



**2. Book / Proceedings (In compliance with NBA Cri No. 4.6.2 / NAAC Cri. No. 3.2.2 )**

Sr. No.	Name of the teacher	Title of the paper	Title of the proceedings/Book	Month and Year of publication MM/YYYY	ISBN/ISSN number	Name of the publisher
1	S J Kulkarni	Environmental, Economic, and Social Sustainability and the Virtual World: Impact of Artificial Intelligence	Green Metaverse for Greener Economies	AUG 2024	9781032638188	CRC Press Taylor and Fransis
2		Biocatalysis in organic synthesis using microbial enzymes—Latest developments	Enzyme Biotechnology for Environmental Sustainability	AUG 2024	978-0-443-22072-2	Academic press Elsevier
3		Role of Algae in Sustainable Food Production	Achieving Food Security Through Sustainable Agriculture	SEPT 2024	9798369342404	IGI Global
4		Application of Quantum Dots for Energy Conservation and Storage	Engineering Materials for Efficient Energy Storage and Conversion	AUG 2024	979-8-3693-4936-6	IGI Global
5		Fruit Peel Waste	Municipal Solid Waste	AUG 2024		IGI Global

		Valorization Through Its Biosorptive Nature: Investigation for Heavy Metal Removal	Management and Recycling Technologies		9798369340547	
6		Micelles: Synthesis, Characterization Methods, and Applications	Discovery, Disruption, and Future Implications of Nanomaterials	JULY 2024	9798369343975	IGI Global
7		Active Antimicrobial Packaging Innovations: Safeguarding Food Quality and Consumer Health	Revolutionizing Pest Management for Sustainable Agriculture	AUG 2024	9798369330616	IGI Global
8		An Overview on Recent Developments in Biological and Hybrid Wastewater Treatment Technology in India	Biological and Hybrid Wastewater Treatment Technology: Recent Developments in India	AUG 2024	9783031630453	Springer

**3. Faculty as Resource person/Guest lecture (In compliance with NBA Cri No. 5.6 / NAAC Cri No. 6) (Target: 2 senior faculties per program per semester should be resource person)**

Sr. No.	Inviting/Organizing agency	Name of the faculty	Broad Area of the Program	Topic	Duration (Hrs)	Dates	Participants/Beneficiaries
1	Springer nature	S J Kulkarni	Reviewers panel	Review of papers	-	-	Journals -Biomass Conversion and Biorefinery
2	University of Mumbai	S J Kulkarni	Modeling, simulation	Practical oral assessment	03	05.08.2024	M Tech students of Mumbai University, Kalyan subcenter
3	KBC NMU ,Jalgaon	S J Kulkarni	Chemical Engineering	Importance of Chemical Engineering in Sustainable Development	02	09.12.2024	B. Tech. students of UICT,KBC NMU , Jalgaon
4	PLOS ONE peer-reviewed journal published by the Public Library of Science (PLOS)	S. H. Gharat	Reviewer	Reviews original scientific manuscripts	-	-	Manuscript submitted to PLOS ONE journal by researchers

**4. Faculty Awards (In compliance with NBA Cri No. / NAAC Cri No. 3.3.2) (Target: 1 award in 10 years span)**

Sr. No	Name of Faculty	Name of Award	Awarding Agency	Month & Year	Area of contribution
1	S H Gharat	Maharashtra State National Award for the best Research work done by teachers of Engg. Colleges instituted by Govt. of Maharashtra. ( <i>Applied</i> )	Indian Society for Technical Education	Applied on 22nd November 2024	Research work on Granular flow in Silo

**5. Faculty Recognition (In compliance with NBA Cri No. / NAAC Cri No. 3.3.2) (Target: 1 recognition in 5 years span per faculty)**

Sr. No	Name of Faculty	Type of Recognition	Title (if any)	Recognizing Agency	Month & Year	Area of work and significance
1	S. P. Tekade	MOOCs	Mentor	NPTEL	Jan-April 2024	
2	S.J. Kulkarni	Research, publication, review and editorial activities	Editorial Board Member	Galore Knowledge Publication Private Ltd.	December 2024	Research, publication, review and editorial activities
		Appreciation letter	Peer reviewer and Author	IGI Global Scientific Publishing	December 2024	Peer review

**6. FDP /STTP Attended (In compliance with NBA Cri No. 5.6 / NAAC Cri No. 6.3.4 ) (Target: 1 program per year per Assistant Professor)**

Sr. No.	Name of the faculty	Broad Area of the Program	Title of the program	Duration	Dates		Organizing agency	Score/Grade Obtained
					From	To		
1	S J Kulkarni	Nanotechnology	Role of nanotech in sustainable development	1 week	18.10.2024	22.10.2024	GIT Level	Completed

