

**Online Short Term Course (e-STC)
on
Synthesis and Characterization of
Nanomaterials
(SCNANO-2026)
17th Aug– 21st Aug 2026
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 goals of the institute as embodied in the logo are truly remarkable in their scope of vision. The college provides Undergraduate, Postgraduate and Doctorate Education in Engineering, Sciences & Humanities, fostering the spirit of national integration among the students, a close interaction with industry and a strong emphasis on research, both basic and applied.

About Department of Materials Science and Engineering

The Department of Materials Science and Engineering (Formerly Centre for Materials Science) has evolved into one of the finest in terms of teaching curriculum and methodology supported by a well-organized and adequately funded research program. The Department has a very well-established B. Tech. program complemented by an M. Tech. program. Apart from this many Research Scholars have got their Ph.D. in various areas of specialization and 10 Research scholars are ongoing in various areas of specialization. The department is, perhaps, the most versatile in terms of the range of specializations of its faculty members and a well experienced support staff.

**Patron
Prof. H. M. Suryawanshi
Director
National Institute of Technology Hamirpur
Chairman
Head
Department of Materials Science and Engineering**

**Convener
Prof. Ravi Kumar**

**Coordinators
Dr. Vikram Verma
Dr. Raj Bahadur Singh**

**Organizing Committee, All faculty and Staff of
Department of Materials Science and
Engineering
NIT Hamirpur.**

**Online Short Term Course (e-STC) will be
held using Google Meet**

**Contact Person
Dr. Vikram Verma
Assistant Professor
Department of Materials Science and Engineering
National Institute of Technology Hamirpur
Hamirpur, Himachal Pradesh – 177 005, India
Email: vikramv@nith.ac.in
Mob: 8765069147**

**Short Term Course (STC)
on
Synthesis and Characterization of
Nanomaterials
SCNANO-2026)
17th Aug– 21st Aug 2026**

**An Initiative of
National Institute of Technology Hamirpur**



**Organized
by
Department of Materials Science and Engineering,
National Institute of Technology Hamirpur,
Hamirpur, Himachal Pradesh – 177 005, India
Phone: +91-1972-254380
Web: www.nith.ac.in**

About Short Term Course

This short-term course provides a platform to expose participants to current and emerging challenges in the field and their potential solutions while strengthening the fundamentals of the synthesis and characterization of nanomaterials. Expert lectures, interactive discussions, and idea-sharing sessions will enhance participants' knowledge and promote collaborative learning. The course aims to inspire innovation and equip participants with the skills needed to address present and future scientific and industrial challenges effectively

Objectives and Scope

Synthesis and characterization of nanomaterials are among the fastest-growing areas of Materials Science, Nanotechnology, and allied disciplines. The ability to synthesize and characterize nanomaterials with controlled composition, morphology, and properties is essential for advancing emerging technologies. Functional nanomaterials have widespread applications in energy, healthcare, electronics, environmental remediation, aerospace, automotive, and sustainable manufacturing. This workshop aims to provide participants with a strong foundation in the principles and recent advances in nanomaterial synthesis and characterization. It will cover key synthesis techniques, structure–property relationships, and advanced characterization methods through expert lectures and interactive discussions, equipping participants to address current research challenges and industrial applications.

Topics to be Covered

- Co-precipitation and Sol–Gel Synthesis of Nanomaterials
- Electrodeposition of Nanostructured Materials
- Physical Vapor Deposition (PVD) of Thin Films and Nanostructures
- X-ray Diffraction (XRD): Crystal Structure and Phase Analysis
- Field Emission Scanning Electron Microscopy (FESEM): Surface Morphology and Microstructural Characterization
- Transmission Electron Microscopy (TEM): Nanoscale Structural and Defect Characterization
- Spectroscopic Techniques for Nanomaterial Characterization
- Two-Dimensional (2D) Materials: Synthesis, Properties, and Applications
- Nanodevices: Design, Fabrication, and Emerging Applications
- Applications of Nanomaterials in Energy, Electronics, Healthcare, and Environmental Engineering

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): 14-08-2026

Confirmation by E-mail: 15-08-2026

STC duration: 17-08-2026 to 21-08-2026

Registration Fee Details

- (a) Rs. 500 for Academia/R&D Labs participants
- (b) Rs. 200 for Students
- (c) Rs. 1000 for participants from Industry

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 Himachal Pradesh as state of Institution and type of Institution as educational institute
- Choose NIT Hamirpur from Name of the Institutions and Select payment category as **WORKSHOP FDP STC CONFERENCE**
- Generate the payment slip and attach it with the registration form available at the following link

<https://docs.google.com/forms/d/e/1FAIpQLSczB71iqfbKc6zcohaAeICkvMcfV2wVltzO59n6WBf6wHiMaA/viewform?usp=publish-editor>

Certificate

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