



Online and Offline(hybrid) Faculty  
Development Programme on  
**Zero Waste Practice in  
Industries**

**January 09-20, 2023**

Sponsored by  
**ATAL Academy - AICTE**

**Organized by:**

**Metallurgical and Materials  
Engineering Department**



**National Institute of  
Technology Durgapur**

## ORGANIZING COMMITTEE

### PATRON

**Prof. Indrajit Basak**

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### PROGRAMME DURATION

**09<sup>th</sup> -20<sup>th</sup> January, 2023**

### WHO CAN ATTEND

- (i) Faculties and Research Scholars from AICTE approved Institutions
- (ii) Participants from Industries

### REGISTRATION FEE

Faculty and research scholars from AICTE approved Institutions – **NIL**  
Participants from Industries-**NIL**  
Registration is required to be done in *ATAL Academy* Portal. Link:  
<https://www.aicte-india.org/atal>

### RESOURCE PERSONS

Resource persons include faculties from IIT Kharagpur, Jadavpur University, N.I.T. Durgapur and professionals from SAIL and other relevant industries.

## THEME OF THE WORKSHOP

❖The requirement of industry is producing products adopting green technology with minimal harm to environment accompanying with profit.

❖Sustainable green technologies have to be thought over to tide over the crisis before time runs out.

❖The Green Technology which is used now in places utmost important in terms of economic and environment friendly process that minimize the harm to the environment, conserve energy, natural resources and product safety.

❖The sustainability not only reduce the cost and waste but also helps to achieve the eco-friendly demand of society.

❖The proposed short term AICTE sponsored course will be devoted to review the recent advances and the new research and development initiatives in this direction. Special emphasis will be laid on Indian scenario and policies.





## COURSE CONTENT

- **Categorization of Industrial Waste and its generation**
- **Industrial Water Engineering**
- **Zero liquid Discharge in industries**
- **Sustainability of Waste to Energy**
- **Recycling and Utilization of Industry Waste Materials**
- **Application of Biotechnology in mitigation of Industrial Wastes**
- **Innovation in Environmental Management**
- **Mineral Beneficiation : A method to reduce Waste generation**
- **Special lectures : Time and Stress Management**
- **Research Methodology, Happiness and Well Being, Indian Ethics and Values, National Education Policy 2020**

## ABOUT NIT Durgapur

Durgapur- A city hard and strong, the home to SAIL-DSP, SAIL-ASP, DVC-DTPS, Secondary Steel Units, is situated on the banks of River Damodar. National Institute of Technology Durgapur (NITD) is a leading technical institute offering undergraduate, postgraduate and doctoral programs in various disciplines of engineering, science, social science and management studies. NITD was established as a Regional Engineering College Durgapur (RECD) in 1960 as a joint venture of the Government of India and Government of West Bengal. REC Durgapur was converted to NIT Durgapur under the full administrative and financial control of the Ministry of Human Resource Development of Government of India with a Deemed University status on 3rd July, 2003. The Institute was declared an Institute of National Importance by the Government of India on August 15, 2007. In this year the institute is celebrating Diamond Jubilee.

## TENTATIVE SPEAKERS

- ❖ **Prof P.P.Sengupta**, Ex Professor , N.I.T Durgapur
- ❖ **Prof. Arun Kumar Majumdar**, Professor, Mining Engineering Department, IIT Kharagpur
- ❖ **Prof. Brajesh Kumar Dubey**, Professor, Civil Engineering Department, IIT Kharagpur
- ❖ **Prof. Priyadarshi Patnaik**, Professor, Humanities and Social Science Department, IIT Kharagpur
- ❖ **Prof. Pankaj Kumar Ray**, Professor, Department of Water Resource Engineering, Jadavpur University
- ❖ **Dr. Anupam Debsarkar**, Associate Professor, Department of Civil Engineering, Jadavpur University
- ❖ **Prof. Papita Das**, Professor, Department of Civil Engineering, Jadavpur University
- ❖ **Dr. Nirmal Kr Hui** Dean and Professor, Mechanical Engineering Department, NIT Durgapur
- ❖ **Dr. Gautam Banerjee**, Professor, DMS Department, NIT Durgapur
- ❖ **Prof. Surya Prakash Patti**, Associate Professor, IIM Kozhikode
- ❖ **Prof. A. K. Mandal**, Assistant Professor, MME Department NIT Durgapur
- ❖ **Dr. S Pramanik**, Associate Professor, NIT Durgapur
- ❖ **Dr. Satadhal Ghorai**, Associate Professor, MME Department, NIT Durgapur
- ❖ **Mr Subhra Dhara** General Manager, RDCIS SAIL, Ranchi

