



K.K. Wagh Education Society's

K.K. Wagh Institute of Engineering Education and Research, Nashik.

**Chemical Engineering Department**

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TECHNICAL NEWS LETTER

## July 2020 - December 2020

The Department of Chemical Engineering was established in the year of 1999 with an objective of creating center of excellence for Chemical Engineering and the annual intake of students initially was 60. The department is accredited twice by National Board of Accreditation (NBA), AICTE, New Delhi. The department has proven faculty members having several years of experience in academics and veteran supporting staffs having strong research interests in conventional & emerging areas of Chemical Engineering. The department believes in continuous upgradation of the knowledge of the faculty and has been sponsoring the faculty for the post-graduation and research programme from last few years. It is well equipped with state-of-the-art infrastructure and laboratories as per the university syllabus. The department has adequate number of computers with latest configuration and internet facilities. The department also provides excellent computational facilities including professional software such as UNISIM, CHEMCAD, ZWCAD, ESPOIR SMART INTERVIEW SIMULATOR and MATLAB to the faculty and the students. In addition to this, the department has its own library offering reference books for all subjects and also Chemical Engineering encyclopedia.

The department has a good track of record of academic results. Students have secured top ranks at university examinations & achieved success in GATE, GRE & other examinations. Students have been recruited in the top National & International Chemical industries. Apart from the focus on basic sciences and engineering subjects, we motivate the students to participate in various national events such as Project Exhibition, Paper Presentation, Model Making and Sports Competition.

Association of Chemical Engineering Students (ACES), a student's association, function in the department and provides strong platform for overall development of the students. The students get a chance to interact in Seminars, Workshops, Cultural Programmes, Expert Lectures on various topics like Personality Development, Preparation for Competitive Examination, study abroad etc through ACES. The department is proactive for good industry institute interaction. Department has signed MoUs with various industries for mutual benefit. Various experts from the industry are invited and industrial visits are organized every year regularly to bridge the gap between theory and practice. The department organizes in plant training for all second & third year students every year in various eminent industries such as BPCL, HPCL, IOCL, Reliance, RCF, Biocon

and other private sector industries available around. Most of the final year projects get sponsorship from industry.

### Department Staff

S.N	Name	Qualification	Area of specialization	Designation
1.	Prof. Dr.Venkat S. Mane	Ph.D.	Chemical Engineering	Professor & H.O.D.
2.	Prof. Dr. Suyog N. Jain	Ph.D	Chemical Engineering	Associate Professor
3.	Prof. Vijay N. Mawal	M.Tech,Ph.D Pursuing	Chemical Engineering	Assistant Professor
4.	Prof. Gaurav B. Daware	M.Tech,Ph.D Pursuing	Chemical Engineering	Assistant Professor
5.	Prof. Sandeep N. Derle	M.Tech,Ph.D Pursuing	Chemical Engineering	Assistant Professor
6.	Prof. Piyush P. Joshi	M.Tech	Chemical Engineering	Assistant Professor
7.	Prof. Zameer K. Deshmukh	M.Tech	Chemical Engineering	Assistant Professor
8.	Prof. Tejmal B. Mahale	M.Tech	Chemical Engineering	Assistant Professor
9.	Prof. Varsha Parashar	M.Tech	Chemical Engineering	Assistant Professor

### Details of publications by the Faculty

Sr. No.	Name of Staff	Title of Paper	Journal Details	Academic Year
1.	Prof. Dr. G. B. Daware	Adsorption of 3-Aminopyridine (3AP) from aqueous solution using sugarcane bagasse activated carbon (SBAC)	Environmental Technology & Innovation (Elsevier)	2019-2020
2.	Prof. Dr. G. B. Daware	Sonochemical degradation of 3-methylpyridine (3MP) intensified using combination with various oxidants	Ultrasonic Sonochemistry	2019-2020
3.	Prof. Dr. S. N. Jain	Sesame ( <i>Sesamum indicum</i> ) oil cake—industrial waste biomass for sequestration of Basic Blue 26 from aqueous media	Biomass Conversion and Biorefinery (Springer)	2020-2021

