

## COURSE OBJECTIVE

Energy management can help industry control its operating costs. Energy management is also important for reducing local, regional and global emissions and can help mitigate the problem of global warming. This course will help industry professionals acquire the skills and techniques required to implement energy management. This course will also benefit researchers and students who are interested in working on energy management. In the context of the Energy Conservation Act 2001, the Bureau of Energy Efficiency has emphasised the importance of Energy Managers and Certified Energy Auditors. This course is designed to provide the background required for engineers to meet this role.

Apart from the lectures, hands-on laboratory sessions on efficiency testing are planned at IIT. The course also includes tutorials to help participants understand the concepts involved.

## ABOUT IIT BOMBAY & DESE

The Indian Institute of Technology Bombay is one of the premier technological institutes in India with students and faculty who are comparable with the best in the world. IIT Bombay has several undergraduate,

postgraduate and doctoral programmes in the engineering, basic sciences, humanities and management and has also initiated programmes in inter-disciplinary areas like energy systems, environmental sciences, bio-medical etc. The institute has a vibrant research culture and has several linkages with Indian and international industries and institutes.

Energy Systems Engineering (ESE) was founded as an inter-disciplinary programme in 1981. In 2007, the Board of Governors of IIT Bombay approved the growth of Energy Systems Engineering into a Department of Energy science and Engineering (DESE) with a mission to develop sustainable energy systems and solutions for the future. Apart from the post-graduate (M.Tech and Ph.D.) programmes, the DESE faculty have been actively involved in organising training programmes in the field of energy efficiency, energy conservation and renewable energy. DESE has started an integrated M.Sc.- Ph.D. programme in Energy from 2007 and a Dual Degree B.Tech (Energy Engineering) and M.Tech. (Energy Systems Engineering) programme in 2008. DESE currently has about 35 M.Tech's and Ph.D graduating annually.

## COURSE CONTENTS

- Overview of India's Energy Scene
- Fundamentals of Energy Engineering
- Energy Auditing
- Energy Efficiency in Motor drive Systems
- Cogeneration
- Efficiency in Boilers and Steam Systems
- Energy Economics
- Efficiency in Pumping Systems
- Pinch Analysis
- Energy and Environment
- Waste Heat Recovery
- Benchmarking Energy Performance
- Energy and Climate, CDM, Carbon Credits
- Laboratory Experiments- Boiler, Motor Efficiency , Lighting, Pumping Control

## COURSE FEE

Per participant

- Rs. 12000 from industry
- Rs. 10000 from Academic institutions
- US \$ 400 for foreign delegates

The demand draft should be drawn in favour of **"The Registrar, IIT Bombay- CEP Account"** payable at Mumbai.

No income tax is to be deducted at source from the course fee, as IIT Bombay is exempt from the same. The course fee includes course material, lunch and coffee/tea.

## ACCOMMODATION

Accommodation (during the course) for participants attending the course in IIT Mumbai will be arranged in the institute guest house for a limited number of participants on advance request. Accommodation charges are not included in the course fee and should be paid directly by the participant.

## COURSE DATES & VENUE

The Course dates are November 22 – 26, 2010. The programme will be held at the Conference Hall (Ground Floor), **Institute Guest House, IIT Bombay.**

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For information on other Continuing Education Programmes at IIT B, contact:

PROF-IN-CHARGE (CEP)  
OFFICE OF  
CONTINUING EDUCATION PROGRAMME (CEP)  
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY,  
POWAI, MUMBAI – 400 076.  
TEL. NO. : 022-2576 7060, 2572 6199  
FAX : 2572 3480  
Email : cep@iitb.ac.in

For latest information on CEP, please visit our home page at :  
<http://www.iitb.ac.in/~cep/>

## REGISTRATION

The participants should send registration forms duly filled along with the demand draft for the course fee to address given below on or before **18 November 2010.**

**Last date for receipt of registration forms:**

**18 November 2010**

**Address all communication to:**

Prof. Rangan Banerjee  
Department of Energy Science & Engineering  
Indian Institute of Technology Bombay  
Powai, Mumbai – 400 076

Tel. : +91-22-2576 7883 / 25767890  
Fax : +91-22-2572 6875, 2576 4890  
Email : rangan@iitb.ac.in

**Visit : [www.ese.iitb.ac.in/em10.html](http://www.ese.iitb.ac.in/em10.html)**

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# CEP COURSE ON ENERGY MANAGEMENT

**November 22 – 26, 2010**



*Organised by*

**Department of Energy Science and  
Engineering**

*Office of*

**Continuing Education Programme**

**Indian Institute of Technology Bombay**

**Mumbai – 400076, India**