ISIEINDIA
CHARGING CAREER

06
MONTHS

ONLINE PROGRAM

PROFESSIONAL MASTER CERTIFICATION

E-MOBILITY - COMMUNICATION, ARCHITECTURE and DIAGNOSIS

Certified By:

N·S·D·C
RE IMAGINE FUTURE

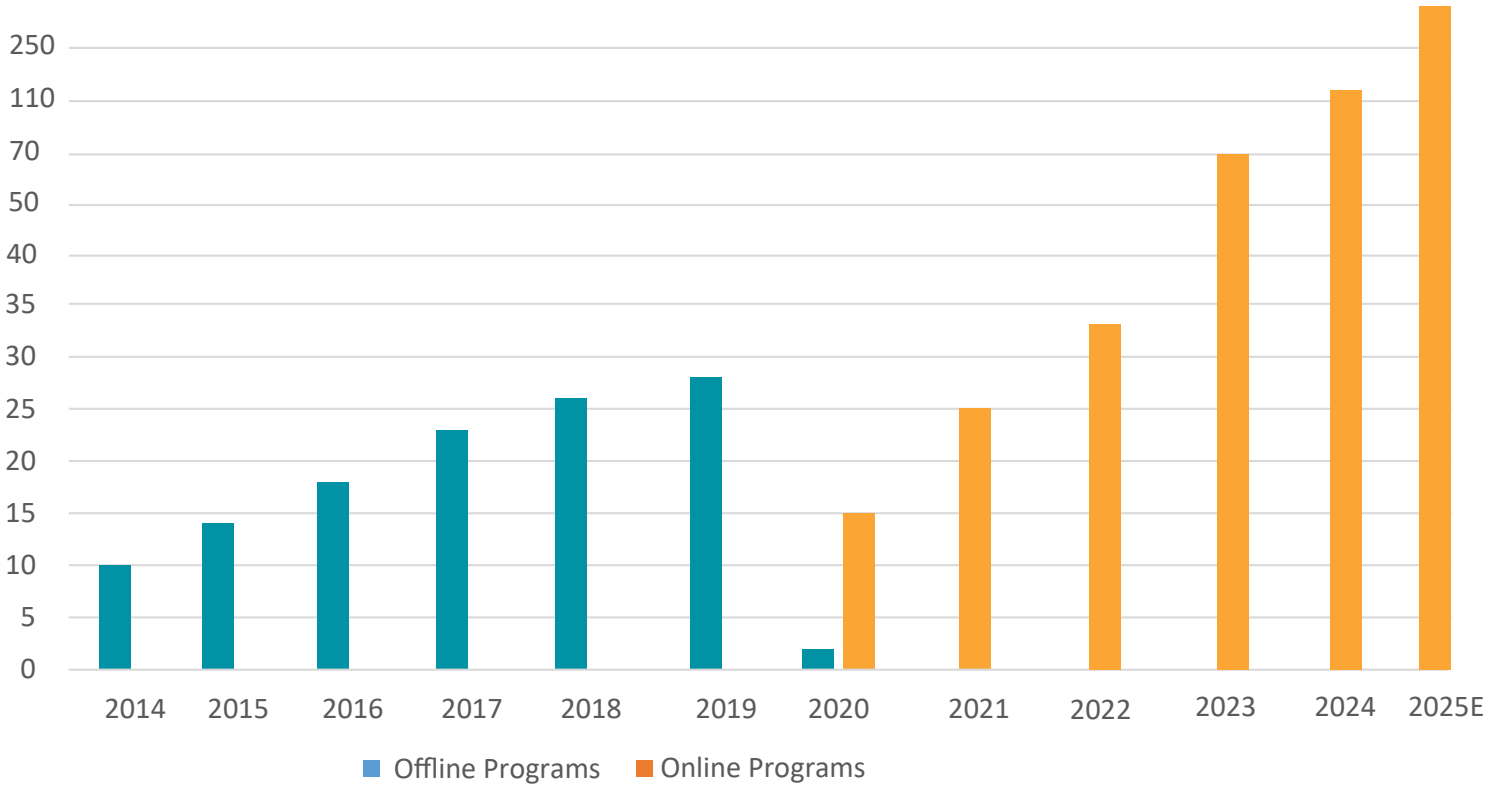
SMEV
SOCIETY of MANUFACTURERS of ELECTRIC VEHICLES

