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ABOUT THE INSTITUTION

College of Engineering Perumon was founded in the year 2000 by the Co-operative Academy of Professional Education (CAPE), which was established by the Government of Kerala. The college offers four undergraduate programs (ME, ECE, EEE & CSE) affiliated to APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY (KTU) and approved by All India Council for Technical Education (AICTE).

ABOUT THE DEPARTMENT

The Department of Electrical and Electronics Engineering (NBA accredited during 2019-22) was established in the year 2000 offering four-year B. Tech. degree program in Electrical and Electronics Engineering. It is provided with good infrastructural facilities like well equipped laboratories, library, well qualified and experienced faculties and technically sounded supporting staffs.

ORGANISING COMMITTEE

Patron
Dr.R Sasikumar
(Director CAPE)

Chairperson
Dr. Bindu S J
(Principal)

Convenor
Mrs. Jasna Basheer (HoD)

Co Ordinator
Dr. Bindu S J (Associate Professor)
Mob: 9497361252

Mrs. Rekha T (Assistant Professor)
Mob: +919497776509

HOW TO APPLY

The applicants should fill the google registration form link provided below
https://docs.google.com/forms/d/e/1FAIpQLSegLC4FUA0lyi8c1Pn1CSxywaFG7B8yvv2lQcxbYHI3bPc0Eg/viewform?usp=pp_url

Any queries can be mailed to
rekhat@perumonec.ac.in

REGISTRATION FEE

No registration fee is charged from the participants

AICTE Training And Learning (ATAL) Faculty Development Program on

"Emerging control techniques in smartgrid empowering EV"

(10^{th} - 21^{st} October 2022)

Organized by

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
(NBA Accredited 2018-2022)

College of Engineering PERUMON

COLLEGE OF ENGINEERING PERUMON

(Under CAPE, established by Govt. of Kerala)

Perinad P.O. Kollam. Kerala. Pin 691601

www.perumonec.ac.in

AICTE Training And Learning (ATAL)

The ATAL academy was established on 24th September 2018 with the objective to plan and help in imparting quality technical education in the country, and to assist technical institutions in advancing research, innovation, and entrepreneurship through training. The Academy stresses upon empowering technical teachers and technicians using Information and Communication Technology.

The academy provides a variety of opportunities for training and exchange of experiences, such as workshops, orientation, learning communities, peer monitoring, and other FDPs.

COURSE PLATFORM

For the FDP will be conducted through hybrid mode. Online for theory and offline for practical/labs/experiential learning. The details of online platform will be communicated to the selected candidates through their registered e-mail. The certificate will be awarded to those who have minimum attendance of 80% and 60% Marks in the test conducted as per the norms of ATAL scheme.

ELIGIBILITY CRITERIA

The program is open to faculty members (EEE/ECE/EIE branch) of AICTE approved engineering colleges, M. Tech. scholar's specialization in EEE

DATES TO REMEMBER

Last date for receipt of applications: 10/09/2022

COURSE OBJECTIVE

This course aims at giving the faculties irrespective of their trade, an insight into the challenge is ensuring the deployment of the charging infrastructure required to serve the needs of the ever-growing number of EVs, the secure and efficient integration of EVs into the power system .

The main thrust area includes

- **Planning and operation of the distribution grid with integration of EV charging infrastructure**

• Grid support services from electric vehicles to facilitate large-scale renewable energy integration

• Technologies and standards for EV charging infrastructure's integration with distribution grid

• Policies and regulations for EV charging infrastructure and integration with distribution grid

COURSE OUTLINE

- Smart converter architectures and control
- Practical Issues and Considerations in Vehicle to Grid Configuration
- Research challenges in EV Charging infrastructure
- Efficient power converters for charging
- Grid Interaction of Electric
- Vehicles in Smart Grid
- EV Charging Topologies
- Machine learning model development
- Hands on session :Design and control of integrated drives with wide bandgap device by CDAC Kerala

RESOURCE PERSONS

Sessions will be handled by eminent personalities from IITS and NITS higher learning institutions and experts fromindustries.

