

Completed Registration form should be sent to Course coordinators:

**Prof. Eldho T.I. / Prof. Y.M. Desai,
Course Coordinator,
Department of Civil Engineering,
Indian Institute of Technology Bombay,
Powai, Mumbai – 400 076**

Phone: (022) – 25767339 / 25767333

Fax: (022) –25767302 / 25723480

Email: eldho@civil.iitb.ac.in
desai@civil.iitb.ac.in

Deadline for submitting application: 15 April, 2016

Notification of acceptance: 30 April, 2016

- Incomplete application forms will not be entertained
- For additional copies of the registration form, please xerox or type in the format given

For further details:

<http://www.iitb.ac.in/~qip/>

Boarding & Lodging

Participants who need accommodation in the campus, will be provided on request, in IIT Student Hostels (subject to availability). Food will be available in Hostels/ canteen (participants should meet boarding and lodging expenditure from their DA).

Faculty

The teaching faculty constitutes experts from various engineering disciplines of IIT Bombay. The core faculty include Prof. Y.M. Desai, Prof. Tarun Kant, Prof. Eldho T.I., etc.

Venue for Classes

Classes will be held in Seminar Hall of Department of Civil Engineering, IIT Bombay.

Lecture Notes

To fully realize the objectives of the course, the lecture notes will be made available at the time of registration at IIT Bombay

Date & Time of Registration:

4 July 2016, 9.00 AM at Civil Dept., IIT Bombay.

For any further information regarding QIP programmes at IIT Bombay, contact:

Coordinator, Q.I.P.,
IIT Bombay, Powai, Mumbai – 400 076.
Phone & Fax – (022) 25767047
Email: qip@iitb.ac.in



QIP SHORT TERM COURSE

on

FINITE ELEMENT METHOD & APPLICATIONS IN CIVIL ENGINEERING

4 July – 8 July 2016

Coordinators

**Prof. T.I. Eldho
Prof. Y.M. Desai**

**Department of Civil Engineering
Indian Institute of Technology Bombay
Powai, Mumbai 400 076
INDIA**

INTRODUCTION

The basics of the Finite Element Method (FEM) will be discussed at length in this introductory course. Applicability of the method and different types of formulation procedures will be explained. Complete step-by-step details will be presented for typical one, two and three - dimensional analyses. Moreover, FEM formulations will be elaborated for various fields of Civil Engineering such as structural, hydraulics, geotechnical, environmental engineering etc. Computer implementation of the methods and use of various packages will be introduced. Course notes, analysis software will enable the participants to perform routine analyses.

BROAD OBJECTIVES

- To introduce the FEM to the participants.
- To apply the FEM to solve problems in different engineering disciplines viz. stress analysis, hydraulics, environmental and geotechnical engineering applications to familiarize participants to programming techniques in implementing the FEM.

COURSE CONTENTS

The short-term course aims to include following themes with particular emphasis to Civil Engineering:

- ◆ Introduction to FEM
- ◆ Advantages & disadvantages of FEM
- ◆ Variational and weighted residual formulations
- ◆ Formulation of 1-D & 2-D elements, as well as plate and shell elements
- ◆ Programming techniques utilized in implementing FEM
- ◆ Introduction to Boundary Element Method (BEM)
- ◆ Demonstration of packages

ELIGIBILITY

Faculty members of engineering colleges recognized by AICTE, working in the area of engineering are eligible to attend the course.

TRANSPORT, BOARDING & LODGING

Participants are entitled for Second Class (Sleeper Class) or III AC railway fare to and fro by the shortest route from college to IIT Bombay. All participants will be given auto fare from Kanjurmarg / Andheri to IIT on the dates of arrival and departure. Local participants will be paid second class railway fare or BEST Bus fare. Boarding and lodging will also be provided free of cost. Accommodation will be provided in the students Hostels only.

COURSE SCHEDULE & EVALUATION

This programme is scheduled to be held during 4 July - 8 July 2016. Successful participants would be awarded 'Course Completion Certificate'.

REGISTRATION

There is no registration fee for the course. However all **shortlisted candidates** are required to confirm their participation by sending a "**Demand Draft of Rs.2,000/- in the name of "Registrar IIT Bombay"**". The above amount will be refunded to the participant if he / she attends the course. In case a participant does not attend the course, the above amount is forfeited.

The completed registration forms should be received by the Coordinators by **15 April, 2016**.

QIP Short Term Course on

FINITE ELEMENT METHODS & APPLICATIONS IN CIVIL ENGINEERING

4 July – 8 July 2016

Registration Form

Name(in block letters): _____

Gender: Male / Female _____

Designation: _____

Organization: _____

Mailing Address: _____

Telephone: _____

Fax: _____

Email: _____

Educational Qualification: _____

Experience: _____

Accommodation in Campus: YES / NO

Signature of Applicant: _____

Sponsorship & signature of Head of the College / Institute (with date & seal)