

SSBT's College of Engineering & Technology, Bambhori, Jalgaon (Included under section 2 (f) and 12(B)of the UGC Act, 1956) Grade B ++ (2.91) NAAC Accredited 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 Thrice 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



#### Programme Educational Objectives (PEOs) 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.

#### **Programme Outcomes (POs) of Chemical Engineering Department**

- **PO1** Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2 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.
- **PO3 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.
- **PO4** 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.
- PO5 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.
- PO6 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.
- **PO7** 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.
- **PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **PO9 Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **PO10 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.
- **PO11 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.
- **PO12 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.

#### Programme Specific Outcomes (PSOs) of Chemical Engineering Department

- PSO1 How are you able to apply basic principles of science, mathematics and chemical engineering skills in interpreting and analyzing experimental data for societal development?
- PSO2 How are you able to design and provide solutions to problems in the development of chemical and allied industries?
- PSO3 How are you able to display multidisciplinary approach for providing techno-economical and eco-friendly solutions?

# Int. Conference / Add on Courses /Events / Expert Lectures etc. Organized

DATE	EVENT NAME	EVENT DESCRIPTION
09/08/2017	Alumni Lecture	Alumni Nishant Vyas delivered Lecture on "Importance of Research in a Chemical Industries" for departmental students.
16/08/2017 to 19/08/2017	Add on Course	Shri. V.P.Sangore and Miss S.R.Deshmukh conducted add on course entitled "Advanced Instrumental Analysis and Techniques in Chemical Engineering" for S.E. Chemical Students.
16/08/2017 to 19/08/2017	Add on Course	Dr.V.R.Diware and Dr.S.A.Thakur conducted add on course entitled "Industrial Hazards & Safety" for T.E.Chemical Students
16/08/2017 to 19/08/2017	Add on Course	Shri. N.Y.Ghare and Miss S.R.Deshmukh conducted add on course entitled "Process Design in Chemical Engineering" for B.E. Chemical Students
19/08/2017	Awareness Programme	For F E Chemical Engineering Students about Scope & Opportunities in Chemical Engineering.
08/09/2017	Tree Plantation	Tree Plantation program at SSBT's COET Campus.
09/09/2017	Fresher's Welcome	Welcome for F.E. Students and Direct Second Year Students
09/09/2017	Teachers Day	Teachers Day
09/09/2017	Expert Lecture	Dr.S.D.Dawande delivered Lecture on "Importance of GATE" for departmental students
22/09/2017	Expert Lecture	Alumni: Rahul Khandade delivered Lecture on "Organic Chemical plant handling" for departmental students
06/10/2017	Industrial Visit	<ul> <li>Industrial Visit for B.E.Chemical Engineering Students was organized at</li> <li>◆ JB Plastochem Pvt.Ltd., Bambhori, Jalgaon</li> <li>◆ Benzo Chem Industries Pvt.Ltd., MIDC, Jalgaon</li> <li>◆ Vega Chemicals Pvt.Ltd., MIDC, Jalgaon</li> </ul>
22/12/2017 to 24/12/2017	International Conference	International Conference on Global Trends in Engineering, Technology & Management (ICGTETM) was organized jointly by Chemical & Civil Engineering Department.

## B.E. Chemical Engineering Results (Academic Year 2017-18, SEM-VII)

# List of Top Five Students (College Level and University Level)

Merit No.	Name of the Student	CGPA
1	JADHAV MAHESHWAR VAMAN	8.15
2	KOLI SHUBHAM TUKARAM	8.05
3	GIRASE DARSHAN BHOJUSING	7.94
4	NYATI NIKHIL VINOD	7.94
5	CHAUDHARI KRUNAL DILIP 7.83	

# T.E. Chemical Engineering Top Five Students (Academic Year 2017-18, SEM-V)

Merit No.	Name of the Student	CGPA	
1	YELNE MAYURI VIJAYRAO	8.71	
2	CHAVAN JIVAN SURESH 8.10		
3	KOLI BHAVANA BHARAT 8.07		
4	SHRIKHANDE PRATHAMESH PRABHAKAR 7.87		
5	DESALE YOGESH SARJERAO 7.65		