### Summary of Expert Talks

Sr. No.	Date	Name of Expert with Designation	Topic of Talk	No. of Students Present
1	10/7/2020	Dr. P. V. Pathak, Rtd. Process Engg., HUL, Mumbai, Member of GEDA, Saligao, Goa	Innovations in Chemical Engineering	101
2	18/07/2020	Mr. Ravindra Jorigal, Manager-Business Development, Asian Academy of Professional Training, Pune	Piping Design Engineering	107
3	23/07/2020	Mr. C. R. Mohikar, Petro-Project Consultant, Nashik	Process, Intelligent process control (Remote operations) & process safety	98
4	05/08/2020	Mr. Shyamshankar Singh, Equinox Software and Services Pvt. Ltd., Electronic Estate, Pune- Satara Road, Pune	Scope of Process Modelling and Simulation	104
5	17/08/2020	Mr. Ghanashyam Patil, Process Engineer, Larsen & Toubro Ltd., Vadodara	Process Design Engineering	100
6	25/08/2020	Pramod Daspute, Energy Auditor and Faculty Trainer, PCRA, Mumbai	Career options in ENERGY AUDIT-A Course PCRA Training Program	59



7	26/08/2020	Siddhesh Bhagwan Jadhav, Lead Process Engineer Burns McDonnell Engineering India Pvt. Ltd., Mumbai	Pressure Relief Valves	52
8	27/08/2020	Dr Yogeshwar Suryawanshi, Asst. Professor Veermata Jijabai Technological Institute, Mumbai	Catalysis	115
9	28/08/2020	Sudhir R Shah, Training Faculty Petroleum Conservation Research Association (PCRA), Bandra(E), Mumbai	Importance of Energy Conservation-ITP from PCRA	62
10	11/09/2020	Saurabh Patle, Consultant at T-Systems ICT India Pvt. Ltd., Pune (PGDM, Indian Institute of Management, Kozhikode, Kerala)	Interpersonal Skills required in Industry	56
11	19/09/2020	Mr. Amol Banwat, Director, Amol Oils Pvt. Ltd., 92/2 Ajantha Road, Chincholi, Jalgaon, Maharashtra	Skills required by chemical engg. in Future	
12	03/10/2020	Dr. K. Elaya Perumal Corrosion and Metallurgical Consultant Unit C-20, Melur Meadows Coimbatore District Tamil Nadu	Corrosion and Material of Construction	176
13	10/10/2020	Mr. Chetan Malode, Process Engineer Alfa Laval, Pune	Overview of Process Engineering	123
14	31/10/2020	Mr. Sachin Deshmukh, Validation Engineer, Synlait Food Nutrition Company, Christchurch, New Zealand	Process Engineering and Design	62

