CURRICULUM- VITAE

1. **Name :** Dr. Ashutosh Mishra

2. **Address:** Assistant Professor & Head of Department
Department of Chemical Engineering
Dr. Ambedkar Institute of Technology for Divyangjan, U.P.,
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4. **Educational Qualifications:**

Ph.D : Chemical Engineering, Dr. A.P.J. Abdul Kalam Technical University, Lucknow. (H.B.T.I., Kanpur)

Ph. D. Thesis titled "Preparation of biosurfactants using waste from oil processing industry and their application".

M.Tech: Chemical Engineering, Harcourt Butler Technical Institute, Kanpur (Now HBTU), First Div with Honors

B.Tech: Chemical Engineering, I.E.T., C.S.J.M. University, Kanpur (Now UIET, CSJM, University), First Div with Honors

GATE: QUALIFIED with AIR 373

5. **Experience:**

5.1 Rohit Surfactant Private Limited (RSPL Group)

Quality Control Chemical Engineer

[July,2005] – [Jan,2007] | [Kanpur, Uttar Pradesh]

- Quality Assurance & Testing: Performed rigorous physical and chemical testing on raw materials, intermediate formulas, and finished FMCG products (such as detergents, soaps, and cleaning formulations) to ensure strict compliance with company standards and statutory regulations.
- Process Optimization: Monitored chemical manufacturing processes across production lines, identifying variations and implementing corrective actions to minimize batch failures and optimize raw material usage.
- Instrumentation & Analysis: Operated and maintained advanced laboratory testing equipment for titration, pH determination, active matter assay, STPP, Hardness, salts, acid surfactants and viscosity testing. Handling of Batch reactors, Continuous

Reactors , Autoclave, C-Mass (GCMS), HPLC, Gas Chromatography, water testing (including heavy metals) and analysis of all types of Soaps and Detergent.

- Compliance & Safety: Maintained meticulous documentation of daily quality control logs, batch release certificatest and laborary reports in alignment with Good Laboratory Practices (GLP) at various plants all over the county.

5.2 Dr. Ambedkar Institute of Technology for Divyangjan, U.P., Kanpur (formerly known as Dr. Ambedkar Institute of Technology for Handicapped, U.P., Kanpur (AITH Kanpur))

01.02.2007 to till date at Dr. Ambedkar Institute of Technology for Divyangjan, U.P., Kanpur (formerly known as Dr. Ambedkar Institute of Technology for Handicapped, U.P., Kanpur (AITH Kanpur)) as Assistant Professor in Chemical Engineering Department.

- 25 June, 2005 to 31 January 2007 at M/s GHARI Industries Pvt. Ltd., Kanpur as Quality Control Engineer.
- **Professional Experience:**

  Institute Level: Head of the Department since 2008. Assistant Dean- Academics. Institute NIRF Ranking, Member Institute Proctorial Board. Incharge- AICTE Affairs, AKTU Affairs, Store, Phones. Former Incharge- Extracurricular Activities (ie Cultural, Sports and Technical Festival), Founder Incharge- Incubation Centre of the Institute. Worked as Project Manager- Community Scheme, in which training programmes had been organized for Soap, Detergent, Liquid phenyl and other .F.M.C.G. Products. President, Member and Secretary of various different committees of purchase, appointments and administration in the Institutes. Member Training and Placement Cell of the Institute and visited more than 100 reputed industries across the country regarding technical enhancements, academic excellence and Placement of the Students.

  Others: Member BOS Chemical Engineering- Chemical Technology, Food Technology and Petroleum Engineering at AKTU Lucknow. Paper setter at various Indian Universities. Examiner at AKTU Lucknow, Board of Technical Education, Lucknow, and many other Technical Institutions/ Universities. Worked as Nodal Officer and Centre Controller in the State Engineering Entrance Examinations, U.P. many times. Worked as member Flying Squad, Cemtre Controller in the Semester Examiners conducted by AKTU Lucknow.

