

Introduction

Finite Element Analysis (FEA) has become an integral part of design process in automotive, aviation, civil Construction and various consumer and industrial goods industries. Cut throat competition in the market puts tremendous pressure on the corporations to launch reasonably priced products in short time, making them to rely more on virtual tools (CAD/CAE) accelerate the design and development of products. As dependability of the industries on virtual tools increases, so the responsibilities of the Finite Element Analysts to provide results with most accuracy within available resources and time constrains. FEA tools are being used to analyse multi disciplinary problems, including but not limited to structures, thermal and fluid flow, bio-technology, electromagnetism etc.

This course will be particularly beneficial for Engineers and Scientists working in Structural/Fluidflow/Environmental/Geo-technical/Thermal Engineering, Research Organizations, Govt. R&D Departments, Consulting companies, and selfemployed practitioners engaged in the analysis, design, planning, construction, operation, maintenance and management. This course would provide an excellent opportunity for the participants to interact with one another and discuss problems and solutions of mutual interest. At the end of the course, the participants may be in a position to identify and select appropriate FEA methodologies for their specific conditions.

Objective

- To apply the finite element method (FEM) to solve problems in different engineering disciplines viz stress analysis, fluid flow, heat transfer, and vibrations applications.
- To familiarize the participants to programming techniques utilized in implementing the FEM.
- To introduce the mesh free and extended FEM to the participants.

Eligibility

The course is open to Faculty Members, Students from Engineering Institutes / Colleges / Polytechnics and Practicing Engineers from Industries and R&D Institutions. Seats are limited.

Course Content

- Introduction to finite element methods: basics and fundamentals.
- FEA for solid mechanics problems.
- FEA for heat transfer problems.
- FEA for fluid flow problems.
- FEA for composite structure problems.
- FEA for dynamic problems.
- FEA for electrical circuit network problems.
- Introduction to mesh free method and extended finite element method (XFEM)
- Demonstration of FEA based packages & Case Studies

Faculty

The faculty members for this course are experts from reputed institutes and industry persons having rich experience in Finite Element Method and related fields.

Prof. Puneet Mahajan, IIT Delhi

Prof. B.K. Mishra, IIT Roorkee

Prof. P. Seshu, IIT Bombay

Dr. Manish Shrikhande Roorkee

Dr. I.V. Singh, IIT Roorkee

Dr. Rajeev Kumar, IIT Mandi

Dr. Vishal S. Chauhan, IIT Mandi

Dr. Om Prakash Singh, IIT Mandi

Registration Fee

Practicing Engineers : Rs. 7,500/-

Faculty Members : Rs. 4,000/-

Students : Rs. 2,000/-

Registration fee includes course material, working lunch, refreshments and accommodation (sharing basis at hostel). Fee is payable in advance by Demand Draft / Cheque in favour of "The Registrar, IIT Mandi" payable at Mandi, HP

Date & Time of Registration : 1st July 2013, 9AM at Academic block IIT Mandi.

SHORT TERM COURSE

on

FINITE ELEMENT METHOD FOR ENGINEERING APPLICATIONS-2013 (FEMEA-2013)

(1-5, July 2013)

Registration form

Name.....

Qualification

Designation..... Experience

Organization.....

Address.....

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Phone/Mobile No

E – Mail

Payment Details

Demand Draft No.....

Dated.....Drawn on.....

Date:.....Signature.....
Note

Patron

Honorable Professor T. A. Gonsalves,
Director, , IIT Mandi

Advisory Committee

Prof. Lalit Malhotra, IIT Mandi
Prof. Subrata Ray, IIT Mandi
Prof. Ramesh Oruganti, IIT Mandi
Prof. Balasundaram Subramanian IIT Mandi
Prof. S.R. Kale, IIT Delhi
Prof. B. K. Mishra, IIT Roorkee
Dr. Sukumar Bhattacharya IIT Mandi
Dr. Anand Srivastava IIT Mandi

Organizing committee

Dr. P. Anil Kishan, IIT Mandi
Dr. Rahul Vaish, IIT Mandi
Dr. Akansha Dwivedi, IIT Mandi
Dr. Ankit Bansal, IIT Mandi
Dr. Niraj Sinha, IIT Mandi
Dr. Om Prakash Singh, IIT Mandi
Dr. Sudhir Kumar Pandey
Dr. Ratan Joarder
Dr. Bharat Singh Rajpurohit, IIT Mandi
Dr. Anil. Kumar Sao, IIT Mandi
Dr. Manoj Thakur, IIT Mandi
Dr. Prem Felix Siril, IIT Mandi
Dr. Suman Kalyan Pal, IIT Mandi

General Information about Institute

Nestled in the Sivalik Range of the Himalayas, away from the bustle of the metropolis, a new abode of learning, IIT Mandi, has germinated in 2009.

The focus of IIT Mandi is to spearhead cutting edge research and development of technologies needed by the world in the years to come. Research groups will work together in creating and harnessing the newest technologies needed to serve the people of the region and the country, and to tackle problems of global importance. In order to achieve excellence and high impact locally and globally, IIT Mandi focusing on strongly foster inter-disciplinary R&D. With a view to innovating sustainable technologies for widespread use, IIT Mandi encourages strong Humanities and Social Sciences participation in technology R&D.

How to Apply

The duly filled Registration Form along with the Registration Fees (see fee details overleaf) should reach to the coordinator on or before 21st June 2013. Intimation of selection will be communicated to the participants by 24th June 2013.

Contact Address for correspondence

Dr. Rajeev Kumar / Dr. Vishal Singh
Course Coordinators,
School of Engineering,
Indian Institute of Technology Mandi,
Mandi – 175001

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SHORT TERM COURSE
on

**FINITE ELEMENT METHOD
FOR ENGINEERING
APPLICATIONS-2013
(FEMEA-2013)**

(1-5, July 2013)

**Coordinators**

Dr. Rajeev Kumar
Dr. Vishal Singh Chauhan

**School of Engineering,
Indian Institute of Technology Mandi,
Mandi 175001, INDIA**