



PMMMNTT Scheme



A Five-Day Faculty Development Programme on **TEACHING AND LEARNING STRATEGIES OF DIFFERENTIAL EQUATIONS AND APPLICATIONS IN SCIENCE AND ENGINEERING**

28th Dec 2020 – 1st Jan 2021

Call for Registration and Participation

Coordinators
Dr. P. Muthu
Dr. H.P. Rani
Dr. D. Bhargavi

Organized by the
Department of Mathematics
In association with
Teaching Learning Centre
National Institute of Technology
Warangal – 506 004, India.

Overview:

Differential equations have wide applications in various engineering and science disciplines. In general, modeling of the variation of a physical quantity, such as temperature, pressure, displacement, velocity, stress, strain, current, voltage, or concentration of a pollutant, with the change of time or location, or both would result in differential equations. Similarly, studying the variation of some physical quantities on other physical quantities would also lead to differential equations.

In fact, many engineering subjects, such as mechanical vibration or structural dynamics, heat transfer, or theory of electric circuits, are founded on the theory of differential equations. It is practically important for engineers to be able to model physical problems using mathematical equations, and then solve these equations so that the behavior of the systems concerned can be studied.

This program has been designed to cover the nuances of online teaching in detail and will help the attendees to develop and deliver online content professionally. The FDP will provide the attendees with hands-on experience on various tools to create video/audio content and present the same to students. This training program, which is being organized under the aegis of the Teaching Learning Centre (TLC), is essentially a humble beginning on the Post-COVID-19 pedagogy of Technical Education.

Objectives:

This online FDP is expected to create awareness and understanding among the participants about the IT tools and software. This will enable to start using these tools in classroom teaching with a focus on providing the knowledge on differential equations. A major focus will be on explaining mathematical concepts with theory and solving differential equations along with the applications.

Course Content:

Effective use of ICT in teaching and learning.
Professional Ethics and Universal Human Values
Computer Animations and Virtual Experiments
Higher-Order Differential Equations.
Applications of Linear/Nonlinear Differential Equations.
System of Differential Equations.
Series Solutions of Differential Equations.
Numerical Solutions of Differential Equations.
Dynamical systems, stability.
Modelling and simulation of dynamical systems.
Complex dynamical systems.
Related topics, e.g. bifurcations and chaos in dynamical systems, asymptotic methods in nonlinear dynamics, and others.
Research Performance, Research Productivity, Institutional Ranking Systems,
Research metrics, Scientometrics, Citation tools, Impact Factor, h-Index
Research Ethics – Copyright, IPR issues, Plagiarism, Plagiarism Detection Software

Registration is open to:

Faculty members in the institutions of higher learning.

Research Scholars have an aptitude to teaching and desire to take up teaching profession as their career.

All working professionals working in the application of differential equations.

Resource Persons:

Eminent personalities and experts from IITs, NITs, and Centrally Funded Research Institutions will be delivering the lectures. Also, faculty of the Mathematics Department, Teaching Learning Centre and senior faculty at NIT Warangal are the resource persons.

Registration:

The registration for the FDP program is through online mode by filling the details in the link appended below.

<https://docs.google.com/forms/d/e/1FAIpQLSdUzpK30xe76utVdhw-VacXT9gDOMOhAvLNHa5tP7zAOL-gHg/viewform>

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

The FDP program will be offered in online mode and is limited to 100 participants. It is compulsory to attend all the sessions without fail to receive the digital certificate. The link for attending the online sessions will be shared after completing the registration. **LAST DATE for registration: 21-12-2020**

Registration Fee:

Category of participants	Fee details
Faculty Members	Rs.600/-
Research Scholars	Rs.300/-

Note: Registration fee for Faculty and Research Scholars of SC/ST category is half of the amount mentioned above as applicable.

Registration fee need to be remitted through On-line / NEFT to the Bank account given below. Scanned copy of the Proof of remittance of the requisite registration fee (with transaction number if online transaction)

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

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 programs.

About Department of Mathematics, NITW

The Department of Mathematics is a highly reputed department which functions with excellence as its motto. The Department was started in 1959 along with other Engineering and Science Departments and has established itself as a dynamic center for academic and research activities. The Department has so far produced 120 Ph.D.'s and presently 30 Research Scholars are working. AICTE recognized the Department of Mathematics as QIP center for Ph.D. The Department offers M.Sc. (Applied Mathematics) and M.Sc. (Mathematics & Scientific Computing) Courses. Recently, the Department of Mathematics at NIT Warangal has identified as National Resource Centre (NRC) for Mathematics to develop online courses to train faculty within India.

Teaching-Learning Centre of NIT Warangal:

The Teaching Learning Centre (TLC) is established at NIT Warangal with grants from the MHRD, under the scheme, 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMMNTT). Many senior and young faculty members across various departments of the Institute are associated with this Center as the Core-Team. One of the important objectives of the center is to conduct training programs for aspiring, newly inducted and in-service faculty in Science, Engineering and Social Sciences disciplines in higher education. Other activities of the TLC include preparation of print and e-learning materials, offering courses on-line, curriculum development, carrying out research in educational technology and pedagogy and integrating with E&ICT into teaching-learning process. The TLC has special programmes of training for the marginalized and women-faculty.



PANDIT MADAN MOHAN MALAVIYA TEACHING LEARNING CENTRE



For any queries please contact:

FDP Coordinators:

Dr. P. Muthu

Associate Professor and Head
Department of Mathematics
N.I.T Warangal, Telangana
Ph. No.:+91 833 2969 452
Email: pm@nitw.ac.in

Dr. H. P. Rani

Associate Professor
Department of Mathematics
NIT Warangal, Telangana
Ph. No.:+91 9908 143247
Email: hprani@nitw.ac.in

Dr. D. Bhargavi

Assistant Professor
Department of Mathematics
NIT Warangal, Telangana
Ph. No.:+91 8332969456
Email: bhargavi@nitw.ac.in



A Five-Day Faculty Development Programme on
**Teaching and Learning Strategies of Differential Equations
and Applications in Science and Engineering**
28th December, 2020 - 01st January, 2021

Organized by the

DEPARTMENT OF MATHEMATICS

In Association with the

TEACHING LEARNING CENTRE (TLC), NIT WARANGAL

Under the Scheme of PMMMNMTT, Ministry of Education, Govt. of India

REGISTRATION FORM

Name : _____

Date of Birth : _____

Place of Birth: Village/Town/City: _____ District: _____

Tick as applicable (Rural / Urban): _____ State: _____

Aadhaar number: _____ Gender (Put a ✓ Mark) M F

Category (Tick as applicable) : **Open / OBC / SC / ST / PWD**

Qualification : _____

Designation : _____

Organization : _____

No. of Years of Teaching Experience: _____

Address for Correspondence : _____

Mobile(s): _____ E-mail(s): _____

Payment Details: Amount: _____ Transaction No.: _____

Date: _____ Bank: _____ Branch: _____

Declaration by the Applicant

If selected, I agree to abide by the rules and regulations of the workshop/ training programme and shall attend all the sessions.

** Kindly go through the brochure before making payment

Date:

Signature of the Applicant

Recommended and Forwarded

Office Seal

Signature of the Head of the Department / Institution