ABOUT ISIEINDIA

ISIEINDIA is the most popular and favorite E-mobility Motor sports, Education and Research Publication organization in India among engineering institutes and green energy research organization. ISIEINDIA has become one of the epicenter of green energy concept development in India. We are motivating people (Engineers + Future Engineers) to work on New and Renewable Sources of Energy. We provide the platform to new start-ups, Innovative ideas and passionate people, who really want to contribute to society.

We are giving our innovative services to more than 50,000 + peoples. Our services and product have been appreciated and noted by delegates from 22 countries. We are an associate member of FMSCI. We have been awarded by National Youth Award by Ministry of Youth Affairs, and recommended by Ministry of New and Renewable Energy. ISIEINDIA is the 1st society in India which is motivating engineering students to work on commercial green Mobility.

Program Delivered



The Skill Development Cell of Imperial Society of Innovative Engineers was established in 2015. Since, then we have delivered training in multiple domains of engineering such as - automobile, electric vehicle, computer science, electrical, electronics, etc. Since, its inception we have skilled and re-skilled more than 2.5 lac youths and professionals, helping them launch into a successful career in their desired domain.

SINCE 2015

4.5 LAC+

YOUTHS AND PROFESSIONALS

TRAINED

ABOUT PROGRAM

Professional Master Certification Programs are long term programs with 6 months of duration. These programs have been designed in order to make you employable and help you achieve that dream job. The courses under this program covers the in depth understandings of the topics covered, with 5+ case studies with mini and major projects.

The lectures will be provided on our Online platform, which can be accessed at any time as per your convenience.

We at ISIEINDIA believe that any lesson learnt is not useful unless you get to apply it in real time. Thus we have placed mini projects through out the course to help you get a proper understanding of the subject. The mini project will be briefed at the beginning of the subject and by the end of it you would have to submit the project. Apart from the mini projects you will also be provided with a major project that you would have to submit at the end of the course.

- Placement Assistance
- Industry Oriented Curriculum
- Live Industrial Projects
- Industrial Experts
- Live Doubt Sessions
- Globally Valid Certificate
- No Cost EMI

SKILL YOURSELF ANYTIME, ANYWHERE

With quality content delivered at your screen, you can up-skill yourself anytime, anywhere. It could be during evening coffee, at night before bed, morning tea, during daily transit, you choose when to learn.

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E-MOBILITY - COMMUNICATION, ARCHITECTURE and DIAGNOSIS

Electric mobility comes with zero or ultra-low tailpipe emissions of local air pollutants and much lower noise, and, by being one of the most innovative clusters for the automotive sector, can provide a major boost to the economic and industrial competitiveness, attracting investments, especially in countries.

The Electric Vehicle industry in India is far behind, with less than 1% of the total vehicle sales. Currently, Indian roads are dominated by conventional vehicles and have approximately 0.4 million electric two-wheelers and a few thousand electric cars only. The Indian EV industry has been on the back seat due to various challenges. Also, the industry is in requirement of EV Professionals are in need of Skilled Professionals which will have the knowledge in a particular domain of Electric Vehicle. Delivering e-Mobility to the masses is not only a huge investment, but a significant operational undertaking. As OEMs, suppliers and emerging vehicle manufacturers invest billions to develop innovative electric vehicles, and optimize development and production processes, they are looking for a strategic partner to help realize their vision.

The course is fully Online mode, it includes 05 Subjects for the 200 learning hour. The course includes 20 assignments in total and it also includes assessments after completion of each module, based on which you will be provided with a global certificate.

