ISIEINDIA

Specialization Programme in **E-Vehicle Technology**

1 MONTHS | ONLINE LECTURES | 20 HOURS LEARNING

CONTENTS

About ISIEINDIA

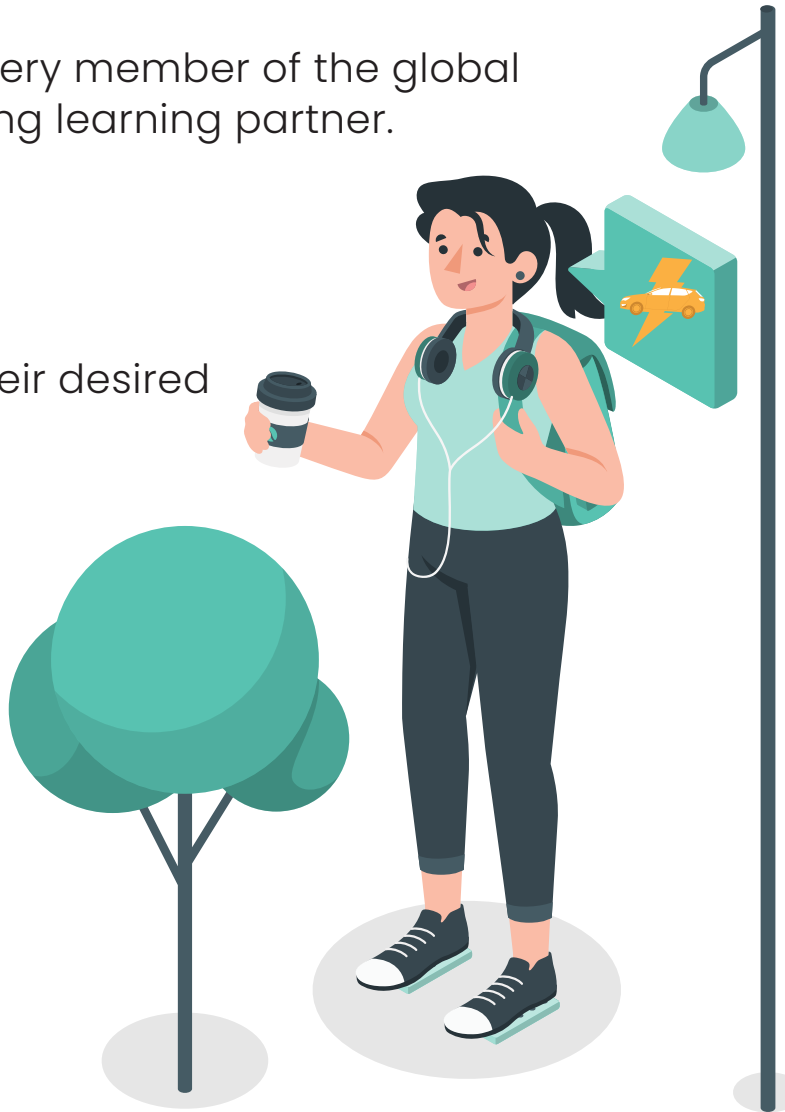
We are India's Biggest ED-TECH Company that provides Skill Based Education Solutions in Green Mobility to Students, Graduates and Working Professionals with the latest technology, pedagogy, industry partners and world-class trainers. We create immersive online and offline project based learning experiences for our learners globally. Our Programs are Industry oriented to enhance the technical skill sets and to create a sustainable career path for learners.

Our Mission

Powering career success for every member of the global workforce as their trusted lifelong learning partner.

Our Vission

Making our learners achieve their desired outcomes.



Why ISIEINDIA

300%
Highest Salary Hike

250+
City Learner Base

60%
Average Salary Hike

300+
Hiring Partner

350+
Industry Experts

1+ Million
Learners

Program Highlights

Blended Learning

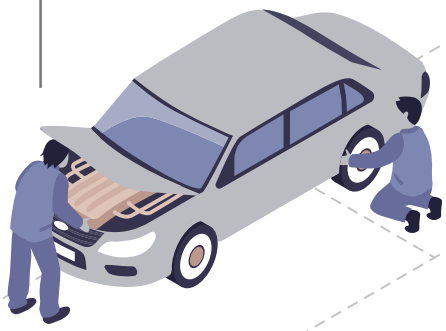
Learn with the ease and fliexibility recorded session as well as live session-designed to ensure a wholesome learning experience.

