

## REGISTRATION FORM

Self Financed

**Faculty Development Programme (FDP)**

on

**Modern Trends in Manufacturing  
Processes and Control Techniques in  
Renewable Energy System**

**(November 16<sup>th</sup> 2021 to November 21<sup>st</sup>, 2021)**

1. Name:.....

2. Gender:.....

3. Designation:.....

4. Organization:.....

5. Correspondence address:.....  
.....

Mobile. No.:.....

E-mail:.....

6. Qualifications: .....

7. Teaching/Research Exp.(years):.....

8. Area of Research: .....

9. Registration fee details: Nil

The above information provides is true and to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the programme.

(Signature of the Applicant with date)

(Signature of Head of Department/Institute with date)

**Note: Registration can be done either through the link or send the hard copy of the above registration form.**

Google form link: <https://forms.gle/3b1yPKajZcv4cvre8>

## REGISTRATION

**Registration Fee: Nil**

**How to Register**

Duly filled applications form need to be submitted on or before **1<sup>st</sup> November 2021**. The selection is on a first come first served basis depending upon the availability of seats. As seats are limited, so pre-registration is required by applying online through Google link form below.

Google form link: <https://forms.gle/3b1yPKajZcv4cvre8>

**Important Dates**

**Last date of Registration: November 01, 2021**

**Notification of Selection: November 05, 2021**

### ORGANIZING COMMITTEE

Patron	
Prof. (Dr.) Ajay K. Sharma	Director, NIT Delhi
Convenor(s)	
Dr. Harish Kumar	ME Department
Dr. V. S. Pandey	AS Department
Coordinator(s)	
Dr. Anshul Agarwal	EE Department
Dr. Leeladhar Nagdeve	ME Department
Organizing Committee Members	
Dr. Ashok Kumar Dewangan	ME Department
Dr. Sachin Singh	EE Department
Dr. Amit Kumar Singh	EE Department
Dr. Pankaj Mukhija	EE Department

**Dr. Harish Kumar**

**Assistant Professor & Head  
Mechanical Engineering Department  
National Institute of Technology Delhi  
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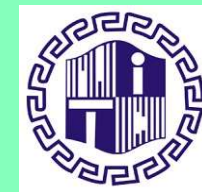


**CONVENOR(S)**

**Dr. Harish Kumar  
Dr. V. S. Pandey**

**COORDINATOR(S)**

**Dr. Anshul Agarwal  
Dr. Leeladhar Nagdeve**



**ORGANISED BY**

**Mechanical Engineering Department**

***National Institute of Technology Delhi***

**(An Institute of National Importance)**

***www.nitdelhi.ac.in***

## ABOUT THE INSTITUTE

National Institute of Technology, Delhi (NITD) was established in 2010 by Ministry of Human Resource Development, Government of India during the 11th Five Year Plan. It has been declared as an Institute of National Importance by an act of Parliament of India. It aims to provide instructions and research avenues in the areas of Engineering, Technology, Management, Education, Sciences and Humanities and for advancement of learning and dissemination of knowledge in such areas.

The institute offers three undergraduate programmes, five PG programmes and Ph. D. programme in all disciplines not only to keep pace with the expanding frontiers of knowledge but also to provide research training relevant to the present social and economic objectives of the country and the world.

The institute is located in Delhi and is presently running in a makeshift campus at National Institute of Labour Economics Research And Development (NILERD) at Institutional Area, Narela. Present campus of Institute is situated at around 17 Km from Jahangirpuri Metro Station and is well connected with public conveyance. A land of 51 acres had been acquired on NH-1 for the permanent campus of NIT Delhi. The construction work for the permanent campus is in progress.

## ABOUT THE DEPARTMENT

The Department of Mechanical Engineering currently offers M. Tech. programme in Computer Aided Design & Manufacturing (CAD/CAM) and Ph.D. programme in all area of the Mechanical Engineering. The Department has two Laboratories: CAD Lab. & CAM Lab. Department also offers first year courses in B. Tech. (common for all branches). Intake capacity for M.Tech. CAD/CAM Programme is 15 seats. The programme has been started from academic session 2016-17. The main focus of our curriculum is to impart technical know-how to students, promote their problem solving skills and innovation of new technologies. Faculty members of the department have excellent academic and research credentials. Faculty members are dynamically working on various sponsored projects and published numerous peer reviewed journal articles/papers.

## OBJECTIVES OF THE COURSE

Modern manufacturing processes such as advanced machining processes, 3-D Printing, and Nano-Technology etc. are needed for the present era in the global competitiveness and considered major thrust areas for the innovative research. Advanced machining processes and 3-D printing are the key factor in bio-medical, automotive, aerospace, nuclear, and aerospace industries etc. Therefore, the precise understanding of the modern manufacturing processes in actual practice is required for all engineering fields. In any manufacturing industry, “Quality” of the engineering-components is of prime importance, depends on the various parameters of the involved processes and other factors also. Therefore, researchers need to understand the associated parameters of the process, quality control approaches, and able to anticipate the root-cause of failures for preventive measures.

In the same way, advancement and innovation in semiconductor technology have turned out to be progressively reliable because of quick, precise and cost-effective and lossless devices. The development of innovative technologies has been increasing in the field of renewable energy which enables us to explore, discuss and address the various issues of renewable energy and provide clean and green energy for the fulfilment of power requirement and so for reduction in dependency on conventional energy sources. The advance control technique in addition to artificial intelligence provides us smart and efficient energy systems but to address the issues such as variability and uncertainty in electrical supply building addition power supply becomes costly.

The purpose of this FDP is to disseminate the scientific, theoretical or applied research in the field of Modern Manufacturing and Renewable Energy, to serve as a platform for demonstrating results and research with a strong empirical component, to provide as channel to fill the existing gap between research and actual practice. The aim of this FDP is to discuss the applications of technologies which present new insights, innovative modelling techniques and novel optimization methodologies associated with the renewable power generation reduces the requirement of additional power supply as backup supply and enhances the performance of renewable energy systems and also improve the power quality

This FDP will focus on advanced topics related to modern manufacturing and renewable energy systems like:

- Modern Manufacturing Processes
- Precision Manufacturing & Measurement
- 3-D Printing
- Sustainable Manufacturing
- Micro / Nano-electromechanical system (MEMS/NEMS)
- Nano sciences and nanotechnologies
- Automation & Robotics
- Metrology
- Geographical location and environmental impact on renewable energy system.
- Power converter topology for renewable energy system.
- New trends in renewable energy system.
- Design modelling & controlling of intelligent algorithm for renewable energy system.
- Conditioning monitoring of fault detection in renewable energy system.
- Materials characterization of Photovoltaic devices.
- New architecture of storage device.
- Smart energy topology for battery energy storage system management.
- Application of renewable energy system in grid/movable system.
- Suitability of renewable energy system in buildings.
- Sustainable energy technology and assessment.
- Application of energy storage systems for renewable energy system.
- Energy management and storage

This course will offer a unique opportunity to the faculty members, researchers, engineers and research student working in the relevant topics of electromechanical system, renewable energy and materials. Talks will be delivered by eminent academicians as well as field professionals.

## ELIGIBILITY FOR PARTICIPANTS

The faculty development programme is open to faculty members, research scholars, students and industry personnel belonging to engineering / Science disciplines.