

Two Week ISTE Short Term Training Programme (STTP)

on

Technical Communication for STEM faculty

Under the

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

One-week equivalent of work to be completed online,
during
08th October to 11th November 2015

Physical participation at Remote centers during
30th November to 05th December 2015

Conducted by IIT Bombay



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Short Term Training Programme on Technical Communication

This Short Term Training Program (STTP) on Technical Communication, is being conducted by IIT Bombay under the National Mission on Education through ICT (MHRD, GoI) in collaboration with the Indian Society of Technical Education (ISTE), for enhancing teaching skills of faculty of engineering colleges. It is meant to train faculty from all departments of Science, Technology, Engineering, Mathematics (STEM), and Humanities. The trained faculty can potentially use contents from this course for (i) teaching Undergraduate/Postgraduate (UG/PG) **courses** in Technical Communication, Scientific Communication or equivalent and (ii) training project students to communicate their **research or development work** to various audience. On successful completion of this program they will be able to organise, comprehend, write, and present, short and long forms of any technical work in the framework of the **Scientific Method**. They will also be able to communicate this content within the widely accepted **current norms**. In this process, they will gain relevant examples in their own domain of knowledge, and be able to use those, along with the general illustrations given here, to train students in the craft of technical communication.

Who Should/Can Attend?

1. Do you feel the quality of project reports or thesis submitted by students leaves a lot to be desired?
2. Do you see that your students are able to defend their work among peers, but are unable to express it well in an interview or to a general audience?
3. Do you think your students must carry out even small projects with a rigour expected of a scientific approach?
4. Do you observe your students have scant or no regard to ethics of technical or workplace communication?
5. Do you teach a “Communication skills” course for STEM disciplines, and felt the lack of good resources?

If you answered ‘Yes’ to any of the above questions, and you wish to try and change that situation for good, then this course may be for you.

Who is eligible?

- Any faculty member from STEM departments, or from Humanities, Social Sciences, and Management disciplines (who conduct communications courses for STEM students).
- Science teachers teaching PG courses equivalent to M.Sc level or UG courses in engineering (BE/BTech).
- Faculty from polytechnic institutes
- Teachers registered in a Masters or a Ph.D program, during their employment as a teacher in one of the above categories.

Who is not eligible?

- Teachers of B.Sc, B.A, BBA, or equivalent, and students/research scholars are welcome to listen to the lectures and participate in the workshop tutorials, subject to availability of seats, but are not eligible to get a certificate from ISTE.
- Teachers who are not employed in any college at the time of the STTP, are not eligible.

Background of the T10kT Short Term Training Programmes

In 2009, IIT Bombay started conducting Teacher Training Programmes to engage 1,000 teachers at a time, in subject specific training STTPs of two weeks duration. In 2013 the project was scaled further, to train up to 10,000 teachers (T10KT) simultaneously, using 353 specially equipped centers at colleges across India. These remote centers are connected to IIT Bombay e-studio (which has facilities to conduct high quality live audio-video sessions,) using the A-VIEW software, developed by Amrita University. The main advantage for the participating teachers is that they are able to get a high quality training near to their place of work or stay, which is particularly appreciated by teachers who have significant family commitments that prohibit outstation travel for long periods.

To further enhance the learning experience, some STTPs are now being offered in an online-cum-face-to-face blended mode. The participants first undergo a learning through video lectures and online interactive assessments through IIT Bombay's MOOCs (Massive Open Online Courses) platform called as IITBombayX, which is in partnership with edX. A paper on this blended model is available at <http://www.it.iitb.ac.in/nmeict/pdfs/MOOCs.pdf>. This will also train teachers for adopting the use of MOOCs in general.

When the participants attend the face-to-face component of the STTP, after the online learning, they are already half prepared with the content. This makes the workshop tutorials more effective; this is equivalent to a **flipped-classroom approach**. Since part of the content is already available online, the teachers can later use that material to teach their students in a similar flipped-classroom method, where the students listen to the lectures online, and attend their class to carry out tutorial assignments. **IITBombayX is free for anyone to register and to participate in the courses.**

STTP format

The STTP on Technical Communication will be conducted in the blended-MOOC format. It will consist of the following parts:

- 1. Online Component: IITBombayX (MOOCs) and Moodle (8 Oct to 11 Nov 2015) : 5 Weeks**
Registered participants will listen to online video lectures and complete assessments in IITBombayX and Moodle platforms. They will be evaluated by giving grades for this portion. The online platform has a provision for conducting a discussion forum for clarifying doubts with IIT Bombay faculty.
- 2. Face-to-face workshop (30 Nov to 5 Dec 2015) : 6 Days**
Participants will assemble in a local college that is authorised to be a Remote Center for IIT Bombay's Technical Communication STTP. Sessions will be conducted by IIT Bombay faculty from IIT Bombay via the internet. Participants will be able to interact live through this audio-video link with IIT Bombay faculty. Participants will work individually and in groups to carry out tutorial exercises in various aspects of communication, with live feedback from IIT Bombay and the local Course Coordinators.
- 3. Post workshop assignment**
Participants will need to submit online assignments after the completion of the face-to-face workshop. This will again be a graded evaluation.

