Whom will the course benefit?
Electrical engineering faculty, researchers and practicing engineers who are interested in modeling, simulation and real-time simulation of power converters, power apparatus and networks.

Course Objective:
- Mathematical modeling of power converters, apparatus and networks.
- Numerical techniques, offline simulation and simulation exercises.
- Introduction to an educational real-time simulator developed as part of a national project.
- Hands-on sessions on the educational real-time simulator.

Course Contents:
3. Review of continuous-time models of power converters, apparatus and networks; discrete-time modeling of power elements and networks using different numerical techniques; Euler forward, Euler backward, trapezoidal and Adomian decomposition; offline simulation.
4. Educational real-time simulator (miniature full-spectrum simulator): introduction and overview; architecture and system organization; examples of subsystem hardware and firmware; programming environment; programming with built-in parser; programming in C; multiprocessor programming
5. Real-time simulation exercises: simple circuit examples, dc-dc converters, voltage source inverter, induction machine, synchronous machine, a simple micro-grid (i.e. inverter and DG set)

Faculty:
IISc faculty, guest faculty from IIT Bombay and scientists from CDAC, Thiruvananthapuram, will deliver the lectures and handle the hands-on sessions.

Eligibility:
The course is meant for faculty of engineering colleges recognized by All India Council for Technical Education (AICTE), National Institutes of Technology (NIT’s) and National Institute of Technical Teachers’ Training & Research (NITTTRs). Selected teachers will be paid TA at actual subject to the limit of Three tier AC train/bus fare by the shortest route from the place of work to Bengaluru and back; however, the maximum TA payable is Rs.3000/-.

The lodging charges will be Rs.300/- per day. Local participants will be paid DA @ Rs.150/- per day for 5 days.

In addition, a few seats are available for non-sponsored (self-support) teachers, scientists from research labs, practicing engineers from industries and other interested persons on payment basis as under.

Course Fee:
Academic Institutes, Govt. R&D Labs: 10,000 INR
Private Industries: 15,000 INR

This will entitle them to participate in the course and receive the course material. Single room accommodation is available on the Institute campus at the Hoysala House. The participants have to request in advance along with the registration form for such accommodation. The lodging charges will be Rs.1000/- per day for self-support college teachers, and Rs.1500/- per day for Industry participants, subject to availability of accommodation.

Registration Form
(Please mail to reach before 10 May 2017)

1. Name:......................................................
2. Age:.................. Sex: Male/Female
3. Office address ..........................................................
   ........................................................................
4. Landline No. with STD code:.................................
5. Mobile No. .......................................................
6. Email ID:.............................................................
7. Academic Qualifications
   Degree subject year University
   Diploma/B.Sc./B.A.................................................
   B.E./B.Tech/M.Sc. ...................................................
   M.E./M.Tech./M.Phil..............................................
   Ph.D. Completed/Pursuing/Intend pursuing:................
   Thesis title/Proposed Research Area:........................
   ........................................................................
   ........................................................................
8. Teaching Experience .................... (Years)
9. Industry Experience ...................... (Years)
10. Course taught/professional responsibilities

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11. Accommodation required

Yes / No

12. Self-support candidate:

Academic Institutes, Govt. R&D Labs: Rs. 10,000
Private Industries: Rs. 15,000

Demand Draft No………………………… dated…………

I agree to abide by the rules of the QIP courses. If selected, I shall participate in the course for the entire duration.

Date:
Place:
Signature

The applicant Mr/Ms……………………………………

……………………………………………………………………………………………………

from our institution will be permitted to attend the QIP Short Term Course on “Real-Time Simulation for Power Electronics and Power Systems Applications” to be held during 10-14 July 2017 at the Indian Institute of Science, Bengaluru, if selected. He/she will be granted necessary leave of absence.

It is certified that our college is recognized by AICTE Order No:………………………… Date:………………

Date:
Place:
Signature of Head of the Department

Signature and Seal of the Principal of the Institution

(Xerox copy of this form may also be used)

Intending participants may use the attached application form or a xerox copy of the same. Applicants from AICTE recognized colleges, NIT’s and NITTRs are required to submit their applications sponsored by their colleges.

Non-sponsored (self-support) teacher applicants should send their application along with a DD for the course fee drawn in favor of “Registrar, Indian Institute of Science, Bengaluru -560012” payable at Bengaluru. The course fee will be Rs. 10,000 for participants from academic institutions and government research labs, and Rs. 15,000 for participants from other organizations.

Deadlines:

Receiving completed applications: 10 May 2017

Intimation of selection: 15 May 2017

Please mail the filled-in application form to

The Officer-in-charge
Centre for Continuing Education
Indian Institute of Science
Bengaluru - 560 012
Telephone: 080-23600911, 22932055
Email: admin@cce.iisc.ernet.in/ office@cce.iisc.ernet.in

To reach on or before: 10 May 2017