

SPECIALIZATION PROGRAM IN ELECTRIC VEHICLE ENGINEERING®

In association with



Industry Partner: Morris Garages (MG Motor) India | Certification: ASDC | Supported by SMEV

For

- ✚ B.E/B.Tech in M.E with Specialization in EV Engineering®
- ✚ B.E/B.Tech in Auto with Specialization in EV Engineering®
- ✚ B.E/B.Tech in EEE with Specialization in EV Engineering®
- ✚ B.E/B.Tech in ECE with Specialization in EV Engineering®

Specialization in Electric Vehicle Engineering® is exclusive program by ISIEINDIA in association with Industry partner i.e. MG Motor India and Supported by SMEV – Society of Manufacturers of Electric Vehicle and certified by ASDC – Automotive Skill Development Council (Skill India).

We are offering this program as Academia Partnership Program to various Top Private Universities and STUs. The program curriculum as per need of Industry and design and verified by 300+ Automotive professionals working in Automotive Industry. The prime objective of this program to equipped our engineering students with industry ready skills by project based and hands on learning.

Currently ISIEINDIA in association with current Industry Partners offering **2 Models** of collaboration to start Specialization in Electric Vehicle Engineering® as follows:

Model-1:

In this model ISIEINDIA offering 2 subjects and 1 Lab in 5th, 6th and 7th Semester along with 5/6 month Internship in SMEV associated industries or live project in their 8th Semester.

| Semester | Course Code | Course Title | Hours Per Week | | | Credit |
|----------------------|-------------|--|----------------|---|---|--------|
| | | | L | T | P | |
| 5. | EVE-01 | Fundamentals of EV & HEV | 3 | 0 | | 7 |
| | EVE-03 | EV Drive and Control | 3 | | | |
| | EVEP-13 | Fundamentals & EV Drive Control Lab | | | 2 | |
| 6. | EVE-04 | EV/HEV Powertrain | 3 | 0 | | 7 |
| | EVE-05 | Energy Storage, BMS & BTMS | 3 | | | |
| | EVEP-45 | EV Powertrain, BMS & Energy Storage Lab | | | 2 | |
| 7. | EVE-06 | Charging Infrastructure for EV/HEV | 3 | 0 | | 6 |
| | EVEP-67 | Charging Infra & Simulation (MATLAB) Lab | | | 2 | |
| | EV-OE | Electives (OE) | 2 | | | |
| 8. | Internship | Internship in SMEV Associate Industry / Live Project in Centre of Excellence-COE | | | | 6 |
| Total Credits | | | | | | 26 |

Model-2:

This is most preferred model and recommend by our Industry partner MG Motor as well, in this model the students will pursue 1 subject and 1 practical lab from 1st semester to 7th semester and in their 8th semester, and they will be having an option for Industry Internship or Live project.

| Semester | Course Code | Course Title | Hours Per Week | | | Credit |
|----------------------|-----------------------------|--|----------------|---|---|--------|
| | | | L | T | P | |
| 1. | EV 101 EVP 110 | Fundamentals of EV & HEV EV/HEV Fundamental Lab | 3 | 0 | 2 | 4 |
| 2. | EV 202 EVP 220 | Vehicle Engineering Vehicle Engineering Lab | 3 | 0 | 2 | 4 |
| 3. | EV 406 EVP 460 | EV Drive and Control EV Drive and Control Lab | 3 | 0 | 2 | 4 |
| 4. | EV 407 EVP 470 | EV/HEV Powertrain EV/HEV Power train Lab | 3 | 0 | 2 | 4 |
| 5. | EV 508 EVP 580 | Energy Storage, BMS & BTMS Energy Storage and BMS Lab | 3 | 0 | 2 | 4 |
| 6. | EV 611 EVP 610 | Charging Infrastructure for EV/ HEV Charging Infrastructure Practical Lab | 3 | 0 | 2 | 4 |
| 7. | EV 712 EVP 230 EV OE1 | EV/HEV Homologation Modelling of EV/HEV Lab Open Elective-1 | 3 2 | 0 | 2 | 6 |
| 8. | Internship | Internship in SMEV Associate Industry | | | | 8 |
| Total Credits | | | | | | 38 |

ELECTIVES COURSE

| Electives | Course Code | Course Name | Credit |
|------------------|-------------|---------------------------------------|--------|
| Elective Courses | EV 305 (OE) | Automotive Safety | 2 |
| | EV 106(OE) | EV Embedded System & ADAS | 2 |
| | EV-OE21 | AI & IOT Application to Automotive | 2 |
| | EV-OE23 | In-Vehicle Networking | 2 |
| | EV-OE31 | Intelligent Transport System | 2 |
| | EV-OE32 | Fundamentals of Autonomous Vehicle | 2 |
| | EV-OE23 | Fundamentals of Hydrogen & Fuel Cells | 2 |

- The university/institution can choose any of 1 subject as open elective in semester 7 for complete batch of 60 students.

Eligibility to start these Specializations at your Campus

- Minimum No. of students for the course will be 60 Per Semester.
- To start this Specialization Program, you need to setup the Centre of Excellence-EV for Practical's & Hands-On trainings.
- Affiliated Institutions can run these programs as value added course and the Universities can incorporate the complete course in their regular course curriculum.
- Having classrooms with all infrastructure i.e. Benches, Lights, Fan/A.C, White Board & Marker, Projector, Good Internet connectivity etc.
- ISIEINDIA will provide Trainers at your campus.
- Accommodation & Food for Trainer's will be provided by Campus/Institution.
- In Each Semester ASDC will be conducting assessment and a certificate in every semester will be provided to students. That will be jointly issued by (ISIE + MG Motor + ASDC) with certif. ID (global valid certification ID in automotive sector).

For Services offered by ISIEINDIA under Skill Based Education Initiative

- For Skill Development Program: <https://imperialsociety.in/isiesdp2/>
- For Faculty Development Program: <https://imperialsociety.in/faculty-development-program/>
- Academia Partnership Program: <https://imperialsociety.in/electric-vehicle-engineering/>
- ForCentreofExcellence:<https://imperialsociety.in/center-of-excellence/>
- ForStudentResearchAssociation:<https://imperialsociety.in/isie-sra/>
- ForJournalsforNational/InternationalConferences:<https://imperialjournal.com/>
- For Expert Talk: https://imperialsociety.in/expert_talk/
- For Research Project: <https://imperialsociety.in/research-project/>
- For Asia's Biggest ESVC Event: <https://www.worldsolarproject.com/>

Please feel free to contact us for any queries or concerns. We look forward to speak with you at your earliest convenience.

For more information:

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