

About VMSBUTU, Dehradun

Veer Madho Singh Bhandari Uttarakhand Technical University (VMSBUTU), Dehradun was established on 27th January 2005 by Govt. of Uttarakhand. The University has been established in an area of 8.372 hectare and it is the only affiliating University of the state for technical institutions. There are 7 campus and 132 affiliated colleges with 33,000 students in various courses. University is running 08 UG, 6 PG and 18 Ph.D programmes.

About THDC-IHET, Tehri

THDC Institute of Hydropower Engineering and Technology (THDC-IHET) is a campus institute of Veer Madho Singh Bhandari Uttarakhand Technical University, Dehradun, established in Bhagirathipuram, Tehri, the heart of hill state Uttarakhand. The institute is situated at distance of 3 km from the Tehri dam, which is one of the largest hydropower dams in the world. The institute is providing B. Tech courses in core engineering streams and M. Tech in Hydropower & Renewable Energy. The institute is an energy focused center offering skill development course under the Jal Urja Mitra Skill Development Programme to enhance practical competencies in the energy sector. The institute provides grand infrastructure, well equipped labs, modernized classrooms, computer centre, seminar hall and a fully automated library. The campus is equipped with a 150 kW installed rooftop solar power plant, supporting clean energy generation. In addition, best possible facility of hostel, sports, gym, canteen, guest house, start-hub, exhibition hall and transportation are also offered. Well qualified faculties of the institute provide best educational, research and professional environment.

About the Department

The Department of Electrical Engineering has been an integral part of the institute since its inception. It offers a comprehensive UG program in Electrical Engineering, PG program in Hydro and Renewable Energy and a skill development program under Jal Urja Mitra. The department boasts state-of-the-art infrastructure, including fully equipped laboratories designed to deliver high-quality, hands-on education. In addition to academic excellence, the department regularly organizes extracurricular activities aimed at fostering creativity and innovation among students. With advanced laboratory facilities and cutting-edge equipment, the department is well-positioned to support both learning and research.

Chief Patron

Prof. Tripta Thakur

Vice Chancellor

**Veer Madho Singh Bhandari Uttarakhand
Technical University, Dehradun**

Patron

Prof. Sharad Kumar Pradhan

Director

**THDC Institute of Hydropower Engineering
and Technology, Tehri**

Coordinator

Mr. Nitin Kumar Gupta

Assistant Professor

**THDC Institute of Hydropower Engineering
and Technology, Tehri**

Co-Coordinator

Mr. Himanshu Nautiyal

Assistant Professor

**THDC Institute of Hydropower Engineering
and Technology, Tehri**

**AICTE Training and Learning (ATAL)
Academy**

**Faculty Development Programme
(FDP) On**

**Sustainable Electric Vehicles for
Hilly Terrains**

(05-10 October, 2026)



Coordinator

Nitin Kumar Gupta

Electrical Engineering Department
THDC Institute of Hydropower Engineering &
Technology, Bhagirathipuram, Tehri-249124
(Campus Institute of Veer Madho Singh Bhandari
Uttarakhand Technical University, Dehradun)
www.thdcihet.ac.in

About ATAL Academy

All India Council for Technical Education (AICTE) through its newly established AICTE Training and Learning (ATAL) Academy have intimated Faculty Development Programs in various thrust domains of modern technology to impart quality training to Faculty Members, Research Scholars and PG students. The objectives of ATAL Academy are as follows:

- To set up an Academy which will plan and help in imparting quality technical education in the country.
- To support technical institutions in fostering research, innovation and entrepreneurship through training.
- To stress up on empowering technical teachers & technicians using Information & Communication Technology.
- To utilize SWAYAM platform and other resource for the delivery of trainings.
- To provide a variety of opportunities for training and exchange of experiences. Such as workshops, Orientations, learning communities, peer mentoring and other faculty development programmes.
- To support policy makers for incorporating training as per requirement.

About FDP

The Faculty Development Programme (FDP) aims to provide faculty members, researchers, and professionals with a comprehensive understanding of electric vehicle (EV) systems with a special focus on their application in hilly and mountainous terrains. Electric mobility is rapidly emerging as a key solution for sustainable transportation. However, deployment in hilly regions poses unique challenges such as steep gradients, high energy consumption, battery performance issues under

varying climatic conditions, and limited charging infrastructure. This FDP aims to address these challenges by exploring advanced design methodologies, energy-efficient control strategies, and innovative energy storage solutions. This FDP is designed to address these pressing issues by exploring innovative technologies and emerging trends in electric vehicle and energy storage system. Through expert lectures, case studies, and hands-on sessions, participants will gain valuable insights into the practical challenges and opportunities in the clean energy sector. By fostering interdisciplinary learning and collaboration, this FDP is intended for faculty members, researchers, and industry professionals who seek to enhance their knowledge and skills in electric mobility, with a focus on sustainable and region-specific solutions. The program also aims to promote research and innovation in EV technologies tailored for remote and geographically challenging areas.

Contents

The major themes/contents of the FDP are as follow:

- Fundamentals of Electric Mobility
- EV design challenges in hilly regions and remote areas
- Battery technologies and energy storage system
- Energy management and control strategies
- EV charging infrastructure in hilly areas and challenges in remote charging deployment
- Grid integration and power system impact
- Drive cycle analysis for hilly terrain
- Emerging technologies and trends
- Challenges in rural and hilly areas
- Lifecycle analysis of EVs
- Case Studies
- Field Visits

Who Can Attend

The faculty members of AICTE approved Institutions, Universities, research scholars; PG Students; Participants form Government, Industry and professionals from R&D labs.

Registration Process

There is no registration fee for participants. All boarding and lodgings arrangements will be made by THDC-IHET, Tehri. External Participants (traveling more than 20 km one side to attend the FDPs) who attend at least 90% of the sessions shall be reimbursed lump sum Rs. 1200.00, at the end of the FDP. Registrations can be done online using the link: www.aicte-india.org/atal

Contact Person

Nitin Kumar Gupta

Assistant Professor

Electrical Engineering

**Department THDC Institute of
Hydropower Engineering &
Technology, Tehri- 249124
(Uttarakhand)**

Email: nitin@thdcihet.ac.in

Mob: +91- 8938933821

