

**An Online
Faculty Development Programme
on
“Electric Vehicles: Charging &
Challenges”**

5th to 9th February 2021

at



**College of Engineering
Vadakara
(Under CAPE, Est. by Govt of Kerala)**

**Sponsored by
TEQIP - II**

Organised by

**Department of
Electrical & Electronics Engineering
College of Engineering Vadakara
Mandarathur P O, Vadakara,
Kozhikode - 673 105
KERALA - INDIA**

About the College

The first Engineering College under the Co-operative Academy of Professional Education (CAPE), Thiruvananthapuram, established by Govt. of Kerala, started functioning in June 1999.

The college is affiliated to Kerala Technological University (KTU) and approved by All India Council for Technical Education (AICTE).

The site at Kakkoramala surrounded by lush greenery is bounded by green fields and silvery clouds.

The CEV is located at Vadakara, a region lying in the northern part of Kozhikode district in Kerala. The CEV owns a 26-acre campus at Kakkoramala in Kurunthodi, in the Maniyoor panchayat of Vadakara.

About the Department

The department of Electrical and Electronics Engineering was established in the year 2009. Since its commencement, the primary objective of the department has been to impart quality education and training at the under graduate in various area of Electrical and Electronics Engineering with broad emphasis on design aspects of Electrical system. We aim at producing engineers with sound

knowledge in Electronics Engineering and a strong background in Electrical.

About the Programme

Environmental concerns due to emissions and the depleting fossil resources are turning the attention of the automobile manufactures and the public towards renewable sources like solar and wind which are carbon emission free. Conventional engines in the automobiles are replaced by battery and electrical motors which can be designed to seamlessly suit the powering requirements with suitably designed power converters. The important components of the system are the battery charging stations which have AC or DC inputs from the grid network or directly from the RES, batteries in the vehicles, converters and electric motors. The government is encouraging research in EV due to the advantages with monetary benefits to the manufacturers and users. This Faculty Development Programme aims to give the faculties an insight into the fundamentals and recent innovations of hybrid and electric vehicles. The programme aims at delivering the fundamental and advanced knowledge in design, analysis, control, calibration and operating characteristics of Battery EV (BEV) and Hybrid EV (HEV).



The topics include:

- Overview & Various Components in EV Systems
- A revisit to Gate drivers for Power Electronic Converters in EV
- Converter Topologies for EV Systems
- Fast Charging Challenges
- EV Charging Station – Simulation & Hardware Implementation
- Control Concepts for Charging Stations
- Grid Power Quality – Solutions with Charging Stations
- Ultra Capacitors for EV Charging Stations

Target Audience

Faculties from various AICTE approved Engineering colleges /Institutions, Senior undergraduate students, post graduate students, research scholars, engineers, scientists etc.

Resource Persons

- Dr. Praveen Kumar
IIT Guwahati
- Dr. Sreelakshmi M P
NIT Calicut
- Dr. Shelas Sathyan
NIT Trichy
- Dr. Rijil Ramchand
NIT Calicut
- Dr. Nikhil Sasidharan
NIT Calicut
- Mr. Muhammed Aslam
InQbe Innovations
- Mr. Nithin T
College of Engg. Vadakara

Registration

Registration is free for all participants. The **Registration form** must be completed at:
<https://forms.gle/ifMdvD7TdyLAWwuj8>

Sessions Through :



Convener

- **Mr. Nithin T**
HOD, Dept. of EEE
College of Engineering Vadakara

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