



## Comprehensive Professional Training Program on

### ETP/CETP: Operation, Maintenance, Troubleshooting and Analytical Testing

*Training for Engineers, Chemists and Operators*



### Organized & Conducted by

**CSIR-NEERI**

**National Environmental Engineering Research Institute,**

**Nehru Marg Nagpur-440020**

**www.neeri.res.in**



**Training for whom:** This program aims at improving knowledge and skill of CETP/ETP/STP operators.

**Management of Faculty:** Faculty for the course will be from the expertise of CSIR-NEERI.

**Methods of instruction:** The participants will be given both theoretical and hands on training. The medium of instruction will be English/Hindi/Marathi.

**Registration:** Duly filled registration form to be sent either by email ([icaop@neeri.res.in](mailto:icaop@neeri.res.in)) or WhatsApp (+91 9665463332) or by post to 'Head, Wastewater Technology Division, CSIR-NEERI, Nehru Marg, Nagpur 440020'.

**Mode of payment:** Either through Cheques or DD drawn in favour of Director, CSIR-NEERI or through online account transfer to CSIR NEERI SBI account number 30266513766, IFSC code SBIN0004224.

**Evaluation:** A certificate will be issued to participants after successful completion of the training program

**Program Coordinators:** For further details on the course please contact the following coordinators:

1. Dr. Rima Biswas Mondal (Principal Scientist, email: [ra\\_biswas@neeri.res.in](mailto:ra_biswas@neeri.res.in), M-9665463332)
2. Dr. Sukdeb Pal (Sr. Scientist, email: [s\\_pal@neeri.res.in](mailto:s_pal@neeri.res.in), M-7276059155)

#### **Program Mentors:**

1. Dr. Rakesh Kumar (Director, email: [director@neeri.res.in](mailto:director@neeri.res.in))
2. Dr. M.P. Patil (Chief Scientist, email: [mp\\_patil@neeri.res.in](mailto:mp_patil@neeri.res.in))

#### **How to reach CSIR-NEERI, Nagpur, India**

GPS Co-ordinates: 21.212065 N, 79.071410E

##### **By Train**

Nagpur Railway Station connects the city extensively with rest of India by an excellent network of railways. CSIR-NEERI is about 5.9 Km from Nagpur railway Station.

##### **By Roadways**

Nagpur is a major junction for roadways in India. NH7 and NH6 pass through Nagpur.

##### **By Airways**

Dr. Babasaheb Ambedkar International Airport connects Nagpur with rest of India and few cities of Middle East via several domestic and international airlines. CSIR-NEERI is about 5.7 Km from airport.

## Comprehensive Professional Training Program ETP/CETP: Operation, Maintenance, Troubleshooting and Analytical Testing

**Expertise:** CSIR-NEERI is a premier laboratory in the Engineering cluster committed for scientific excellence and societal benefits with a vision to become a globally recognized R&D platform for innovation in environmental science and engineering leading to overall improvement of environmental quality in the country. Our scientists and engineer blend their passion for excellence in science with societal commitments.

**Need for the Program:** Water scarcity in the country warrants recycling, reuse of wastewater in a big way. Industrial wastewater, which is mostly hazardous and deleterious to the environment, need pollutant specific treatment. Big industries can manage their own wastewater at their effluent treatment plant (ETP). However, as wastewater treatment needs an elaborate treatment facility, small and medium scale industries often find it difficult and expensive to have their own treatment facility. Hence a Common Effluent Treatment Plant (CETP) provides a centralized platform for a homogenous and heterogenous cluster of industries to treat their wastewater on chargeable basis. Wastewater treatment in CETP has now become an important revenue generating business, a resource of recycled water, a process of protecting environment and influencing quality of life at large. However, CETP operation is a tricky affair since wastewater received are diverse. Hence, this program has been specifically designed for the training and guidance of personnel involved in operation, maintenance, management and performance of CETP and can be extended to manage wastewater optimally in ETP too.