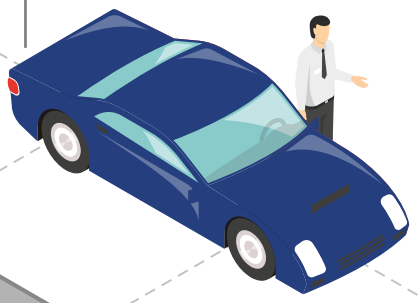
Dedicated Career Assistance

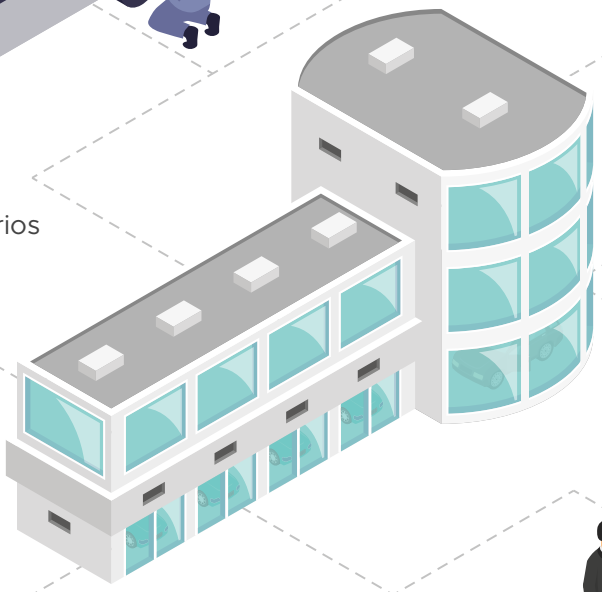
Receive a 360-degree career support from hiring manager.

Project Based Learning

Dedicated support for Comprehensive projects that you can showcase in your resume.

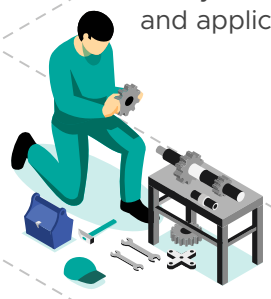






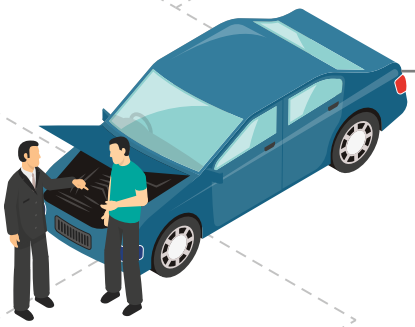
Real Case Study

Study current market scenarios and applications



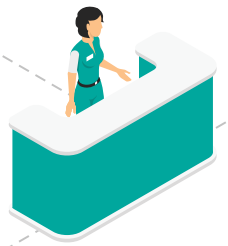
Personalised Mentorship

Get unparalled personalised mentorship and doubt resolution from our panel of Industry.



Doubt Clearning Session

Mentorship from industrial trainer for dobut clearance



Learn Key Tools & Technologies

Learn Simulink, MATLAB, ANSYS Maxwell, etc.

Career Guidance

Active career guidance support by providing updates on industry demands and job opportunities

Faculty and Industry **Experts**

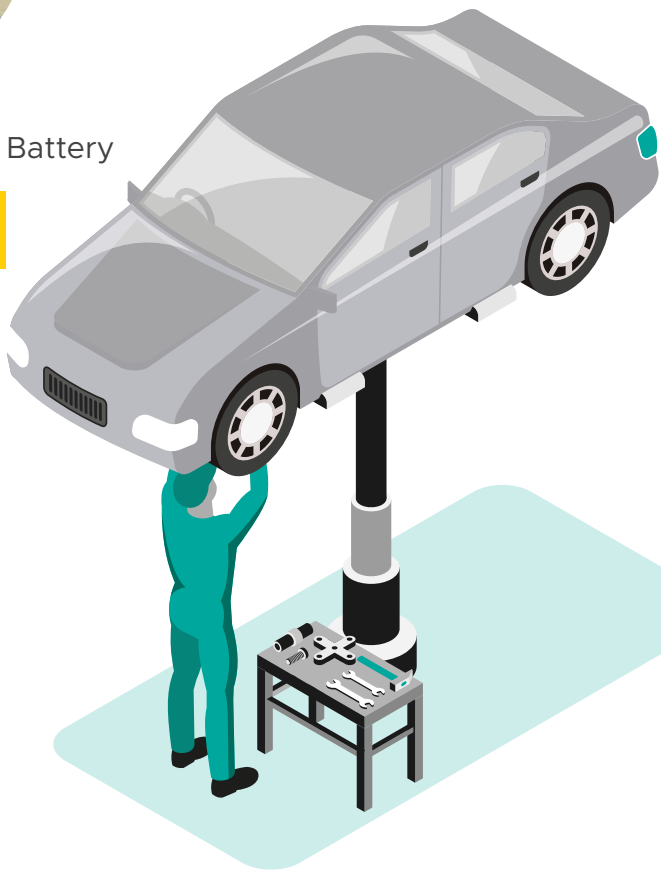
G Leela Mohan Rao
Associate Software Engineer
accenture

