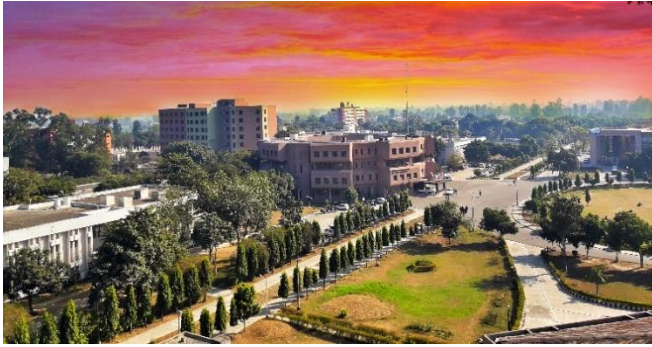


## ABOUT NIT, JALANDHAR



Dr B.R. Ambedkar National Institute of Technology Jalandhar (NITJ) was established in the year 1987 as Regional Engineering College and was conferred the status of National Institute of Technology (Deemed University) by the Government of India on October 17, 2002 under the aegis of Ministry of Human Resource Development, New Delhi. The Government of India has declared the Institute as an “**Institute of National Importance**” under an act of Parliament in 2007.

As one of the National Institutes of Technology (NIT), the Institute has the responsibility of providing high quality education in Engineering, Technology and Sciences to produce competent technical and scientific manpower for the country. The Institute offers B Tech, M Tech, M Sc, MBA and PhD programmes in several disciplines of Engineering, Technology and Sciences.

## HOW TO REACH NITJ

The institute is located on GT Road Amritsar by-pass at a distance of 15 km from Jalandhar Bus Stand, 12 km from Jalandhar City Railway Station, and 18 km from Jalandhar Cantt. Railway Station. It is connected to New Delhi by Road through AC bus service and Rail through Shatabadi/Superfast trains. The city is surrounded by famous rivers Sutlej and Beas. Jalandhar is internationally famous for sports goods industry and hand tools industry.

## ACCOMODATION

Limited accommodation would be available in the NITJ Guest Rooms/Hostels for outstation participants on nominal charges at first come first serve basis.

## Who can attend this STC?

PG Students/Research-scholars/ Industry professionals/ Faculty members can attend the STC. The interested persons need to apply to the ‘Course Coordinator’ in the prescribed format by due date (through proper channel).

## FOR REGISTRATION

The Registration Fees ₹ 1,000/-to be submitted in the form of DD in the favor of “**The Director, NIT Jalandhar**”, payable at “Jalandhar”

OR

Registration fee may be paid in CASH at registration desk on the spot.

## IMPORTANT DATES

Last date of Registration: 15 May, 2020

## ORGANIZING COMMITTEE

### Patron

**Professor (Dr) L K Awasthi**  
Director, Dr B R Ambedkar NIT, Jalandhar

### Chief Convener

**Dr Dinesh Shukla**  
Head, Department of Mechanical Engineering

### Convener

**Dr Sumit Sharma**  
Department of Mechanical Engineering  
Email: [sharmas@nitj.ac.in](mailto:sharmas@nitj.ac.in)

### Coordinators

**Dr Nitin Sharma**  
Department of Mechanical Engineering  
Ph.-9418573982  
Email: [sharman@nitj.ac.in](mailto:sharman@nitj.ac.in)

**Dr Saurabh Kango**  
Department of Mechanical Engineering  
Ph. -9882428386  
Email: [kangos@nitj.ac.in](mailto:kangos@nitj.ac.in)

## One Week Short Term Course On

## “*Future Scope in Engineering Materials and Tribology*”

**May 29–June 2, 2020**

Funded by  
Technical Education Quality Improvement Program-III

### Convener

**Dr Sumit Sharma**

### Coordinators

**Dr Nitin Sharma  
Dr Saurabh Kango**

### Organized by

**Department of Mechanical Engineering**



**Dr B R Ambedkar  
National Institute of Technology Jalandhar**

**Jalandhar, Punjab, India, 144011**

**[www.nitj.ac.in](http://www.nitj.ac.in)**

## OVERVIEW OF COURSE

Department of Mechanical Engineering under the aegis of NITJ is organizing a 5-day STC on Future Scope in Engineering Materials and Tribology (FSEMT) from May 29 to June 2, 2020. The present STC aims at providing a leading forum for sharing original research contributions and practical developments in the field of Materials Science and Engineering Tribology so as to contribute its share for technological advancements. Globalization provides all around development and this development is impossible without technological contributions. Hence, the present short term course aims to providing a leading forum for sharing original research contributions and practical developments in the field of Materials, composites, tribology by the various experts across the country so as to contribute its share for technological advancements.

