

Half Day Coordinators' Workshop on Pedagogy for Effective use of ICT in Engineering Education

Under the

**National Mission on Education through ICT
(MHRD, Govt. of India)**

On 25th November 2014

Workshop overview

Educational technology is now ubiquitous; however, the potential of these technologies is lost without appropriate pedagogical strategies. Teachers not only need to have a knowledge of which ICT tools are relevant for education, but more importantly how to use them effectively. This workshop focuses on which pedagogical strategies are effective while using ICT tools in a given teaching-learning situation. In this workshop, participants will begin by articulating the objectives for their course, and explore tools appropriate for some pedagogical goals of engineering courses. Participants will learn effective strategies for teaching with these tools. The workshop will give participants several opportunities to apply these strategies to design materials and activities for their courses.

Coordinators' Workshop Duration and Venue

IIT Bombay will conduct the Coordinators' workshop with **Remote Center Coordinators** on 25th November 2014 for **half day** from 2:30 pm to 5:30 pm. The workshop will be conducted through A-View with the registered remote centers of IIT Bombay. The participating institutes will act as a remote center later for the conduct of Main workshop.

Teaching Faculty

Prof. Sahana Murthy

Inter-Disciplinary Programme in Educational Technology, IIT Bombay

<http://www.et.iitb.ac.in>

Prof. Sridhar Iyer

Department of Computer Science and Engineering, IIT Bombay

<http://www.it.iitb.ac.in/~sri/>

Who Should Attend

The workshop is required to be attended by the remote center coordinators only, who are willing to be prospective Workshop coordinators for the main workshop to be held in January 2015.

Course Fee

Since the workshop is funded by the National Mission on Education through ICT (MHRD, Government of India), there is no course fee for participation.

Course Content

Topics in the workshop will include:

- 1] Course planning
 - a. Developing learning objectives – what, why, how
 - b. Hierarchy of cognitive levels for learning objectives
 - c. Concept maps for course planning and corresponding open-source tools
- 2] Writing effective assessment questions

- a. Alignment of assessment to learning objectives
- b. Writing higher order assessment questions
(Apply, analyze, evaluate, and create levels)
- 3] Visualizing scientific content
 - a. Benefits of visualizations such as animation and simulation for engineering teaching & learning
 - b. How to find suitable visualizations for your course
 - c. How to effectively teach using visualizations
- 4] Creating an active-learning classroom
 - a. Why active-learning and how to achieve it
 - b. Specific active-learning techniques such as Peer instruction and Think-pair-share
- 5] Flipped classroom – what, why, how
 - a. The out-of-class part: videos, Spoken-Tutorials for content
 - b. The in-class part: activities for students based on above content
- 6] Promoting student collaboration
 - a. Benefits of promoting student interaction
 - b. Tools to promote student collaboration – blogs, wikis, and forums
- 7] Exploring ET tools
- 8] Evaluating effectiveness of teaching strategies

How to Apply

Remote Center Coordinators who are willing for their Institutes to be a remote center for conducting the Main workshop in January 2015, should register online at **www.it.iitb.ac.in/nmeict**

Note

Please note that this workshop is conducted by the T10KT project of IIT Bombay, under the National Mission on Education through ICT. Live recording of the course and other created contents will be released under Open Source through a portal. The recorded CD/DVD of the course lectures will be available for distribution at cost, to any individual/ institution. All participants are required to sign an authorization for such release of contents contributed by them during and after the workshop. Recognition and citation will naturally be made for all contributors.

**LAST DATE FOR ONLINE ENROLLMENT:
22nd November 2014**

Address for Communication:

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