### **About the University**

Shri Mata Vaishno Devi University (SMVDU) has been established under the Jammu and Kashmir Shri Mata Vaishno Devi University act, 1999 an Act of the J&K State Legislature as an autonomous, highly Technical & fully Residential University. The University started functioning an academic unit in Aug 2004 when it was inaugurated on 19th August 2004 at the hands of the then Hon'ble President of India Dr. A P J Abdul Kalam. The University is approved by UGC under Section 2(F) & Section 12(B) of UGC Act of 1956.

## **About the Department**

The School of Electrical Engineering at Shri Mata Vaishno Devi University (SMVDU) is committed to excellence in education, research, and innovation in the field of electrical engineering. The school offers undergraduate, postgraduate, and doctoral programs, providing a strong foundation in core electrical engineering principles while integrating modern advancements in power systems, renewable energy, electric vehicles, and smart grid technologies.

#### Vision:

Advancement of electrical engineering academics, research and development within and in close collaboration with industry, society and leading institutions while developing visionaries who can create a better society with a passion for technology.

#### Mission:

To impart program-oriented knowledge in Electrical Engineering required for solving engineering problems so as to comprehend, analyze design and create novel products and solutions for the country.

Provide opportunities at individual level for developing a professional with an ability to apply his/her knowledge and skills for the advancement of society in Electrical Engineering.

### **FDP Overview:**

The FDP aims to equip participants with indepth knowledge of EV technology, covering key aspects such as powertrain design, battery management systems, energy-efficient propulsion, and smart charging infrastructure. The program will explore advancements in renewable energy integration, lightweight materials, and optimization techniques to enhance EV performance and sustainability. Emphasizing a multidisciplinary approach, it will address challenges in power electronics, thermal management, and control strategies, fostering research and innovation in the field. Through expert sessions, hands-on workshops, and case studies, this FDP will empower faculty members and researchers to contribute to the development of next-generation electric vehicles for a cleaner and more sustainable future.

# Faculty Development Programme On

"Design, Development, and Optimization of Electric

Vehicles for a Green Future"

6 – 11 October, 2025





Sponsored by
AICTE Training and Learning
(ATAL) Academy
Organized by



School of Electrical Engineering, Shri Mata Vaishno Devi University

Website: https://www.smvdu.ac.in

Patron: Prof. (Dr.) Pragati Kumar, Vice Chancellor

Coordinator: Dr. K. R. Jha, Head, SoEE, SMVDU

Co-Coordinator: Dr. Jatinkumar Soni, Assistant

Professor, SoEE, SMVDU

Organizing Secretary: Mr. Akash Deep, Dr. Prabhu

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#### **Resource Persons:**

#### Academia:

- 1. Dr. Arun Kumar Verma, Associate Professor, IIT Jammu
- 2. Minal Chandra, Senior Scientist, CSIR- CRRI, New Delhi
- 3. Dr Anjanee Kumar Mishra, Assistant Professor, Netaji Subhas University of Technology
- 4. Dr Krishna Kumar Gupta, Assistant Professor, Thapar Institute of Engg. & Technology
- 5. Dr. Anup Shukla, Assistant Professor, IIT Jammu
- 6. Prof.(Dr.) Obbu Chandra Sekhar, Professor, National Institute of Technology Delhi

### **Industry:**

- 7. Nilesh Thakare, Product Manager, Entuple
- 8. Sajeeth Kumar, Founder & CEO, Reynlab Technologies
- 9. Dr. Ramesh Singh, Tata Elxsi Bangalore
- 10. Mr. Manik Abrol, System Engineer, Alstom
- 11. Mr. Ramesha BS, Altair Engineering

## **Overseas experts:**

- 12. Dr. Viranjay M. Srivastava, Honorary Associate Professor, Birmingham City University
- 13. Prof. Ghanshyam Singh, Professor and Director, Professor: University of Johannesburg

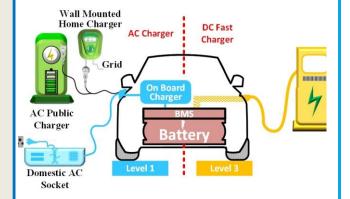


#### **Contents to be Covered:**

- Power Of Optimization For Sustainable Smart Product Development.
- Digital Twin Laboratories: Transforming EV Engineering Education Through Virtual-Physical Integration.
- Advanced Control and Optimization Strategies for Modern Electric Vehicle Powertrains.
- Power Electronics & Control Converters, inverters, regenerative braking, and motor control.
- Impact of Industry 5.0 for Sustainable, and Resilient Manufacturing of Electric Vehicles and Related Technologies.
- Hybrid Electric Vehicle Evolution in the 21st Century: Toward Green and Sustainable Mobility.

#### Who Should Attend?

- Faculty members from AICTE approved institutions.
- Research Scholars and PG Students from all the disciplines.
- Participants from Government, Industry and staff of host institution.



## **Registration Details:**

- Registration Fee: Nil
- Program will be conducted through online mode.
- The participants are advised to apply online at AICTE ATAL registration portal through: <a href="https://atalacademy.aicte-india.org/signup">https://atalacademy.aicte-india.org/signup</a>
- E-Certificate will be provided to all the registered participants\*.
- \* N. B.: A test shall be conducted through ATAL portal at the end of the program and the participant should secure at least 70% marks in test and 80% attendance in FDP.

### **Contact Persons:**

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