

## SPONSORSHIP

Mr./Mrs./Dr. \_\_\_\_\_  
is an employee of our institute and his/her application is hereby sponsored. The applicant will be permitted to attend the short-term course at IIT Guwahati during November 27-December 1, 2006, if selected.

Date: \_\_\_\_\_  
Signature of Sponsoring Authority  
Designation: \_\_\_\_\_  
Official Seal: \_\_\_\_\_

---

For applicants from Industries and Government Departments:

DD No. \_\_\_\_\_ Date: \_\_\_\_\_

Bank: \_\_\_\_\_

Amount: \_\_\_\_\_

\_\_\_\_\_  
Signature of the Applicant

---

The duly sponsored application form should be mailed to:

Dr. S.K. Deb, Course Coordinator  
NPEEE Short Term Course  
Department of Civil Engineering  
Indian Institute of Technology Guwahati  
Guwahati – 781 039, Assam

Ph. No.: 0361 2582402 (O), 0361 2584402 (R)

Fax No.: 0361 2582440

Email: [skdeb@iitg.ernet.in](mailto:skdeb@iitg.ernet.in)

## ELIGIBILITY

The course is open to teachers of Engineering Colleges approved by AICTE and having a degree in Civil Engineering. *No course fee* is charged for participants sponsored by AICTE approved institutions.

Participants from Industry and Governments Departments are eligible, provided they meet their T.A. and D.A. and pay a course fee @ Rs. 4000/-. The payment is to be made by demand draft drawn on any Nationalised Bank in favour of *IIT Guwahati*, payable at Guwahati.

## BOARDING AND LODGING

Boarding and lodging facilities will be provided for the selected candidates from AICTE approved institutions in the Institute Guest House (subject to availability).

## IMPORTANT DATES

The last date for the receipt of duly sponsored applications: 17.10.2006

Intimation of Selection: 24.10.2006

N.B. Interested candidates may send advance copy of the application duly countersigned by the Head of the Department / Controlling Officer (for sponsored candidate) to avoid procedural delay.

## SHORT TERM TRAINING PROGRAMME

ON

*Seismic Retrofitting of Buildings:  
Conventional and Structural Control  
Based Approaches*

Under



**November 27- December 1, 2006**

*Sponsored by*  
**Ministry of Human Resource Development  
Government of India**

*Coordinator*  
**Dr. S.K. Deb**



**Department of Civil Engineering  
Indian Institute of Technology Guwahati  
Guwahati - 781 039**

## BACKGROUND

The National Programme on Earthquake Engineering Education (NPEEE) supported by the Ministry of Human Resource Development (MHRD) aims at developing better teaching capabilities within the country in the crucial area of Earthquake Engineering. The country is prone to unacceptably large earthquake risk that needs to be reduced by a variety of means. However, in any endeavour towards seismic risk reduction, the lack of adequate quality and quantity of manpower is a major bottleneck in our country. NPEEE is meant for developing capacity within the engineering and architectural institutions of the country in this subject. The main vehicle of this change is the *training of teachers and curriculum development*.

## COURSE OBJECTIVES

- To discuss the evaluation procedures of buildings
- To explain new codal provisions
- To explore available retrofitting materials
- To introduce the developments in structural control methodology
- To discuss both conventional & control based seismic retrofitting of buildings

## COURSE CONTENTS

- Introduction to seismology
- Earthquake ground motion and characteristics
- Concept of response spectrum, Design spectrum
- Preliminary evaluation – Rapid visual screening
- Introduction to Pushover analysis
- Detailed evaluation of building using *SAP 2000 Nonlinear* program

- FEMA 356 - relevant provisions, IS: 13935, 1993, Draft provisions & commentaries
- Retrofitting materials, advantages & disadvantages of different types of materials
- Retrofitting of structural elements & joints
- Passive control methods for retrofitting
- Introduction to semi-active control methods for retrofitting

## FACULTY

Faculty members of IIT Guwahati and guest faculty members from industry will deliver lectures.

## ABOUT IIT GUWAHATI CAMPUS

IIT Guwahati campus is spread over a sprawling 285 hectares plot of land on the north bank of the river Brahmaputra around 25 km from the heart of the city. With the majestic Brahmaputra on one side, and with hills and vast open spaces on others, the campus provides an ideal setting for learning. Guwahati city (situated at 91° 44' E longitude & 26° 10' N latitude) is gateway to beautiful NE region of the country and linked with all major cities by rail, road and air. Guwahati has a temperate climate with temperature varying between 7°C to 37°C. During first week of December minimum will be around 15°C.

## FINANCIAL ASSISTANCE

Participants sponsored by AICTE approved institutions will be eligible for single ***Third AC SLEEPER CLASS*** to and fro railway fare via shortest route and free lodging and boarding at **IITG Guest House** (non AC & sharing basis) during course period. **Participants attending the course in full only will be eligible for TA. Participants are required to produce the ticket(s) in original for reimbursement.**

## NPEEE SHORT TERM TRAINING PROGRAMME ON

### *Seismic Retrofitting of Buildings: Conventional and Structural Control Based Approaches*

November 27 - December 1, 2006

#### *Application Form*

1. **Name (block letter):**
2. **Designation:**
3. **Organisation:**
4. **Address for communication:**

**Pin code:**  
**Fax No.**

**Ph. No.:**  
**E-mail:**

5. **Highest Academic Qualification:**
6. **Specialisation:**
7. **Experience (in years):**  
(a) **Teaching:** (b) **Industrial:**
8. **Courses taught (last five years):**
9. **Please attach a separate enclosure on Earthquake Engg. related activities pursued in past 5 years (in maximum 300 words).**

**Place:**  
**Date:**

**Signature of the applicant**