

Introduction

In the past few decades, power electronics field has grown considerably. It is due to development of switching devices, magnetic components, control techniques, computational methods, controllers, etc. Applications of power electronics, motor drives are essential in several areas like industry, transportation, medical, telecommunication, residential, energy systems, etc. Several applications require compactness of power converters. This necessitates high frequency switching which results in increased switching losses and reduced efficiency. This FDP is intended to cover certain specific application areas where there is increasing demand for improved converter topologies, control techniques, renewable energy, motor drives etc. Renewable energy sources for grid & off-grid applications have several challenges. Power electronics plays vital role in these aspects. Operation, control and modeling of power converters used in these applications will be discussed. Thus, this FDP aims at giving scope for advanced research.

Course Content

- Fundamentals of Converters and Renewable Energy Technologies
- Electric Vehicle and Solar PV Systems
- Solar PV Power Condition Systems for Standalone Applications.
- SRM Drivers For EV/Pumping Applications
- Condition monitoring, and fault detection and diagnostics of wind energy conversion system
- Power Electronic Converter Applications to Solar Photovoltaic Systems
- Role of the Electricity Authority in India's Renewable Energy Integration
- Energy Efficiency and Conservation in Power Generation
- Driving the Future: Wind Energy and Electric Vehicles Revolution
- Energy, climate, and sustainability policy

Objectives

The Objectives of the FDP are;

- To train the teachers/research scholars with the state of art information on energy conversion techniques.
- To enhance the designing capabilities of the participants in the theme area of the programme.
- To empower the participants with usage of MATLAB tool for theme applications.

Who can attend?

The faculty members, Research scholars & PG Scholars of the AICTE approved institutions and Industry Personnel are eligible to attend this programme.

How to Register for FDP?

Eligible candidates have to register through the following link on or before 2nd November 2025

<https://www.aicte-india.org/atal> or

<https://atalacademy.aicte-india.org/signup>

"No Charge for Registration, Course and Certification"

Confirmation of Participation and Certificates

Upon the registration, confirmation will be sent to the selected participants through email on 05.11.2025.

The detailed schedule will be shared only to the confirmed participants through email and WhatsApp.

Certificate will be provided by the ATAL academy to those who have attendance more than 80%, filled daily feedback form and successfully completed the assessment test(online) with score minimum 70% marks in the test.

ONE-WEEK ONLINE ATAL FACULTY DEVELOPMENT PROGRAMME

ON

**"Emerging Trends and Future Prospects in
Advanced Energy Conversion Technologies
and Applications"**

10.11.2025 to 15.11.2025

Sponsored by

AICTE Training and Learning (ATAL) Academy



Coordinator

Dr. RVD Rama Rao

Professor & Head, Dept. of EEE

Co-Coordinator

Dr. I Kasireddy

Associate Professor, Dept. of EEE



VISHNU
UNIVERSAL LEARNING

Organized by

**Department of Electrical & Electronics
Engineering**

Vishnu Institute of Technology (Autonomous)

Bhimavaram, West Godavari District

Andhra Pradesh-534202

www.vishnu.edu.in

About the College

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. The institute is approved by AICTE and is permanently affiliated to JNTUK, Kakinada. Over a decade, this institute has witnessed significant growth and stands out as one of the best engineering colleges in AP. This institute is accredited by NAAC twice with 'A++' grade (3.51/4) with its validity up to 2024.

The institute has attained autonomous status for 10 years from the year 2019. Indian Merchant's Chamber (IMC) recognized the services of VITB with its Ramakrishna Bajaj National Quality award in education sector (2010, 2011, 2017) and Asia Pacific Quality Organization (APQO)-Best in class Award (2012, 2018).

About the Department

The EEE Department offers B.Tech, M.Tech, and Ph.D. programs with advanced labs and a recognized research center. The department is well equipped with highly sophisticated laboratory equipment & excellent research facilities with advanced software's in Electrical Engineering. The department has been regularly conducting a number of workshops and development programmes for the benefit of student, researchers and faculty of technical institutions. The department is honored with the achievement of prestigious Chhatra Vishwakarma Award 2020 and Smart India Hackathon 2019. The department also won the Tie-Grad business idea competition twice. It has consistently encouraged students to participate in national-level competitions, bringing laurels to the institution. These achievements reflect the department's strong culture of innovation, entrepreneurship, and excellence.

ORGANIZING COMMITTEE

Chief Patron

Sri. K. V. Vishnu Raju,

Chairman, SVES

Patron(s)

Sri. Ravichandran Rajagopal

Vice Chairman, SVES

Sri. Aditya Vissam

Secretary, SVES

Co-Patron

Dr. M. Venu

Principal

Prof. M. Srilakshmi

Vice-Principal

Coordinator

Dr. RVD Ramarao

Professor & Head, Dept. of EEE

Email: hod_eee@vishnu.edu.in

Mobile: 9908740746

Co-Coordinator

Dr. Idamakanti Kasireddy

Assoc. Prof., Dept. of EEE

Email: kaasireddy.i@vishnu.edu.in

Mobile: 7903657060

Technical Advisory Committee

Dr. N. Padmavathy, Dean-R&D

Dr. D. J. Nagendra Kumar, HOD-IT

Dr. R. Srinivasa Raju, HOD-CSE & DE

Dr. M. Ratna Babu, HOD-AI

Dr. K Vijay, HOD-CE

Dr. N. Naga Krishna, HOD-ME

Organising Team

Dr. I. Kasireddy, Associate Professor

Dr. Reddi Khasim S, Associate Professor

Mr. P. Naveen, Associate Professor

Core Committee

Dr. Raju Aedla, Professor

Dr. K. Vamsi Krishna Varma, Professor

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

Dr. Reddi Khasim S, Associate Professor

Dr. Ch. Phani Kumar, Associate Professor

Dr. BNCHV Chakravarti, Associate Professor

Mr. P. Naveen, Associate Professor

Mr. G. Suribabu, Associate Professor

Dr. S. Pragaspathy, Professor

Resource Persons

Faculty from reputed technical Institutions and Experienced Engineers from Industry are the resource persons for the programme and will deliver the lectures.