Boris Fabris
Automotive Design Consultant

Priya Parameswarappa
Buisness System Manager
SIEMENS

Manish Kumar
Assistant Manager, R&D
TVS

Rahul Bollini
R&D Consultant for Li-Ion Battery
ISIE INDIA



Ketan Kumar Jangra
Assistant Manager
JBM Group

ISIEINDIA Up Learning Experience

Industry Mentor

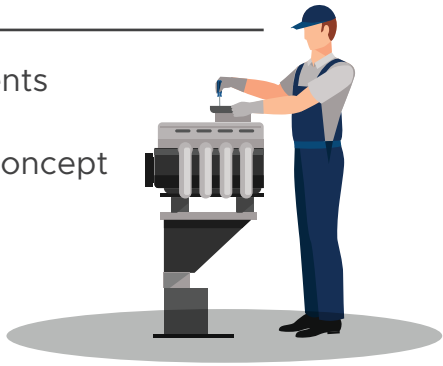
- Receive unparalleled guidance from industry mentors, teaching assistants and graders
- Receive one-on-one feedback on submissions and personalised feeback on improvements

Industry Networking

- Live Sessions by expert on various industry topics.
- One-on-one discussion and feedback sessions with industry mentors

Expert Feedback

- Personalized expert feedback on assignments and projects
- Regular live sessions by experts to clarify concept related doubts



Student Support Team

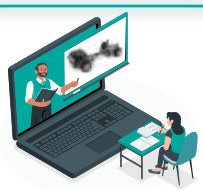
- We have a dedicated Learner Support Team for handling your queries via email or callback request.
- This support is available from Monday to Saturday between 09:00 AM to 07:00 PM

Q&A Forum

- Timely doubt resolution by industry experts and peers
- 100% expert-verified responses to ensure quality learning

Learning Path

20+ Hours of Online Learning



Learn Specializations in Electric Vehicle

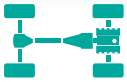
Mini Projects

Assignments & Case Study

Advance Electric Vehicle Design

BMS & Energy Storage in EV

EV Design and Development



Electric Powertrain and Modes

Advanced Motor, Battery Pack & BMS

BMS & ECU for Electric Vehicle

Motor Selection, Design & EV Industry Prospect

EV Battery Pack Design

Battery Thermal Management and Safety

EV Charging Protocols and Challenges

Aerodynamics of Vehicle Design

About the Program

Its India's 1st EV Specialization Program by ISIEINDIA supported by SMEV, exclusively designed for learners who are in 1st, 2nd, 3rd Year of B.Tech / B.E. This program will equip you with right set of Skills in the E-Mobility sector along with guaranteed placements for our learners

We preferred project based and skill based learning methodology that will add value in your academic career as well as professional career.

This program has 11 specialization programs with mini projects. Where you will gain a better understanding of the concepts of EV Architecture and Powertrain Selection, Motor Selection of the Vehicle, Battery Pack Designing and BMS, EV Charging, Aerodynamics of Vehicle Design and much more.

The software used in these course are MATLAB, Simulink, Ansys will help the students to gain a better understanding of what is being taught to them and make them industry-ready.

List of Program

Advance Electric Vehicle Design

- Basics Concept of EV and HEV
- Chassis & Dynamics
- Steering & its Mechanism
- Suspension
- Braking Dynamics
- Tire & Its Features
- Chassis Design and Simulation
- Motor and its Types
- Battery & BMS for EV
- Simulating Vehicle Setup on MATLAB Using Powertrain Blockset
- Case Study -Student Formula Design

BMS & Energy Storage in EV

- Introduction to Energy Storage System
- Energy Storage Systems
- Design and Chemistry of Batteries
- Concept and Calculation for Lithium Battery and BMS
- Essentials of Lithium Battery Systems
- Future Prospects of Batteries
- Fuel Cell Technologies
- Capacitors
- Performance & Optimization
- Energy Management Control Strategies
- Smart Energy Management