**National / International Seminars / Conferences / Workshop / Symposia attended**

Sr. No.	A.Y.	Name of Faculty/Coordinator(s)	Title of Conference /Event	Organized by Faculty	Date
1.	2020-2021	Prof. Dr. S. N. Jain	Online STTP on Role of Teacher: To boost Moral values, Ethics in Engineering Education System	AICTE & MVP's KBTCOE, Nashik	17/12/2020
2.	2020-2021	Prof. T. B. Mahale	Online STTP on Role of Teacher: To boost Moral values, Ethics in Engineering Education System	AICTE & MVP's KBTCOE, Nashik	17/12/2020
3.	2020-2021	Prof. Dr. V. S. Mane	Online STTP on Role of Teacher: To boost Moral values, Ethics in Engineering Education System	AICTE & MVP's KBTCOE, Nashik	17/12/2020
4.	2020-2021	Prof. Varsha Parashar	Online STTP on Role of Teacher: To boost Moral values, Ethics in Engineering Education System	AICTE & MVP's KBTCOE, Nashik	17/12/2020
5.	2020-2021	Prof. S. N. Dertle	Online STTP on Role of Teacher: To boost Moral values, Ethics in Engineering Education System	AICTE & MVP's KBTCOE, Nashik	17/12/2020
6.	2020-2021	Prof. P. P. Joshi	Online STTP on Role of Teacher: To boost Moral values, Ethics in Engineering Education System	AICTE & MVP's KBTCOE, Nashik	17/12/2020
7.	2020-2021	Prof. P. P. Joshi	Speak English Professionally : In Person , online & On the phone	Georgia Institute of Technology	14/12/2020
8.	2020-2021	Prof. T. B. Mahale	CHEM e Quiz online	Bharati Vidyapeeth College of Engineering, Navi Mumbai	06/11/2020
9.	2020-2021	Prof. Varsha	IEEE Xplore Digital Library: Orientation Workshop	IEEE in collaboration with Library	29/10/2020
10.	2020-2021	Prof. Dr. S. N. Jain	Nano Technology : A Makers Course an online Non Credit Course	Dukes NC State University through Coursera	05/10/2020

11.	2020-2021	Prof. Varsha Parashar	attended STTP-II on Industrial Pollution & Control Strategies	Anurag Group of Institutions, Telangana	05/10/2020
12.	2020-2021	Prof. Varsha Parashar	Completed STTP on Sustainable Design of Chemical Process Plants by Using ASPEN PLUS and ASPEN HYSYS Simulating Tools	Vellore Institute of Technology, Vellore, TN	21/09/2020
13.	2020-2021	Prof. P. P. Joshi	Glimpses of IPR and Recent Trends	IPR Cell of KKWIEE&R., Nashik	18/09/2020
14.	2020-2021	Prof. Varsha Parashar	attended webinar on Sustainable Industrial Development	Government Engg. College Bharuch	15/09/2020
15.	2020-2021	Prof. P. P. Joshi	attended Expert Talk on Submarine an Engineering Marvel	ISTE Students Chapter of KKWIEE&R., Nashik	10/09/2020
16.	2020-2021	Prof. Dr. Mane V.S.	Patent Protection for Innovation Driven Educational Institutions	Turnip Innovations in Associations with Frontiers Legals	29/08/2020
17.	2020-2021	Prof. T. B. Mahale	Patent Protection for Innovation Driven Educational Institutions	Turnip Innovations in Associations with Frontiers Legals	29/08/2020
18.	2020-2021	Prof. Varsha Parashar	Patent Protection for Innovation Driven Educational Institutions	Turnip Innovations in Associations with Frontiers Legals	29/08/2020
19.	2020-2021	Prof. P. P. Joshi	An overview of CFD and its applications in todays World	AICHE SC Dept. of Chemical Engg. AISSMS college of Engineering, Pune	16/08/2020
20.	2020-2021	Prof. T. B. Mahale	Use of LMS, Virtual Teaching and OBE Software for Engineering Colleges	vmedulife Software services	13/08/2020
21.	2020-2021	Prof. Varsha Parashar	Farmer Producer Company : New Challenges and Opportunities	K K Wagh College of Agriculture, Nashik	11/08/2020
22.	2020-2021	Prof. Varsha Parashar	Emerging trends in energy, environment and nano materials	Sri Venkateswara College Of Engg, Sriperumbudur, Chennai	24/07/2020
23.	2020-2021	Prof. Varsha Parashar	"Sophisticated Analytical Instruments: Principles and Applications to Chemical and Material Sciences (SAIPACMS-2020)"	Sinhgad College of Engineering, Pune.	21/07/2020
24.	2020-2021	Prof. Dr. V. S. Mane	Designing for Experience: Applying Design Thinking to Learning Organization	KKWIEER, Nashik	17/07/2020
25.	2020-2021	Prof. V. N. Mawal	Designing for Experience: Applying Design Thinking to Learning Organization	KKWIEER, Nashik	17/07/2020
26.	2020-2021	Prof. Dr. S.N. Jain	Designing for Experience: Applying Design Thinking to Learning Organization	KKWIEER, Nashik	17/07/2020
27.	2020-2021	Prof. T. B. Mahale	Designing for Experience: Applying Design Thinking to Learning Organization	KKWIEER, Nashik	17/07/2020
28.	2020-2021	Prof. T. B. Mahale	ICT Tools for Collaboration	IQAC-KKWIEER, Nashik	17/07/2020
29.	2020-2021	Prof. Varsha Parashar	Designing for Experience: Applying Design Thinking to Learning Organization	KKWIEER, Nashik	17/07/2020
30.	2020-2021	Mr. A. N. Pagar	How to write and Publish paper in any 50,000+ Web of science & Scopus Indexed Journals Conference papers effectively & efficiently using TYPESET Research studio	KKWIEE&R., Nashik	10/07/2020

