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, 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.

SCHOOL OF RENEWABLE ENERGY AND EFFICINECY, NIT KURUKSHETRA

The School of Renewable Eneegy and Efficiency (SREE) offers M.Tech and Ph.D. Degree program. The MTech program is Renewable Energy Systems. PhD degree is offered in all relevant areas of Electrical and Mechnaical Engineering. The major areas are related to renewable energy issues and applications in the areas of electrical and mechanical engineering. The school is run by the Departments of Electrical and Mechnaical Engineering jointly.

COURSE OBJECTIVES

The short term course is designed for the research scholars amd faculty/staff members of NIT Kurukshetra. Ansys offers a comprehensive software suite that spans the entire range of physics, providing access to virtually any field of engineering simulation that a design process requires. Organizations around the world trust Ansys to deliver the best value for their engineering simulation software investment.

The primary aim of this e-STC is to impart research skills to the beginners, and to improve the quality of research among the existing researchers in the thematic areas of renewable energy and its management using ANSYS Software. This programme will bring a positive transformation among the faculty members, research scholars and participants towards research work, and enable the participants to develop competence in understanding recent advances in proposed topic of the course. The participants will gain the knowledge of recent and future trends in renewable energy utilization and analysis using ANSYS. The software will cover the analysis and applications to the discipline of Electrical, Electronics, mechanical and Civil Engineering.

PATRON

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

CONVENERS

Dr. Ashwani Kumar,
Professor and Coordinator SREE

COURSE COORDINATORS

Dr. Shivam
Dr.Pradeep Kumar
Assistant Professor, Electrical Engineering Department

IMPORTANT DATES

- Last date for Registration: **28th Feb, 2024**
- Confirmation to the participants (on website or by email): **1st March, 2024**

*Online/Hybrid
Self Sponsored Short-Term
Course
On*

Training on ANSYS Software: Application to Engineering Problems (ANSYS-AEP)

(4th - 8th March 2024)

Organized by

**Schoolof Renewable Energy and Efficiency
National Institute of TechnologyKurukshetra
Kurukshetra, Haryana, India**

COURSE CONTENTS

The course aims to address the following topics related to the emerging research and challenges:

- Introduction to Maxwell Tools and GUI Solvers in Maxwell with examples
- Solving a motor design for analytical results in RMXprt AC/DC microgrids
- Use of optometric in RMXprt/Maxwell Converting the RMXprt design into Maxwell 2D and Maxwell 3D
- Creating a motor model using UDPs in Maxwell Introduction to Ansys Simplorer Introduction to Ansys Motor-CAD
- Introduction to Ansys and HF tools Design of coaxial cable, waveguide [rectangular and circular] Design of GPS antenna
- Design of Inset feed ISM band antenna
- Domain decomposition of array antenna
- Design of mmwave 5G antenna
- Optimization of 5G antenna
- Design of flexible antenna/Bending of antenna Antenna Placement Metamaterial Design and analysis of its parameters Introduction to ALH, information on student license Geometric modelling in Spaceclaim Geometric Repairement with workshop Introduction to Meshing- Global & Local Meshing and Fluent meshing Introduction to CFD Flow in Elbow pipe, Simple Pipe- Laminar & Turbulent Flow Fluid flow and heat transfer in mixing Tee External Flow simulation Unsteady flow over a cylinder Flow through CD Nozzle1-way FSI Battery analysis and Thermal Management of Battery Best Practices for Meshing (Structural Problem and CFD Problem) Different Mesh Techniques for Local and Global mesh settings Engineering data – Material selection and modification. Introduction of FEA Analysis of Globe Valve, Connections, Joints, Remote Connections, Contacts Parameter Study Non-Linearity Analysis - 3-D Spring Plate Analysis Nonlinear Analysis-Plastic Deformation-Structural Transient Fatigue Analysis Thermal Analysis of a Heat Exchanger Explicit Dynamics - Oblique Impact Structural Optimization – For different load conditions and validation

RESOURCE PERSONS

Industry experts from ANSYS.

WHO SHOULD ATTEND?

The course is designed for Faculty members/ research scholars/students from different Industry/ R&D / Govt. Organization organizations may apply:

Participant's category	Registration fee*
Students/ Research Scholars	Rs. 300/- online Rs. 500/- offline
Faculty	Rs. 500/- online Rs. 700/- offline
Industry/ R&D / Govt. Organization	Rs. 1000/- online Rs. 1500/ Offline

* **Registration fee is non-refundable**

The brochure with registration form can be downloaded from the Institute website **www.nitkkr.ac.in**

REGISTRATION

Registration fee is to be paid through SBI Collect. Go to SBI COLLECT> EDUCATIONAL INSTITUTIONS>> DIRECTOR NIT KURUKSHETRA>> ANSYS AEP
Please write the name of e-STC in remarks during online SBI Collect payment and save a copy of the payment receipt.

The participants need to upload (i) aPayement receipt (receipt of SBI collect payment) link will be updated soon and (ii) Signed copy of registration form through the link:

https://forms.gle/zhio1m3SAURmUd526

The registration form, complete in all respects, accompanied by the details of requisite amount should reach on or before **2 March, 2024.**

Address for Correspondence:

Course Coordinators

Room No. E-218 Electrical Engineering Department, NIT Kurukshetra – 136119, Haryana, India

Email: shivam@nitkkr.ac.in

Phones:+918950213359

REGISTRATION FORM
Training on ANSYS Software: Application to Engineering Problems (ANSYS-AEP)

(4th - 8th March 2024)

Title: (Dr./Mr./Mrs./Ms.) :

Name (in BLOCK LETTER) :

Sex (M/F) :

Date of Birth: (dd/mm/yyyy):

Designation :

Organization :

Address for correspondence:

Phone :

E-mail :

Qualification :

Category (Please Tick) : Students/ Faculty/ Industry/ R&D / Govt. Organization

Payment Details

Transaction ID/ Reference ID:

Date of Payment:

Amount :

Attachment(s)   Fee Payment Receipt

Signature of applicant (with date):

Signatuer of Head of the Department/Head of the Institution