

11. Conferences attended in the past five years

12. Earthquake engineering related activities pursued by the applicant in past 5 years: (it may be attached as a separate enclosure):

13. Other activities that show interest in Earthquake Engineering

Signature:

Name:

Recommendation of the Head of the Institution

Signature:

Name:

Date:

Designation:

(With Seal)

Other Participants

Industries and Government departments desirous of utilizing this opportunity may depute participants at their own expenses. A course fee of Rs. 20,000 (Rupees twenty thousand only) in the form of crossed DD payable to "Registrar, Indian Institute of Science Bangalore 560012" should be paid by such participants. Only five participants on a first come first served basis will be selected under this category.

For further details please contact

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Dept. of Civil Engineering,
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For more general information about NPEEE, please see website:

<http://www.nicee.org/npeee>

or

Email: npeee@iitk.ac.in

Please mail applications to:

Assistant Registrar,
Centre for Continuing Education
Indian Institute of Science, Bangalore-560012
Tel: 080-3600911, 2932491
Fax: 080-3600911
Email: office@cce.iisc.ernet.in

Important Dates:

Last date for receiving applications: Dec 24, 2006
Date for Intimation of Selections: Jan. 4, 2006

SHORT TERM COURSE

ON

Structural Dynamics and Random Vibration in Earthquake Engineering

Jan 30 – Feb 3, 2006

Convener

Professor D. Roy
Dept. of Civil Engineering

Sponsored by

Ministry of Human Resource
Development, Govt. of India
National Programme on Earthquake
Engineering Education



Centre for Continuing Education
INDIAN INSTITUTE OF SCIENCE
BANGALORE - 560012

Prelude

Earthquake hazard mitigation and preparedness are the key words heard nowadays in any of the discussions on engineering curricula. Invariably the question arises as to how the engineering graduates are educated in earthquake resistant design of structures. In order to address this issue the Ministry of Human Resource Development (MHRD) Govt. of India has launched recently the National Programme on Earthquake Engineering Education (NPEEE). Its aim is to build capacity in our technical institutions particularly engineering colleges, in the subject of earthquake engineering. Several short-term courses in the coming years are planned all over the country to meet this objective. IISc Bangalore, one of the resource institutions participating in NPEEE, will be conducting a short-term course during January 30 – February 3, 2006 for engineering college teachers. The coordinator of NPEEE at IISc is Prof C.S. Manohar, Department of Civil Engineering (Email: manohar@civil.iisc.ernet.in)

Participants

Teachers of recognized engineering colleges are eligible to apply for the course. There is no fee for the course. Selected participants will be given all course materials and will be provided with free lodging in the Hoysala Guest House of IISc. They will have access to the Structural Engineering laboratory of the Dept. of Civil Engineering. The number of participants is limited to 25-30 per course. Working lunch and coffee/tea will be served during the course.

Objectives in detail

- Introduce the basic concepts in dynamic as well as probabilistic modeling of earthquake loading and dynamic analyses/simulation with uncertainty in earthquake engineering.
- Introduce the basics of structural dynamic analyses with emphasis on earthquake engg. applications.
- Introduce the basics of probabilistic assessment of seismic hazard and structural reliability.

Course Contents and Format

1. Elements of structural dynamics (SDOF systems; elements of matrix algebra and MDOF systems; dynamics of continuous beams; numerical integration; response spectrum (14 hours; days 1, 2)
2. Elements of random variables and processes; PSD functions; response of SDOF and MDOF systems to filtered white noise excitations; stochastic modeling of earthquake accelerograms; derivations of modal combination rules (SRSS and CQC); spectrum and PSD compatible accelerograms (12 hours; days 3, 4)
3. Structural reliability and fragility analyses (9 hours; days 4, 5)

Every lecture will be of an hour's duration and the total number of lecture hours, covering all the topics and spread over 5 days, will be 35 hours. Tutorials as well as computer demonstrations will be conducted for each of the three broad topics mentioned above.

Resource Faculty

Prof D Roy, Prof C S Manohar (IISc Bangalore), and

Travel and Stay

Return train fare by 3-tier AC and free stay on the campus of IISc will be provided for the selected out station (non-local) participants. In addition a per diem of Rs. 150 will be provided for fourteen days to cover food and other expenses.

Venue and Time

The lectures will be held in the central lecture hall complex, Center for Continuing Education, IISc, Bangalore. Timings of lectures will be announced later and will be included in the registration material. The short-term course will be inaugurated at 9.30 AM on 30th January 2006. The course will end with a written test and have a feedback session on 3rd February, 2006.

Official Language

The official language of the short-term course will be English

Application Form

Application form for teachers to participate in training programme

1. Name:
2. Designation:
3. Name of College/Institution:
4. Address:

5. Phone (Office): _____
Phone (Home): _____
6. Email: _____
7. Qualifications:

Year	Degree	Specialization	University

8. Thesis titles (if applicable)
M.E./ MTech:

Ph.D:

9. Courses taught in the past five years:

10. Short courses attended in the past five years:
