



ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)

On

**Electric Vehicles and Energy Storage Systems: Design, Challenges
& Grid Integration Issues**



Organized by

E&ICT Academy, NIT Warangal

In association with

Department of Electrical and Electronics Engineering

Anil Neerukonda Institute of Technology and Sciences (A), Visakhapatnam

INVITATION

You are cordially invited to attend the inaugural function of online Faculty Development Program (FDP)

On

**“Electric Vehicles and Energy Storage Systems: Design, Challenges
& Grid Integration Issues”**

(15th – 19th March 2025)

Venue: Online

Prof. P. Sreehari Rao

Chairman, E&ICT
NIT Warangal

Prof. K. Sri Rama Krishna

Principal, ANITS Visakhapatnam

Prof. J. Vijaya Kumar

HoD EEE, ANITS Visakhapatnam

Dr. V. S. Sandeep Reddy

Assistant Prof, Department of EEE,
ANITS Visakhapatnam
Will preside over the function

The program will be organized by E&ICT academy of NIT Warangal through coordination from faculty of NIT Warangal in association with Anil Neerukonda Institute of Technology and Sciences (ANITS) (A), Visakhapatnam; academicians in the concerned field from IITs/NITs/IITs/abroad are invited to deliver lectures. Speakers from industries are also expected to provide as part of the course.

Coordinators

Dr. M. Sailaja Kumari, Professor
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Electric Vehicles and Energy Storage Systems: Design, Challenges And Grid Integration Issues

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Organized by

E&ICT Academy, NIT Warangal

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Preamble:

“Electronics & ICT Academy” was set up at NIT Warangal with financial assistance from MeitY, Gol. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. This academy offers faculty development programs (FDPs) in standardized courses and emerging areas of Electronics, Information Communication Technologies, training and consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation, and entrepreneurial activities.

This FDP is devoted to addressing the design, challenges, and grid integration of EVs and ESS represent both the promise and complexity of transitioning to a sustainable energy future. Their importance lies in their ability to mitigate climate change, enhance energy resilience, and supports a more sustainable and connected society, which is being conducted online at the National Institute of Technology, Warangal, and the ANITS Visakhapatnam. Academicians and industry experts handle the whole course.

Major Course Contents:

- Introduction to electric vehicles and various energy storage systems and applications
- Impact of EVs on the grid ,V2G and G2V technology
- Motors and their sustainability for EVs
- Energy Source: Batteries, Battery parameters, Types, Selection ,Battery modeling
- BMS and EMS ,new battery technologies and forecasting
- Various meta heuristic techniques used in BESS and EV Optimizations
- Optimal Locations for EV Charging stations
- Future Technology in EV and ESS.

Faculty conducting this program:

The program will be organized by E&ICT academy at NIT Warangal through coordination from faculty of NIT Warangal in association with Anil Neerukonda Institute of Technology and Sciences (ANITS) (A), Visakhapatnam; academicians in the concerned field from IITs/NITs/IITs/abroad are invited to deliver lectures. Speakers from industries are also expected to provide as part of the course.

Eligibility:

The program is open to the Faculty of Engineering Colleges, MCA Colleges, and other allied disciplines in India. Industry personnel working in the concerned /allied discipline can also attend.

Registration Fee Particulars:

Faculty and Research Scholars	Rs. 750/-
Industry Participants	Rs. 2200/-

Participants need to pay the Registration Fee Online using the following details.

Online Transfer Details

Account Name: Electronics &ICT Academy NITW
Account No: 62423775910
IFSC: SBIN0020149
Branch : State Bank of India , NIT (REC) Warangal

How to apply:

Participants are required to fill out the online registration form by clicking on the following link:

Link to Apply:

<https://docs.google.com/forms/d/e/1FAIpQLScplNYOsD7vz3eU7Yn3-noAPdrERETUIYCnNerjZ5ZDg2oJmw/viewform>

Selection Criteria:

Selection will be made based on a first-come-first-serve basis to a maximum number of 40(forty).The list of selected participants will be intimated through e-mail. The DD/online payment will be returned if a candidate is not selected .Candidates will be issued satisfactory certificates on successful completion of the course.

Important dates:

Last date for submission of the Application	08-03-2025 (05:00 PM)
Selection List by Email	12-03-2025
Duration	15-03-2025 to 19-03-2025
Timings	4 to 6:45 pm and 6:15 to 8 pm

About NIT Warangal:

NIT Warangal, the pioneering RECs, offers top-notch technical education with B.Tech, M.Tech, and Ph.D. programs. All its B.Tech and M.Tech programs are NBA accredited. The Computer Science and Engineering department provides B.Tech in CSE, M.Tech in CSE and CSIS, and MCA. With experienced faculty, robust labs, and industry ties with Microsoft, IBM, Oracle, and others, it conducts sponsored programs regularly.

About ANITS Visakhapatnam:

Anil Neerukonda Institute of Technology & Sciences (ANITS) (Autonomous) Visakhapatnam is owned by Megha Engineering and Infrastructure Limited (MEIL) which is one of the top infrastructure and manufacturing company in India with headquarters at Hyderabad. The institute was established in the academic year 2001-02. ANITS has been accredited by NAAC with A+ grade and all its B.Tech programs are accredited by NBA under Tier-1. ANITS permanently affiliated to Andhra University and it has been accorded the status of “Centre for Research” for guiding Ph.D scholars.

Coordinators

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One Week Online Faculty Development Program on
“Electric Vehicles and Energy Storage System: Design Challenges and grid integration issues”



Dates: 15-03-2025 to 19-03-2025

E&ICT Academy, NIT Warangal (in association with)
Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam
(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)

PROGRAM SCHEDULE

Dates & Days	4:00 PM- 5:45 PM	6:15 PM-8:00 PM
15-03-2025 (Saturday)	Fundamentals of Electric Vehicles (Prof.M.Sailaja Kumari, NITW)	Introduction to Energy storage system and economic operations using ESS in Microgrids (Dr.V.S.Sandeep Reddy, ANITS VSKP)
16-03-2025 (Sunday)	Design and implementation of HEV using intelligent systems (Dr. A.Venkatesh, ANITS,VSKP)	Advanced speed control schemes of Electric drive for EV applications (Dr.T.Vinay Kumar,NITW)
17-03-2025 (Monday)	Control Implementation for EV Motor drives (Dr.M.Ravi Eeswar ,SRM University Chennai)	Adaptive Protection of Smart grids Dr.M.Nabab Alam ,NITW
18-03-2025 (Tuesday)	Wireless Power: Applications and Challenges (Dr.P.Chandrasekhar , IIT B)	Grid integration of power converters (Dr.D.Srinivas Rao,NITW)
19-03-2025 (Wednesday)	Techno economic assessment of centralized Hybrid ESS (Dr.Dipanshu Naware ,NIT Trichy)	Fault tolerant motor drive configurations for EV applications Dr.PatnanaHemaKumar,Specilaist Grade F,TBU Electrification,TataElxsiHyd