2	S J Kulkarni	Outcome based education	<i>Accreditation System and Ranking Framework</i>	8 week	15.07.2024	31.10.2024	NITTTTR	to be completed
3	N.Y. Ghare	Sustainability	Emerging Technologies and Innovations:Pioneering Environmental Sustainability(ETIPES -2024)	1 week	30.09.2024	04.10.2024	KK Wagh Institute of Engineering Education and Research, Nashik	9/10
4	N.Y. Ghare	Nanotechnology	Role of nanotech in sustainable development	1 week	18.10.2024	22.10.2024	GIT Level	Completed
5	Mapara J V	Nanotechnology	Role of nanotech in sustainable development	1 week	18.10.2024	22.10.2024	GIT Level	Completed
6	S. H. Gharat	Optimization	Process Optimization	1 week	14.10.2024	18.10.2024	UPL University Ankleshwar	Completed
7	S. H. Gharat	Nanotechnology	Role of nanotech in sustainable development	1 week	18.10.2024	22.10.2024	Department of Chemical Engg, GIT Level	Completed
8	S. P. Tekade	Nanotechnology	Role of nanotech in sustainable development	1 week	18.10.2024	22.10.2024	GIT Level Department of Chemical Engg,	Completed

<b>9</b>	N.D.Galande	Optimization	Process Optimization	1 week	14.10.2024	18.10.2024	UPL University Ankleshwar	Completed
<b>10</b>	N.D.Galande	Nanotechnology	Role of nanotech in sustainable development	1 week	18.10.2024	22.10.2024	GIT Level Department of Chemical Engg,	Completed
<b>11</b>	Mapara J V	Universal Human Values	Inculcating Universal Human Values in Technical Education	3 Days	01.07.2024	03.07.2024	GIT Level	Completed
<b>12</b>	S. D. Ayare	Nanotechnology	Role of nanotech in sustainable development	1 week	18.10.2024	22.10.2024	GIT Level Department of Chemical Engg,	Completed
<b>13</b>	Mrs. S.V.Jadhav	Nanotechnology	Role of nanotech in sustainable development	1 week	18.10.2024	22.10.2024	GIT Level Department of Chemical Engg,	Completed
<b>14</b>	S. H. Gharat	Simulation - DWSIM	Chemical Process Simulation Using DWSIM	1 week	11.11.2024	15.11.2024	Department of Chemical Engineering GVP COE Visakhapatnam	Completed
<b>15</b>	S. H. Gharat	Fluidization	Fluidization Engineering	12 weeks	July- 2024	October 2024	NPTEL -AICTE	Completed
<b>16</b>	V.B. Sawant	Nanotechnology	Role of nanotech in sustainable development	1 week	18.10.2024	22.10.2024	GIT Level Department of Chemical Engg,	Completed

## Annual Reports (AY 2023-24)

1. Yearly Publication Record (Academic Year \_\_\_\_ ) (In compliance with NBA Cri No. 4.6.2 / NAAC Cri. No. 3.2.1 )  
(Target: 1 Research Paper per year per faculty in SCOPUS/UGC approved journals)

### Journal Publications

Sr. No.	Title of paper	Name of the author/s	Name of `journal	Year of publication	Volume/ Issue	ISSN/ ISBN number	Is it listed in UGC Care list/Scopus/Web of Science/other, mention
1	A review on current scenario of energy, nuclear reactor technology and cold trap	Sudesh D. Ayare, Sarjerao Doltade, Shyam Tekade	Clean Technologies and Environmental Policy	2023	In Press	1618-954X	SCI, Scopus
2	Augmented flow and reduced clogging of particles passing through small apertures by addition of fine grains.	Sandip H. Gharat, Luis A. Pugnaroni	Powder Technology	2023	427	1873-328X	SCI, Scopus

3	Biohydrogen From Waste Feedstocks – Materials, Methods and Recent Developments	Kulkarni, S.J., Suryawanshi, M.A., Mane, V.B. <i>et al.</i>	<i>BioNanoSci.</i> 13, 1501–1516 (2023). <a href="https://doi.org/10.1007/s12668-023-01206-x">https://doi.org/10.1007/s12668-023-01206-x</a>	2023	13	Electronic ISSN2191-1649  Print ISSN2191-1630	ESCI, Scopus
4	Stirred tank reactor with dual impeller Rushton turbine for application of wastewater treatment - Process optimization and CFD simulation	Teli, S., & Kulkarni, S. J.	<i>Advances in Environmental Technology</i> , 9(3), 174-193. doi: 10.22104/aet.2023.6207.1710	2023	9	Print ISSN 476-6674 Online ISSN 476-4779	ESCI, Scopus
5	A review on flow and segregation of granular materials during heap formation	Mamta Sardare, Sandip H. Gharat*	Paper accepted for publication	Revised manuscript submitted Manuscript ID	Accepted for Publication		SCI
6	Cavitation-assisted intensification of biogas production	Sandip H. Gharat, Parag R.Gogate*	DOI: 10.1002/tqem.22231	2024	Environ Qual Manage. 2024;1–27.	Online ISSN: 1520-6483 Print ISSN: 1088-1913 Wiley Publications	SCI