COURSE DETAILS

05 SUBJECTS

80+ LECTURE HOURS

5+ CASE STUDIES

01 PROJECTS

SUBJECT 01

Powertrain Selection and Industry Prospects

- About EV Industry and Market Study
- EV Architectures and Types
- Powertrain Selection
- Model Based Simulation - Driving Cycle and Transmission Efficiency

SUBJECT 02

Electric Motor and Drive Methods

- Motor Types for EV
- Motor Drive Methods
- Motor Design Parameters
- Controller Architecture and Communication
- Model Based Simulation - Motor Energy Consumption

SUBJECT 03

Power Unit Design and Safety

- Cell Types and Characteristics
- Battery Pack Design and Cell Sorting
- BMS Design and Architecture
- Constructional and Functional Safety
- Model Based Simulation - Range Calculation

SUBJECT 04

Electric Vehicle Communication and Diagnostics

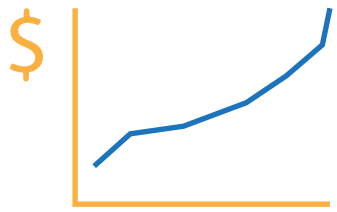
- Embedded Systems in Electric Vehicle
- Vehicle Control Unit Architecture
- Communication Systems and Protocols
- Vehicle Diagnostics and Troubleshooting

SUBJECT 05

Electric Vehicle Charging Infra and Connected Technology

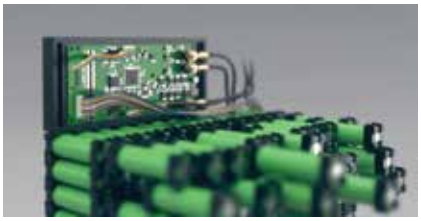
- EVSE Systems and Types
- Charging Protocols
- Charging Stations and Challenges
- ADAS Systems
- Vehicle Connected Technology

MAJOR CASE STUDIES



EV Market Impact

The EV market has grown the most despite of COVID-19 situation in the past one year. In this we take a look at the various parameters affecting the EV market and how the government and manufacturers have joined hands to promote EV.



BMS Architecture for EV

BMS Architecture types used for 2-Wheeler and 4-Wheeler operation and how the communication and data gathering is different in both cases. Battery pack safety measures and differences.

EV Architecture

Various hybrid vehicle architecture and their significance with respect to the market demands. Comparison study of BMW i8, BMW i3, Toyota Prius and Hyundai Nexon to understand the suitable source of energy as well as a brief look into the F1 Hybrid Setup and how it has revolutionized the hybrid powertrain.

Battery Charging vs Swapping

When it comes to EV design, it is really important to know which way to choose, battery swapping or charging as it will alter the design. Also take a look at case of Gogoro.

CASE STUDY

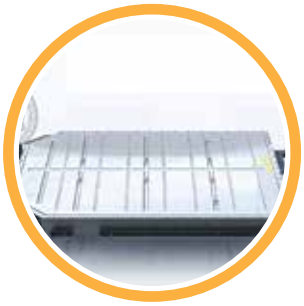
The course is filled with case studies at every unit, explaining real world scenarios and their solutions. The studies mentioned above are the major case studies, associated with which are multiple minor case studies to help you gain more insight into the industry,

PROJECTS

CHOOSE ANY ONE PROJECT

Powertrain Efficiency of an EV

For a given electric vehicle create a mathematical model in order to simulate for the optimal efficiency of the system. Calculate and modify for an optimal efficiency or Wh/km energy consumption of the powertrain system.



Battery Pack Management and DAQ

For a given performance criteria and charge and discharge cycle/ temperature profile of the battery pack choose a suitable management strategy for the system, and create the communication model for BMS with other components and data gathering system.

VCU and Communication

Perform a complete simulation of vehicle control unit/ electronic control unit - for communication between high voltage components and loop. This is a model based simulation to understand the complete data gathering and communication system for an EV at vehicular level.