## S.E. Chemical Engineering Top Five Students (Academic Year 2017-18, SEM III)

Merit No.	Name of the Student	<b>CGPA</b> 8.10	
1	BALDI GAURAV GIRDHARI		
2	MAHAJAN DEVEN SANJAY	7.80	
3	PATL AKASH AJAY	7.68	
4	BOMBATKAR SHANTANU GAJANAN 7.58		
5	RAMTEKE SAHIL DYANESHWAR 7.58		

# **Tree Plantation**









# Teachers Day & Fresher's Welcome









Alumni Meet (Sept.10, 2017)



Mr. Nishant Vyas & Rahul Khandade (Alumni) Lecture





#### **INTERNATIONAL CONFERENCE (ICGTETM)**

International Conference on Global Trends in Engineering, Technology & Management (ICGTETM) was organized jointly by Department of Chemical & Civil Engineering on Dec.22-24,2017. The conference was organized to provide a forum for exchange of technical expertise and sharing of knowledge to the scientists and engineers working in the diversified fields of engineering and has hosted eminent participants including chief guest and key note speakers from the apex of the academic arena.

Prof V S Sapkal, Former VC of RSTM University kindly served as the Chief Guest. Prof R H Gupta held the President position of the Inaugural Function. Prof Emeritus Yerach Doytsher from Israel Institute of Technology was the keynote speaker. Prof Emeritus S Mishra, North Maharashtra University Jalgaon was the Guest of Honor. There were 83 papers selected for the conference screened through plagiarism check. Academicians, Research Scholars from various fields & places participated & presented their research papers on the theme.





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.







#### **INDUSTRIAL VISIT**



Industrial visit has its own importance in a career of a student who is pursuing a professional degree in Chemical Engineering. Objectives of industrial visit are to provide students an insight regarding internal functioning of chemical plants.

It provides students with an opportunity to learn practically through interaction with the technical man force, working methods and industrial environments.

It also gives them exposure to current work practices carried out in chemical industries. Industrial visits are arranged regularly for final year students with an objective to combine theoretical knowledge with industrial knowledge.

This year also Industrial Visit for final year students of Chemical Engineering Department was conducted on 06.10.2017. Final year students visited the following industries along with Dr. S.A.Thakur & Shri. V.P.Sangore & Dr. N.Y.Ghare as accompanying faculty.

- 1. JB Plastochem Pvt.Ltd., Bambhori, Jalgaon
- 2. Benzo Chem Industries Pvt.Ltd., MIDC, Jalgaon
- 3. Vega Chemicals Pvt.Ltd., MIDC, Jalgaon

The students minutely observed the unit operations and processes carried out in the industries, the raw material storage division, boiler division, processing vessels, and R&D division and interacted with the supervisors, and supporting staff to gain practical knowledge.









# **Career Counseling Seminars Conducted by the Department**

Faculty members of Chemical Engineering Department conducted Career Counseling Seminar to aware the students about the Engineering Education & Career Opportunities at following various places of the region.

YEAR	DATE	PLACE
2017-18	Oct. 26 ,2017	Parishram Classes , Parola, Dist: Jalgaon
	Nov.06, 2017	Jawaharlal Nehru Arts ,Science and Commerce Junior
		College ,Boradi, Tah. Shirpur, Dist:Dhule
	Nov. 15,2017	Vision Classes and Narayan Academy, Jamner,
		Dist: Jalgaon
	Nov. 18,2017	Zawar Academy, Pachora, Dist: Jalgaon
	Nov.22,2017	Dadasaheb Gajananrao Garud Jr College, Shendurni, Jamner ,Dist: Jalgaon
	Nov.22,2017	New English School & Junior College, Jamner ,Dist: Jalgaon
	Nov.24,2017	Yogeshwar Jr. College, Amalner, Dist: Jalgaon
	Nov.24,2017	Vijay Naval Patil Army School & Jr. College, Amalner, Dist: Jalgaon
	Nov.28,2017	Pratap Vidyamandir, Chopda, Dist: Jalgaon
	Nov 29,2017	Satpuda Vidyalaya & Jr. College , Dhule
	Nov 29,2017	A.Y.K.K's Arts, Commerce, Sc. Jr College, Dhule
	Nov.30,2017	Govt Madhyamic Ashramshala & Jr. College, Shevage, tal
		Sakri, Dist: Dhule
	Nov.30,2017	S.G.Patil Arts, Comm & Sci. College, Sakri
	Dec 29, 2017	Anudanit Sec. & Higher Sec. Art & Sci. Ashramshala, Indave
	Dec 30, 2017	Saraswati Classes, Satana, Dist: Nasik
	Dec 30, 2017	MGV's Samajshri Prashantdada Hiray Arts, Commerce and Science College, Nampur





