### Preamble:

Any physical phenomenon in nature studied in various branches of engineering and science is described by algebraic, differential and integral equations relating various parameters. It is not always feasible to solve these equations by classical analytical methods for arbitrary shapes and boundary conditions and to derive closed form solutions. With the advent of computers having high speed computational powers, engineers and scientists have found themselves quite comfortable in applying numerical methods to solve such unfeasible problems. The finite element method (FEM) is a numerical approach by which partial differential equations can be solved approximately. Major industries such as the automobile. aerospace, chemical. pharmaceutical, petroleum, electronics are using FEM frequently to simulate complex phenomenon of different scales for design and manufacturing of high technology products. Hence, this course will be beneficial for engineering students, engineers and scientists working in various industries and academia.

### Themes:

#### Introduction to FEM

Different approaches in FEM: Direct Approach, Variational Approach, Energy approach Application to Structural Mechanics Problems Application to Heat Transfer Problems Programming for Finite Element Analysis Analysis of free vibration and forced vibration Overview of commonly used commercial FE softwares such as ANSYS, HYPERWORKS and MATLAB

#### Venue:

Mechanical Seminar Hall, MNIT Jaipur

#### **Resource Persons:**

Faculties from reputed institutions like IITs, NITs and R&D institutes.

# **Target Audience:**

This training program is open to Academician, Scientist, UG/PG/PhD Students, persons working in R&D Organizations and industries.

# **Registration Fee:**

The application in the prescribed format along with the registration fee should be sent to the coordinator via post or email latest by March 22, 2019.

# **Registration Fee (Rs)**

Industry / R& D organization	5000/-
Academic	2500/-
Research Scholar	1500/-

Registration fee (non refundable) includes registration kit, course certificate, sessions tea and lunch.

# Accommodation & Transport:

Guest rooms are available @Rs. 200/day in institute hostel and food can be taken in hostel canteen by purchasing coupons (Rs 40-80 per meal).Working lunch will be provided to all the participants. Limited accommodation in faculty guest house is also available on first come first serve basis. No TA/DA will be provided to the participants.

# **Importance Dates:**

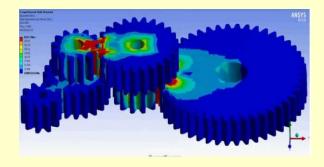
Last date of Registration:22 March 2019Intimation of selection (Email):23 March 2019

#### TEQIP Sponsored One week Short Term Course on

Finite Element Method in Engineering for Industries and Academia

### 25 March – 29 March, 2019





### Jointly Organized by

Department of Mechanical Engineering Malaviya National Institute of Technology Jaipur, J. L. N. Marg, Malaviya Nagar, Jaipur-302017 (Raj.)

#### &

Department of Mechanical Engineering College of Technology and Engineering, Maharana Pratap University of Agriculture and Technology, Udaipur-313001

#### One week STC on

Finite Element Method in Engineering for Industries and Academia

# 25 March - 29 March, 2019 REGISTRATION FORM

Name	
Designation and Official Address	
Mailing Address	
Accommodation required:	Yes/ No

Phone/Mobile

E-mail:

Details of course fee Payment by crossed

Cheque/D.D. No. \_\_\_\_ Dated

**Note:** DD should be drawn in favor of "The Registrar, MNIT Jaipur" payable at Jaipur or NEFT transfer. Current A/C No.: 36875887782, Bank: SBI Bank, Branch: MNIT Campus Jaipur, IFSC Code: SBIN0015921

Applicant Signature

Authorized Signatory

Patron:

**Prof. Udaykumar R. Yaragatti** Director, MNIT Jaipur

**Prof. A. K. Sharma** Dean, CTAE, Udaipur

### Chairman:

Prof. Dilip Sharma, MNIT Jaipur Prof. M. A. Salaoda, CTAE, Udaipur

# **Conveners:**

Dr. T. C. Gupta, MNIT Jaipur Dr. Nirupam Rohtagi, MNIT Jaipur

# **Coordinators:**

Dr. M. L. Meena, MNIT Jaipur Dr. Sushant Upadhaya, MNIT Jaipur Dr. Chitranjan, CTAE Udaipur

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# About MNIT Jaipur

About MNIT Jaipur Malaviya National Institute of Technology Jaipur is one of the NITs established in Jaipur known as Pink City. Institute was established as a joint venture of the govt. of india and the govt. of Rajasthan in 1963. Subsequently on June 26, 2002. The college has been given the status of National Institute of Technology and on 15 August, 2007 Proclaimed Institute of National Important through Act of Parliament. The Institute is fully funded by MHRD, Government of India. MNIT Campus spreads over 325 acres of Lush green area in the central location of Jaipur City. At present the Institute offers Undergraduate and Post graduate Courses (M.Tech. /M.Sc./ MBA & Ph.D.) to about 5000 students in almost all leading fields of engineering, technology, management and sciences. The institute has renowned faculty and labs with state of art equipment. The institute is actively engaged in research consultancy and developmental activities besides imparting regular teaching.