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31.	2020-2021	Prof. P. P. Joshi	Webinar series on Process Safety and Risk Management	Department of Chemical Engg. IChE, Bangalore	10/07/2020
32.	2020-2021	Prof. T. B. Mahale	How to write and publish Paper in 50000+ Web of Science & Scopus Indexed Journals Conferences Papers effectively and efficiently using TYPESET Research Studio	Kusumagraj Central Library of KKWIEER, Nashik	10/07/2020
33.	2020-2021	Prof. Varsha Parashar	How to write and publish Paper in 50000+ Web of Science & Scopus Indexed Journals Conferences Papers effectively and efficiently using TYPESET Research Studio	Kusumagraj Central Library of KKWIEER, Nashik	10/07/2020
34.	2020-2021	Prof. Z. K. Deshmukh	NIRF Ranking System	AVN Institute of Engineering & Technology, Telangana	03/07/2020

**Record of ICT usage by faculty Youtube videos**

Sr. No.	Name of Faculty	Subject	Topic	Video Link
1	Prof. Dr. V.S. Mane	Heat Transfer	Costs involved in total product cost for typical Chemical process plant	<a href="https://youtu.be/cNMLz3231R4">https://youtu.be/cNMLz3231R4</a>
			Condensation, Dropwise / Filmwise condensation and calculation of Heat Transfer Rate	<a href="https://youtu.be/u_FGIBwJQ1I">https://youtu.be/u_FGIBwJQ1I</a>
			Convection, Heat Transfer to fluids without phase change and flow arrangements for Heat Exchangers	<a href="https://youtu.be/nml6O7Lj7U">https://youtu.be/nml6O7Lj7U</a>
			Convection, Heat Transfer to fluids without phase change and flow arrangements for Heat Exchangers	<a href="https://youtu.be/Jd130UJVP4Y">https://youtu.be/Jd130UJVP4Y</a>
			Factors need to establish before detailed estimate design, Comparison of process and Plant Layout	<a href="https://youtu.be/B4latxuxuYs">https://youtu.be/B4latxuxuYs</a>
			Modes of Heat Transfer, Fourier's Law of Heat Conduction and Electrical analogy of Heat Conduction	<a href="https://youtu.be/bUYoLHtcccl">https://youtu.be/bUYoLHtcccl</a>
			Electrophoresis - Advanced separation technique	<a href="https://youtu.be/Syh88_rAhSg">https://youtu.be/Syh88_rAhSg</a>
			Types of moisture in Drying operation	<a href="https://youtu.be/LGamolm9GQ">https://youtu.be/LGamolm9GQ</a>
2	Prof. V. N. Mawal	Environmental Engineering	Air Pollution; Sources and Types of Air Pollutant	<a href="https://youtu.be/cNUhRupp8Xw">https://youtu.be/cNUhRupp8Xw</a>
			Introduction to Major Environment Acts	<a href="https://youtu.be/QzBRInqXRrS">https://youtu.be/QzBRInqXRrS</a>
			Introduction to Hazardous Waste	<a href="https://youtu.be/wJBLZPJrYtM">https://youtu.be/wJBLZPJrYtM</a>
			Wastewater Characteristics	<a href="https://youtu.be/3sFqHTPcnFE">https://youtu.be/3sFqHTPcnFE</a>
			Introduction to Secondary Wastewater Treatment	<a href="https://youtu.be/kYU4kWqNd4Q">https://youtu.be/kYU4kWqNd4Q</a>
			Design of fabric Filter in separation of particulate matter from gas stream	<a href="https://youtu.be/omDNU21miHA">https://youtu.be/omDNU21miHA</a>
3	Dr. S. N. Jain	Chemical Reaction Engineering I	Analysis and Interpretation of batch reactor data	<a href="https://youtu.be/9Xcia6AOdV4">https://youtu.be/9Xcia6AOdV4</a>
			Product Distribution in Parallel (Multiple) Reactions	<a href="https://youtu.be/LIhbDsUWN1Q">https://youtu.be/LIhbDsUWN1Q</a>
			Types of Multiple Reactions	<a href="https://youtu.be/LFifT8HhxAE">https://youtu.be/LFifT8HhxAE</a>