AICTE Training And Learning (ATAL) Faculty Development Program on

"Emerging control techniques in smartgrid empowering EV"

Program Schedule

Week 1 – Online (7:00 pm – 9:30 pm)					
10-10-2022	**11-10-2022**	**12-10-2022**	**13-10-2022**	**14-10-2022**	**15-10-2022**
7:00 – 7:50PM	**7:00 – 7:50PM**	**7:00 – 7:50PM**	**7:00 – 7:50PM**	**7:00 – 7:50PM**	**7:00 – 7:50PM**
Inauguration: Prof. Vivek Agarwal Professor, Dept. of Electrical Engineering, Indian Institute of Technology Bombay, India	Dr. Shelas Sathyan, Assistant Professor, EEE, NIT Trichy "Power Converters for DC Microgrid" :Session I	Dr. V. Karthikeyan, NITC "Research Challenges in EV charging Infrastructure" :Session I	Dr. Shelas Sathyan, Assistant Professor, EEE, NIT Trichy "Efficient Power Converters for EV charging" :Session I	MS. Vimala, Scientist E, NIELIT "Machine learning model development and Case Studies for EV applications" :Session I	"Advancement in Charging Stations" By Prof. Vivek Agarwal Professor, Dept. of Electrical Engineering, Indian Institute of Technology Bombay :Session I
8:00 – 8:50PM	**8:00 – 8:50PM**	**8:00 – 8:50PM**	**8:00 – 8:50PM**	**8:00 – 8:50PM**	**8:00 – 8:50PM**
"Smart Converter Architectures and Control for tomorrow's grid" By Prof. Vivek Agarwal Professor, Dept. of Electrical Engineering, Indian Institute of Technology Bombay :Session I	Dr. Shelas Sathyan, Assistant Professor, EEE, NIT Trichy "Power Converters for DC Microgrid": :Session II	Dr. V. Karthikeyan, NITC "Research Challenges in EV charging Infrastructure": :Session II	Dr. Shelas Sathyan, Assistant Professor, EEE, NIT Trichy "Efficient Power Converters for EV charging": :Session II	MS. Vimala, Scientist E, NIELIT "Machine learning model development and Case Studies for EV applications": :Session II	"Advancement in Charging Stations" By Prof. Vivek Agarwal Professor, Dept. of Electrical Engineering, Indian Institute of Technology Bombay: :Session II
9:00 – 9:30PM	**9:00 – 9:30PM**	**9:00 – 9:30PM**	**9:00 – 9:30PM**	**9:00 – 9:30PM**	**9:00 – 9:30PM**
Interactions	Interactions	Interactions	Interactions	Interactions	MCQs

Week 2 – Offline (9:30 am – 4:30 pm)

17-10-2022	18-10-2022	19-10-2022	20-10-2022	21-10-2022
9:00 – 9:30AM	9:30 – 12:00AM	9:30 – 12:00AM	9:30 – 12:00AM	9:30 – 12:00AM
Inauguration	**Session 8: Design and control of integrated drives with wide band gap devices: Thermal Aspects and PCB Design considerations**	**Session 10: Hands on session of control of integrated drives**	**Session 12: Software analysis of Impact of Electric vehicles on Grid**	**Session 14:ANSYS Demonstration on motor design**
9:30 – 12:00 Noon	12:00 – 1:00PM	12:00 – 1:00PM	12:00 – 1:00PM	12:00 – 1:00PM
Session 7: Design and control of integrated drives with wide band gap devices: Thermal Aspects and PCB Design considerations	**Article 1 Discussion**	**Article 2 Discussion**	**MCQs**	**Visit Report (Team)**
12:00 – 1:00PM	1:00 – 2:00PM	1:00 – 2:00PM	1:00 – 2:00PM	1:00 – 2:00PM
Lunch	**Lunch**	**Lunch**	**Lunch**	**Lunch**
1:00 – 2:00PM	2:00 – 4:00PM	2:00 – 4:00PM	2:00 – 4:00PM	2:00 – 3:00PM
Travel for Visit	**Session 9: Hands on session of control of integrated drives**	**Session 11: Software analysis of Impact of Electric vehicles on Grid**	**Session 13: ANSYS Demonstration on motor design**	**Reflection Journal**
2:00 – 4:00PM	4:00 – 5:15PM	4:00 – 5:15PM	4:00 – 5:15PM	3:00 – 4:00PM
Visit: KEL (Kerala Electrical and Allied ENGG. CO.LTD.	**Teaching Practice**	**Teaching Practice**	**Teaching Practice**	**Feedback**
4:00 – 5:00PM				4:00 – 5:00PM
Travel back				**Valedictory**