6. <u>Research Papers (Reputed International Journals):</u>

i. **Mishra, A.**, Sawood, G. M., Gautam, S. B., & Trivedi, R. K. (2021). Optimization of process inputs for the synthesis of waste rice bran oil isolated Pseudomonas aeruginosa MTCC 424 biosurfactant using response surface methodology for oil recovery applications. *Bioresource Technology Reports*, 14, 100653., https://doi.org/10.1016/j.biteb.2021.100653.

ii. Sawood, G. M., **Mishra, A.**, & Gupta, S. K. (2021). Optimization of arsenate adsorption over aluminum-impregnated tea waste biochar using RSM–central composite design and adsorption mechanism. *Journal of Hazardous, Toxic, and Radioactive Waste*, 25(2), 04020075., https://doi.org/10.1061/(ASCE)HZ.2153-5515.0000588.

iii. **Mishra, Ashutosh**, et al. "Modeling of the As (III) Adsorption Using Fe Impregnated Polyethylene Terephthalate Char Matrix: A Statistical Approach." *Journal of Water Science & Technology*, vol. 86, no. 7, 2022, pp. 1790–1809, https://doi.org/10.2166/wst.2022.300.

iv. Ahmad, S., Gautam, S. B., Sawood, G. M., Dixit, S., & **Mishra, A**. (2024). Modified paddy husk carbon with linked fibrils of FeHO2 using aluminium as the surface regulator for enhanced As (III) removal in fixed bed system. *International Journal of Chemical Reactor Engineering*, 22(2), 153-170., https://doi.org/10.1515/ijcre-2023-0122.

v. **Mishra, Ashutosh**, and Rakesh Kumar Trivedi. "A Comparative Study of Biosurfactant Preparation by Pseudomonas Aeruginosa MTCC 424 Using Rice Bran Oil and Soybean Oil Substrates." *Journal of the Indian Chemical Society*, vol. 97, no. 11b, 2020, pp. 2501–2515, indianchemicalsociety.com/portal/uploads/journal/NovB%20(18).pdf.

vi. **Mishra Ashutosh**, and Rakesh Kumar Trivedi. "Synthesis and Characterization of Biosurfactant Using Waste from Oil Processing Industry as Substrate by *Pseudomonas Aeruginosa* (MTCC 424)." *Rasayan Journal of Chemistry*, vol. 12, no. 2, 2019, pp. 1011–1021. https://doi.org/10.31788/rjc.2019.1225073.

vii. Mishra, A. and Trivedi, R.K., 2021. Deinking of old used papers using crude rhamnolipid biosurfactant. *Poll Res.*, *40*, pp.250-256.

viii. **Mishra, Ashutosh**, et al. "Modelling and Optimization of Arsenic Removal from Municipal Water Using Fe-Al Deposited Activated Carbon Derived from Neem Leaf Waste: A Response Surface Methodology Approach." *Indian Journal of Chemical Technology*, vol. 33, no. 3, 2026, pp. 358–369, https://doi.org/10.56042/ijct.v33i3.24136.

ix. Mishra, Ashutosh, and Rakesh Kumar Trivedi. "Kinetic Study of Biosurfactant Production with Pseudomonas Aeruginosa MTCC 424 Using Residual Rice Bran Oil as Substrate." *Indian Journal of Chemical Technology*, vol. 33, no. 3, 2026, pp. 344–350, https://doi.org/10.56042/ijct.v33i3.27343.

7. Other Reviewed Research Papers :

i. Ahmad, S. and Mishra, A., 2014. A study on physico-chemical properties of ground water quality of various locations of Kanpur City. International Journal of Science and Research, 3(3), pp.177-179.

ii. Vibha Verma, Samreen Ahmed, Ashutosh Mishra, 2014. Effect of different Catalyst on the production of Biodiesel from Jatropha oil and Comparative analysis. International Jouranl of Science and Technology , II(IV), pp. 22-25

iii. Raqib Khan, Dharmveer Singh, Omanath Yadav, Ashutosh Mishra , 2018, The Substrates Used in Microbial Fuel Cells (MFCS) for Sustainable Energy Production, IJSRD - International Journal for Scientific Research & Development| 6(02),ISSN (online): 2321-0613

iv. Sakshi Sahu, Rusechana Devi, Vivek Yadav, Sandeep Pal, Ashutosh Mishra, 2018, A Review Paper on Studies and Research on Gold Recovery Cyanidation Process through Adsorption on Activated Carbon , International Journal for Scientific Research & Development, 6(02) , 2018, ISSN (online): 2321-0613

v. Zishan Ansari, Prashant Singh, Rahul, Ashutosh Mishra , 2018, Ammonia Synthesis from Haber - Bosch Process by using Le Chatelier's Principal: IJSRD - International Journal for Scientific Research & Development| 6(02), ISSN (online): 2321-0613

vi. Mani Yadav, Rahul Tripathi, Anshu Singh, Ashutosh Mishra, 2018, Formaldehyde Carcinogenicity: Consequences and Risk Assessment IJSRD - International Journal for Scientific Research & Development, 6(02),| ISSN (online): 2321-0613

vii. Priyanka Pal, Shivam Vinayak, Ashutosh Mishra , 2018, Environmental Applications of Bio-Surfactants: Recent Advances Baibhav Singh,: IJSRD - International Journal for Scientific Research & Development, 6(02), ISSN (online): pp. 2321-0613

viii. Sunil Kumar Rao, Himanshu Ranjan, Ashish Yadav, Ashutosh Mishra , 2018, Membrane Bioreactor: Water and Waste Water Treatment IJSRD - International Journal for Scientific Research & Development 6(02), ISSN (online): 2321-0613, pp. 3524-3526.

