

## Introduction:

This course is designed to give students an introduction to emerging trends in the field of thermal engineering. The participants will be apprised of the methods of analysis of various thermal systems. They will also learn the usage of various instruments available in the area of Thermal Engineering at MNNIT Allahabad, Prayagraj, U.P.

The participants will be provided course material comprising of solutions / tutorials to a variety of problems.

## Course contents:

### IC Engines/Alternative Fuels/HEV:

- Fuel Injection Systems (MPFI and SPFI)
- Causes, Effects and Control of Cycle-by-Cycle Variations in Combustion:
- Pollutant Formation, Measurement and Control
- Alternative fuels production and usage (Biodiesel, Ethers and Alcohol blended conventional fuels)
- Energy and thermal management of hybrid electric vehicles

### Solar energy and its applications:

- Solar radiation and its measurements
- Solar geometry
- Solar photo-voltaic
- Solar architecture
- Solar thermal applications.

### Cryogenics and Refrigeration:

- Properties of mixture refrigerants at low temperature
- Design of heat exchangers.
- Passive cooling of buildings and thermal comfort.

## Heat transfer:

- Transient heat transfer analysis
- Thermos-mechanical coupled behaviour
- Radiative heat transfer modelling.

## Resource persons:

The course instructors/faculty will be from IITs NITS and other reputed universities.

## Target Participants:

The program is open to UG/PG students, research scholars, faculty members of engineering institutions and Industry Personnel. Number of participants will be limited to 50 on first come-first serve basis.

## Registration Fees:

**Rs. 1000/- (without Lunch):** For UG / PG Students & Research Scholars of MNNIT

**Rs. 2500/- (Lunch included):** For UG / PG Students & Research Scholars from Outside MNNIT

**Rs. 5000/- (Lunch included):** For Faculties & Industrial Personals

## Accommodation :

On prior request, accommodation may be provided to the participants on payment basis in the institute hostels / Guest House (EDC) (subject to availability). The participants have to bear accommodation charges.

## Payment mode for Registration fee:

- (i) Through Demand Draft in favour of “**ETTE - 2018**” payable at **Prayagraj**.
- (ii) Through **NEFT/IMPS**  
Account Name: **ETTE - 2018**  
Account No.: **718400301000334**  
Bank Name: **Vijaya Bank**  
Branch: **MNNIT Allahabad, Prayagraj, U.P.**  
IFSC Code: **VIJB0007184**

Hard copy of the duly filled and signed registration form and duly approved by the Head of Department/ Institute, along with the registration fee should reach the Coordinators on or before **February 23, 2019**. However, scanned advanced copy of registration form and DD may be sent through email for early registration.

## [Mail the application form to:](#)

**ettemnnit2018@gmail.com**

## [Contact for any query:](#)

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## APPLICATION FORM

**Self-Financed Short Term Course  
on  
Emerging Trends in Thermal  
Engineering (ETTE-2018)**

**(March 1-5, 2019)**

(Previous dates were Dec 10-14, 2018)

1. Name:.....
2. Date of birth:.....
3. Institution:.....
4. Educational qualifications:.....
5. Class/Branch (or)  
Designation/Department:
5. Address for correspondence:  
  
Phone:  
E-mail:
6. Accommodation required - Yes / No
7. Amount Paid: .....
8. Mode of Payment:.....

### **Declaration**

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the course. I also agree to inform the Coordinators in case, I am unable to attend the course.

Place:

Date: Signature of the candidate

**Mr/Ms/Dr.** \_\_\_\_\_  
is a student / employee of our institute and is hereby allowed to participate in the **STC on Emerging Trends in Thermal Engineering (ETTE-2018)**.

Place:

Date: Signature & Stamp of Head of  
Department/Institution

## About MNNIT Allahabad :

Motilal Nehru National Institute of Technology Allahabad (formerly MNREC) is one of the oldest RECs setup in the country. It is situated in Prayagraj, Uttar Pradesh. Since 1964, it has been a centre of technological excellence in the state of UP in particular and the country in general.

The Institute offers various undergraduate and postgraduate courses such as B.Tech., M.Tech., MCA, MBA, M.Sc., M.S.W and Ph.D. degree. It has been recognized by GOI as one of the Quality Improvement Programme (QIP) centre for M.Tech. and Ph.D. program. Also, it is a lead Institution under World Bank funded GOI Project on Technical Education Quality Improvement Programme (TEQIP)

The institute is a fully residential, networked campus and is well connected by rail, road and air.

## Mechanical Engineering Department :

Department of Mechanical Engineering is the leading department of the institute. It offers B.Tech. (in Mechanical and Production and Industrial Engg.), M.Tech. (Computer Aided Design and Manufacturing, Design, Production, Product Design and Development and Thermal) and PhD. The department has 35 highly qualified faculty. More than 100 PhDs have been produced by the department which is also a QIP centre for PhD and M.Tech. The department has good laboratories and is equipped with latest software and equipments.

Self-Financed

## Short Term Course on

## Emerging Trends in Thermal Engineering (ETTE-2018)

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### **Patron**

**Prof. Rajeev Tripathi**  
Director

### **Chairman**

**Prof. A. D. Bhatt**  
Head, Mechanical Engineering Department

### **Course Coordinators**

**Dr. Samir Saraswati**  
**Dr. Rahul Dev**  
**Dr. Bireswar Paul**  
**Dr. Jitendra N. Gangwar**



**Organized by**

**Department of Mechanical Engineering**  
**Motilal Nehru National Institute of Technology**  
**Allahabad, Prayagraj – 211004, UP**

