

**CONTINUING EDUCATION PROGRAMME ON
MATRIX COMPUTATION AND NUMERICAL TECHNIQUES IN
SCIENCE AND ENGINEERING**

(CEP - MCNTSE)

Sponsored by TEQIP-III, NITW

29th October – 02nd November, 2018

Registration Form

1. Name:

2. Designation:.....

3. Department:

4. Organization:

5. Address for Correspondence:

City:

State:Mobile:

Email:

6. DD No:..... Bank:..... Date:.....

7. Will you be requiring accommodation?

(Participant's Signature)

Recommended and forwarded by

(Signature of Head of the Department/Institute)
(With date and seal)

**CONTINUING EDUCATION PROGRAMME ON
MATRIX COMPUTATION AND NUMERICAL TECHNIQUES IN
SCIENCE AND ENGINEERING**

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TEQIP - III NITW

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Organized by
Department of Mathematics
NIT, Warangal – 506004

Course Coordinator

Dr. P. Muthu
Associate Professor
Department of Mathematics, NIT, Warangal

About NIT & Mathematics Department, Warangal:

National Institute of Technology, Warangal, formerly known as Regional Engineering College, was established in 1959. The Institute currently has thirteen academic departments and a few advanced research centres in various disciplines of engineering, pure sciences and management, with nearly 100 laboratories organized in a unique pattern of functioning, Central Library with state of the art facilities, Auditorium, Student Activity Centre, Mega Computer Centre, Indoor Games Complex, big stadium, Seminar Halls with required infrastructure, Dispensary with state of art of facilities, etc.

The institute is well-known for its Research and Development, Industrial consultancy, Continuing education and Training programmes for teachers and industrial personnel. It is located on either side of Hyderabad - Warangal highway at a distance of 3 Kms from Kazipet Railway Station and 12 Kms from Warangal Railway Station. It is located at a distance of 140 Kms from Hyderabad.

The Department of Mathematics offers PhD program, two year M.Sc programs with specialization in two fields, namely, (i) Applied Mathematics and (ii) Mathematics & Scientific Computing and offers Core courses as well as Elective courses to all branches of B.Tech/M.Tech students of the Institute. The Department has experienced faculty with good publications and well-established laboratories. The Department has liaison with reputed industries and R&D organizations.

PROGRAM OBJECTIVE:

The stunning growth in the hardware performance in computing has allowed more sophisticated mathematical models to be employed in sciences and engineering. In most of the applications, solution of systems of linear equations and/or eigenvalue problems has at the core. Increased problem sizes and changes in computer architecture have also made the development of new methods and new implementations of old ones necessary.

Matrices are used to represent many different objects such as networks and images besides linear transformations. Concepts such as ill-condition, norms and orthogonality are central to matrix computation.

This CEP aims in giving a comprehensive and up-to-date treatment of methods and algorithms in matrix computations and it can serve as a source of knowledge for scholars in engineering/sciences and as a basis for further use in research work. For example, this course is useful to communication engineers working on numerical concepts of linear control systems and digital signal processing. Scholars/PG Students of Mathematics and various disciplines of engineering pursuing research in Advanced Numerical Analysis or Matrix computation will also be benefitted by this CEP. The interactive system such as MATLAB/SCILAB will be used for working out the assignment problems and computer exercises during the lab sessions.

PROGRAM CONTENTS:

1. Review of Matrix Algebra/Numerical Stability
2. Direct and Iterative methods for linear systems
3. Singular Value Decomposition (SVD) of a matrix
4. Linear Least Squares Problem
5. Householder and Givens Matrices and their applications
6. Numerical Methods for Matrix Eigenvalue Problems
7. Numerical methods for systems and control
8. Non-negative Matrices and their applications

ELIGIBILITY:

The program is designed for the faculty from AICTE approved engineering colleges, degree colleges, Research Scholars & PG students, and also for working professionals from industry and R & D organizations.

RESOURCE PERSONS:

Faculty from NIT Warangal and Prof. K. C. Sivakumar, IIT Madras will be handling lectures and hands-on-sessions

REGISTRATION FEE PARTICULARS/Bank Details:

The Registration Fee may be sent in the form of crossed DD or Remitted On-line to the Bank Account Details given below :

Account Name : **TEQIP - III FUNDS,** A/c No:**37583198741**

Bank: **State Bank of India, NIT Warangal,** Br. Code : **20149,** IFSC Code: **SBIN0020149**

ACCOMMODATION:

All the selected participants will be provided accommodation in the institute guest house.

No TA will be paid for the participants.

Category of Participants	Registration fee (includes accommodation, boarding and inter session snacks)	Registration fee (for Local participants, with working Lunch)
Faculty from other Educational Institutions	Rs. 2,000/-	Rs. 1000/-
Research Scholars & PG students	Rs. 2,000/-	Rs. 500/-
Participants from industry and R&D organizations	Rs. 5,000/-	--

IMPORTANT DATES:

Submission of scanned application through e-mail :	22-10-2018
Application with DD should reach on :	23-10-2018
Selection will be informed through email up to :	24-10-2018
Intimation of your acceptance :	26-10-2018

ADDRESS FOR CORRESPONDENCE

Dr. P. Muthu,

Associate Professor, Department of Mathematics

National Institute of Technology, WARANGAL – 506004, Telangana, India.

Mail the scanned copy of (1) filled-in and duly signed application form;

and (2) DD to : **pm@nitw.ac.in (or) muthuatbits@gmail.com**

For any enquiry contact: (M) 0833 2969 452, (P) 0870 – 246 2833