



SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE
(AN AUTONOMOUS INSTITUTION)



IEEE



**Faculty Development Programme (FDP) on
Electric Vehicles**
Organized by
Department of Electrical and Electronics Engineering
Under
Industry Institute Collaboration
In association with
IEEE Student Branch
&
TVS Training & Services (A TVS Group Company)



Date: 2.7.2024 to 5.7.2024 (Four days)



Venue: Electric Vehicle Laboratory – Centre of Excellence

Introduction

The Faculty Development Programme on Electric Vehicles was held from July 2nd to 5th, 2024.

Electric vehicles (EVs) are a viable option for combating fuel shortages and pollution in the transportation industry.

The program of study aims to provide cutting-edge trends and breakthroughs in electric vehicles.

The curriculum focused on theoretical aspects as well as hands-on experience for participants.

It assisted them in advancing the industry and establishing cooperation by focusing on current research concerns.

The FDP has covered the following areas

- Selection of Batteries,
- Selection of Electric Motors for specific capacity vehicles,
- Fundamentals of Electric Vehicle, components such as battery, BMS, spot welding, ADAS, CAN,
- Testing of PMSM motor
- Power converters and tools used in electrical vehicles.

The participants have been trained with hands-on approach in order to have an in-depth insight into the domain of automobile and expose them to feasibility and future scope of Electric vehicles.

About the TVS-Training and Services

Established in 2011, TVS Training & Services Ltd (TVS) is a key player within the TVS Group. Their primary focus is on delivering comprehensive staffing, training, and consulting solutions for corporations (B2B), educational institutions (B2E), and government agencies (B2G).

- TVS offers training programs across a wide range of domains
- They empower unemployed youth across India by equipping them with valuable skills and facilitating job placement.
- TVS actively collaborates with key organizations like the National Skill Development Corporation (NSDC), and Tamil Nadu Skill Development Corporation.
- This collaborative approach strengthens their reach and impact.
- TVS aspires to create a skilled workforce that meets the demands of various sectors and industries across the globe.
- Business-to-business section: Over 35,000 individuals trained and partnerships exceeding 250 companies.
- Business-to-employee section: Collaborations with over 25 colleges and universities, resulting in more than 12,500 trained engineers.
- Business to government section: Partnerships with NSDC, governments of Tamil Nadu and Andhra Pradesh, leading to skilling of over 30,000 rural youths.
- By focusing on partnerships, diverse training programs, and a commitment to skilling the Indian workforce, TVS Training & Services remains a leader in its field.

Training content of FDP on Electric vehicles:

Duration: 32 Hours (4 days)

Date: 2.7.2024 (Tuesday) to 5.7.2024 (Friday)

Mode of Training: Offline



Program Overview:

FDP on Electric Vehicle comprises both theory and practical sessions of 32 hours durations.

In this FDP, EV concepts were covered in 5 individual modules. The concepts were explained by the resource person with the help of PPT, relevant videos and examples.

The entire sessions were an interactive with the faculty members followed by a live demo session of equipment's. The working and testing of EV major components, assembly of EV were covered through audio / video aids. Face to face discussion with the trainers were arranged to clarify the doubts during the sessions.

The MCQ (Multi choice questions) test was conducted to the faculty members those who attended the training to ensure the understanding level of the Programme. Also, the evaluation and feedback were collected from the Participants.

Outcome of FDP:

Candidates will be able to:

- Familiar in architecture of Electric Vehicle and its components.
- Compare different types of Motors & Batteries.
- Test the EV components.
- Select the major components in EV.
- Design the vehicle parameters for EV.
- Assemble and dismantle the Electric car.
- Understand the EV role in Indian Market.
- Acquire knowledge on EV Charger characteristics.
- Demonstration the HV PPE (Personal Protective Equipment) - 8 Cal/cm² kit.

Certification criteria:

- Attendance – 90% Minimum.
- Assignment completion – 100% and Post test assessment score – 70% Minimum.

Photos of Standee



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FACULTY DEVELOPMENT PROGRAMME ON ELECTRIC VEHICLES 2nd to 5th July 2024

Organized by

**Department of Electrical and Electronics
Engineering**



**Under
Industry Institute Collaboration**

In association with



**IEEE Student Branch
and
TVS Training & Services
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IEEE- FDP Brochure



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Department of
Electrical and Electronics Engineering

Organized

Faculty Development Program on

Electric Vehicles

2- 5 July 2024

Under
Industry Institute Collaboration



Resource Persons from
TVS Industries



IEEE Student Branch

In Association with






Scan for Register



Sri Manakula Vinayagar Engineering College's Department of Electrical and Electronics Engineering is organizing a Faculty Development Program on Electric Vehicles from 2nd to 5th July 2024. Celebrating 25 years of excellence, the event is under Industry Institute Collaboration and conducted in association with the IEEE Student Branch and TVS Training & Services (a TVS Group Company). Resource persons from TVS Industries will provide insights and knowledge during the program. Faculty members are encouraged to scan the provided QR code for registration and further details. This program aims to enhance the knowledge and teaching capabilities of educators in the evolving field of electric vehicles.