## COURSE OUTLINE

**Composite Materials:** Polymer, ceramic and metal matrix composites, green composites, fibrous and particulate composites, hybrid composites, self-healing composites, micro and nano composites, nano-electronics and nano-mechanics. Multiscale Modelling of Materials: Molecular dynamics, Density functional theory analysis, Monte Carlo technique of atomistic modeling, meso-scale modeling, Finite element modeling (FEM) of materials. Mechanical Properties: Fracture and damage, fatigue, dynamic fracture, dynamic behavior, interfaces and interphases, creep and aggressive environment.

**Tribology:** Friction, wear, lubrication, surface texturing, hydrophobic and super-hydrophobic surfaces, amphiphobic surfaces, Oleophobic surfaces, fluid-film bearings, porous bearings, Rheology of Non-Newtonian fluids

## OBJECTIVES OF THE COURSE

1. The main objective of the STC is to provide a unique platform to facilitate the scientists, researchers, academicians, industrialists and students to share the recent advancements and the challenges in technological development of tribology of materials.
2. To exchange innovative ideas among the researchers in the area of tribology of materials around the country.
3. To provide an opportunity to national experts to share their experiences and success stories.

## ABOUT THE DEPARTMENT

The Department of Mechanical engineering offers B. Tech, M. Tech and PhD programmes. The B. Tech programme is accredited by the NBA. The Department has experienced and enthusiastic faculty members. The Department has good facilities for CAD, Simulation, material testing (DMA, UTM, etc.) and pursues research in the areas of Mechatronics, Robotics, System Dynamics & Control, Modeling and Simulation of Physical Systems, Biomechanics, Alternate Fuel for IC Engines, Synthesis and Application of Carbon Nanotubes, Renewable Energy, Welding Technology, Simulation and Modeling, Industrial & Production Engineering, Heat Transfer, Fluid Dynamics, Combustion, Computational Fluid Dynamics, Friction Stir Welding, Vibration, Heat Exchangers, Alternative Refrigerants, Flow Condensation & boiling, Thermal System Simulation, Emission Control, Fuel Efficient Engines and Tribology.

## REGISTRATION

Email the scanned copy of following filled registration form along with DD to [kangos@nitj.ac.in](mailto:kangos@nitj.ac.in) or [sharman@nitj.ac.in](mailto:sharman@nitj.ac.in)

Contact Us:

### Dr Sumit Sharma

Department of Mechanical Engineering

Ph:8146871758

Email: [sharmas@nitj.ac.in](mailto:sharmas@nitj.ac.in)

### Dr Nitin Sharma

Department of Mechanical Engineering

Ph: 9418573982

Email: [sharman@nitj.ac.in](mailto:sharman@nitj.ac.in)

### Dr Saurabh Kango

Department of Mechanical Engineering

Ph:9882728386

Email: [kangos@nitj.ac.in](mailto:kangos@nitj.ac.in)

## Application Form

Name: Mr./Ms./Dr. \_\_\_\_\_  
(In Capital Letters)

Designation: \_\_\_\_\_

Department: \_\_\_\_\_

Organization \_\_\_\_\_

Address for Correspondence: \_\_\_\_\_

---

---

Mobile No. \_\_\_\_\_

E-Mail ID: \_\_\_\_\_

Educational Qualification: \_\_\_\_\_

Accommodation Required: \_\_\_\_\_ (Yes/No)

Fee Detail: Amount \_\_\_\_\_ DD No. \_\_\_\_\_

Signature and Date: \_\_\_\_\_

### Recommendation of the Sponsoring Authority:

The application is hereby sponsored and will be permitted to attend short-term course, if shortlisted.

Date: \_\_\_\_\_

Signature and Seal of Sponsoring Authority