

**One Week On-line Short Term Course
on**

**Advances in Industrial and Manufacturing
Operations: Applications and Practices
(AIMOAP-23)**

December 15-19, 2023

About NIT Kurukshetra

National Institute of Technology Kurukshetra, Haryana (founded as Regional Engineering College, Kurukshetra in 1963) was conferred upon the status of Deemed University on June 26, 2002. Institute has B. Tech, M.Tech, MBA and MCA Courses in various disciplines with annual intake of about 1500 students. Institute also offers excellent facilities for advanced research in the emerging areas of Science and Technology leading to Ph.D. degree. The institute has well qualified and dedicated faculty along with finest supporting staff, laboratories and other infrastructure. The infrastructure is geared to enable the Institute to turn out technical personnel of a high quality.

About Mechanical Engineering Department

Department of Mechanical Engineering, NIT Kurukshetra has been offering Under-graduate Program (B.Tech. in Mechanical Engineering & Production and Industrial Engineering), Post-graduate Program in Production and Industrial Engineering, Design Engineering and Thermal Engineering. The course curriculum has been designed to be compatible with the existing and emerging needs of the industry. The autonomy of the Institute is a privilege to the department in terms of flexibility to modify and revise courses/syllabi at different time intervals to cater contemporary needs to the needs of the Industry. The department has established state-of-the-art facilities in various domains of mechanical and industrial engineering.

Patron

Prof. B. V. Ramana Reddy
Hon'ble Director
NIT Kurukshetra

Chairman

Prof. Hari Singh
Head, Department of Mechanical Engineering

Coordinator

Dr. Dilbagh Panchal
Dr. Ranjeet Kumar
Dr. Manoj Kumar Sinha

Organizing Committee

All faculty and Staff of Mechanical Engineering
Department, NIT Kurukshetra

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An Initiative of

National Institute of Technology Kurukshetra

Kurukshetra, Haryana-136119, India



Organized by

**Department of Mechanical Engineering
National Institute of Technology Kurukshetra**

Kurukshetra, Haryana – 136119, India

Phone: +91-1744-233447,

Web: www.nitkkr.ac.in

About Short Term Course (STC)

This STC aligns with the theme of providing a platform to expose the participants to the current and future challenges with their possible solutions, along with brushing up on the fundamentals of industrial operations and key manufacturing aspects. Lectures, exhaustive discussion, mutual interaction and idea sharing will certainly open an avenue to mitigating the ongoing and future industrial needs in more scientific ways.

Objectives and Scope

The present-day requirements of quality and durable products at competitive prices are the key challenges to the manufacturer. Quite often, the manufacturing level reflects the ability to adopt the new and upcoming industrial needs. The growth of a country primarily depends on the strength of the manufacturing sectors. Product realisation consists of detailed investigations of the industrial and manufacturing operations, which play a critical role in product realisation. The prime objective of this STC is to impart comprehensive knowledge of recent advances and developments in industrial and manufacturing practices. This STC will certainly enfold the mutually dependent realms to cater for the future needs of the manufacturing industries and to enable the participants to address various upcoming issues and challenges related to manufacturing processes and systems.

Topics to be Covered

- Supply Chain Trends in Industry 4.0 Era
- Role of Incubation Centers in India
- Multi-material Additive Manufacturing
- Scope and Application of Digital Twin in Manufacturing
- Performance Analysis of Industrial Systems
- Advancement in Cutting Tool Technology
- Laser Based Manufacturing Processes

Resource Persons/Speakers

Faculties/Experts from IITs, NITs, IIITs and other premier Institutions/Organizations will deliver the lectures.

Targeted Participants

Faculty from engineering institutes, universities, research scholars, UG/PG students, and other educational institutes and employees of the industries.

Number of Participants

Number of participants is limited for this STC. Application will be accepted on *first-cum-first serve basis*.

Important Dates

Last date (Online Registration): **13-12-2023**

Confirmation by E-mail: **14-12-2023**

STC duration: **15-12-2023 to 19-12-2023**

Registration Fee Details

| Participants | Amount (in Rs.) |
|-------------------------------------|-----------------|
| Students (UG/PG/PhD) | 200/- |
| Participants from Academia/R&D Labs | 300/- |
| Participants from Industries | 500/- |

Registration is compulsory for all the delegates. The registration fee is non-refundable.

How to Apply

The interested candidates must deposit the registration fee through SBI collect with the following procedure:

- Go to SBI collect and choose Educational Institutions and Filter by selecting state as Haryana
- Choose Director NIT Kurukshetra from Name of the Institutions and Select payment category as **AIMOAP-23**
- Generate the payment slip and attach it with the registration form available at the following link

https://docs.google.com/forms/u/2/d/e/1FAIpQLSdbwh4th_uVvt2LfMRNvnRTRbq2gNz06-RvJP1sbJ0ZedbCsg/viewform?usp=sf_link

***E-Certificate will be provided to those registered participants whose minimum attendance is 75% of this STC.**



Annexure – A

National Institute of Technology Kurukshetra, Haryana-136119

(An Institute of National Importance)

Department of Mechanical Engineering

Tentative Schedule of e-STC (15th Dec.-19th Dec. 2023)

Advances in Industrial and Manufacturing Operations: Applications and Practices (AIMOAP-23)

| | 11:00 am – 01:00 pm | 01:00 pm – 03:00 pm | 3:00 pm – 5:00 pm |
|-----------------------------------|--|---------------------|--|
| 15/12/2023 1 st Day | AI Focused Food Supply Chain (Mr. Utkarsh Mittal) Manager, Gap Inc. USA | Break | Multi-material Additive Manufacturing (Dr. Sandeep Sahu) Scientist, CSIO Chandigarh |
| 16/12/2023 2 nd Day | Role of Incubation Centres in India (Dr. Rishi Kant) Assistant Professor, CIMP Patna | | Metal Machining and Advancement in Cutting Tool Technology (Mr. Sanjeev Aggarwal) General Manager, Motherson Techno Tools Ltd. Noida |
| 17/12/2023 3 rd Day | Scope & Analysis of Data Science in Industrial Development (Dr. Archana) Assistant Professor, O. P. Jindal Global University Sonipat, Haryana | | Product Quality Enhancement with Heat Treatment (Mr. N. J. Pai) Technical Director, M/s Bhat Metals |
| 18/12/2023 4 th Day | Laser Based Manufacturing Processes (Dr. Ravi Kant) Assistant Professor, IIT Ropar | | Scope and Application of Digital Twin in Manufacturing (Dr. Rajeshkumar Madarkar) Research Associate, University of Strathclyde Glasgow, UK. |
| 19/12/2023 5 th Day | Supply Chain Trends in Industry 4.0 Era (Dr. Vinay Yadav) Assistant Professor, IIM Shillong | | Metal Additive Manufacturing of Aerospace Grade Alloys (Dr. Sarvesh Mishra) Assistant Professor, IIT Kanpur |

***Inauguration on 15/12/2023 from 10.30 AM to 11 AM**

***Valedictory on 19/12/2023 from 5 PM to 5.30 PM**