



## About NIT Hamirpur

National Institute of Technology Hamirpur is one of the thirty one NITs of the country, established in 1986 as Regional Engineering College, as a joint and cooperative enterprise of the Govt. of India and Govt. of Himachal Pradesh. The institute's goals, reflected in its logo, are broad and visionary. It offers undergraduate, postgraduate, and doctoral programs in engineering, sciences, and humanities, aiming to promote national integration, industry interaction, and emphasize both basic and applied research.

## About Department of Materials Science and Engineering

The Department of Materials Science and Engineering (formerly Centre for Materials Science) has become renowned for its high-quality teaching and research. Supported by a well-funded program, it offers a strong B.Tech. and M.Tech. curriculum. Numerous research scholars have earned their Ph.D. in various specializations. The department boasts a versatile faculty and experienced support staff, making it a leader in diverse specializations.

### Patron

Prof. H. M. Suryawanshi  
Director

National Institute of Technology Hamirpur

### Chairman

Dr. Vishal Singh  
Head

Department of Materials Science and  
Engineering

### Convener

Dr. Vishal Singh

### Coordinators

Dr. Raj Bahadur Singh  
Dr. Rita Maurya

### Organizing Committee

All faculty and Staff members of  
Department of Materials Science and  
Engineering  
NIT Hamirpur H. P. India.

### Contact Person

Dr. Raj Bahadur Singh  
Assistant Professor  
Department of Materials Science and  
Engineering  
NIT- Hamirpur -177 005 (H.P.), India  
Email: raj@nith.ac.in  
Mob: 09140858597

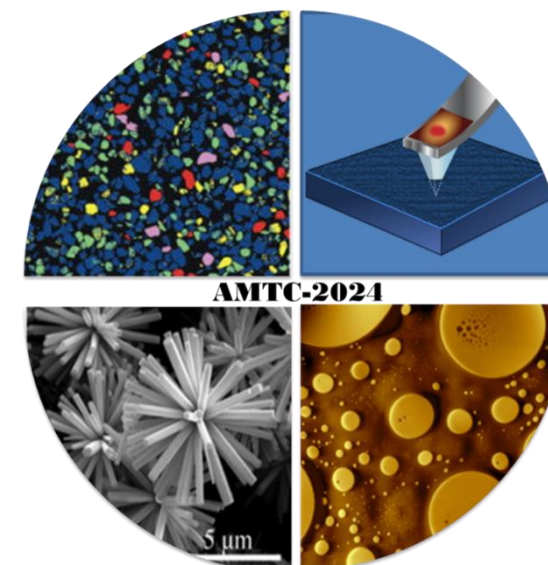
## Online Short Term Course (e-STC)

on

Advanced Materials Testing and  
Characterization

**(AMTC-2024)**

**29th July - 2nd Aug 2024**



Organized by  
Department of Materials Science and  
Engineering,  
National Institute of Technology Hamirpur,  
Hamirpur, Himachal Pradesh – 177 005

## About e-Short Term Course

Materials testing and characterization are crucial aspects of Metallurgical and Materials Engineering, often indicating the readiness to meet evolving industrial demands. A country's growth hinges on its ability to develop innovative materials, impacting sectors like automotive, aerospace, manufacturing, and construction. This STC aims to provide comprehensive knowledge on advanced testing and characterization of metals, alloys, and special materials. It will address industry needs and equip participants to tackle upcoming challenges in materials testing and characterization effectively.

### Objectives and Scope

This Short-Term Course (STC) is designed to achieve multiple objectives. Participants will first develop a foundational understanding of materials testing and characterization principles and concepts. Then, they will explore the interdisciplinary nature of these techniques, witnessing their applications across diverse industries like automotive, aerospace, biomedical, and electronics. Additionally, the course will offer insights into current and future challenges in Advanced Materials Testing and Characterization, while also refreshing participants' understanding of materials science and engineering fundamentals.

## Topics to be Covered

- X-Ray Diffraction
- Optical Microscopy
- Scanning Electron Microscopy
- Transmission Electron Microscopy
- Tensile Testing
- Nano, Micro Hardness Testing
- Microstructural Characterization
- Characterization of Nano Materials
- Coatings and Characterization
- Fatigue Testing

### Resource Persons/Speakers:

Faculties/Experts from IITs, NITs, CSIR labs 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 workshop. Application will be accepted on *first-cum-first serve basis*.

### Important Dates

Last date (Online Registration): July, 25 2024  
Confirmation by E-mail: July, 27 2024  
e-STC duration: 29-07-2024 to 02-08-2024

## Registration Fee Details

- ❖ Rs. 200 for Students
- ❖ Rs. 500 for Academia/R&D Labs
- ❖ Rs. 1000 for participants from Industry

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

### Mode of Fee Payment

The interested candidates must deposit the registration fee through SBI collect with the following procedure: Open SBI Collect <<https://www.onlinesbi.sbi/sbicollect/>>Under Select Category <Click on Educational Institutions>Filter by state <Himachal Pradesh> Educational Institutions <NIT Hamirpur>Payment Category <Workshop/ STC/FDP/Conference>

### How to Apply

Generate the payment slip and attach it with the registration form available at the following link:

[https://docs.google.com/forms/d/e/1FAIpQLSc1Jf kLL0IEGui4bP8QxUtTZCRn7WRsc-G7cSNNIw\\_IDn3DEw/viewform](https://docs.google.com/forms/d/e/1FAIpQLSc1Jf kLL0IEGui4bP8QxUtTZCRn7WRsc-G7cSNNIw_IDn3DEw/viewform)

### Certificate

E-Certificate will be provided to those registered participants whose minimum attendance is 75% of the program.