Date and Time

Start time: 02 Jul 2024 09:30 AM
End time: 05 Jul 2024 04:30 PM
All times are (UTC+05:30) Chennai
 Add Event to Calendar
 [iCal](#)
 [Google Calendar](#)



Location

E-Vehicle Centre of Excellence
Sri Manakula Vinayagar Engineering College

Puducherry, Pondicherry
India 605107
Building: Engineering Block



Hosts

[Sri Manakula Vinayagar Eng. College](#)

[Contact Event Host](#)

Registration

Starts 29 June 2024 12:00 AM
Ends 01 July 2024 12:00 AM
All times are (UTC+05:30) Chennai
No Admission Charge

Registration not yet Open

Speakers

Topic: e-Vehicles

Inauguration of FDP Programme



Dr. S. Jayakumar,

Controller of Examination

Inaugurated the training session and addressed the gathering by highlighting the need for skill development of manpower in EV technology, because the number of electric vehicles increase daily in the country.

Dr. S. Anbumalar,

Dean Academics

Highlighted the facilities and feature in MoU between SMVEC and TVS Training & Service.



Dr. K. Velmurugan,

Dean R&D

discussed about the EV laboratory facilities and future plan of Research & Development programme.



Dr. A.A. Arivalagar,

Dean Academics

**advised all the faculties to take
the benefit of this wonderful
opportunity for the bright future
in EV sector for students.**



Dr.P.Jamuna,

HoD/EEE

**thanked TVS -Training & services
and all the dignitaries & faculty
from
SMVEC for gracing the ceremony
by their solemn presence**



Group photo during validation

Demonstration of Safety Equipment's



*Presentation given by
Mr. Vinoth Rajasekar,
TVS-T&S*



*Technical discussion with resource person
Mr. Karthick, TVS-T&S*



*Technical discussion with
resource person
Mr. Naga Praveen, TVS-
T&S*





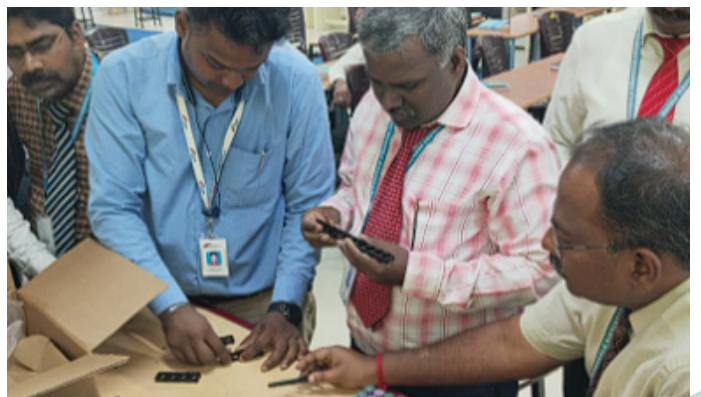
Technical discussion with resource persons



Technical discussion for Design of cell arrangement



Testing of Li-ion battery cell



Spot welding for battery pack and assembling

Spot welding for battery pack and assembling

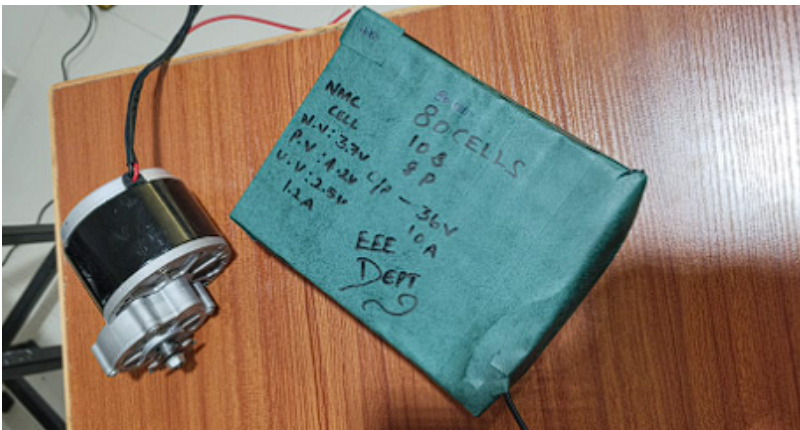


Spot welding for battery pack and assembling

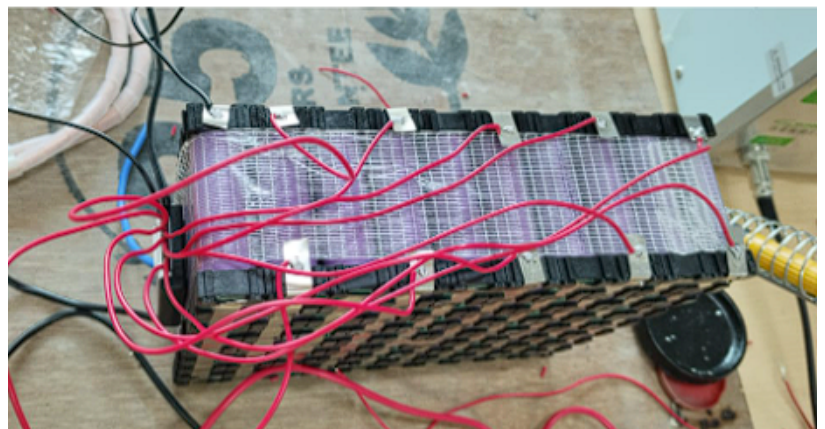




Battery Management system for battery pack and assembling



Battery Management system for battery pack and assembling





Demonstration of ADAS (Advanced driver- assistance systems)



Group photo during the Valedictory session