EV Design and Development

- Introduction and Basics of EV & HEV
- Hybrid Electric Vehicle Powertrain
- Simulating Vehicle Setup on MATLAB
- Charging System and Its Technologies
- Prospect And Reality Of EV's
- Chassis & Dynamics
- Steering & its Mechanism
- Suspension & Braking Dynamics
- Tire & Its Features
- Introduction to CAE & CAD
- Chassis Design and Simulation
- Codes and Standards for Electric Vehicle

Electric Powertrain and Modes

- Inside Hybrid and Electric Vehicles
- Simulating Vehicle Setup Using Simulink
- Electric Machines & Selection of Motor and controller for EV /HEV
- Component Sizing and Integration
- Design & Optimization of Drivetrain
- Energy Management Control Strategies
- Foundations of Power Electronics
- Conditioning and Filtering
- Codes and Standards

Advanced Motor, Battery Pack and BMS

- Electric Machines & Selection of Motor and controller for EV /HEV
- Component Sizing and Integration
- Essentials of Battery Systems & BMS
- Li-Ion Battery for EV
- Cell Balancing
- BMS & Battery Pack Integration
- Thermally modelling of a Battery pack

BMS & ECU for Electric Vehicle

- Introduction & EV Roadmap
- EV Architecture
- ECU Design for Electric Vehicle
- Li-Ion Battery & Battery Management System (BMS)
- Model Based Development & Integration

Motor Selection, Design and EV Industry Prospects

- About EV Industry
- Powertrain Calculation
- Aero Calculation
- Wheel Selection
- Motor Selection
- Motors in EV & Control Methods
- Theory of Motor Design
- Motor Modelling and Design
- Energy Consumption

EV Battery Pack Design

- Introduction to Lithium-Ion Cells
- Characteristics of a Lithium-Ion Cell
- Lithium-Ion Cell Operation
- Introduction to Battery Pack
- Battery Pack Testing
- Battery Pack Design

Battery Thermal Management and Safety

- Introduction to BMS
- BMS In Li-Ion Batteries
- Introduction to BTMS
- Thermal Loading
- Heat Management

EV Charging Protocols and Challenges

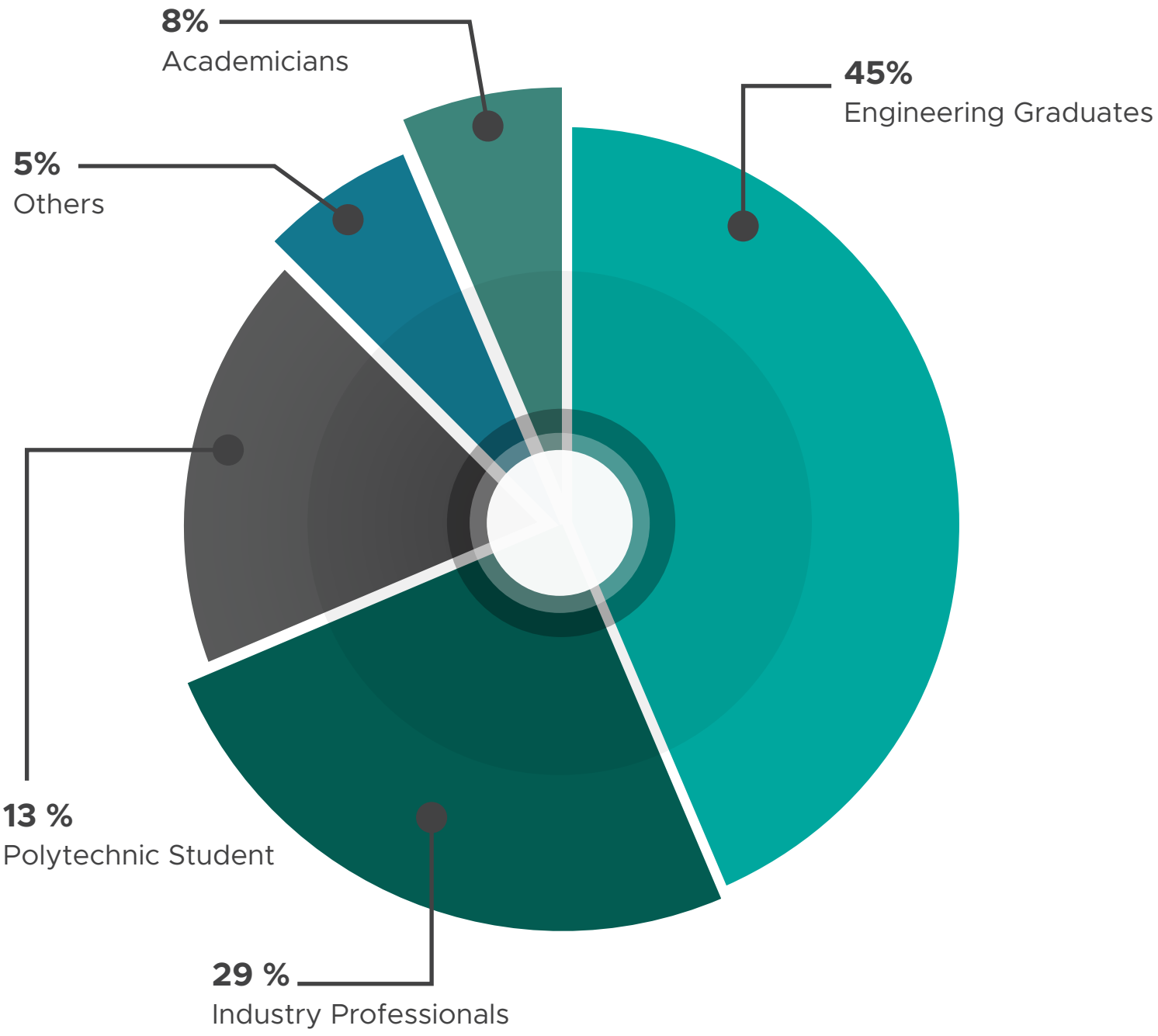
- Intro to EVSE
- EV Charging Connector
- Introduction to Charger
- Communication Protocol
- OCPP and CSMS
- Charger Technologies
- Charging Level and Modes
- Fast Charger
- Smart Grid & V2G

