



K. Nikhila

Environmental Science & Engineering
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| Examination | Department/Board | Institute | Year | CPI / % |
|---------------|-------------------------------------|------------|------|---------|
| M.Sc. | Environmental Science & Engineering | IIT Bombay | 2022 | 7.66 |
| B.Sc. | Chemistry | BIT MESRA | 2020 | 8.21 |
| Intermediate | CBSE | KV IIT KGP | 2017 | 94.6 |
| Matriculation | CBSE | KV IIT KGP | 2015 | 9.5 |

KEY PROJECTS

Development of a mechanistic model for photocatalytic denitrification of water

M.Sc. Research Project

[Jan'21 - Present]

- Built a **MATLAB** and **Python** based mechanistic model to investigate the influence of operational parameters on photocatalytic denitrification of water
- Conducted photocatalytic denitrification experiments in a UV-VIS photoreactor to obtain data for calibration and validation of the model

Ecolabelling for sustainable food consumption

ES 655 Environmental Management Course Project

[Sep'22 – Nov'22]

- Reviewed the impact of ecolabelling and greenwashing on food consumption patterns

Development of policy statement for Powai lake rejuvenation

ES 645 Environmental Law and Policy Course Project

[Sep'21 – Nov'21]

- Estimated possible technical inputs, capital and operational costs
- Compiled relevant national and international policy framework for lake rejuvenation

EIA of the expansion of Ductile Iron (DI) pipe plant in Rashmi Metalliks Ltd

ES 653 Environmental Impact Assessment Course Project

[Aug'21 – Nov'21]

- Estimated the possible environmental impact of the expansion of DI pipe plant in Rashmi Metalliks Ltd

Municipal Solid Waste (MSW) management in Kharagpur city

ES 647 Municipal Solid and Hazardous Waste Management Course Project

[Aug'21 – Nov'21]

- Evaluated the MSW generation rate and collection strategy Kharagpur city

Air quality monitoring using satellite data

ES 296 Seminar Project

[Sep'20 – Dec'20]

- Reviewed the scope and application of satellite data for air quality monitoring (AQM)

TECHNICAL SKILLS

Programming: C, C++, Python

Software & Tools: MS Office, MATLAB, SCILAB, QGIS, EPANET, Visual Minteq, OpenLCA, Canva, Mendeley, Origin

Experimental Skills: Photocatalyst synthesis, Photocatalysis, Parameter optimization, Sample preparation and analysis

POSITIONS OF RESPONSIBILITY

Teaching Assistant / ES 200 Environmental Studies [Jan'23 - Present]

- **Mentoring** and proactive **assistance** to students towards the subject
- Coordinating with professor in conducting class activities and maintaining attendance record

Teaching Assistant / British Council and LRWC, IIT Bombay [Dec'22 – Present]

- **Coordinating** and proactive assistance to **students and British Council instructors** to conduct **English language** classes
- Preparing class material and plan, maintaining attendance record and giving feedback

Teaching Assistant / ES 645 Environmental Law and Policy [Jul'22 – Dec'22]

- Designed question papers, term paper projects for the course curriculum
- Maintained attendance and grade record
- Evaluated term paper projects and gave feedback
- Coordinated with students and the professor for the conduction of class activities

Teaching Assistant / ES 200 Environmental Studies [Aug'21 – Apr'22]

- Maintained attendance and grade record
- Invigilated and evaluated quizzes, assignments and examinations
- Coordinated with students and the professor for the conduction of class activities and examinations

Content Writer / Green Yatra, Mumbai [Jul'21 – Aug'21]

- Written articles for Green Yatra's official blog
- Volunteered for E-workshops on sustainable solutions and ecosystem rejuvenation

Climate Counsellor / ICCE, Mumbai [Oct'20 – Jan'21]

- Mentored and assisted students for Green (R)evolution program against Climate Change
- Designed course material, study plan, certification exam and evaluation patter

RELEVANT COURSES

- | | |
|--------------------------------------------|-------------------------------------------------|
| • Environmental Management | • GIS for Environmental Planning and Management |
| • Environmental Computational Laboratory | • Plastic Waste Management |
| • Environmental Systems Modelling | • Sustainable engineering concepts and LCA |
| • Environmental Impact Assessment | • Integrated waste management for a smart city |
| • Environmental Law and Policy | |
| • Environmental Governance and Development | |

SEMINARS/WORKSHOPS ATTENDED

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|-------------------------------------------------------------------------------------------------------------------------------|----------|
| Global tools and techniques to manage local solid waste problems Prof. Mohan Dangi, California State University | [Feb'23] |
| Resource Exploitation and Environmental Impact Prof. Andy Hursthouse, University of the West of Scotland | [Jan'23] |
| Potential of waste to generate heat in residential houses Dr Darpan Das, University of York | [Jan'23] |
| Plastic Recyclathon Awareness Session Team Zero Waste, IIT Bombay | [Jul'22] |
| TetraPak recycling webinar RUR Greenlife and Team Zero Waste | [Aug'21] |
| Webinar on Management of Construction and Demolition Waste PHD Chamber of Commerce and Industry (PHDCCI), Rajasthan | [Jun'21] |

HONOURS & AWARDS

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| Secured 2nd position in Impromptu Speech / PG CULT INFORMALS'22, IIT Bombay | [Feb'22] |
| Secured 2nd position in Essay Writing / PRO IIT Bombay and MoE India | [May'21] |
| Secured 1st position in Chemical Engineering Symposium / IChE, BIT MESRA, Ranchi | [Mar'19] |
| Qualified round 1 for Fake Research TRYST, Techfest IIT Delhi | [Feb'18] |
| Secured excellence in academics award PNK, Kharagpur | [Jul'17] |
| Secured position in 1.5% of KVS students in AISSCE KVIIT KGP | [Jun'17] |

EXTRA CURRICULAR

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| Powai lake Clean Up Drive Volunteer / Wildlife Club, IIT Bombay | [Dec'22] |
| Kindness Krew Volunteer Abhyuday, IIT Bombay | [Aug'22] |
| Finding Leader in You (FLY) Scholar Competitiveness Mindset Institute (CMI) | [Aug'21] |
| Orator and Member Online Conversation Club, IIT Bombay | [Jul'21] |
| EnPro'21 Entrepreneurship Cell, IIT Bombay | [Jul'21] |
| Volunteer and Member Rotaract Club, BIT MESRA | [Sep'18] |