

# 1 YEAR FULL TIME POST GRADUATE DIPLOMA IN ELECTRIC MOBILITY (PGD-EM)

## ABOUT THE COURSE:

PGD-EM is an apt course for those who wish to dive into exciting careers in future mobility solutions. The course is designed for fresh graduates and experienced professionals working in industries. The course is a brainchild of the Maharashtra Chamber of Commerce, Industries and Agriculture (MCCIA), an organization that thinks for a holistic development of nation and has contributed immensely to the Industrial development of Maharashtra, making it the Numero-Uno. College of Engineering Pune, Cummins College of Engineering for Women, Pune (CCOEW), Department of Technology, Savitribai Phule Pune University (SPPU) and ARAI, Pune are hosting the course. The professionals from MCCIA and faculty of COEP, CCOEW, SPPU and ARAI with eminent resource personalities, will prepare the students for upcoming challenges and opportunities in transition from ICE mobility to Electric Mobility.

The course includes class room lectures, video lectures, presentations and tutorials, which are all reinforced with practicals on ARAI's the state-of-the-art Centre of Excellence in E-Mobility. Students will be exposed to current developments in EV Technology, charging issues, government policies through case-studies and real world projects. One of the prime objectives of the course is to create innovators in the field of electric Mobility and accordingly, the spectrum of the learning is very wide that goes from fundamentals to advanced technology.

## COURSE DETAILS:

### Trimester I

- Bridge Course
  - Fundamentals of Automotive Electrical & Electronic Systems (for Mechanical group)
  - Fundamentals of Automotive Mechanical Systems (for Electrical group)
- Applied Mathematics
- EV System Design and Architecture
- Energy Storage Systems for Electric Vehicles
- EV Motor Drives and Power Electronics
- Lab 1
- Mini Project 1

### Trimester II

- Vehicle Dynamics and Traction Systems
- Sensors and Controls in Electric Vehicles
- IOT for Electric Vehicles
- Elective 1
- Elective 2
- Lab 2
- Mini Project 2

### Trimester III

- Full time Project

### Elective Courses (Elective 1 & 2):

- Thermal Design and Management of EV Systems
- Safety and Automotive Standards
- Energy Management and Vehicle Integration
- Advance Electric Drives
- Embedded Systems and In-Vehicle Communication Protocols
- FEM and CFD for Electric Vehicles
- Design Validation Process



### Total Number of Seats:

COEP: 20, DOT-SPPU: 20 and CCOEW (only girls candidates): 20

### ELIGIBILITY CRITERIA:

Engineering Graduate in Mechanical / Electrical / Electronics & Telecommunication / Instrumentation / Automobile and allied branches.

### COURSE FEES:

Decided by respective institutions (varying from 1.55 Lac to 1.80 Lac)

### SELECTION CRITERIA:

Refer websites of respective academic institutions ([www.coep.org.in](http://www.coep.org.in), [www.unipune.ac.in/dot](http://www.unipune.ac.in/dot), [www.cumminscollege.org](http://www.cumminscollege.org))

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