemical) is estimated to have reached around US \$ 60.3 billion in 2010.

In terms of total value added (at constant 2000 prices), the Indian chemical industry was the fifth largest in the world, and 2nd largest in Asia after China. The industry accounts for about 10% of the output of the Indian manufacturing sector, 13% of Indians total exports, and 9% of the country's total imports. In terms of segmentation, basic chemical was the largest sector with total revenues of US\$ 43.3 billion, equivalent to about two-third of the industry's overall value in 2010.

With per-capita consumption of chemical products in India being only a fraction of the global average, the opportunities for the domestic industry are enormous. As per Indian chemical industry, XII five year plan, 2012-2017, India emerges as one of the focus destinations for chemical companies worldwide with the current size of approximately \$108 billion and the Indian chemical industry could grow at 11% p.a. to reach size of \$224 billion by 2017. However, the industry could aim to grow much more and its growth potential is limited only by its aspirations. Focused growth and planning for the chemical sector would enhance global competitiveness further, increase domestic value addition, provide technological depth and promote sustained economic growth.



## Upcoming Chemical Industries in India

1. Madhya Bharat Agro Products Ltd. will be setting up plant to manufacture Single Superphosphate with capacity of 1.8 lakh TPA at Sagar (M.P.).
  2. Kudos Chemie Ltd. will set up plant to manufacture Adenine with capacity of 1200 tpa at Ropar, Punjab.
  3. Hemani Intermediates Pvt. Ltd. at Bharuch, Gujarat.
  4. Emami Ltd. will be expanding pesticides capacity from 620 to 1862 TPM at Dahej, Vagra Taluka.
  5. Markap Resources plans to set up a carbon black unit with capacity of 60,000 TPA at Abu Road.
  6. Patel Pesticides (India) plans to set up pesticides unit with a capacity of 100 TPM at Nandesari.
  7. Yodeva Plastics is expanding shampoo capacity from 14,000 to 30,000 KLPA at Baddi. It will also include expansion of liquid soap capacity from 7,000 to 15,000 KLPA work underway.
  8. J.R Organics plans to set up an organic acids unit with a capacity of 30,000 KLPA at Somaiya Nagar, Dewa Road.
  9. Hyderabad Chemical Products is setting up a pesticides unit over 13 acres at Humnabad Industrial Area. It will manufacture Cartap hydrochloride technical (1,000TPA), Indoxa carb technical (50TPA), Acephate technical (250TPA), Monocrotophos technical (600 TPA).
  10. Thermax plans to set up a construction chemical unit with a capacity of 1,000 TPM at Jhagadla.
  11. Ahldha Pharma plans to set up a bulk drug unit with a capacity of 15 TPM at JN Pharmacy, Parawada.
  12. Malwin Pharma plans to expand bulk drug and intermediates capacity from 30 to 36 TPM at Hadamtala Industrial Area.
  13. Dhruv Chemicals & Pharmaceuticals plans to set up a bulk drugs and intermediates unit over 5,300 sq yards with a capacity of 678 TPA at Behra village, Dera Bassi tehsil.
  14. Ashutosh Pellets is setting up a bulk drugs unit over 5,948 sq mtrs with a capacity of 260 TPM at Vamaj village, Vamaj-Adraj Road, Kadi Taluka.
  15. Harish Chemicals is setting up a dye and dyes intermediates unit with a capacity of 110 TPM at Plot No. 813, GIDC Industrial Estate, Sachin.
  16. Heranba Industries plans to expand agro chemicals capacity from 150 to 200 TPA at Vapi.
- This shows that there is vast growth of Chemical Industries in India.

## 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.

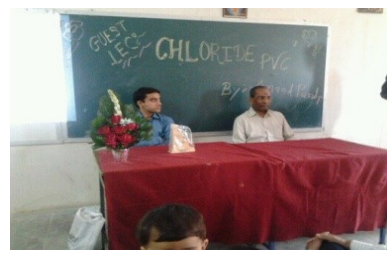
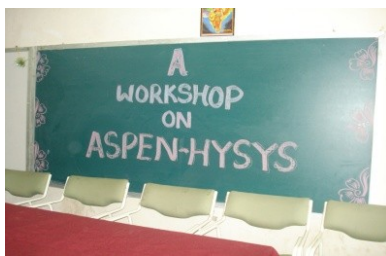
Chemical Engineers are involved in the production of bulk and specialty chemicals, petrochemicals, integrated circuits, pulp and paper, consumer products, minerals, and pharmaceuticals.

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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