AICTE IDEA Lab

MET's Institute of Engineering, Nashik

6-DAYS SKILLING PROGRAM

AICTE IDEALab

DESIGN • MAKE • INNOVATE

Automotive Tech: From ICE to Electrification

From Concept to Creation

3 TO 8 AUG 2026
30 Participants

FREE REGISTRATION
LIMITED SEATS

ABOUT THE PROGRAM

The AICTE IDEA Lab presents a 6-day skilling program focused on Automotive transformation from ICE to Electrification. Participants will gain industry-relevant knowledge on powertrain evolution, EV components, system sizing, simulation and hands-on training through expert-led sessions and real-world use cases.

PROGRAM OBJECTIVE

To provide an intensive, fast-tracked engineering overview of ICE-to-EV transition fundamentals, enabling students to analyze powertrain shifts, size electric propulsion components, and simulate basic electric vehicle dynamics.

PROGRAM OUTCOMES (POs)

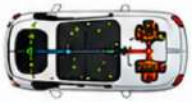
Upon completing this 6-day program, students will be able to:

- **Map Powertrain Shifts:** Differentiate critical architecture, torque-speed curves, and transmission needs between ICE and EV systems.
- **Size EV Powertrains:** Calculate basic battery capacity, motor power, and torque requirements for specific vehicle range and acceleration.
- **Evaluate Battery Packs:** Analyze cell chemistry selection, basic thermal management layouts, and fundamental BMS safety functions.
- **Model Vehicle Dynamics:** Run basic vehicle performance, aerodynamic drag, and rolling resistance simulations using software tools.
- **Review EV Standards:** Identify essential Indian and global EV testing, safety, and charging standards (such as AIS 156).

DAY-WISE SCHEDULE

DAY 1 — Introduction to EHV and ICE
- Fundamentals of EHV
- Overview of ICE Technology
- Comparison: ICE vs EV Architecture

DAY 2 — Introduction to Electric Vehicle and EV Component Identification
- EV Architecture & Working Principle
- Major EV Components Overview
- Component Identification



DAY 3 — EV Component Identification and Hands-on Training
- Component Identification in Lab
- Hands-on Training on EV Components
- Fault Identification Basics

DAY 4 — Project Demonstration: Hands-on Training
- Mini Project Build/Assembly
- Hands-on Testing & Troubleshooting
- Team Demonstration

DAY 5 — Data Analysis & Mini EV Testing
- Data Acquisition & Analysis
- Performance Evaluation
- Mini EV Testing & Validation

DAY 6 — Motor and battery parameter calculation and selection
- Motor Sizing & Selection
- Battery Sizing & Selection
- Case Study & Final Discussion

FOCUSED AUDIENCE

- Engineering Students
- Diploma Students
- All Branches

PROGRAM HIGHLIGHTS

Hands-on Training | Expert Guidance | Modern Equipment | Project Based Learning | Industry Applications | Participation Certificate

LEARNING OUTCOMES

- Industry-Relevant Skills
- Hands-on Experience
- Problem Solving
- Innovation & Creativity
- Career Advancement

REGISTRATION DETAILS

Available Seats	30 (First Come, First Serve)
Selection Basis	First Come First Serve
Certification	E-Certificate on Successful Completion
Registration Email	abhilashn_ioe@bkc.met.edu

SCAN TO REGISTER

SCAN ME

FOCUS AREA

- ICE to EV Transition
- Electric Powertrain
- Battery & BMS
- Vehicle Dynamics
- Testing & Standards

Chief Mentor of IDEA Lab
Dr. V. P. Wani
Principal, IoE
MET's BKC Nashik

Coordinator of IDEA Lab
Dr. S. D. Kalpande
HOD, Mech. Engg.
MET's BKC Nashik

Dr. D. P. Kadam
HOD, Elect. Dept.
MET BKC IOE

Co-Coordinator IDEA Lab
Dr. D. D. Deshmukh
Co-Coordinator IDEA Lab
MET's BKC Nashik

Program Coordinator
Prof. A. A. Netake
9011499341

Program Co-Coordinator
Dr. D. K. Dond
9730992895

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Institute of Engineering
Adgaon, Nashik-422003 | FOLLOW US
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