7	A Review on Sustainable Applications of Nanobiosensors in Various Fields and Future Potential	Madhura Bodkhe, Tejas Chalke, Sunil Kulkarni, Ajaygiri Goswami	BioNano Science	2024	In Press	In Press	SCI
8	Intensified degradation of tartrazine dye present in effluent using ultrasound combined with ultraviolet irradiation and oxidants	Sonali P Jadhav, Sudesh D Ayare, Parag R Gogate	Environmental Monitoring and Assessment	2024	196 (5)		SCI- Springer International Publishing

**2. Book / Proceedings (In compliance with NBA Cri No. 4.6.2 / NAAC Cri. No. 3.2.2 )**

Sr. No.	Name of the teacher	Title of the paper	Title of the proceedings/Book	Month and Year of publication MM/YYYY	ISBN/ISSN number	Name of the publisher
1	Dr S J Kulkarni	Optimization of Parameters and Modelling for Breakthrough Curve for Chromium Removal in Fixed Bed.	<i>Promoting Sustainable Management Through Technological Innovation</i>	10/ 2023	ISBN13: 9781668499795 ISBN10: 1668499797 EISBN13: 9781668499801	IGI Global SCOPUS
2	Dr S J Kulkarni	Combinations of Biotechnology and Nanotechnology in Industrial Wastewater Treatment.	<i>Sustainable Science and Intelligent Technologies for Societal Development</i>	9/2023	ISBN13: 9798369311868 EISBN13: 9798369311875	IGI Global SCOPUS
3	Dr S J Kulkarni	Orange Peel-Facilitated Adsorption of Methylene Blue Dye.	<i>Sustainable Science and Intelligent Technologies for Societal Development</i>	9/2023	ISBN13: 9798369311868 EISBN13: 9798369311875	IGI Global SCOPUS
4	Dr S J Kulkarni	A Comprehensive Review on the Use of Walnut Husk	<i>Intelligent Engineering Applications and Applied Sciences for Sustainability</i> (pp.	8/2023	ISBN13: 9798369300442 EISBN13: 9798369300459	IGI Global

		Extract as a Natural Hair Dye.	351-366). IGI Global. <a href="https://doi.org/10.4018/979-8-3693-0044-2.ch018">https://doi.org/10.4018/979-8-3693-0044-2.ch018</a>			SCOPUS
5	Dr S J Kulkarni	Rice Husk and Waste Paper as Feedstocks for Synthesis of Microcrystalline Cellulose.	<i>Intelligent Engineering Applications and Applied Sciences for Sustainability</i> (pp. 160-168). IGI Global.	8/2023	ISBN13: 9798369300442 EISBN13: 9798369300459	IGI Global SCOPUS
6	Sunil Jayant Kulkarni	<b>Multifaceted and Diverse Applications of Nanocomposites</b>	<b>Smart and Sustainable Applications of Nanocomposites</b>	2024	DOI: 10.4018/979-8-3693-1094-6.ch003	IGI Global SCOPUS
7	Tejas Chalke, Madhura Bodkhe, Sunil Jayant Kulkarni, Ajaygiri K. Goswami	<b>Application of CFD in Healthcare or the Biomedical Field</b>	<b>Biomedical Research Developments for Improved Healthcare</b>	2024	DOI: 10.4018/979-8-3693-1922-2.ch009	IGI Global SCOPUS
8	Sunil Jayant Kulkarni	<b>Strategic Plan for Research Activities in an Engineering Institute</b>	<b>Advancing Student Employability Through Higher Education</b>	2024	DOI: 10.4018/979-8-3693-0517-1.ch012	GI Global SCOPUS

**3. Faculty as Resource person/Guest lecture (In compliance with NBA Cri No. 5.6 / NAAC Cri No. 6 ) (Target: 2 senior faculties per program per semester should be resource person)**

