

About the FDP

The Faculty Development Program (FDP) on 'Sustainable Drives: Renewable Energy Solutions for Electric Vehicle Systems' aims to equip academicians, researchers, and industry professionals with advanced knowledge and cutting-edge innovations in the evolving fields of sustainable technologies. The shift towards sustainable transportation has made Electric Vehicles (EVs) a key focus in addressing energy and environmental challenges. This Faculty Development Program (FDP) aims to bridge the knowledge gap in integrating renewable energy technologies with EV systems. Through expert lectures, interactive sessions, and case studies, the program will explore the principles, technologies, and trends involved in developing efficient, eco-friendly electric transportation powered by solar, wind, and other clean energy sources.

This FDP will be highly beneficial for faculty, researchers, and industry professionals working in or aspiring to contribute to the evolving fields of electric mobility and green energy systems.

Objectives

The FDP is focused on the following key objectives:

- Overview of Electric Vehicle Systems and Sustainable Mobility Concepts.
- Integration of Renewable Energy Sources for EV Charging
- Energy Storage Technologies and Battery Management in EVs
- Power Electronics and Control Systems for EVs
- Smart Charging Infrastructure and Vehicle-to-Grid (V2G) Technologies
- Design and Simulation Tools for EV and Renewable Energy Integration
- Challenges, Opportunities, and Case Studies in Sustainable E-Mobility.

CLOs:

- To understand the architecture and functioning of electric vehicle systems powered by renewable energy sources.
- To explore sustainable energy integration strategies, energy storage technologies, and intelligent control mechanisms for electric vehicle applications.

COs:

- Participants will gain a strong conceptual foundation and technical knowledge of renewable energy-based EV system design and deployment.
- Participants will be equipped to develop teaching, research, and project-based applications aligned with green mobility and sustainable engineering solutions.

Who can attend?

The program is open to faculty members, research scholars, and postgraduate students from AICTE-approved institutions, as well as industry professionals.

The number of participants is limited to 50, and registration will be accepted on a first-come, first-served basis

How to Register for FDP?

Eligible candidates have to register through the following link on or before 5th June 2025

<https://forms.gle/CBDs59wyUqsZAvn4A>

There are no charges for registration, course materials, or certification.

Confirmation of Participation & Certificates

Upon registration, confirmation will be sent via email to selected participants by 7th June 2025.

The detailed schedule will be shared exclusively with confirmed participants through email and WhatsApp.

A ONE WEEK OFFLINE FACULTY DEVELOPMENT PROGRAMME

on

“Sustainable Drives: Renewable Energy Solutions for Electric Vehicle Systems”

16th – 20th June 2025

Organized by

Dept. of EEE, UCE, JNTUK, Kakinada

In association with

Dept. of EEE, Vishnu Institute of Technology,
Bhimavaram



Coordinators

Dr. T. Murali Mohan,

Professor, Dept. of EEE, UCE, JNTUK

Dr. RVD Ramarao,

Professor & Head, Dept. of EEE, VITB



VENUE

**C-BLOCK FIRST FLOOR SEMINAR HALL,
Vishnu Institute of Technology (Autonomous)
Bhimavaram, West Godavari District
Andhra Pradesh-534202**

7036179868, 9908740746

www.vishnu.edu.in

About JNTUK, Kakinada

Jawaharlal Nehru Technological University, Kakinada (JNTUK), established in 2008, is a premier institution offering UG, PG, and Ph.D. programs in Engineering, Pharmacy, and Management. With jurisdiction over 11 districts and more than 150 affiliated colleges, JNTUK is known for its strong academic foundation, industry collaboration, and emphasis on research and innovation. The university supports advanced learning through dedicated R&D centers, updated curricula, and partnerships with national platforms like NPTEL and IISc.

About Dept. of EEE, UCE

The Department of Electrical and Electronics Engineering, UCE-JNTUK, established in 1946, is one of the oldest and most reputed departments in the university. It offers UG, PG, and Ph.D. programs with a strong focus on innovation, research, and industry-relevant education. The department emphasizes modern technological developments in electrical sciences and strives to equip students with both theoretical foundations and practical skills suited for global challenges.

About VIT-Bhimavaram

Vishnu Institute of Technology, Bhimavaram (VITB) was established in 2008 by Sri K.V. Vishnu Raju under the aegis of Sri Vishnu Educational Society, founded by Padma Bhushan Dr. B.V. Raju. VITB is approved by AICTE and affiliated to JNTUK, Kakinada. It holds NBA, NAAC 'A++' grade (3.51/4), has autonomous status since 2019, and has received prestigious awards including the Ramakrishna Bajaj National Quality Award and the APQO Best in Class Award.

About the Dept. of EEE, VITB

The EEE Department offers B.Tech, M.Tech, and Ph.D. programs with advanced labs and a recognized research center. It conducts regular workshops and training programs, and has earned national accolades like the Chhatra Vishwakarma Award 2020 and Smart India Hackathon 2019.

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Dr. V. Sandeep, Asst. Professor, NIT-AP

Dr. Y. Pradeep Kumar, Asst. Prof., NIT-Warangal.

Dr. Srinivas Singirikonda, Subject Matter Expert- for
EV Power train system, PDSL (UK), Hyderabad.