ix. Books Chapters:

a) Dixit, S., Sawood, G. M., **Mishra, A.**, & Singh, N. (2023). A biodegradable nanocomposite for structural applications. In *Futuristic Trends in Chemical, Material Sciences & Nano Technology* (Vol. 3, pp. 157–172). Iterative International Publishers (IIP). https://doi.org/10.58532/V3BECS9P6CH1

b) Sawood, G. M., **Mishra, A.**, Ahmad, S., Yadav, V. L., Mishra, P. K., & Gupta, S. K. (2025). Introduction: An Overview of Advanced Biofuels and Hydrogen. In *Clean Energy Carriers: Hydrogen Fuel and Biofuel: An Era of Zero Emission Fuel* (Vol. 1, pp. 1–26). Professional Prints, New York, USA. https://doi.org/10.5281/zenodo.14781498

c) Singha, N., Ahmad, S., Sawood, G. M., **Mishra, A.**, Mishra, G., & Dixit, S. (2025). Solid and Liquid Biofuels for Energy. In *Clean Energy Carriers: Hydrogen Fuel & Biofuel ; An Era of Zero Emission Fuel* (Vol. 1). Professional Prints, New York, USA. https://doi.org/10.5281/zenodo.14782012

8. Ongoing Project:

Working as Principal Investigator on an sponsored project of Rs 15.36 lacs on "**Enhanced Arsenic mitigation from aqueous system using Fe- Al decorated agro based activated carbon"** sponsored by Council of Science and Technology, Government of U.P.

9. Faculty Development Program/ Short Term Courses/ Workshops participated/ Attended/ paper presented :

1. TEQIP-III Sponsored Five Days Online Faculty Development Program on 'Frontiers in Chemical Engineering' from 14/09/2020 to 18/09/2020 organizes by Department of Chemical Engineering Madan Mohan Malaviya University of Technology and Gorakhpur & Department of Chemical Engineering Sadar Vallabhbhai Patel National Institute of Technology, Surat.
2. "Sustainable Design of Chemical Process Plants by Using ASPEN PLUS and ASPEN HYSYS Simulating Tools" conducted by center for Disaster Mitigation (CDMM), Vellore Institute of Technology(VIT), Vellore, Tamilnadu during 21.09.2020 to 26.09.2020
3. One week faculty development program on "Next generation of Chemical Manufacturing and Waste Management" during 29.07.2020 to 02.08.2020 organizes by Department of Chemical Engineering, Institute of Engineering and Technology, Uttar Pradesh.

4. An International webinar on “Green Fuels: Novel Catalytic Synthesis” held on 18th July 2020 organizes by Department of Chemical Engineering RAJA BALWANT SINGH ENGINEERING TECHNICAL CAMPUS.
5. COVID-19 Quiz cum Awareness Programme organized by Department of Applied Science and Humanities, Rajkiya Engineering College Ambedkar Nagar (UP).
6. Short Term training Program through ICT Mode on Probelem Based Learning during 20.05.2019 to 31.05.2019 from NITTTR, Kolkata.
7. Faculty development Program on “Workshop on Sign Language” during 07-10 January, 2020 at AITH Kanpur.
8. Eight-day Faculty development Program on “ Universal Human values and Professional Ethics” organized by TEQUIP III and conducted by Value Education Cell, AKTU Lucknow during 13.01.2019 to 20.01.2019 at M.P.E.C. Kanpur.
9. Workshop on Chemical Engineering Curriculum Review on June 10, 11, 2015.
10. AICTE recognized short term course on “Climate Change and Disaster management through ICT” conducted by Rural Development Department from 12.11.2018 to 16.11.2018 (One week) conducted by NITTTR Chandigarh at AITH Kanpur.
11. AICTE recognized short term course on “Skill Development Programme” for Employment Generation in India through ICT” conducted by Rural Development Department, NITTTR, Chandigarh during 27.08.2018 to 31.08.2018 (One week) at AITH Kanpur.
12. One day workshop on Virtual Laboratories on 16.09.2017 conducted by Indian Institute of Technology, Kanpur at IIT Kanpur.
13. State level Faculty Interaction Seminar held during June 8-9,2015.
14. One day workshop on Virtual Laboratories on 04.02.2012 conducted by Indian Institute of Technology, Kanpur at IIT Kanpur.
15. Participated One day workshop on Virtual Laboratories on 15.03.2015 conducted by Indian Institute of Technology, Kanpur at IIT Kanpur.
16. AICTE recognized short term course on “Optical Fiber Communication through ICT” conducted by Electronics and Communication Department, NITTTR, Chandigarh during 05.09.2016 to 09.09.2016 (One week) at AITH Kanpur.
17. Attended AKTU Lucknow sponsored FDP on “Assistive Technologies for Equitable and Inclusive Education” during 23 to 27 July 2024 at AITD Kanpur.
18. Attended three day AICTE sponsored workshop on Super Computing, Artificial Intelligence and Quantum Computing during 17-19 Oct 2024 at AITD Kanpur.