### Salient Features of the Training:

- ✓ 50-50% distribution of theory and practical session
- ✓ Experienced faculty from CSIR-NEERI
- ✓ Lectures assisted with multimedia aid
- ✓ Personal attention to every candidate
- ✓ Hands on training in state of the art NABL accredited laboratory at CSIR-NEERI
- ✓ Discussion with actual case studies
- ✓ Constructive group discussion & assignments

CSIR-NEERI invites application for the "Certificate Course in Wastewater Engineering Design, Operation, Maintenance, Troubleshooting & Analysis/Assessment" at Nagpur as per details given below:

<b>Title of the Course</b>	Comprehensive Professional Training Program on ETP/CETP: Operation, Maintenance, Troubleshooting and Analytical Testing
<b>Duration</b>	4 days
<b>No. of Participants</b>	Min: 10, Max: 20
<b>Date of Start</b>	3 <sup>rd</sup> September-6 <sup>th</sup> September 2019
<b>Venue of the course</b>	CSIR-NEERI, Nagpur
<b>Course Fee</b>	Rs. 20000/- (per person) plus 18% GST
<b>Status</b>	Residential

Day	Course content
1	<b>Module I: Wastewater Treatment: A Conceptual Overview</b>
	<ul style="list-style-type: none"> <li>• Introduction to the basics of wastewater treatment</li> <li>• Understanding wastewater characteristics</li> <li>• Fundamentals of wastewater engineering</li> </ul>
2	<b>Module II: Wastewater Treatment Technologies: Physical, Chemical and Biological</b>
	<ul style="list-style-type: none"> <li>• Recent technologies in physical treatment of wastewater</li> <li>• Fundamental understanding of chemical processes in wastewater treatment</li> <li>• Advanced oxidation processes: concepts, challenges and technologies</li> <li>• Assignment/Quiz/Discussions</li> </ul>
3	<ul style="list-style-type: none"> <li>• Principals and concepts of biological treatment of wastewater</li> <li>• How to determine activity potential of the biological sludge?</li> <li>• Handling operational issues like start-up and shock loading of biological units like SBR, CSTR, ASP, UASB, Digester Trickling Filter, etc.</li> <li>• Assignment/Quiz/Discussions</li> </ul>
	<ul style="list-style-type: none"> <li>• How to handle biological treatment of tricky wastewater like oil &amp; grease, phenolics, ammonia, phosphate, etc.</li> <li>• Fundamentals of Biological Nutrient removal</li> <li>• Demonstration of pilot units on wastewater treatment/ visit to a Wastewater treatment facility</li> </ul>
4	<b>Module III: Troubleshooting of treatment operations and processes</b>
	<ul style="list-style-type: none"> <li>• Troubleshooting of sick unit operations-Engineering perspectives</li> <li>• Showcasing our customized solutions for various industrial problems: Sharing experiences</li> </ul>
4	<b>Module IV: Effluent Recycle/Reuse and Sludge Management</b>
	<ul style="list-style-type: none"> <li>• Recycle and Reuse-A concept towards zero liquid discharge</li> <li>• Chemical &amp; bio-sludge management</li> <li>• Assignment/Quiz/Discussions</li> </ul>
4	<b>Module V: Wastewater Chemistry: Sampling, Preservation &amp; Analytical Techniques</b>
	<ul style="list-style-type: none"> <li>• Bridging the gap: Analyst and Operator</li> <li>• Wastewater sampling, preservation methods</li> <li>• Characterization of wastewater pollutants</li> <li>• Importance and overview of good laboratory practices in wastewater</li> <li>• QA QC Procedures in analysis, accuracy, precision, concepts of measurement uncertainty, calibration</li> <li>• Assignment/Quiz/Discussions</li> </ul>
4	<b>Final Sum-up</b>
	<ul style="list-style-type: none"> <li>• Discussions</li> <li>• Valedictory Function</li> </ul>



COMPREHENSIVE PROFESSIONAL TRAINING PROGRAM  
CETP/ETP: Operation, Maintenance, Troubleshooting & Analytical Testing  
CSIR-NEERI, Nagpur; September 03 – 06, 2019



## REGISTRATION FORM

Name (Dr. /Mr. /Ms.): \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Email: \_\_\_\_\_ Mobile: \_\_\_\_\_

## PAYMENT DETAILS

Payment Mode ( Online transfer\*/ Cheque#/ DD#): \_\_\_\_\_

Transaction ID/ Chq. Or DD No: \_\_\_\_\_

Date: \_\_\_\_\_ Amount in INR: \_\_\_\_\_

Date : \_\_\_\_\_ Signature: \_\_\_\_\_

\*Beneficiary: **Director, CSIR-NEERI; State Bank of India, NEERI Branch, Branch Code: 04224; A/c No. 30266513766; MICR: 40002031; IFSC: SBIN0004224**

#Drawn in favor of "Director, CSIR-NEERI"

Duly completed form to be sent *either by*  
**Email ([icaop@neeri.res.in](mailto:icaop@neeri.res.in)) or WhatsApp (+91-9665463332) or by post**  
**To: Head, Wastewater Technology Division, CSIR-NEERI, Nehru Marg,**  
**Nagpur 440 020, INDIA**