

## **Kamla Nehru Institute of Technology (KNIT) Sultanpur**

KNIT Sultanpur was initially established as the Faculty of Technology in the year 1976 by Kamla Nehru Memorial Trust. Later, in the year 1983 it was registered as a separate society and re-named as the Kamla Nehru Institute of Technology. The Institute is one of the leading technical Institutions of the region and is responsible for producing best engineers with skill sets comparable with the best in the world. This institute is fully aware of its social responsibilities and is addressing the issues of application of technology to the industry. It also renders the testing and consultancy services to the neighbouring industries and various other agencies. The Institute is presently academically autonomous, affiliated to Dr. Abdul Kalam Technical University, (formerly Uttar Pradesh Technical University, Lucknow) Lucknow.

### **Department of Mechanical Engineering**

The mechanical Engineering department is among the oldest departments of the Institute. The department has a well qualified faculty and technical supporting staff. All the laboratories of the departments are well equipped with modern equipments. The department offers UG , PG (Full Time ) , PG (Part Time) and PhD courses. The department acquires state of the art equipments through world bank assisted TEQIPO program.

### **PAO -2019**

#### **CHIEF PATRON**

Prof. V.K. Pathak, Hon'ble Vice Chancellor,  
AKTU Lucknow

#### **PATRON**

Prof. J. P. Pandey, Director, KNIT Sultanpur

#### **CHAIRMAN**

Prof. S. P. Kutar, Head I/C MED, KNIT Sultanpur

#### **COORDINATOR**

Dr. Amit Medhavi

#### **Convener(S)**

Prof. Shashank Kumar  
Prof. Ambuj Kumar  
Prof. Rajnish Singh

#### **ORGANIZING COMMITTEE**

Dr. A.K. Chauhan , Dr. Anil Kumar, Dr. Virendra Kumar, Prof. Manish Kr. Seth , Prof. Ravi Kumar , Prof. Ram Poojan Ydava , Prof. Brijesh Kumar , Mr. Krishna Mohan Singh, Mr. Shailendra Kumar and Mr. Rahul Shukla

#### **ADVISORY COMMITTEE**

Prof. K. S. Verma, Coordinator TEQIP-III,  
Prof. R.P. Payasi , Dean R & D

#### **Registration Process:**

There is no registration fee. Fill the application and get attested by the Head of Institute/College and please send scanned copy of this form to: [ambuj.kumar@knit.ac.in](mailto:ambuj.kumar@knit.ac.in) on or before **30<sup>th</sup> July 2019**. Also submit the hard copy of this application form on the first day of STC, failing which your candidature will not be considered.

#### **Contact Person:**

**Prof. Shashank Kumar**, Department of Mechanical Engineering, KNIT Sultanpur-228118, U.P.  
Phone: +91 9453280888, 7903197767  
E-mail: [shashank.kumar@knit.ac.in](mailto:shashank.kumar@knit.ac.in),  
[ambuj.kumar@knit.ac.in](mailto:ambuj.kumar@knit.ac.in), [rajnish.singh@knit.ac.in](mailto:rajnish.singh@knit.ac.in)

## **One Week Short Term Course on "Practical Aspects of Optimization" (PAO-2019)**

**August 1-5, 2019**

**Under the aegis of  
TEQIP-III Project**



**ORGANIZED**

**By**

**Department of Mechanical Engineering  
Kamla Nehru Institute of Technology  
Sultanpur, U. P.-228118, India**

## About Practical Aspects of Optimization

The course is designed for faculty members, students and industry personals in view of acquiring knowledge of the above, so as to carry out research activities in the all fields of engineering and sciences. Optimization can be defined as the act of obtaining the best result under the given circumstances. Optimization technique has been a basic tool in all areas of applied mathematics, engineering, business and other sciences. Design, construction and maintenance of engineering systems involve decision making both at the managerial and the technological level. The one week FDP aims to introduce the participants to these optimization techniques and provide them with hands-on experience, enabling them to apply the techniques in their respective fields

### Last Date of Registration:

July 30, 2019. Participants are limited to 60 and selected on a first come first serve basis.

### Who Can Attend?

The course will be useful for the faculty members / Doctoral & PG students of different Universities/ Institutes/ colleges & Professionals working in the Industries. Limited number of U.G. students may also be selected based on the availability of seats. Selected candidates will be informed through email.

## Course Content

- ❖ Introduction
- ❖ Multi-objective Optimization
  - Utility Function Method
  - Inverted Utility Function Method
  - Global Criterion Method
  - Bounded Objective Function Method
- ❖ Optimal Control Theory
  - Necessary Conditions for Optimal Control
  - Necessary Conditions for a General Problem
- ❖ Optimization using MATLAB
  - Basic concepts and classification of optimization techniques.
  - Objective functions and constraints
  - Mathematical Modeling
  - Nonlinear optimization.
  - Multi-objective optimization.
  - Solutions of optimization problems using MATLAB.
- ❖ Optimization of Transportation problems
- ❖ Taguchi method

## RESOURCE PERSONS :

The FDP will be endorsed with several distinguished speakers invited from well-known premier institutions like IIT/NIT and other state govt engineering colleges.

## Registration form

One Week Short Term Course on "Practical Aspects of Optimization" (PAO)

August 1-5, 2019

Department of Mechanical Engineering  
Kamla Nehru Institute of Technology  
Sultanpur, U. P.-228118, India

Full Name-----

(in BLOCK letters, as desired on certificate)

Designation & Dept.:-----

Affiliation:-----

Highest qualification:-----

Experience (if any): Teaching:----- Industry:-----

Address for correspondence:-----

Mobile:-----Email:-----

Accommodation required: YES/NO

Attending the STC: Manual

Signature of the Applicant

Sig. & Stamp of Approving Authority