

TWO WEEK MAIN WORKSHOP ON ANALOG ELECTRONICS

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

June 4th , 2013 to June 14th, 2013

Introduction

An important initiative has been taken by IIT Bombay and IIT Kharagpur to work with Engineering Colleges in the country to enhance the teaching skills of our faculty colleagues in core Engineering and Science subjects. This is the second phase of Teach One Thousand Teachers programme run successfully earlier by IIT Bombay under the project called 'Empowerment of Students and Teachers through Synchronous and Asynchronous Instruction'. Two-week ISTE workshops are conducted during the vacation periods in summer and winter. Participating teachers attend live lectures delivered by IIT faculty at a remote center close to their own college, and also attend tutorial and lab sessions conducted in the same centers. The lecture transmission and live interaction takes place in distance mode using the AVIEW technology through internet, at selected remote centers across the country. This initiative is part of the 'National Mission on Education through ICT,' which is supported by MHRD. Faculty coordinators are appointed at each remote centre to handle the technology infrastructure and other operational logistics. Additionally, for each workshop there will be a workshop Faculty Coordinator for that subject, who will help in the conduct of labs and tutorials at each center.

We invite expert faculty from various remote centers to a five-day 'Coordinators' training workshop' which is held in IIT, at least two months before the main workshop. These Coordinators then act as Workshop Coordinators during the main workshop, liaising between the participants at their Remote Centers and IIT, from where the workshop is transmitted live. During the main workshop, the Workshop Coordinator at every center supervises the conduct of tutorials and labs. All the lectures and tutorial sessions are recorded at IIT. The final edited audio-visual contents, along with other course material will be released under Open Source. These contents can be freely used later by all teachers and students.

Since December 2009, two-week ISTE workshops were conducted on "Effective teaching/ learning of Computer Programming," "Database Management Systems," "Basic Electronics," "Thermodynamics," "Software Development Techniques for Teachers of Engineering and Science Colleges," "Heat Transfer", "Solar Photovoltaics", "Introduction to Research Methodology", "Engineering Thermodynamics" and "Research Methods in Education Technology." We have reached more than 30,000 teachers and helped them to enhance their teaching skills at around **320** distinct Remote Centers across the country.

In the backdrop of the success of these workshops, we now announce another two-week ISTE workshop during June 4-14, 2013 on Analog Electronics.

Course Content

Syllabus to be followed for the workshop on course on "Analog Electronics," is given below:

- **Semiconductor Devices (BJT and MOSFET):** Operations and characteristics, low frequency- and high frequency models.
- **Single stage amplifiers:** Common emitter and common source amplifier, Common base and common gate amplifier, Common collector and common drain amplifier; frequency response, concept of active load.
- **Multi stage amplifiers:** Cascaded amplifier stages; CE-CE, CE-CB, CE-CC, CC-CC amplifier.
- **Current mirror:** Simple and cascade using BJT and MOSFET.
- **Differential amplifier:** Double ended and single ended differential amplifiers using BJT and MOSFET.
- **Feedback:** Basic configurations and practical amplifier circuits using negative feedback.
- **Stability and Oscillators:** Stability analysis, phase margin and gain margin, positive feedback, RC and LC oscillators.
- **Power amplifiers:** Class A, Class B, Class AB and Class C amplifiers, Practical power amplifier circuits.

Duration and Venue

The duration of the workshop is two weeks (10 working days). It will begin on Tuesday, 4th June, 2013 and will end on Friday 14th June, 2013. There will be one-day break on Sunday, 9th June, 2013.

Venue: 221 remote centres located in different parts of the country. The list of participating remote centres conducting two week workshops on "Analog Electronics" are given along with the online application form.

Teaching Faculty

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Who may benefit

The workshop will benefit faculty colleagues who are teaching Analog Electronics and/or related subjects at the undergraduate or the postgraduate level

Note

Please note that this workshop is conducted under the CEP IIT Kharagpur. 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 or institution. All participants are required to sign an undertaking for such release of contents contributed by them during and after the workshop. The recognition and citation will naturally be made for all contributors.

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.

Accommodation and other Support for outstation Participants

Remote Centers are being funded to provide tea/lunch on each day of the workshop, and for accommodation, wherever available, for a limited number of outstation participants. Travel expenses up to Rs. 1000/- one way and one-time will be reimbursed against proof of actual expenditure, for participants beyond a distance of 100 Km from the Remote Centre.

How to Apply

Those wishing to attend this course should register online [[Click Here](#)]

**LAST DATE FOR ONLINE ENROLLMENT:
20th May, 2013**

Address for Communication:

**Administration Team,
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