



NATIONAL INSTITUTE OF TECHNOLOGY  
WARANGAL

Warangal - 506 004, Telangana

TEACHING LEARNING CENTRE

(A Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching)



*A Five Day Online Faculty Development*

*Programme on*

**“TEACHING AND LEARNING STRATEGIES  
FOR FRONTIERS IN MEMBRANES FOR  
WASTEWATER TREATMENT”**

**8<sup>th</sup> – 12<sup>th</sup> March'2021**

**Call for Registration and Participation**

**Coordinators**

Prof. Anand Kishore Kola

Dr. Kishant Kumar

Dr. Naresh Thota

**Organized by the**

**Department of Chemical Engineering**

**In Association with the**

**TEACHING LEARNING CENTRE**

*Established under the Scheme of PMMMNMTT,  
Ministry of Education, Govt. of India*



### Overview of the FDP:

During the last 30 years, environmental issues, especially concerning the chemical and biological contamination of water, have become a major concern for both society and public authorities, but more importantly, for the whole industrial world. Any activities whether domestic or agricultural but also industrial produce wastewaters or effluents containing undesirable contaminants which can also be toxic. In this context, a constant effort must be made to protect water resources. In general, conventional wastewater treatment consists of a combination of physical, chemical, and biological processes and operations to remove insoluble particles and soluble contaminants from effluents. This FDP will discuss different types of effluents, gives a general scheme of wastewater treatment, and describes the advantages and disadvantages of technologies available.

### Objectives of the FDP:

- To update the participants how to apply knowledge of mathematics, physics, chemistry, and microbiology to solve and analyze engineering problems related to water and wastewater collection, transport, quality and treatment.
- To enhance the understanding of teachers how to use the fundamental principles of mass balance, chemical kinetics and equilibrium to design water or wastewater reactors to achieve a desirable treatment goal
- To empower the faculty to understand selected contemporary global water and wastewater issues such as water shortage, wastewater reuse and emerging contaminants.

### Topics to be covered:

- Biological treatment: Aerobic digestion (oxidation) of the effluent and anaerobic waste minimization.
- Chemical treatment: Direct chemical oxidation, photo-oxidation of the effluent, photo-catalytic oxidation and destruction of organic compounds by sonication.
- Physical (thermal) treatment: Wet air oxidation (WAO), supercritical fluid oxidation of toxic contaminant and incineration (complete combustion).

### Resource Persons:

Eminent Faculty from IITs, NITs, Central Universities, Teaching Learning Centres and Senior Faculty from NIT Warangal.

### Mode of Delivery:

Resource Persons will deliver the online lectures and hands-on sessions through, Google-Meet platform. The essence of the FDP is to improve the teaching ability of the teachers and enabling the learners to learn. The theme of the FDP is a way in building capacity of making better teachers. Lectures can be presentation mode, Discussions and hands-on sessions. Ultimate goal of the FDP is to develop the faculty members in the new pedagogy and emerging areas of science and technology.

### Registration is open to:

The program is open to all NBA and AICTE approved Engineering/Polytechnic college teachers, Degree college lecturers, research scholars and P.G. students. The number of participants is approximately 100 and selection will be based on priority basis. The Brochure and details of the Registration Form can be downloaded from the institute website <http://www.nitw.ac.in>

### How to Register:

Eligible candidates may apply by filling the following Google form by uploading payment proof on or before 7<sup>th</sup> March'2021. Google Form Link:

<https://forms.gle/XB37RmfW29JcFhsi7>

**Note:** Keep the payment receipt ready as a PDF file (size < 1 MB)

### Registration Fee:

Category of Participants	3-Day Reg. Fee	5-Day Reg. Fee	6-Day Reg. Fee
Faculty Members	-NA-	600/-	-NA-
Research Scholars	-NA-	300/-	-NA-

**Note:** Registration Fee for Faculty and Students of SC/ST category is half of the amounts mentioned above as applicable.

### Bank Details:

Registration Fee may be remitted through NEFT to the Bank account given below. Proof of remittance of the requisite registration fee (with transaction number if online transaction) shall be uploaded in the Google Form.

<b>Account Name</b>	Director, Research Account, NITW
<b>Account Number</b>	62266262236
<b>Bank</b>	State Bank of India (SBI)
<b>Branch</b>	NIT Warangal Campus
<b>IFSC code</b>	SBIN0020149

### Confirmation of Participation:

On receipt of the Google Form and Fee Remittance Receipt, participants will be sent confirmation of their participation through email by 8<sup>th</sup> March' 2021. As the programme is conducted online with the number of participants in the workshop is limited to 100. Candidates are advised to register early to avoid disappointment.

### Brief profile of the Department:

The Department of Chemical Engineering was started in the year 1964. It offers B.Tech, M.Tech and Ph.D programmes. Students are admitted into these programmes through National level competitive examinations. Foreign national students are also given admission to these programmes. The Department has well qualified faculty dedicated to teaching and research in fundamental and advanced areas. The Department houses various laboratories catering to the needs of the curriculum. The faculty are actively engaged in industrial consultancy and sponsored research projects. The Department has inked MoUs with some of the leading industries. The graduating students are absorbed into reputed firms through campus placements. The Department aims at inculcating lifelong learning skills in the students. The alumni of the Department are shouldering high positions in multifarious organizations. The Department celebrated its Golden Jubilee in 2014.

### Teaching Learning Centre of NIT Warangal:

The Teaching Learning Centre (TLC) has been established at NIT Warangal with grants from the MHRD, through its scheme "**Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMMNTT)**". Under this Scheme, a separate building has been built exclusively for the TLC activities, with the state-of-art training facilities that include a studio for production and uploading of video and e-lectures on various subjects of higher education, training halls to train the faculty in various theme areas of Science and Technology, humanities and social sciences, linguistics and communication skills, pedagogy and cognition evaluation, etc. among others. Many senior and young faculty are associated with this Centre as Core-Team. One of the important objectives of the Centre is to conduct training programmes for the aspiring, newly inducted and in-service faculty in science, engineering, social sciences disciplines in higher education. Other activities of the TLC include preparation of print and e-learning materials, offering on-line courses, curriculum design, carrying out research in educational technology and pedagogy and integrating with ICT into teaching-learning process. The TLC has special programmes of training for the marginalized and women-faculty.

### About NIT Warangal:

National Institute of Technology Warangal, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 31 post-graduate programs besides doctoral programmes. About 5000 students across the country and about 500 international students study on the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure in the form of state of the art library, seminar halls, guest houses and research laboratories.

**For any queries regarding the FDP, please contact the Programme Coordinators:**

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**For further details about Teaching Learning Centre, please contact:**

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