

Online Short-Term Course (STC)
on
**Newer Techniques for Energy
Transformations: A Pathway to
Sustainable Development
(NTETPSD-26)**

September 7-11, 2026



Organized by
**Department of Chemical Engineering
National Institute of Technology
Hamirpur – 177005
Himachal Pradesh-India**

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About NIT Hamirpur

National Institute of Technology Hamirpur is one of the thirty-one NITs of the country, which came into existence on August 07, 1986 as Regional Engineering College, a joint and cooperative enterprise of the Govt. of India and Govt. of Himachal Pradesh. On June 26; 2002, REC Hamirpur was awarded the status of Deemed University and upgraded to National Institute of Technology. NIT Hamirpur is an institute of National importance set up by an act of Parliament namely the National Institute of Technology Act 2007 which received the accent of the President of India on June 05, 2007.

About Chemical Engineering Department

Department of Chemical Engineering was established in the year 2013, with a mission to impart high quality engineering education and to mold the students to meet the ever-growing demand of technical manpower in the field of Chemical Engineering. The department offers three programs B.Tech, M.Tech and Ph.D. The department comprises of several laboratories for the undergraduates catering to the needs of the curriculum.

In addition, computational/ experimental and research laboratories for the postgraduates and doctoral resources are already in place. All the faculties are highly qualified and well dedicated to teaching and research in various fields of chemical engineering as well as in different interdisciplinary areas of engineering.

About The e-STC

The rapid depletion of fossil fuels and growing environmental concerns demand a transition to sustainable, efficient energy systems. Energy transformation technologies convert primary sources into more efficient, environmentally friendly forms. Recent advances in energy conversion, integration, and management offer new opportunities to achieve sustainable development goals. The short-term course on “Newer Techniques for Energy Transformations: A Pathway to Sustainable Development” is essential to bridge the gap between conventional practices and modern technologies. The program will cover advanced energy conversion systems, energy integration, waste heat recovery, renewable energy, hydrogen energy systems, and optimization tools like pinch analysis, process intensification, and smart energy management.

Objectives of The e-STC

- To introduce the concepts of novel techniques for energy transformation.
- To critically analyze the technical and governance challenges for the newer novel energy technologies.
- To explore the mechanisms for efficient and sustainable value-chain management for newer energy transformation techniques.
- To examine best practices, case studies, and global models for the novel energy transformations leading to sustainable development.
- To foster interdisciplinary ideas and research in the field of novel energy resources for creating resilient pathways toward sustainable development.

Thrust of The e-STC

In this program, the participants will be able to:

- Provide fundamental and advanced knowledge of modern energy transformation technologies for sustainable energy systems.
- Explore recent advancements in renewable energy technologies, including solar, wind, hydrogen, and bioenergy, for efficient energy generation.
- Introduce next-generation energy storage systems such as advanced batteries, solid-state batteries, fuel cells, and supercapacitors.
- Highlight the role of advanced and nanostructured materials in enhancing energy conversion and storage performance.
- Examine innovative energy conversion techniques, including thermochemical, electrochemical, and hybrid systems.

Who Can Apply

- **Students-** UG, PG, PhD
- **Faculty Members**
- **Other professionals-** Engineers and scientists from Industry and R&D organizations

Participation Fee

All registered participants will get participation e-certificate. The participation fee including GST is mentioned below

- | | |
|---------------------------------|----------|
| ➤ Student (UG/PG/PhD): | 300 INR |
| ➤ Academia/ R&D Labs: | 500 INR |
| ➤ Industry participants: | 1000 INR |
| ➤ Internal Participants of NITH | Nil |

How to Apply

The interested participants should register by paying the registration fee and filling the google form through the below link (copy and paste the link):

<https://forms.gle/PeSw8hWekLYvyuLf8>

Mode of Fee Payment

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>

Important Dates

- Last Date of Registration: **September 4, 2026**
- Intimation to Participants : **September 5, 2026**

*E-Certificate will be provided to those registered participants having attendance $\geq 75\%$ in the program

Resource Persons

The course will be taught by the eminent speakers from the Indian Institutes of Technology (IITs), National Institutes of Technology (NITs), and industry.