

TEQIP-III
Short Term Course On
Devices and Circuits: A
Journey from Conventional-
to-Emerging
(FREE for teachers from
TEQIP-III Colleges)

A Continuing Education Program of
Indian Institute of Technology
Kharagpur

November 26 – November 30,
2018



Coordinator

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Organized by

Department of Electronics and
Electrical Communication Engineering,
Indian Institute of Technology
Kharagpur – 721 302

OBJECTIVES AND SCOPE

The requirement for efficient and low-power devices for VLSI has fueled research work in the development of novel devices and circuit techniques with performances considerably enhanced over the traditional technology. In this context, the development of low power, high efficiency devices modern micro/nano-electronics systems has taken significant strides in overcoming fundamental limitations in the design of state-of-the art devices and associated interface electronic circuits.

Primary focus of this course is to introduce a framework of material selection, device design to designing associated circuitry to address challenges faced by modern electronics industry and their possible solutions which should be further investigated for the future generation nano-electronics systems. Major topics that will be addressed in the course are given below:

- Basic semiconductor device theory
- VLSI technology and process simulation
- Silicon Devices: MOSFET, FinFET
- III-V Devices: HEMT, HBT
- Device simulation techniques
- Interface electronic circuits
- Data Converters
- Circuit simulation techniques
- Open research issues.

COURSE FACULTY

Faculty members from IIT Kharagpur

WHO SHOULD ATTEND

Faculty members from University and Engineering Colleges, Research Scholars, M. Tech final year students, practicing microelectronics engineers, professionals and functional managers, administrators in the VLSI, ASIC area.

ELIGIBILITY

B.E./B. Tech./M.E./M.Tech. or equivalent degree in Electronics/Telecommunication/Electrical Engineering.

LOCATION

The Institute is about 5 Km away from Kharagpur Railway Station. Taxis, Auto-rickshaws, are available as transport.

ACCOMMODATION

Efforts will be made to book accommodation in the guest houses on receipt of request from the participants by September 15, 2018. Limited shared accommodation in the guest house is available which will be distributed according to the date of application received.

REGISTRATION FOR TEQIP-III INSTITUTIONS

Faculty/Teachers from TEQIP-III approved Colleges /Institutions / Universities. Participants should bring a letter of nomination from their head of institution stating that they are being deputed for the course.

There is no registration fee. However, a Cheque of Rs. 1,000/- (Pay to “**CEP-STC, IIT Kharagpur**”) should be enclosed with the application form which will be refunded to the participants attending the course. *Total No. of participants is limited to 30: selection of eligible participants is on **first-come-first-serve** basis*). Shortlisted applicants will be intimated by email.

REGISTRATION: FOR OTHERS (NON TEQIP-III)

- (a) Scientists / Technologists / Engineers from industry:

Course fee: 15,000/-.

- (b) Scientists / Faculty from academic institutions:

Course fee: 10,000/-.

- (c) Registered students

Course fee: 5,000/-.

Under this category, candidates will be provided course materials, lunch, tea & snacks during the course hours. However, TA, boarding, and lodging expenses should be borne by the participants. Boarding & lodging expenses will be waived for TEQIP-III sponsored candidates.

Candidates should send the Demand Draft according to their category drawn in favor of “**CEP-STC, IIT Kharagpur**” payable at Kharagpur along with the completed registration form to Prof. Vivek Dixit, Department of E&ECE, IIT Kharagpur, Kharagpur – 721 302, West Bengal, INDIA. All participants should bring a letter of nomination from their head of institution stating that they are being deputed for the course. Also they are requested to send a soft copy of the application form and the demand draft to the email addresses given below.

Certificate:

A certificate of participation would be issued to all the participants from the Office of Dean, Continuing Education, I.I.T. Kharagpur.

Enquires should be addressed to:

Prof. Vivek Dixit, Course Coordinator,
Department of Electronics and Electrical
Communication Engineering,
IIT Kharagpur, Kharagpur – 721 302

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Fax : +91-3222-255303/283534

TEQIP-III SHORT TERM COURSE ON “**Devices and Circuits: A Journey from Conventional-to-Emerging**”, November 26 - 30, 2018

REGISTRATION FORM

Please complete the details below and mail it to the address overleaf along with the demand draft.

1. Name:.....
2. Designation:.....
3. Address (Office):.....
.....
.....
4. Phone (Mob.):.....
Phone (Res.):.....
E-mail (compulsory):.....
5. Male/ Female:.....
6. Highest academic qualification:.....
7. Accommodation Required (Y/N):.....
8. Cheque/Draft. No.....Date.....
Rs.....drawn on.....Bank.

Date : Signature of the Applicant

Place :

Signature of Head of the Department with seal.