



**PMMNMIT
Scheme**



**One Week Faculty Development
Programme on
Effective Teaching and Learning
methodologies for Differential
Equations**

March 16- 21, 2020

Call for Registration and Participation

Coordinators

**Prof. D. SRINIVASACHARYA
Dr. E. SATYANARAYANA**

Organized by

**DEPARTMENT OF MATHEMATICS
in association with
TEACHING LEARNING CENTRE
NATIONAL INSTITUTE OF TECHNOLOGY
Warangal-506 004, Telangana State, India.**



OVERVIEW OF THE COURSE

The differential equations arise when the real world problems are modelled and hence play an important role in engineering applications. Solving techniques of differential equations usually confuse the learners as theory behind the techniques is, in general, not taught due to the dependency of mathematical analysis. The purpose of this workshop is educate in mathematical and computational analysis of theoretical and applied differential equations. Several simple models are derived in terms of differential equation which govern the physical problems.

OBJECTIVES OF THE WORKSHOP

- To introduce the concepts in a systematic way so that participants can learn and understand the fundamental ideas of Differential equations
- To expose the essential tools of Differential equations in applications point of view to use effectively in engineering applications.
- To emphasize general properties of Linear Differential equations and its advantages in investigating the solutions for Nonlinear Differential equations

TENTATIVE TOPICS TO BE COVERED

- Fundamental solutions
- Asymptotic analysis
- Riemann Problem
- Distribution theory
- Nonlinear waves
- Sobolev Spaces
- Finite Element, Finite Difference and Finite Volume methods
- Spectral methods

RESOURCE PERSONS

Faculty members from IITs, NITs, centrally funded Institutes and Universities and will deliver lectures and conduct workshop sessions.

REGISTRATION IS OPEN TO

- Faculty members of Institutions of higher education teaching Mathematics and Engineering.
- Research Scholars aspiring for academic positions

HOW TO APPLY

Eligible candidates may apply by submitting the scanned copy of the filled-in registration form (attached with this mail/ brochure) by Email to: dsc@nitw.ac.in / satya@nitw.ac.in on or before **28-02-2020**.

As the program is conducted in a workshop mode, the number of participants in the workshop is limited to 40.

SELECTION AND INTIMATION

Upon the receipt of the registration form, the applicants will be selected based on their teaching aspirations and research interest relevant to the workshop. Selected applicants will be intimated through E-mail on or before 06-03-2020.

PAYMENT OF REGISTRATION FEE

After receiving the intimation about the selection, the applicant has to send registration fee in the form of a Demand Draft in favour of **“Director research, NITW”** payable at Warangal, on or before 01-03-2020. Only after receiving the proof of payment of registration fee from the participates through E-mail, they will be sent confirmation of their participation through E-mail immediately.

ACCOMMODATION

Accommodation for the outstation participants will be provided upon request in the Institute Visitors Block or International Students Hostel.

REGISTRATION FEE

Category of participants	Local Participants (With working Lunch)	Residential Participants (accommodation, breakfast, lunch, dinner included)
Faculty	Rs. 750/-	Rs. 1,500/-
Research Scholars	Rs. 400/-	Rs. 800/-

Note: Registration fee for Faculty and Students of SC/ST category is half of the amounts mentioned above as applicable. Accommodation subject to availability.

ABOUT WARANGAL

Warangal is the second largest city of the new state of Telangana. It is situated at a distance of 140 km from the state capital Hyderabad (Nearest Airport). It is well connected by Rail (Kazipet Junction is two km away and Warangal Station is 12 km away) and by Road (NH 202). Warangal is renowned for its rich historical and cultural heritage. It was the seat of erstwhile Kakatiya dynasty. It is a seat of tourist attractions with a number of historical monuments like Thousand Pillars Temple, Warangal Fort, Bhadrakali Temple, Ramappa Temple and Laknavaram Lake located in a radius of 30 kms.



ABOUT NIT WARANGAL

National Institute of Technology Warangal, formerly known as Regional Engineering College was established in 1959, is the first among the 31 NIT's in the country setup as joint venture of the Government of India and the state government. 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 programmes besides doctoral programmes. All the Departments of the institute conduct research programs leading to Ph.D. degrees. 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. Participants are advised to alight either at Kazipet or Warangal depending upon the train of travel. It is well connected by rail and road.

TEACHING LEARNING CENTRE AT NIT WARANGAL

The Teaching Learning Centre (TLC) is established at NIT Warangal with grants from the MHRD, GOI under the scheme, 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMMNMTT). Many senior and young faculty members across various departments of the Institute are associated with this center as members of 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 and Engineering disciplines. Other activities of the TLC include preparation of e-learning materials, offering courses on-line, curriculum development, carrying out research in pedagogy and integrating ICT into teaching-learning process.

BRIEF PROFILE OF THE DEPARTMENT OF MATHEMATICS

The Department of Mathematics is a highly reputed Department which functions with excellence as its motto. The Department was started in the year 1959 along with other Engineering and Science Departments, and has established itself as a dynamic center for academic and research activities. In addition to the teaching of courses in Mathematics for B.Tech. and M.Tech. programmes, the Department offers two P.G. Programs, M.Sc.(Applied Mathematics) and M.Sc.(Mathematics and Scientific Computing). The faculty is actively engaged in Research in diverse fields such as Fluid Dynamics, Bio Mechanics, Numerical Analysis, Differential Equations, Finite Element Method, Operations Research, Functional Analysis, Linear Algebra, Cryptography and Coding Theory. At present, 20 Research Scholars are working for their Ph.D. The Department has a full-fledged computation laboratory to meet the requirements of the M.Sc. students, research scholars and the faculty. The Department has so far produced 105 Ph.D.'s and conducted more than 53 Conferences /Seminars/ Workshops /STTP's, two international conferences and Three GIAN programs. AICTE recognized the Department as QIP center for Ph.D. It is proud to say that Department of Mathematics at NIT Warangal has identified as National Resource Centre for Mathematics to develop online courses to train faculty within India.

For any queries regarding this workshop, please contact any one of the following coordinators

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Sponsored by MHRD, Govt. of India under the PMMMMNTT Scheme

REGISTRATION FORM

Name : _____

Date of Birth : _____

Place of Birth: Village/Town/City: _____ Tick as applicable (Rural/Urban)

District _____ State: _____

Gender (Put a ✓ Mark) : Male Female Aadhaar Number: _____

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

Qualification : _____

Designation : _____

Organization/Institution : _____

No. of Years of Teaching/Research Experience: _____

Area of research : _____

Pl. write how this workshop is beneficial to you: _____

Address for Correspondence: _____

Mobile(s) No.: _____

E-mail(s) ID: _____

Accommodation (Put a V Mark): Required Not Required

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.

Date: _____ Recommended and Forwarded

Signature of the Applicant

Signature of the Head of the Department/ Institution

Office Seal