

Introduction

IIT Bombay has been involved with distance synchronous education, since year 2000. We have trained over 1,36,000 teachers, in partnership with IIT Kharagpur, under the T10KT (Train 10 Thousand Teachers at a time) project sponsored by NMEICT. All training workshops so far, were on specific subjects of Engineering and Science Education, most of which are taught as core courses in our colleges and universities. The participating teachers have benefitted from these programs.

Online educational methodology, and flipped-classrooms with associated pedagogy of active learning, have quickly emerged as the mainstay of effective education in this century. However, most of our teachers lack skills and competencies for proper and effective use of ICT in education. It is thus an urgent national requirement that all our teachers, at least those teaching in our professional colleges, are empowered to use technology effectively, to enhance the quality of education.

To meet this requirement, IIT Bombay has specially designed a Faculty Development Program (FDP) on "Use of ICT in Education for Online and Blended Learning". A pilot implementation of this course was done during May-July, 2016. A total of 2193 participants had successfully completed this workshop and had obtained the certificate. The FDP was a single course then having a longer duration.

Based on the inputs of the participants and course team, this year the course is being offered as a two-part FDP so as to focus on Technology and Pedagogy respectively. These FDPs are conducted under the aegis of Pandit Madan Mohan Malviya National Mission for Teachers and Teaching (PMMMNMTT). The first course under this FDP, with a focus on technology, is titled "Foundation Program in ICT for Education" and is designed as a Blended/Hybrid MOOC (Massive Open Online Course) – FDP101x. There will be one weekend face-to-face sessions at the Remote Centres. The course will be offered from 27 July 2017 till 31 August 2017. The second part of this FDP is scheduled from 14

September to 12 October 2017 and has been explained separately.

Learning Objectives for the Course

After successful completion of the course, participants will be able to:

- i. Identify various ICT devices and applications useful in teaching-learning
- ii. Develop awareness towards ethical practices for use of ICT in education
- iii. Make use of best practices for information dissemination using ICT

Course Content

1. Information Capture, Storage, and Display

- Subsystems of Computer Devices for Capture
 - Keyboard, Monitor, Printer, Webcams, Mouse, Hard disks
 - Tablets and Smart Phones Servers,
 - Cloud, Storage Farms, CD/DVD, Pen Drive
- Effective Storage and Display
 - Directory Organization and File Handling
 - Dealing with Multiple Information format
 - Organizing and Searching

2. The World of Internet and Web

- Essentials
 - Basics of Connectivity, LANs and WANs, Wireless and Bluetooth
 - Organization of Web, IP Address, Domain Names, DNS Servers
 - Browsers and Plug-ins
- Effective Exploration of Web
 - Searching Techniques
 - Best Practices for Exploration

3. Use of ICT for Resource Creation and Management

- Digital Content Creation using common productivity tools
 - Document Editors
 - Presentation Software
 - Spreadsheets

- Audio-Video Resource Creation: Spoken Tutorial Methodology

- Content Management Systems
- Learning Management Systems

4. Best Practices for Information Dissemination with ICT

- Best Practices for Visual Communication
- Best Practices for Online Collaboration
 - ICT as a facilitator for academic ethics and Integrity
 - Creative Commons Licensing
 - Netiquettes for effective email communication
 - Practices for engaging in a healthy online discussion
- Facilitating collaborative resource creation and evaluation for online usage

Criteria for Certification

IIT Bombay will award certificates only to those participants who successfully complete prescribed online tests with minimum 50% aggregate score, and meaningfully participate in face-to-face sessions. **AICTE has recognized this as a Two-week FDP.**

Note 1: This FDP is conducted under the T10KT project of IIT Bombay. Live recording of the course and other created content will be released under Open Source, through a portal. All participants are required to sign a No Objection Certificate for such release of content contributed by them during and after the FDP. All contributors will be acknowledged.

Note 2: Since the content **are** being released under Creative Commons, participants have to ensure that they provide accurate citations. All the content generated will undergo check for plagiarism and plagiarism detected will lead to cancellation of registration and serious disciplinary actions.

Who Should Attend

As this FDP is not subject-specific, teaching faculty from any domain, including faculty from management, polytechnics, science, arts and commerce can participate. Teachers registered in a Masters or a PhD program, during their employment as a teacher, can also participate.

Duration and Venue

This **Two week** FDP consists of two components as follows:

1. **Online work by individual participants:** Each participant is expected to access the online platform, using a PC at home or office, on any convenient day and time during the week, with an online test every week. Each participant has to spend 6 to 8 hours of efforts per week during this component of the FDP. This is equivalent to one day of work in a regular FDP. This activity will be spread over 5 calendar weeks: From Thursday 20 July 2017 to Thursday 24 August 2017.

2. **Face-to-Face interaction:** Participants will have to physically attend these sessions at their chosen or designated Remote Centers (RCs), established across the country by IIT Bombay. Focused interactive sessions with the participating teachers, will be conducted by the faculty from IIT Bombay. The discussions and local tutorial sessions will be moderated by the Workshop Coordinators appointed at each RC. This activity will be conducted on the weekend of 19, 20 August 2017.

Teaching Faculty

Prof. Deepak B. Phatak, Dept. of CSE, IIT Bombay

Prof. Kannan Moudgalya, Dept. of CE, IIT Bombay

Prof. U Bhandarkar, Dept. of ME, IIT Bombay

Prof. P Sunthar, **Dept. of Chemical**, IIT Bombay

Dr. Sameer Sahasrabudhe, Dept. of CSE, IIT Bombay

Mr. Jayakrishnan M, Dept. of IDPET, IIT Bombay

Course Fee

Funding support from Ministry of Human Resource Development (MHRD) permits us to offer the FDP without any course fees. Participants have to take care of their expenses for travel/food during the A-VIEW interaction at Remote **centers**.

Additional benefits

It has been decided that 250 top performing participants, will be identified based on the assessment criteria of both the FDPs. Further, they will also be offered an opportunity to participate as associate faculty (with an appropriate honorarium, of course), for conducting these FDPs in future.

Accommodation: Not Applicable

How to Apply

If you wish to attend this course, you should register online. The online registration will start from **Wednesday 7 July 2017. The last date of online registration is Wednesday 26 July 2017**

The URL for registration is

<http://www.it.iitb.ac.in/nmeict/announcements.html>

Address for communication:

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Two-Week AICTE approved FDP

Under the aegis of Pandit Madan Mohan
Malviya National Mission for Teachers and
Teaching (PMMNMTT)
on

"Foundation Program in ICT for Education"

(This FDP will be offered in a blended/Hybrid mode)

27 July to 31 August 2017

Conducted by

IIT Bombay



Course Coordinator

Professor Deepak B. Phatak
Department of Computer Science & Engineering

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