KURUKSHETRA

Kurukshetra is described as DHARMA-KSHETRA, with historical and religious importance. Here, the battle of Mahabharata was fought, and Lord Shree Krishna preached the philosophy of "KARMA" as enshrined in the holy book "Shrimad Bhagwad Gita". It is one of the premier pilgrimage centers attracting devotees all around the year. Kurukshetra is 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 11 km from the Pipli Bus stand located on NH-44, and about 6 km from the 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), NIT KURUKSHETRA

The Department offers B.Tech, M.Tech, and Ph.D. Degrees. The B.Tech. program in Electrical Engineering provides is run with a number of elective courses. The department has three M.Tech courses with specialization in Control Systems; Power Systems; Power Electronics and Drives and offers Ph.D. in different areas evolving innovations and developments in all disciplines of Electrical Engineering. Out of thirty regular faculty members, the Control Systems group has about ten faculty members. Recently an Advanced control Systems Lab with modern equipment has been established. The significant research areas are Robust Control, Adaptive Control, Nonlinear Systems, Instrumentation, Signal Processing, Reliability and System Engineering, Cyber-Physical Systems, Renewable Energy, Electric Vehicles, Marine Robotics, Industrial Automation, Robotics, Intelligent Control, etc.

RESOURCE PERSONS

- Experts may be invited from Industry/ R & D Organizations.
- Faculty members from IITs/ NIT Kurukshetra.

PATRON

Prof. B. V. Ramana Reddy
Director, NIT Kurukshetra

CO-PATRON

Prof. Ashwani Kumar
Head, Electrical Engineering Department

COURSE ADVISORS

Prof. Lillie Dewan;
Prof. G. L. Pahuja

COURSE CONVENOR

Prof. Jyoti Ohri

COURSE COORDINATORS

Dr. Bhanu Pratap
Dr. Modi Pandu Ranga Prasad

IMPORTANT DATES

Last date of Registration: **July 15, 2022**
Notification of Selection: **July 16, 2022**

Short Term Course
On
Advanced Control Systems & Experiments
(ACSE-2022)
July 18-23, 2022

Organized by

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

COURSE OBJECTIVES

Control System has become an important and integral part of modern manufacturing and industrial processes. As the world becomes more and more technology-driven, large numbers of increasingly complex systems continue to emerge. It is imperative that these systems deliver the desired output even in uncertain environments. The main thrust of this course is to present exposure to controller design and its real-time implementation. The applications of various Advanced Control Techniques on real-time hardware setup will be shown.

The aim of the proposed course is to introduce the fundamentals of modeling, stability analysis, and controller design. Further, various advanced control techniques for stability analysis and controller design will be discussed. Finally, real-time applications of these techniques on hardware setup will be demonstrated. This course will be helpful to postgraduate students, research scholars, and faculty members.

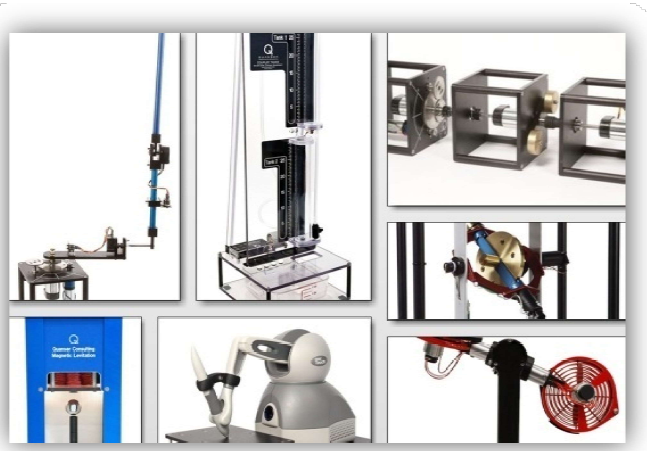
COURSE CONTENTS

The course aims to address the following issues related to the Advanced Control Systems but is not limited to them.

1. **Introduction to the Advanced Control Systems**
2. **Control Applications to Cyber-Physical Systems**
3. **Multi-Agent Systems & Control**
4. **Application of Advanced Control in Robotics**
5. **Nonlinear & Robust Control of Dynamical Systems**
6. **Special Lab sessions to demonstrate the experiments on various Computer-Aided Control Systems using MATLAB Real-Time tools.**

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. It is an interdisciplinary course; participants from the following background such as Electrical, Electronics, Instrumentation, Mechanical, and Chemical Engineering are encouraged to attend. Participants from the areas of Mathematics and Physics may also attend this course.



ONLINE REGISTRATION

Category of Registrations	Registration fee* for Internal/ Online (External) (₹)	Registration fee* for External in offline (₹)
PG Students/ Ph.D. Research Scholars/ JRF/ SRF	300/-	1000/-
Faculty	500/-	3000/-
Industry/ R&D Organization	1000/-	6000/-

* **Registration fee is non-refundable. Participants must have valid ID proof of student/ employee from the associated organization.**

Participants (external in offline) will be provided meals and tea during the sessions. However, limited accommodation is available in the hostel/guest house. The accommodation can be arranged at the request of the participants on a payment basis, separately. No TA/ DA will be paid to the participants. Selection of the Participants will be on a first-come-first served basis. The registration form, complete in all respects, duly forwarded by the Head of the Department/ School/ Institute, accompanied by online details of the requisite amount, should reach on or before **July 15, 2022**.

The registration fee is to be paid in advance through an online transaction with the following steps:

1. Go to the website of the State bank of India (https://www.onlinesbi.com)
2. Click on State Bank Collect (SB Collect)
3. Agree & Proceed
4. Select State and Type of corporate/Institution: Haryana and Education Institution
5. Educational Institutions Name: Director National Institute of Technology Kurukshetra
6. Select payment Category: ACSE 2022 Provide details and submit
7. Enter any random number of 3 digits for the Reference no., if required.
8. Select payment method (Internet Banking, Debit Card and Credit card, etc.).

The information brochure can be downloaded from the institute website **www.nitkkr.ac.in**.

REGISTRATION FORM

The candidates can fill out the Registration Form using the following Google link:

https://bit.ly/3vCv8Mc

The soft copy of the completed application forms should be submitted before the last date of registration.

CORRESPONDANCE

Address: ACSE-2022,
Electrical Engineering Department,
NIT Kurukshetra – 136119, Haryana, India
Email: bhanu@nitkkr.ac.in;
mprprasad@nitkkr.ac.in
Phones: 09468034271, 09729662574