ELIGIBILITY

- **Graduates/ Post Graduates**
- **Industry Professionals**
- **Entrepreneurs looking for Startups**

PAYMENT OPTIONS

NO COST EMI

On following Banks Credit Card -

- **American Express**
- **Yes Bank**
- **Standard Chartered Bank**
- **RBL Bank**
- **IndusInd Bank**
- **CITY Bank**
- **Axis Bank**
- **ICICI Bank**
- **Kotak Bank**
- **HDFC Bank**
- **Bank of Baroda**

- Wallets
- Credit/ Debit Card
- Net Banking
- EMI

CERTIFICATE

ISIEINDIA GLOBAL CERTIFICATE

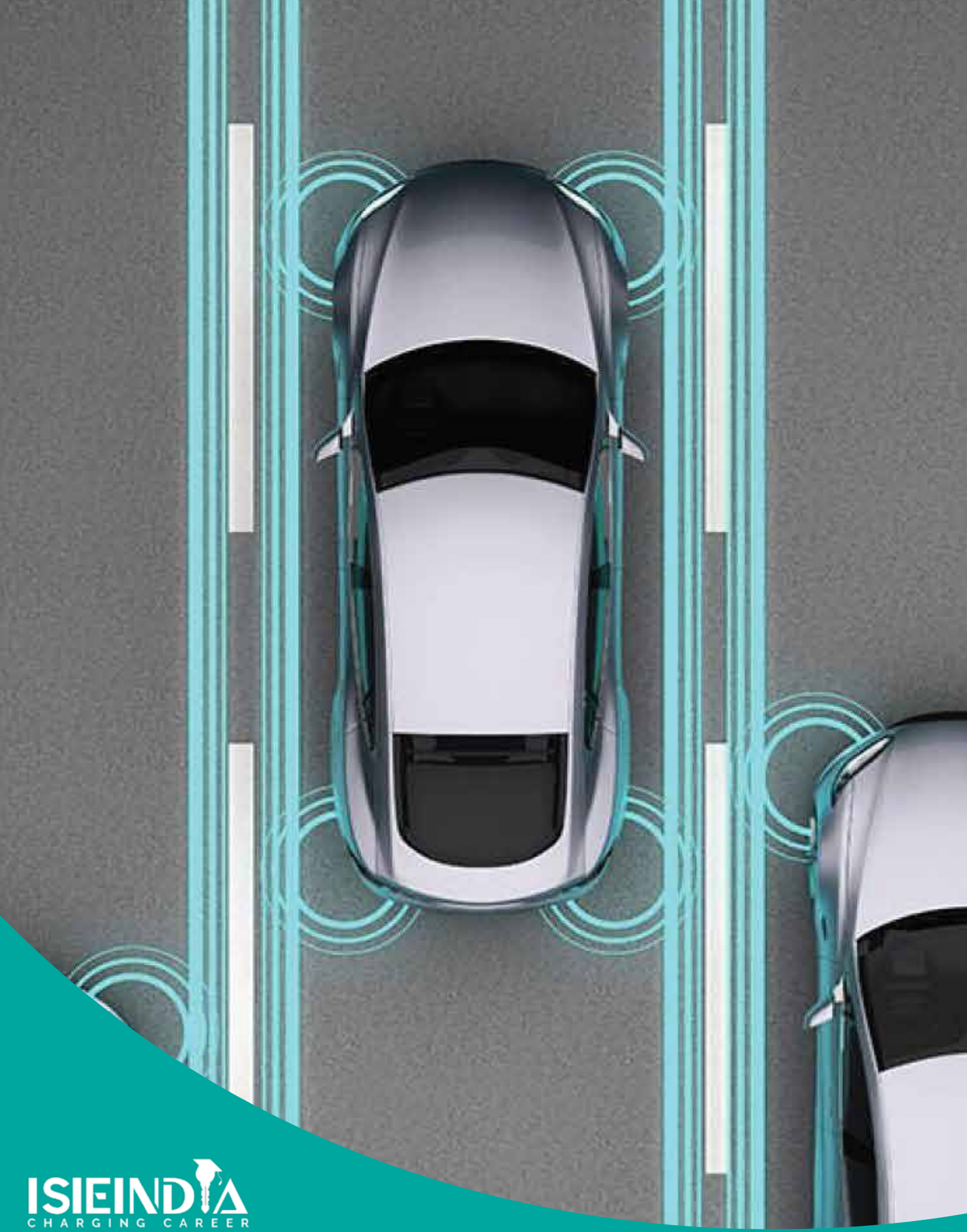
NSDC CERTIFICATE

REFER n EARN

UP TO

Rs. 5000 /Referral

IN YOUR BANK ACCOUNT



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