

Six days training program

on

**Finite Element Methods-Research and Industrial
Applications with Commercial Tools
(FEMRIA-2017)**

1st-6th June, 2017



Organized by

Mechanical Engineering Department
VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY,
NAGPUR-440 010

Introduction

The finite element method is a numerical analysis technique for obtaining approximate solutions to a wide variety of problems that arise in different engineering applications. In view of its diversity and flexibility as an analysis tool, it is extensively used in engineering schools and industry. Advances in computer hardware have made FEA easier and efficient in solving complex engineering problems like static, dynamic and thermal analysis of mechanical components. Several finite element software packages are commercially available which are capable of performing all facets of FEA including modeling, meshing and post processing.

Course Objectives

This course is structured and designed to bridge the gap between theoretical finite element knowledge and its industrial applications by providing plenty of insights into the relationship between physical data (e.g., loads, boundary conditions, material behavior, etc.) and finite element models. The course is intended to provide graduate students, engineers, and researchers working in different specializations of mechanical engineering such as design, thermal, biomedical engineering, automobile engineering, etc.

All the lectures will be addressed with an application of FEM in structural mechanics, biomedical, power generation, composites, crashworthiness, ballistics, vibration analysis, fatigue analysis, etc. Aspects like material selection, meshing methods, convergence, etc. will be discussed in detail. To reduce the analysis time APDL programming method will be introduced which enhances automation of the process and reduces the mental fatigue of the analyst. This workshop is aimed for students, researchers and faculty using or planning to use commercially available FEA package ANSYS to analyze their research/technical problems in the aeronautical, automobile, mechanical, civil and other engineering industries. Participants are assumed to be well versed with basic knowledge of engineering principles (i.e., undergraduate degree in engineering). The maximum number of participants is limited to 50.

Course Material

A copy of the overheads used during presentations/lectures will be made available to the registered participants along with the course material.

Expert Lectures delivery

The lectures will be delivered by experts from Industry along with VNIT Faculty.

Who can attend

Faculty/Engineers/Working Professionals in Academia/R&D Labs/Industry with basic degree in Engineering are eligible. M.Tech/PhD scholars are also encouraged to participate in the course.

Accommodation

Limited accommodation at our VNIT Guest House can be made available to out-station participants on payment basis as per rules of the Institute. Student accommodation can be arranged in student hostels at nominal charges.

Note: Guest House Charges:	Rs.1200/- per day on twin sharing basis
Hostel Charges:	Rs. 100/- per day per person
Hostel Food Charges:	Rs. 50/- per meal

How to reach

VNIT is located at about 8 km from Nagpur Railway Station & 6 km from the Airport.

Registration Details

For Industry/Faculty/Academia	Rs. 6,000/-
For Students	Rs. 4,000/-

The registration fee includes course material/tea/coffee on all working days. Registration fee has to be paid as DD in favor of '**DIRECTOR-VNIT Nagpur**'.

Coordinators

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