

National Level 5 days Faculty Development Programme

on SUSTAINABLE RENEWABLE ENERGY SYSTEMS: Integration of AI, Power Electronics and Electric Drives

14th December 2026 to 18th December 2026

Organized by
Department of Electrical and
Electronics Engineering



ABOUT THE INSTITUTION

Bannari Amman Educational Trust was established in 1995 to create world-class educational facilities for students, especially from rural areas. Bannari Amman Institute of Technology (BIT), founded in 1996 at Sathyamangalam, is an autonomous institution affiliated to Anna University, Chennai, approved by AICTE New Delhi, and accredited by NAAC with an 'A+' Grade. The institute offers undergraduate, Postgraduate and Ph.D. programmes across Engineering, Technology and Management, and has achieved 100% placement for consecutive years.



ABOUT THE DEPARTMENT

The Department of Electrical and Electronics Engineering was established in 1996 and offers a four-year UG programme accredited by NBA (Washington Accord - Tier-I) and IE (United Kingdom). The department also runs a Ph.D./M.S. (by research) programme and boasts a strong team of doctorate and postgraduate faculty with rich industry, research and teaching experience, along with state-of-the-art industry-collaborated laboratories in power systems, power electronics, renewable energy and embedded control.



ELIGIBILITY

The programme is open to faculty members, research scholars, PG/UG students, and professionals from Electrical, Electronics, Instrumentation, Mechanical, Energy and allied disciplines. Participants from government organizations, R&D institutions and industry are also welcome to attend.



OBJECTIVES OF THE FDP

- ✓ To build a strong conceptual foundation in renewable energy sources and sustainable power system designs.
- ✓ To explore the integration of Artificial Intelligence and Machine Learning in energy forecasting, monitoring and control.
- ✓ To provide hands-on exposure to power electronic converters for renewable and electric-drive applications.
- ✓ To develop competency in AI-assisted control of electric drives for industrial and e-mobility systems.
- ✓ To promote research collaboration and future funded-project opportunities in sustainable energy.



TOPICS COVERED

- Fundamentals of Renewable Energy Sources & Sustainable Power Systems
- Solar PV and Wind Energy Conversion Systems
- Power Electronic Converters for Renewable Integration
- AI & Machine Learning for Energy Forecasting and Grid Optimization
- Electric Drives: Fundamentals and Control Strategies
- AI-Based Intelligent Control of Electric Drives
- Battery Energy Storage & Vehicle-to-Grid (V2G) Technologies
- Smart Grid Communication, IoT and Digital Twins
- Power Quality, Reliability and Cyber Security in Sustainable Grids
- Case Studies, Simulation Labs and Future Research Directions



RESOURCE PERSONS

Sessions will be delivered by eminent academicians from IITs / NITs, senior researchers, and practicing experts from the renewable energy, power electronics and e-mobility industries.



CERTIFICATION

An e-certificate will be issued to all registered participants who complete the full 5-day programme and the mandatory post-programme feedback / assessment.



SOFTWARE / TOOLS USED

- MATLAB / Simulink
- PSIM / PLECS (power electronics simulation)
- Python for AI & data analytics



OUTCOMES

- ✓ Awareness of AI-enabled renewable energy and smart power conversion systems.
- ✓ Exposure to simulation tools for power electronics and electric-drive control.
- ✓ Ability to integrate AI algorithms with converter and drive control strategies.
- ✓ A framework for pursuing funded research proposals in clean-energy technologies.
- ✓ Enhanced curriculum-development and pedagogical skills for participating faculty.



REGISTRATION DETAILS

Registration Link:

<https://forms.gle/A3AAijWrfkpHNooK8>

Registration Fee:

200 INR

Last date of Registration:

10th December 2026



ADVISORY COMMITTEE

- Dr Palanisamy C, Principal, BIT
- Dr Sivakumar K, Dean - Administration, BIT
- Dr Amarkarthik A, Dean - Academics and R&D, BIT



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- Dr Alex Stanley Raja T, AP-III/EEE
- Dr Mohanapriya V, AP-III/EEE
- Dr Sritha P, AP-III/EEE



EVENT REGISTRATION DETAILS

Mode of Payment	: Online Transfer
Bank Name	: Axis Bank
A/C Name	: BIT-Center for Advance Studies
A/C Number	: 911010036862582
Branch Name	: Sathyamangalam
IFSC Code	: UTIB00000368
Swift Code	: AXISINBB118



ADDRESS FOR COMMUNICATION

Dr Suresh N S, AP-III/EEE
Mobile No: 9786428841
Mail ID: sureshns@bitsathy.ac.in

Mr Sundar S, AP-III/EEE
Mobile No: 99524 57772
Mail ID: sundars@bitsathy.ac.in

