KURUKSHETRA

Kurukshetra is popularly known for its historical and religious importance. Here, the battle of Mahabharata was fought, and Lord Shree Krishna delivered the devine message as enshrined in the holy book “Shrimad Bhagwad Gita”. It is also known as DHARAMKSHETRA and it attracts devotees from all corners of world all round the year. Kurukshetra is very well connected by Rail, Delhi-Ambala section, by Road (NH1, connecting Delhi-Chandigarh-Amritsar-Jammu) and by Air (Delhi 160 km and Chandigarh 80 km). The NIT Kurukshetra campus is situated about 10 km from Pipli, Bus stand located on NH1 and about 4 km from Kurukshetra railway station.

NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA

NIT Kurukshetra, formerly known as Regional Engineering College, Kurukshetra was founded in 1963. It was conferred upon the NIT status, with Deemed University on June 26, 2002. The Institute offers several courses, in various disciplines of B.Tech., M.Tech., MBA and MCA and Ph.D. with an annual intake of about 1500 students. Institute also provides excellent facilities for advanced research in the emerging areas of Engineering, Science, and Technology. The institute has well qualified and dedicated faculty along with supporting staff, laboratories and other infrastructure. The infrastructure is geared to enable the institute to produce technical personnel of high quality.

ELECTRICAL ENGINEERING DEPARTMENT (EED), NITK

The department offers B.Tech, M.Tech and Ph.D. Degrees. The B.Tech. course in Electrical Engineering provides is run with a number of electives, which enables the students to specialize in one of the fields i.e. Power Apparatus and Systems; Electronics and Instrumentation; Computer Applications; Information and Control. Presently, the department has three post graduate programs, M.Tech, in Control Systems; Power Systems; Power Electronics and Drives and offers Ph.D. in different areas to keep synergy with the evolving innovations and developments in all disciplines of Electrical Engineering.

PATRON

Prof. (Dr.) B.V. Ramana Reddy,
Director, NIT Kurukshetra

CO-PATRON

Dr. Jyoti Ohri,
Professor and Head, EED, NIT Kurukshetra

COURSE CONVENORS

Dr. Sathans, Professor, EED

COURSE COORDINATORS

Dr. Rahul Sharma,
Dr. Amit Kumar,
Dr. Sandeep Kakran

IMPORTANT DATES

Last date of Registration: **July 14, 2024**

CORRESPONDANCE

Address: **ACOSES-2024,**

Electrical Engineering Department, NIT Kurukshetra – 136119, Haryana, India

Email: **rahul0303@nitkkr.ac.in**

Phones:
+917206228032, +918950213417, +918950110011

Short Term Course

On

Advancement in Control and Operation of Smart Energy Systems

(ACOSES-2024)

(July 15-19, 2024)

Organized by

Department of Electrical Engineering,
National Institute of Technology
Kurukshetra
Kurukshetra-136119, Haryana, India

COURSE OBJECTIVES

One of India's major advantages today and going forward is that its RE potential is vast and largely untapped. Recent estimates indicate that India's solar potential is greater than 10,000 GW and its wind potential could be higher than 2,000 GW. This emphasizes enhanced use of renewable/distributed energy sources in power sector. But, recent advances in the areas of renewable energy sources (RES) have led to increased complexity in the power system. Now, the generation of electricity is also performed at the consumer's end. The course aims to disseminate information about various interdisciplinary research efforts required to align the problems in the area of smart energy based power system. The contents of the course relate to the challenges present with the control and operation of sustainable and smart energy systems based power network and their possible solutions. Mathematical modelling of the various control issues will be discussed along with their implementation using suitable tools. The problems will be addressed mathematically to help them model and perform different analysis on the subject interest of the participants to enable them with the different research issues and techniques to the participants.

COURSE CONTENTS

The course aims to discuss the following facts/challenges to accomplish the aforesaid objectives, but not limited to them.

- Application of intelligent control in Smart Grid.
- Overview of control & operation in Indian power sector.
- Control issues of RE integration in low/high voltage grid.
- Advance power electronics applications in renewable energy systems.
- Smart grid and smart city planning.
- Control techniques for Microgrids.
- Smart appliances and effective energy management.
- Battery Storage and EV Integration.
- Lab session on EV charging setup.
- Lab session on Opal-RT.

WHO SHOULD ATTEND?

Faculty members/ research scholars/ students from academic institutes approved by the AICTE/ UGC/ MHRD and Scientists/ Engineers working in Private/ Public/ Govt. organizations/ industries etc. can attend the course. The application should be made on the registration form and should accompany registration fee as below:

Registration Category	**Fees**	
	Online	Offline
UG/PG Students & Research Scholars	500	1000
Academician	700	3000
Industry	1000	6000

* **Registration fee is non-refundable**

Participants will be provided tea during the sessions. However, limited accommodation is available in the hostel/ guest house. The accommodation can be arranged on the request of the participants on payment basis, separately. No TA/ DA will be paid to the participants. Participants will be selected on first-come-first served basis. The registration form, complete in all respects, accompanied by **Online Google Form** https://forms.gle/eatbonk7LfGUp93E6 with the attachment of details of the requisite amount should be submitted on or before **July, 14, 2024**. For more details please refer to the important details section.

Registration fee is to be paid in advance online through **SBI Collect.**

The brochure with registration form can be downloaded from Institute website **www.nitkkr.ac.in**. The soft copy of the completed application forms should be sent at the e-mail address and the hard copy to the correspondence address.