## ABOUT MME DEPARTMENT

The Department, which started its journey in the year 1960, presently offers B.Tech. (Metallurgical and Material Engineering), M.Tech. (Metallurgy and Materials Technology) and Ph.D Programme. The Department maintains high level of interactions with other academic institutes such as IIT Kharagpur, Jadavpur University, IEST Shibpur and CSIR Laboratories, and SAIL.

ATAL Academy, Government of India Sponsored Short Term Course on  
**ZERO WASTE PRACTICE IN INDUSTRIES**

Date : January 09-14, 2023

Organized by MME Department, NIT Durgapur  
 Schedule of Lectures: Online Lectures through MS Teams

Day			
	<b>First Session</b> 7:00 – 7:50 P.M		<b>Second Session</b> 8:00 – 8:50 P.M 9:00 – 9:30 P.M
<b>09/01/2023</b>	Session 1 (I) <i>Innovation Models and Sustainability in Environmental Management</i>	<b>Break</b>	Session 1 (II) <i>Innovation Models and Sustainability in Environmental Management</i> Session 1 Interactions
<b>10/01/2023</b>	Session 2 (I) <i>Industrial Water Management</i>		Session 2 (II) <i>Industrial Water Management</i> Session 2 Interactions
<b>11/01/2023</b>	Session 3 (I) <i>Zero Liquid Discharge in industry</i>		Session 3 (II) <i>Zero Liquid Discharge in industry</i> Session 3 Interactions
<b>12/01/2023</b>	Session 4 (I) <i>Happiness and Well Being</i>		Session 4 (II) <i>Happiness and Well Being</i> Session 4 Interactions
<b>13/01/2023</b>	Session 5(I) <i>Application of Bio Technologies in the mitigation of industrial Wastes</i>		Session 5 (II) <i>Application of Bio Technologies in the mitigation of industrial Wastes</i> Session 5 Interactions
<b>14/01/2023</b>	Session 6(I) <i>Stress Management and Time Management</i>		Session 6(II) <i>Stress Management and Time Management</i> Session 6 Interactions

ATAL Academy, Government of India Sponsored Short Term Course on  
***ZERO WASTE PRACTICE IN INDUSTRIES***

Date : January 16 -20 , 2023

Organized by MME Department, NIT Durgapur  
Schedule of Lectures Offline Lectures at Seminar Hall MME Department ,N.I.T Durgapur

Day	Morning Session			Afternoon Session	
16/01/2023	09:00AM-09:30AM	9:30 AM – 12:00 Noon		<b>Break</b>  <b>Lunch</b>	2:00PM-04:00PM
	Inauguration	Session 7 <i>Indian Values and Ethics</i>	<i>Process Metallurgy Lab</i>		
Day	09:00AM-12:00 Noon	12:00- 1:00 P.M			
17/01/2023	Session 8 <i>Recycling of Industrial Waste through agglomeration</i>	Paper 1 discussion	Session 9 <i>Research Methodology</i>		Teaching Practice
	18/01/2023	Session 10 <i>Categorization of Industrial Waste and its generation</i>	Paper 2 discussion		Session 11 <i>Utilisation of Industry waste for betterment of Society</i>
19/01/2023	Session 12 <i>Sustainability of Waste to Energy</i>	<i>MCQ TEST</i>	Session 13 <i>Mineral Beneficiation : A method to reduce Waste generation</i>		Teaching Practice
20/01/2023	Session 14 <i>National Education Policy</i>	<i>Laboratory Report</i>	<i>Reflection Journal</i>		<i>Feedback and Valedictory Session</i>