



ALTUS EDUCATION PRESENTS

Hybrid & Electric Vehicles

Drive into the Future of Mobility

Self-Paced | Mentor-Led

ABOUT THE PROGRAM

What you will learn

Learn the fundamentals of electric and hybrid vehicle technology, battery systems and sustainable vehicle design. From vehicle dynamics and powertrains to battery management and charging, you will build the knowledge to step into the fast-growing EV industry.

WHAT IS INSIDE

Vehicle Basics

Electric & Hybrid Vehicles

Electric Power System

Battery Management System

EV Chargers

Software Workshop

2-3 months

Program duration

Projects

Minor and major hands-on projects

Certified

Training and internship certificates

Training curriculum

1 · Introduction to Vehicles

- Forces acting on vehicles
- Vehicle traction
- Resistances of a vehicle
- Powertrain structure

2 · Introduction to Electric & Hybrid Vehicles

- Electric vehicles and their topology
- Hybrid vehicles and their topology
- HEV drivetrain structure and design

3 · Electric Power System

- Introduction to batteries
- EV motors and controllers
- Design of a battery pack
- Introduction to battery parameters

4 · Battery Management System

- Architecture and layout of a BMS
- State of Power (SOP) estimation
- State of Health (SOH) estimation

5 · EV Chargers

- Introduction to EV standards and their functions
- Bulk chargers and swap stations
- Public chargers
- On-board chargers

6 · Software Workshop & Training

- Introduction to drive cycle data
- Introduction to the computation of EV powertrain
- MATLAB-based numerical computation of vehicle powertrain behavior

HANDS-ON

Minor & major projects

Apply what you learn through practical minor and major projects, building a portfolio you can show.

TOOL YOU WILL LEARN

MATLAB

Numerical computation of vehicle powertrain behavior.

Modes of training

Self Paced

- Recorded sessions
- Certifications
- Hands-on projects

Mentor Led

- All benefits of Self Paced
- Live sessions
- Doubt-clearing sessions

SHOWCASE YOUR JOURNEY

Certifications

Certificate of Training

Awarded by Altus Education on finishing the course.

Certificate of Internship

Awarded by Altus Education on completing your internship.