Dr. V.S.N. Narasimha Raju, Assoc. Professor, VITB

Dr. I. Kasireddy, Assoc. Professor, VITB

Prof. G. Suribabu, Assoc. Professor, VITB

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Co-Chairperson

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Dr. R.V.D Ramarao, Professor & Head, Dept. of EEE, VITB

Co-Coordinators

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Mrs. S.A Shabeena, Assistant Professor, VITB

A ONE WEEK OFFLINE FDP SCHEDULE

Title of the FDP: Sustainable Drives: Renewable Energy Solutions for Electric Vehicle Systems

Venue: C-Block First Floor Seminar Hall

Day 1 (16-06-2025)	Day 2 (17-06-2025)	Day 3 (18-06-2025)	Day 4 (19-06-2025)	Day 5 (20-06-2025)
9:00AM – 9:30AM INAUGURATION				
9:30AM – 11:00 AM SESSION 1 <i>Sustainable electric Transportation concepts and case studies</i> Resource Person: Dr. Pradeep Kumar Yemula Associate Professor, IIT-Hyderabad	9:30 AM – 11:00 AM SESSION 5 <i>Renewable Energy Sources for EV Charging: Trends and Technologies</i> Resource Person: Dr. Vuddanti Sandeep Assistant Professor, NIT-AP	9:30 AM – 11:00 AM SESSION 8 <i>Introduction of advanced Electric drive technology for EV</i> Resource Person: Dr. T. Vinay Kumar Assistant Professor, NIT-Warangal	9:30 AM – 11:00 AM SESSION 13 <i>Advance Controllers for AC Drives for EV Applications</i> Resource Person: Dr. Tejavathu Ramesh Assistant Professor, NIT-AP	9:30 AM – 11:00 AM SESSION 17 <i>Battery Management Systems in Electric Vehicles</i> Resource Person: Dr. Srinivas Singirikonda Subject Matter Expert, PDSL (UK)
11:00 AM – 11:15 AM TEA BREAK	11:00 AM – 11:15 AM TEA BREAK	11:00 AM – 11:15 AM TEA BREAK	11:00 AM – 11:15 AM TEA BREAK	11:00 AM – 11:15 AM TEA BREAK
11:15 AM – 12:45 PM SESSION 2 <i>Research trends in grid integration of Electric Vehicles</i> Resource Person: Dr. Pradeep Kumar Yemula Associate Professor, IIT-Hyderabad	11:15 AM – 12:45 PM SESSION 6 <i>Integration of Solar PV with Charging Infrastructure</i> Resource Person: Dr. Vuddanti Sandeep Assistant Professor, NIT-AP	11:15 AM – 12:45 PM SESSION 10 <i>Advanced electric drive control schemes for EV -I</i> Resource Person: Dr. T. Vinay Kumar Assistant Professor, NIT-Warangal	11:15 AM – 12:45 PM SESSION 14 <i>Advance Controllers for AC Drives for EV Applications</i> Resource Person: Dr. Tejavathu Ramesh Assistant Professor, NIT-AP	11:15 AM – 12:45 PM SESSION 18 <i>Thermal Management & Safety in EV Batteries</i> Resource Person: Dr. Srinivas Singirikonda Subject Matter Expert, PDSL (UK)
12:45PM – 1:30 PM LUNCH	12:45 PM – 1:30 PM LUNCH	12:45 PM – 1:30 PM LUNCH	12:45 PM – 1:30 PM LUNCH	12:45 PM – 1:30 PM LUNCH
1:30 PM – 3:00 PM SESSION-3 <i>Vehicle-to-Grid Integration concepts for Electric Vehicles</i> Resource Person: Dr. Pradeep Kumar Yemula Associate Professor, IIT-Hyderabad	1:30 PM – 3:00 PM SESSION-7 <i>Control Systems for Grid-Connected Renewable EV Systems</i> Resource Person: Dr. Vuddanti Sandeep Assistant Professor, NIT-AP	1:30 PM – 3:00 PM SESSION-11 <i>Advanced electric drive control schemes for EV -II</i> Resource Person: Dr. T. Vinay Kumar Assistant Professor, NIT-Warangal	1:30 PM – 3:00 PM SESSION-15 <i>Advance Controllers for AC Drives for EV Applications</i> Resource Person: Dr. Tejavathu Ramesh Assistant Professor, NIT-AP	1:30 PM – 3:00 PM SESSION-19 <i>State of Charge (SOC) and State of Health (SOH) Estimation Techniques</i> Resource Person: Dr. Srinivas Singirikonda Subject Matter Expert, PDSL (UK)
3:00 PM – 3:15 PM TEA BREAK	3:00 PM – 3:15 PM TEA BREAK	3:00 PM – 3:15 PM TEA BREAK	3:00 PM – 3:15 PM TEA BREAK	3:00 PM – 3:15 PM TEA BREAK
3:15 PM – 4:45 PM SESSION-4 <i>Non-linear Dynamics in Electric Vehicles</i> Resource Person: Prof. G. Suribabu Associate Professor, VITB	3:15 PM – 4:45 PM SESSION-8 <i>Case Studies on EV Deployments and Charging Infrastructure in India</i> Resource Person: Dr. V.S.N Narasimha Raju Associate Professor, VITB	3:15 PM – 4:45 PM SESSION-12 <i>Load frequency controller design using model-based concept</i> Resource Person: Dr. I. Kasireddy Associate Professor, VITB	3:15 PM – 4:45 PM SESSION-16 <i>Trends and Innovation in Electric Powertrains</i> Resource Person: Dr. V.S.N Narasimha Raju Associate Professor, VITB	3:15 PM – 4:45 PM SESSION-20 <i>Discussion & Assessment submission.</i> Resource Person: Dr. I. Kasireddy Associate Professor, VITB
				4.45 PM -5.15 PM VALEDICTORY

Rules & Regulations:

- Physical presence is mandatory for all sessions.
- An assessment will be conducted at the end of FDP.
- After Registration, join WhatsApp group to receive timely updates.
- Participants need to have 90% attendance & 70% Marks in the assessment and must submit feedback to receive a Certificate of Participation.
- Registrations are accepted only through the link provided in the brochure. There is no provision for offline/spot registrations.