19. Participated DST sponsored two day workshop at "Material Innovations in Energy and Environmental Technologies for a sustainable Future" during 27-28 March, 2025 at IIT Kanpur.
20. One day workshop on " Intellectual Property Rights" sponsored by Council of Science and Technology, U.P., on Nov 29, 2025 at AITD Kanpur

10. Organized Faculty Development Program:

1. Organized One week Faculty Development Program at Institute during Feb 5 to 10, 2024 on "Recent Development of Sustainable Processes in Chemical and Allied Industries" sponsored by ALAL, AICTE, New Delhi.
2. Member Organizing Committee, One week Faculty Development Program at Institute during Oct 26 to 31, 2026 on "Building a sustainable future: Energy Systems and Climate Change Solutions" sponsored by ALAL, AICTE, New Delhi.

11. Participated / Organized National Conferences:

1. Convener, A two day symposium THERMIC-12 on "Recent Development in Process Industries during March 22-23, 2012" as Convener at AITH Kanpur.
2. Member Organizing Committee, National Conference on Environment and Industrial Biotechnology (NCEIB) during November (10-12), 2021 as member Local Organizing Committee at AITH Kanpur.
3. Co Convener, National Conference on "Newer Surfactants in Soap and Detergents" during April 15-16, 2022 as Co-convener and Secretary Central Zone, Oil Technology Association of India at HBTU, Kanpur.

12. Participated / Organized International Conference:

i. Organized International Conference **CHEMCON-2022** as Joint Organizing secretary during December (26- 30)-2022 at HBTU Kanpur in association with IIT, Kanpur, RGIPT Raebareli, AKTU Lucknow and AITH Kanpur as Joint Organizing secretary and Treasurer.

ii. Participated and Presented paper titled " Enhanced Arsenic Mitigation with Fe-Al decorated activated carbon from Tea waste" at International Conference on Sustainable Energy and Advance Materials (ICSEAM-2025 at CSJM University Kanpur) during 18-19 April 2025.

13. Consulting Industries:

1. M/s Prabhat Chemical Industries Agra, U.P.
2. M/s Nomaan Traders, Moradabad, U.P.
3. M/s Sagar Chemicals, Kanpur Dehat, U.P.
4 M/s Rakshat Techno Engineers and Recyclers Pvt. Ltd, Varanasi, U.P.
5. M/s Mera Enterprises, Kanpur Dehat, U.P.

14. Invited Talks:

Given Invited talks on various topics at IRDT, Government of Uttar Pradesh, C.S.J.U., Kanpu and HBTI, Kanpur.

15. Patents Granted:

1. Portable Waste Water Treatment Machine. (06.08.2025)
2. Portable Multistage Effluent Treatment Apparatus (20.08.2026)

16. Collaborations / MoUs with Other Organization of Eminence/ Industries

(a) Indian Institute of Technology Kanpur (IIT Kanpur)
(b) Maulana Azad National Institute of Technology, Bhopal (NIT Bhopal)
(c) Nerolac Paints, Kanpur
(d) Mineral Oil Corporation Kanpur
(e) Mayur Group, Kanpur
(f) Prabhat Chemicals, Agra

17. Membership of Technical Society, Association, Institution etc.:

- Life member Indian Institute of Chemical Engineers (India) -Vice Chairman (2025-2027)
- Life member Oil Technologists Association of India (Former Joint Secretary)
- Life member Indian desalination Association of India
- Life Member Vijanana Bharti

(Dr. Ashutosh Mishra)