

## INTRODUCTION

A course on **Finite Element Seismic Analysis** is planned to be conducted at IIT Madras during 20<sup>th</sup> – 24<sup>th</sup> March 2006 under the aegis of National Programme on Earthquake Engineering Education (NPEEE).

In the aftermath of the Bhuj earthquake in 2001, the NPEEE was initiated with the support of the Ministry of Human Resource Development (MHRD) to develop better teaching capability in the area of Earthquake Engineering. As a part of this strategy, several short term courses are planned to be conducted at all the resource institutes consisting of the IITs and IISc. Details of NPEEE may be found at <http://www.nicee.org/npeee>.

Every phenomenon in nature, biological, chemical or mechanical, may be described using certain basic laws of physics and axioms developed over the years. Engineers and scientists studying practical problems are faced with the task of developing and evaluating mathematical and numerical models to understand the phenomena and ultimately design and manufacture systems for human convenience and comfort. One such numerical method is the FEM.

As a resource institute for the programme, the course will be conducted at the Department of Civil Engineering, IIT Madras, Chennai.

The course is specially designed to introduce issues that are deemed essential for understanding of the finite element concepts from the point of seismic analysis. This course (FESA 2006) is specially designed for Teachers of Engineering Colleges who are involved or likely to be involved in teaching of the subject at the Undergraduate and Postgraduate levels. A test will be conducted at the end of the course to evaluate the value addition of the training.

## OBJECTIVES

1. To give basic concepts of finite element seismic analysis.
2. To illustrate the usage of finite element technique in seismic analysis and design of buildings, bridges and lifeline facilities.

## COURSE CONTENTS

1. Finite element structural analysis
2. Seismic analysis of RC buildings and bridges
3. Finite element analysis of ground response
4. Seismic analysis of dams
5. Dynamic soil-structure interaction
6. Seismic analysis of pile supported structures
7. Usage of SAP 2000 and IS Codal provisions
8. Nonlinear seismic analysis of structures.

## REGISTRATION FORM (FESA 2006)

1. Name:
2. Designation:
3. Mailing Address:  
  
Telephone:  
Fax:  
E-mail:
4. Educational qualifications:
5. Experience:
6. Motivation for attending the course and future plans
7. Name of the Sponsoring Organisation/College/University
8. Boarding and Lodging required: Y/N
9. Signature and date:

Note:

- In addition to this form, candidates should fill the NPEEE application form for teachers to participate in the training programme and get the recommendation of the Head of their Institution on the same.

## RESOURCE FACULTY

The following faculty who have considerable expertise in the area of Finite Element Analyses will be involved in the theory and tutorial sessions.

Dr. G. R. Dodagoudar  
Dr. B. Nageswara Rao  
Prof. A. Meher Prasad  
Prof. Devdas Menon  
Prof. A. Boominathan  
Prof. K. Rajagopal

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## IMPORTANT DETAILS

- Only permanent full-time faculty of AICTE recognized engineering colleges are eligible to apply. **Only 30 seats are available.**
- Cancellation after registration is highly discouraged and application will be given low preference during selection for future courses.
- Candidates are eligible for III AC train fare from the nearest station on production of a copy of the ticket. Non-A/C double room accommodation will be provided on a shared basis during the course period.
- Last date for Registration **25<sup>th</sup> Feb. 2006**

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## CORRESPONDENCE

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# National Programme on Earthquake Engineering Education (NPEEE)

Short Term Course on

## Finite Element Seismic Analysis

20<sup>th</sup> – 24<sup>th</sup> March 2006

Coordinators

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Dr B Nageswara Rao



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