4	Dr. G. B. Daware	Process Dynamics and control	Advance control system	<a href="https://youtu.be/P2Cw6T-QjAg">https://youtu.be/P2Cw6T-QjAg</a>	
			Digital control system	<a href="https://youtu.be/rzljf1o9BHk">https://youtu.be/rzljf1o9BHk</a>	
		Mechanical Operation	Size reduction	<a href="https://studio.youtube.com/video/iUBafS4J_QI/edit">https://studio.youtube.com/video/iUBafS4J_QI/edit</a>	
			Sedimentation	<a href="https://youtu.be/sHZkFVRjvFU">https://youtu.be/sHZkFVRjvFU</a>	
5	Prof. S. N. Derle	Mass Transfer	Fluidisation	<a href="https://youtu.be/kfrUj2urOaU">https://youtu.be/kfrUj2urOaU</a>	
			Distillation and its type	<a href="https://youtu.be/tlQ_1ME5EXw">https://youtu.be/tlQ_1ME5EXw</a>	
			Reflux ratio and q-line	<a href="https://youtu.be/QpGa7O9hpRs">https://youtu.be/QpGa7O9hpRs</a>	
			Soda ash Production	<a href="https://youtu.be/LuQFrbN7eg">https://youtu.be/LuQFrbN7eg</a>	
6	Prof. P. P. Joshi	Chemical Process Technology	Phosphoric acid production	<a href="https://www.youtube.com/watch?v=BqEq7W9leQw">https://www.youtube.com/watch?v=BqEq7W9leQw</a>	
			Ethanol Production from molasses	<a href="https://bit.ly/2UCJ54b">https://bit.ly/2UCJ54b</a>	
			Oil Production from oilseeds	<a href="https://youtu.be/LtJOcAoUpnU">https://youtu.be/LtJOcAoUpnU</a>	
			Catalytic Cracking	<a href="https://youtu.be/8pLA4CgXUcs">https://youtu.be/8pLA4CgXUcs</a>	
7	Prof. Z.K. Deshmukh	Process Instrumentation and Control	Pressure Measuring Device	<a href="https://youtu.be/ahJEzAHFDI4">https://youtu.be/ahJEzAHFDI4</a>	
			Nano-technology	Nanotechnology - Introduction	<a href="https://youtu.be/GDGHCqwEdzk">https://youtu.be/GDGHCqwEdzk</a>
				Choice of reactor	<a href="https://youtu.be/cYQAe-Ga2z0">https://youtu.be/cYQAe-Ga2z0</a>
				Reactor Performance	<a href="https://youtu.be/67-hAy42LdU">https://youtu.be/67-hAy42LdU</a>
8	Prof. T.B. Mahale	Chemical Technology I	Choice of reactor 2	<a href="https://youtu.be/GgHh6laZ2yc">https://youtu.be/GgHh6laZ2yc</a>	
			Chemical Technology I	<a href="https://www.youtube.com/watch?v=J1fYLn1aU1E&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp">https://www.youtube.com/watch?v=J1fYLn1aU1E&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp</a>	
			Phosphorus Industries1 video	<a href="https://www.youtube.com/watch?v=j4eE5k1BE4&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp&amp;index=2">https://www.youtube.com/watch?v=j4eE5k1BE4&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp&amp;index=2</a>	
			Nitrogen Industries	<a href="https://www.youtube.com/watch?v=2CP6Gg5VOIo&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp&amp;index=3">https://www.youtube.com/watch?v=2CP6Gg5VOIo&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp&amp;index=3</a>	
