About the Institute

The National Institute of Technology Sikkim (NIT Sikkim) is one of the esteemed institutions of higher learning in the country, established in 2010 as part of the 11th Five-Year Plan of the Government of India. Located in the serene Himalayan region, the institute offers undergraduate, postgraduate, and Ph.D. programs in various disciplines of engineering, technology, and applied sciences. NIT Sikkim is committed to providing quality education and fostering innovation and research. The institute has a growing reputation for academic excellence, with its students consistently securing placements in top national and international companies.

About the Department

Mechanical Engineering:

Mechanical engineering focuses on the responsible creation of products, processes, and power systems, ranging from molecular structures to complex machinery. Grounded in the principles of mass, motion, forces, and energy, the field drives vital technological advancements. Established in 2014, the department strives for global recognition in education and cutting-edge research. It equips students with a balanced blend of theoretical insight and practical experience, fostering innovative, entrepreneurial, and socially responsible engineers. Through comprehensive training in critical thinking, technical proficiency, and communication, the department prepares graduates to meet evolving industrial demands and excel in multidisciplinary domains.

Computer Science & Engineering:

Active since the founding of NIT Sikkim in 2010, the Department of Computer Science and Engineering offers four-year B. Tech, two-year M. Tech, and Ph.D. degrees. It delivers an exceptional learning environment backed by research excellence. The comprehensive, regularly updated curriculum emphasizes real-world applications and modern engineering practices, ensuring students stay abreast of rapid computational advancements. Capitalizing on diverse faculty expertise, the department actively promotes interdisciplinary and multidisciplinary research projects to prepare graduates for high-impact careers in science and industry.

About Sikkim

Sikkim, a picturesque state in northeastern India, is renowned for its breathtaking landscapes, rich cultural heritage, and peaceful environment. Nestled in the Himalayas, the state is known for its pristine natural beauty, with snow-capped peaks, lush greenery, and serene monasteries., and eco-tourism.

About ATAL FDP

The ATAL (AICTE Training and Learning) Faculty Development Program (FDP) is a flagship initiative of the All-India Council for Technical Education (AICTE) aimed at enhancing the teaching, research, and professional skills of faculty members across various disciplines. The FDP aims to disseminate in-depth knowledge to faculty members, researchers and professionals regarding emerging hydrogen technologies, applications, and role to achieve net-zero energy and sustainable transportation. Hydrogen is emerging as a promising clean energy carrier to decarbonize hard to abate sectors such as heavy-duty transportation, and long-range mobility. The FDP will deal with hydrogen internal combustion engines, combustion characteristics, engine performance, emissions, hydrogen blending and alternative-fuel technologies. The Programme will also include techno-economic, hydrogen mobility, future transportation systems, research opportunities, and industry perspectives of hydrogen energy systems towards sustainable and low-carbon energy solutions.

Topics to be covered:

- Advanced combustion engines using alternative fuels.
- Hydrogen internal combustion engines.
- Hydrogen blending and alternative-fuel technologies.
- Combustion characteristics of hydrogen.
- Hydrogen engine performance and emissions.
- Hydrogen production: grey, blue and green hydrogen.
- Hydrogen mobility and future transportation.
- Hydrogen storage and transportation.
- Hydrogen safety, standards and infrastructure.
- Emerging Internal Combustion Engines
- Drug Use Prevention and Early Intervention

AICTE Training and Learning (ATAL) Academy

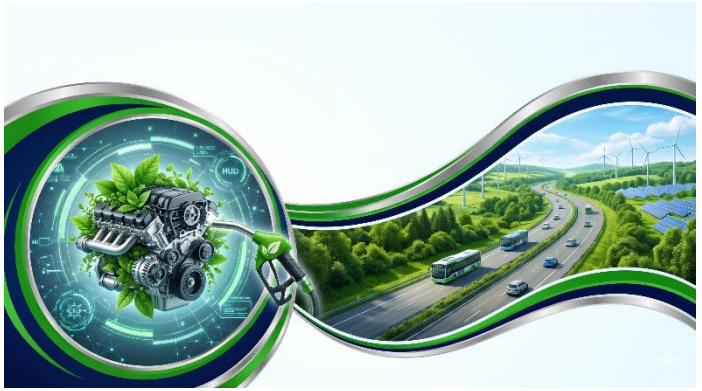
sponsored

Online Faculty Development Programme

on

Green Mobility and Sustainable IC Engines Technologies Fuels and Emission Reduction Strategies

30th Nov to 5th December 2026



Organized By

National Institute of Technology, Sikkim
Ravangla, Barfung Block
South Sikkim- 737139 (India).

(An autonomous Institute under the aegis of the Ministry of Education, Govt. of India)
website: https://nitsikkim.ac.in/

Resource Persons

Experts from IITs, NITs, top foreign universities, and industries.

Who Can Attend?

The faculty members, Research scholars & PG Scholars of the AICTE approved institutions and Industry Personnel

Expected Outcomes of the FDP

- Participants will gain comprehensive understanding of emerging hydrogen technologies, grey/blue/green hydrogen production routes, electrolysis, renewable-energy integration, storage, transportation, safety, standards, and infrastructure.
- Participants acquire domain expertise in hydrogen internal combustion engines, combustion characteristics, engine performance, emissions, hydrogen blending, and alternative-fuel technologies.
- Participants will experience hands-on demonstrations and simulations of hydrogen energy systems.
- Participants will get direct exposure to current research trends, technical challenges, and industry perspectives presented by experts from IITs, NITs, reputed/international universities, research labs, and industry.

Patron

Prof. Mahesh Chandra Govil
Director, NIT Sikkim

Convener

Dr. Jai Gopal Gupta
Associate Professor & Head of Department
Dept. of ME, NIT Sikkim

Coordinator

Dr. Bam Bahadur Sinha
Assistant Professor,
Dept. of CSE, NIT Sikkim

Organizing Committee

Dr. Pankaj Kumar Keserwani, CSE
Dr. Debajit Saha, ME
Dr. Biswajit Roy, ME
Dr. Brijesh Kumar Singh, ME
Dr. Bibhuti Bhusan Nayak, ME

Advisory Committee

Dr. Aurobinda Panda, Dean Academic
Dr. Anjan Kumar Ray, Dean FW
Dr. Taraknath Kundu, Dean R&C
Dr. Achintesh N. Biswas, Dean AIIR
Dr. Sourav Mallick, Dean P&D
Dr. Ranjan Basak, Dean SW



Other Instructions

- This FDP will be conducted in online mode
- In case of any query, feel free to contact the course convener/coordinator.
- Relevant study materials will be provided to the participants
- The certificates shall be issued to those participants who are registered on ATAL portal www.aicte-india.org/atal and attend the program with minimum 80% attendance and score minimum 70% marks in the test.

Registration and General Information

The interested candidates are required to register for the FDP through the following link on or before the last date https://www.aicte-india.org/atal
The number of participants is limited and will be selected based on a first-come, first-serve basis and prerequisite. For any clarification, the FDP coordinator can be contacted.

Contact Us

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Last date of registration

25th November 2026