Sr. No.	Inviting/Organizing agency	Name of the faculty	Broad Area of the Program	Topic	Duration (Hrs)	Dates	Participants/Beneficiaries
1	GIT	S. P. Tekade	Workshop on Recent Trends and Opportunities in Chemical Engineering	Hydrogen, the Future Fuel?	1 Hr	17 Jan 2024	Diploma Students
2	MIT Academy of Engineering, Alandi-Pune	S. H. Gharat	Five days FDP on "Recent Trends in Energy and Sustainability", 21 <sup>st</sup> to 25 <sup>th</sup> August 2023	Granular Processes: Contribution to industrial Sustainability	1.5 Hrs	22 August 2023	Engineering faculty, PhD students and Research Scholars
3	TKIET	Dr S J Kulkarni	DAB Meetings	Vision and mission	01 hr	09.12.2023	Chemical Dept. TKIET
4	TKIET	Dr S J Kulkarni	MTech Dissertation-expert		01 hr	09.12.2023	Chemical Dept. TKIET
5	GIT	S. S. Chavan	Workshop on Recent Trends and Opportunities in Chemical Engineering	Recent Trends and Opportunities in Chemical Engineering	1 Hr	17 Jan 2024	Diploma Students
6	IOPE, Lonere	S. S. Chavan	Seminar presentations	Biofuels	1 Hr	12/12/2023	Diploma Students
7	IOPE, Lonere	S. M. Jangam	Seminar presentations	Resume Writing	1 Hr	12/12/2023	Diploma Students
8	GIT Lavel	Dr. S. H. Gharat	Research Awareness	Role of granular material towards sustainability in chemical engineering	1 Hr	21/02/2024	SE, TE and BE Students

9	TKIET Kolhapur	Dr. S. H. Gharat	Research	How to Write Research Paper	1 Hr	21/03/2024	MTech students of TKIET Kolhapur
10	TKIET Kolhapur	Dr. S. H. Gharat	MTech Dissertation-expert	Comparative study of the conventional distillation column and dividing wall distillation column using simulation	3 hrs	21/03/2024	Chemical Dept. TKIET

#### 4. Summary

Sr. No.	Total Number of Teachers in Dept.	Total Number of publications in the year	Publication Per Teacher per Year
1	09	16 ( by 5 faculty)	
2			

#### 5. Faculty Recognition (In compliance with NBA Cri No. / NAAC Cri No. 3.3.2) (Target: 1 recognition in 5 years span per faculty)

Sr. No	Name of Faculty	Type of Recognition	Title (if any)	Recognizing Agency	Month & Year	Area of work and significance
1	Dr S J Kulkarni	Certificate of Appreciation		Springer nature	Sept 2023	Expert - Chemical Engineering
2	Dr S J Kulkarni	Judge/ Expert for AVISHKAR	AVISHKAR	Mumbai University	Dec 15 2023	Expert - Chemical Engineering
3	Dr. S D Ayare	As Avishkar Guide to the Students for state level participation		Maharashtra State Inter-University Research Convention	Jan 24	Mentoring and Guidance to UG Students
4	Dr. S D Ayare	As Avishkar Guide to the Students for University level		Mumbai University	Dec 23	Mentoring and Guidance to UG Students

		participation				
5	Dr. S. P. Tekade	Reviewer Recognition	Reviewer Recognition	Elsevier ScienceDirect for International Journal of Hydrogen Energy (IJHE)	February 2024	Peer Review for reputed journal IJHE/ Free access to research papers from ScienceDirect/Elsevier for 30 days

**6. Participation in University academic bodies / Other Government Recognized bodies (In compliance with NBA Cri No. 5.8 / NAAC Cri No.1.1.3)**

**(Target: As possible)**

Sr. No	Name of Faculty	Role/Designation/ Title	Type of Body	Name of the University / Govt. Recognized bodies	Name of the Institute (If applicable)
1	Dr S J Kulkarni	Member, Board of studies in chemical engineering	Board of Studies in Chemical Engineering	Mumbai university	-
2	SJK	DAB		TKIET	

**7. Research/Project/MODROB grant received/applied (In compliance with NBA Cri No. / NAAC Cri No. 3.1.1 & 6.4.2) (Target: 1 minor project grant in span of 5 years, 1 major research grant in a span of 10 years)**

Sr. No	Name of PI/ Co - I	Grant Received towards / Applied for	Grant Amount, Rs	Name of Agency/Body	Title	Duration, Yrs
1	Dr. S. H. Gharat	Applied for SURE-SERB Funding	28,82,600	Science and Engineering Research Board	Flow, segregation and clogging of granular mixture in a hopper: effect of size, shape and density	3 Years
2	Dr. S. P. Tekade	Applied for SURE-SERB Funding	22,61,359	Science and Engineering Research Board	Reclamation of waste lubricating oil through continuous microwave-assisted pyrolysis in presence of cashew nut shell waste	3 Years

<b>3</b>	Dr. S. D. Ayare	Applied for SURE-SERB Funding	29,78,900	Science and Engineering Research Board	Hydrodynamic Cavitation for Advanced Industrial Wastewater Treatment: A Sustainable Solution for Environmental Remediation	3 Years
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