Aerodynamics of Vehicle Design

- Introduction
- Calculating Frontal Area
- Drag Calculation
- Drag Simulation

Meet the Class

OUR LEARNER'S COMES FROM



Career Support

Interview Preperation

Pre-recorded content on topics such as

- Problem solving approach
- Approaching guesstimates
- Domain specific interview question bank and much more

Profile Builder

An easy to use Resume, Linedin and Cover Letter prepration tool.

- Resume Score
- Realtime recommendations to improve
- Match your resume to the JD and check fitment
- Linkedin Profile Review

Industry Readiness Assesments

Industry oriented tests which are pre--pared and validated by domain esperts.

- Detailed reports
- Industry readiness score
- Identifying strengths and helping aid in self-improvement plan for key skills

Personalised Industry Session

90-minute sessions over the weekend by leading industry experts

- Session categories: Career, Technical and Communication
- Doubt resolution
- Develop proof of concept and apply theoretical concepts in real world
- Assess skill levels
- Peer Networking
- Classroom element
- Business communication sessions and much more

Career Mentorship Sessions

Get personalised career advice through 1-1 sessions with industry experts

- Goal setting for better employment results
- Industry Readiness Assessment report discussion

1+ Million
Learners

INR 11 LPA
Highest Salary Package

300%
Highest Salary Hike

60%
Average Salary Hike

Our Alumni's Work's at

Plugin Up has a network of over 250+ companies who look to recruit graduates from our programs. Some of these well-known companies include.

HERO ELECTRIC The smart move | BOSCH | ASHOK LEYLAND | LARSEN & TOUBRO | ETO The Good Move

ATHER | amazon.com | Ansys | Mahindra | Cummins

KPMG | इंडियनऑयल IndianOil | MG | MICHELIN | NISSAN

Program Details and
Admission Process

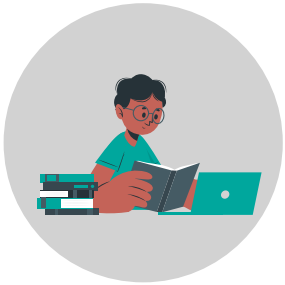
PROGRAM DURATION AND FORMAT
01 Months | Online | Live

PROGRAM FEES
Starting at INR 4499/-

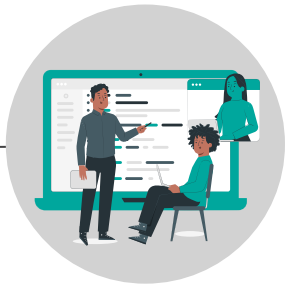
ELIGIBILITY
Bachelor's Degree with 50% or equivalent passing marks.

PROGRAM START DATE
Please refer to the website for program start dates.

COMMITMENT (20-25 hours/specialization)



15-20 HOURS
Asynchronous learning time



2-4 HOURS
Assignments and projects

1 Live Session
During Program

FOR FURTHER INFORMATION CONTACT

AMOL SONAWANE
+91-9289291935

COMPANY INFORMATION
ISIEINDIA
E-210, Second Floor, Block E
Noida-201301