

5 DAY ONLINE FACULTY DEVELOPMENT PROGRAM (FDP)

ON

Advanced Structural Health Monitoring, Sensor Technologies, and Data Analytics: Integrating Machine Learning for Infrastructure

18-05-2026 to 22-05-2026

Organized by

CENTRE FOR TEACHING AND LEARNING, NIT Warangal

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

in association with

**Geethanjali College of Engineering and Technology (Autonomous),
Hyderabad**



Preamble:

The Centre for Teaching and Learning (CTL) has been established at NIT Warangal with grants from the Ministry of Education, through its scheme "Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)". Under this Scheme, a separate building has been built exclusively for the CTL 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. 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 CTL 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 CTL has special programmes of training for the marginalized and women-faculty.

About FDP:

This FDP is devoted to addressing the concepts, challenges, and applications of Structural Health Monitoring (SHM), sensor technologies, and data analytics, which play a vital role in ensuring the safety, reliability, and sustainability of modern infrastructure systems, which is being conducted online at the National Institute of Technology, Warangal, in association with Geethanjali College of Engineering and Technology, Hyderabad.

Major Course Contents:

- Introduction to Structural Health Monitoring (SHM)
- Sensor Technologies and Data Acquisition Systems
- Vibration-Based Damage Detection (VBDD) Techniques
- Signal Processing for SHM (FFT, PSD, Filtering)
- Data Analytics and Feature Engineering
- Deep Learning and AI Applications in SHM
- Digital Twins and Smart Infrastructure Monitoring
- Case Studies on Real-Time Structural Monitoring

Faculty conducting this programme:

The programme will be conducted by the faculty members from NIT Warangal and Academicians in the concerned field from IITs/NITs/IIITs have been invited to deliver lectures in the programme.

Registration Fee Particulars:

	For 5-day FDP
Faculty	Rs.1180/-
Students / Research Scholars	Rs. 590/-
Industry Participants	Rs.2360/-

Registration fees include GST. Participants need to pay the registration fees online using the following details

Online Transfer Details

Account Name: **HEAD, CTL NITW**
Account No: **40376545007**
IFSC: **SBIN0020149**
Bank and Branch: **SBI, NIT (REC) Warangal**

How to apply:

Participants are required to fill the online registration form by clicking on the following link:

https://docs.google.com/forms/d/e/1FAIpQLSc2shE0-oe5z6eAlWvGI2NYRcMkTiQg-6jr3f5_uelon0fkXg/viewform?usp=dialog

Selection Criteria:

Selection will be done based on first-come-first-serve to a minimum number of 50 (fifty) Faculty/industry participants. Additionally, students/PhD scholars are allowed to participate. The list of selected participants will be intimated through e-mail. In case the candidate is not selected, the registration amount will be refunded. Candidates will be issued certificates on successful completion of the course.

Important dates:

Last date (Application & DD)	15-05-2026
Selection List by E- mail	17-05-2026

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.

About GCET Hyderabad:

Geethanjali College of Engineering and Technology (GCET)(Autonomous), Hyderabad is a premier institution committed to excellence in technical education and research. The institute was established in the academic year 2005-06. GCET has been accredited by NAAC with A+ grade and several of its B. Tech programs are accredited by NBA. The institution is affiliated to JNTU Hyderabad and has been granted autonomous status. It has well-developed infrastructure and is actively involved in research and development activities.

Coordinators:

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