Dr. Mukesh Kr. Pathak, Professor, IIT Roorkee.

Dr. Devara Vijaya Bhaskar, Assoc. Professor, IIT(ISM) Dhanbad.

Dr. Dogga Raveendra, Assistant Professor, MNIT Allahabad.

Dr. B L Narasimharaju, Professor, NIT Warangal .

Mr. Ch Rajesh Kumar, IES, Deputy Director, Central Electricity Authority, New Delhi.

Mr. K Satish Kumar, Assistant Director, Central Electricity Authority, New Delhi.

Mr. Piyush Verma, Global Expert and Advisor in Energy and Climate Policy and Governance, Samoa.

Dr. S. Srinivas, Pragmatic Design Solution Limited, USA.

Contact Details: Email: kaasireddy.i@vishnu.edu.in
Mobile: 7903657060

ATAL Online 6 Day Faculty Development Programmes 2025-26 Schedule

FDP Thrust Area: Energy, Sustainability & Climate Change

FDP Title: Emerging Trends and Future Prospects in Advanced Energy Conversion Technologies and Applications

Start Date: 10/11/2025

End Date:15/11/2025

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
6:00PM to 6:30PM Inaugural Session Chief Guest- Dr. Mukesh Kr. Pathak Designation & Organization: Professor- IIT Roorkee Years of Exp: 20 years	6:00PM to 7:30PM Session 3 Topic: Solar PV Power Condition Systems for Standalone Applications Name of the Expert: Dr. Dogga Raveendra Designation & Organization: Assistant Professor- Motilal Nehru National Institute of Technology Allahabad Years of Exp: 10 years	6:00PM to 7:30PM Session 5 Topic: Full bridge series resonant inverter for induction cooking application Name of the Expert: Prof.Devara Vijaya Bhaskar Designation & Organization: Associate Professor-IIT(ISM) Dhanbad Years of Exp: 15 years	6:00PM to 7:30PM Session 7 Topic: Energy, climate, and sustainability policy Name of the Expert: Mr. Piyush Verma Designation & Organization: Global Expert and Advisor in Energy and Climate Policy and Governance, Samoa Years of Exp: 15 years	6:00PM to 7:30PM Session 9 Topic: Condition monitoring, and fault detection and diagnostics of wind energy conversion system Name of the Expert: Mr. Ch Rajesh Kumar, IES Designation & Organization: Deputy Director, Central Electricity Authority New Delhi Years of Exp: 12 years	2:00PM to 3:30PM Session 11 Topic: Driving the Future: Wind Energy and Electric Vehicles Revolution Name of the Expert: Dr. S. Srinivas Designation & Organization: PDSL, United States Years of Exp: 10 years
6:30PM to 8:00PM Session 1 Topic: Electric Vehicle and Solar PV Systems Name of the Expert: Dr. Mukesh Kr. Pathak Designation & Organization: Professor- IIT Roorkee Years of Exp: 20 years	7:30PM to 9:00PM Session 4 Topic: Solar PV fed Converters for EVs using simulations. Name of the Expert: Dr. Dogga Raveendra Designation & Organization: Assistant Professor- Motilal Nehru National Institute of Technology Allahabad Years of Exp: 10 years	7:30PM to 9:00PM Session 6 Topic: SRM Drivers For EV/Pumping Applications Name of the Expert: Prof.Devara Vijaya Bhaskar Designation & Organization: Associate Professor-IIT(ISM) Dhanbad Years of Exp: 15 years	7:30PM to 9:00PM Session 8 Topic: Energy Efficiency and Conservation in Power Generation Name of the Expert: Mr. K Satish Kumar Designation & Organization: Assistant Director, Central Electricity Authority New Delhi Years of Exp: 10 years	7:30PM to 9:00PM Session 10 Topic: Role of the Electricity Authority in India's Renewable Energy Integration Name of the Expert: Mr. Ch Rajesh Kumar, IES Designation & Organization: Deputy Director, Central Electricity Authority New Delhi Years of Exp: 12 years	3:30PM to 5:00PM Session 12 Topic: Performance analysis of multi-level inverter-fed position sensorless PMSM drive using modified MPTC Name of the Expert: Dr. B L Narasimharaju Designation & Organization: Professor- NIT Warangal Years of Exp: 18 years
8:00PM to 9:30PM Session 2 Topic: Power Converters for Microgrid Name of the Expert: Dr. Mukesh Kr. Pathak Designation & Organization: Professor- IIT Roorkee Years of Exp: 20 years					5:00PM to 6:30PM Session 13 Topic: Grid Fed AC-DC Converters for EV Charging/LED Lighting Applications Name of the Expert: Dr. B L Narasimharaju Designation & Organization: Professor- NIT Warangal Years of Exp: 18 years
					6:30PM to 7:30PM Online test & feedback
					7:30PM to 8:00PM Valedictory Session