Duration and Venue

The face-to-face component will be conducted at the Remote Centers and will consist of 6 days.

- 1. Online Component: 8 Oct to 11 Nov 2015 (5 weeks)**
A set of lectures and assignments will be posted every week. The effort expected from the participants is about 7 to 8 hours per week. The online component can be attempted

at any time of the day from any computer with Internet access. About 2 to 3 hours in this weekly work will be carried out offline, and submitted online.

2. Face-to-face workshop: 30 Nov to 5 Dec 2015 (6 days)

The schedule of the workshop is 9:30 am to 4:30 pm Monday to Saturday (approx 6 hours per day excluding lunch break). The participants must be present in the center they have registered.

ISTE Certification Criteria

ISTE will provide the STTP completion certificate **only for eligible faculty (read 'Who can attend?')**

- Additionally, the certificate will be issued only to participants who get a minimum grade equivalent to 40% in every assignment posted during the online component and post-workshop.
- It is also essential that the participants **attend all the days** of the face-to-face workshop.

Course Contents

Scientific method and its relationship to technical communication; Listening and note taking; Reading skills and summarising; Writing skills: methods, organisation, summary; Presentation skills: slide content, non-verbal; Interview and Group Discussion skills; Ethics; Gender and cultural issues; Internet communication.

While this course will be conducted in English, what it will **not** specifically address is training to improve English or Technical English language skills. But what will be covered is universal, and can be applied to any language one is comfortable with.

Teaching Faculty

The following faculty from various departments of IIT Bombay have several years teaching experience in Technical Communication course in IIT Bombay's curriculum.

- Prof. P Sunthar (Coordinator), Chemical Engineering
- Prof. M P Gururajan, Metallurgical Engineering and Materials Science
- Prof. Leena Jha, Sailesh J Mehta School of Management
- Prof. Ambarish Kunwar, Bio-sciences and Bioengineering
- Prof. Sahana Murthy, Education Technology
- Prof. Ashish Pandey, Sailesh J Mehta School of Management
- Prof. Prita Pant, Metallurgical Engineering and Materials Science
- Prof. D Parthasarathy, Humanities and Social Sciences
- Prof. Sachin Patwardhan, Chemical Engineering
- Prof. Virendra Sethi, Environmental Science and Engineering

Open Courseware

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 a cost, to any individual/institution. All participants are required to sign an authorisation for such release of contents contributed by them during and after the STTP. Recognition and citation will given to all contributors.

Course Fee

This STTP is conducted in a self finance mode for the remote centers. Teachers who wish to register, need to pay Rs. 1000/- as participation fees to the IITB authorised remote center where they wish to attend the face-to-face component. For food and stay, the participant will have to bear extra charges as per the rates advertised by the center. Availing of the facilities

related to food and accommodation is optional for the participant.

. **The participation fee of Rs. 1000 is mandatory and non refundable** There is no separate fee for the online component..

Accommodation and other support

Remote centers may provide tea/lunch on each day of the STTP, and accommodation, wherever available, for outstation participants. All the facilities related to food and accommodation are chargeable and charges may vary from place to place. This cost is **not included** in the course fee. The costs chargeable for food and accommodation at a center, are available in the online registration form; please make sure that you check the rates before you apply for a center. Availing of the facilities related to food and accommodation is optional for the participant.

How to Apply

Those wishing to attend this course should first register online at <http://www.it.iitb.ac.in/nmeict>

Enrollment will be strictly online, and no other mode of application will be entertained.

Mandatory requirement

It is mandatory that while registering for the STTP, the participants should submit a scanned copy of a letter from the Principal/Head of the Institute. Format of this letter is available on the registration website. Registration without this letter will not be confirmed.

The online form contains a list of remote centers. From this list, please select a center close to your institute, where you wish to attend the STTP. The last date for enrollment, and for submission of permission letter is 30th September 2015. A list of selected participants will be put up on this website on 3rd October 2015. The selected participants will also be informed by an automated email. After the initial registration is approved by IIT Bombay, the applicants must visit the remote center to pay the course fee to complete the registration process.

Important Dates

- Last date for online registration: 30th Sep 2015
- Last date for payment of course fee at remote center: 30th Sep 2015
- Final approval of participation from IIT Bombay: 3rd Oct 2015
- Online course period: 8 Oct to 11 Nov 2015
- Face-to-face workshop: 30 Nov to 5 Dec 2015

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