		Petroleum Refining	Transportation of Petroleum Products	<a href="https://www.youtube.com/watch?v=mmh1OKpeRog&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp">https://www.youtube.com/watch?v=mmh1OKpeRog&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp</a>	
			Bitumen Manufacturing	<a href="https://www.youtube.com/watch?v=0et4BTmc5xU&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp">https://www.youtube.com/watch?v=0et4BTmc5xU&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp</a>	
			Hydrocracking Process in Petroleum Refining Process	<a href="https://www.youtube.com/watch?v=yLCAAtaDQgPo&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp">https://www.youtube.com/watch?v=yLCAAtaDQgPo&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp</a>	
			Desalting of Crude Oil	<a href="https://www.youtube.com/watch?v=zTH86WECzvQ&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp">https://www.youtube.com/watch?v=zTH86WECzvQ&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp</a>	
8	Prof. Varsha Parashar	Engineering I	Petroleum refining process with block diagram	<a href="https://www.youtube.com/watch?v=_g8xfsbMGiw&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp">https://www.youtube.com/watch?v=_g8xfsbMGiw&amp;list=PLm8XpSDx9ajGy-m8ITnVUQrwhNdDEKyp</a>	
			Principle of Design	<a href="https://www.youtube.com/watch?v=hkHGpggnU58&amp;t=15s">https://www.youtube.com/watch?v=hkHGpggnU58&amp;t=15s</a>	
		Energy Environment Health and Safety	Fundamentals of Preliminary Design	<a href="https://www.youtube.com/watch?v=5PpLhwnH8A&amp;t=157s">https://www.youtube.com/watch?v=5PpLhwnH8A&amp;t=157s</a>	
			Kinetics of Homogeneous Reactions	<a href="https://www.youtube.com/watch?v=IKfVfpP2ZM">https://www.youtube.com/watch?v=IKfVfpP2ZM</a>	
8	Prof. Varsha Parashar	Energy Environment Health and Safety	Reactor Design	<a href="https://www.youtube.com/watch?v=6tZlibHP8F8">https://www.youtube.com/watch?v=6tZlibHP8F8</a>	
			Classification of energy sources, commercial and non-commercial energy, energy resources	<a href="https://www.youtube.com/watch?v=pluRqKkfcQ">https://www.youtube.com/watch?v=pluRqKkfcQ</a>	
			Energy Management and Audit	<a href="https://www.youtube.com/watch?v=yo87X01eXE">https://www.youtube.com/watch?v=yo87X01eXE</a>	
			Energy Available for Industrial Use	<a href="https://www.youtube.com/watch?v=APLsgcPDDgl">https://www.youtube.com/watch?v=APLsgcPDDgl</a>	

Prof. Dr. V. S. Mane  
HOD, Chemical Engg.

Prof. Dr. K. N. Nandurkar  
Principal