#### **Faculty Publications**

Anand D. Kulkarni and **Kishor S. Wani** "Combined Effect of Pour Point Depressants And Magnetic Field On the Viscosity And Pour Point Of Crude Oil", published in International Journal of Creative Research Thought, ISSN: 2320-2882, ICGTETM Dec.2017, page no. 260 -272, December- 2017. Impact Factor: 5.97, http://doi.one/10.1727/IJCRT.17155.

Abhang R.M., **K. S. Wani** and V.S.Patil "Optimization of ZIP-8 Filler Loading in Mixed Matrix Membrane For Gas Separation By Permeation Models", published in International Journal of Creative Research Thought, ISSN: 2320-2882, ICGTETM Dec.2017, page no. 273 -281, December- 2017. Impact Factor: 5.97, http://doi.one/10.1727/IJCRT.17156.

Yogendra D. Thakare and **Kishor S. Wani** "Acoustic Cavitation Coupled With Advance Oxidation Process For Treatment of Dairy Industry Wastewater", published in International Journal of Creative Research Thought, ISSN: 2320-2882, ICGTETM Dec.2017, page no. *353* - 366, December- 2017. Impact Factor: 5.97, http://doi.one/10.1727/IJCRT.17166.

Dr. D.S. Deshmukh, P.M. Solanki, Dr. V. R Diware and Dr. S.P. Shekhawat, "Thermoelectric Generator System For Generation of Electric Power Waste Heat Energy From Two Wheeler Silencer", published in International Journal of Creative Research Thought, ISSN: 2320-2882, ICGTETM Dec.2017, page no. 145 -151, December- 2017. Impact Factor: 5.97, http://doi.one/10.1727/IJCRT.17140.

Dr.S.B.Pawar, Dr. S.L.Patil and Dr. V. R Diware, "Assessment of Awareness and Willingness for Environmental Protection", published in International Journal of Creative Research Thought, ISSN: 2320-2882, ICGTETM Dec.2017, page no. 598- 613, December- 2017. Impact Factor: 5.97, http://doi.one/10.1727/IJCRT.17200.

**Shubhangi R. Deshmukh, Dr. V. R Diware, Dr. S.A.Thakur and V.P.Sangore**, "Separation of Azeotropic Solution of Ethyl Acetate- Ethanol by Cobalt Nitrate", published in International Journal of Creative Research Thought, ISSN: 2320-2882, ICGTETM Dec.2017, page no. 398 -402, December-2017. Impact Factor: 5.97, http://doi.one/10.1727/IJCRT.17170.

Dr.S.B.Pawar, Dr. H.Husain and **Dr. S.A.Thakur**, "Impact on Health Due to Air Pollution: A Case Study Of Jalgaon City", published in International Journal of Creative Research Thought, ISSN: 2320-2882, ICGTETM Dec.2017, page no. 614 -620, December- 2017. Impact Factor: 5.97, http://doi.one/10.1727/IJCRT.17201.

**Dr. S.A.Thakur**, Miss Payal Bhautik, **Mr. V.P.Sangore** and Mr. Kuldeep Singh, "A Review On treatment of Sewage Water and Biogas Purification By Alage", published in International Journal of Creative Research Thought, ISSN: 2320-2882, ICGTETM Dec.2017, page no. 390 -397, December-2017. Impact Factor: 5.97, http://doi.one/10.1727/IJCRT.17169.

#### 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.

#### **News Letter Committee**

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