



**SKILLZYN**<sup>TM</sup>  
**ACADEMY**  
Empowering Skills

**Build Skills**  
**Build Your**  
**Future**



**Skillzyn Academy**  
**Career - Focused Training Programs**

 [www.skillzyn.com](http://www.skillzyn.com)

# Your Pathway to Career Success Starts Here.

Skillzyn Academy is a professional skill-development institute dedicated to bridging the gap between education and industry. We focus on practical, career-oriented training that empowers students to become job-ready in high-demand sectors. Our programs combine expert faculty guidance, hands-on learning, and internship support to help learners build strong career foundations.

## Our Mission

At Skillzyn Academy Private Limited, our mission is to empower students with industry-relevant skills that bridge the gap between education and employment.

## Why Choose Skillzyn?

Industry-oriented training

Practical learning + internships

Expert faculty & real-world projects

Placement assistance

Globally relevant skills



*Programs We Offer*

## **Choose Your Career Track**

- **Healthcare Management & Administration**
- **Diploma in Civil Construction Management**
- **Logistics & Supply Chain Management**
- **Human Resource Management & Industrial Relations**
- **Diploma in Food Safety & Quality Management**
- **QA / QC (Mechanical, Civil, Electrical)**
- **Aviation & Airport Management**
- **Banking & Financial Management**
- **Accounting & Taxation**
- **Fire and Safety**
- **Digital Marketing**
- **NDT Level II**
- **Oil and Gas Operations**
- **Electric Vehicle (EV) Design**
- **Montessori Teacher's Training**



**courses**

# Electric Vehicle (EV) Design

## Duration

3 Months | 6 Months

## Qualification

Plus Two & Above

## Certification

(CTDS), Skillzyn

This course covers a comprehensive range of topics, including EV architecture and components, battery technology, electric powertrains, charging infrastructure, vehicle diagnostics, and sustainable energy systems. Students will gain hands-on experience with industry standard tools and technologies, along with insights into real-world EV manufacturing, maintenance, and service operations.

## Career Opportunities ?

EV Service Technician

Quality Control Inspector

Charging Infrastructure Technician

EV Manufacturing Associate

EV Fleet Manager

Electric Mobility Consultant

EV Sales and Product Specialist

Vehicle Diagnostics Analyst

Sustainability and Energy Analyst



## Benefits of

# Electric Vehicle (EV) Design

- Industry-Relevant Curriculum**  
Covers core topics such as EV systems, battery technology, electric powertrains, and charging infrastructure.
- Practical Training**  
Gain hands-on experience through lab sessions, EV maintenance workshops, and live demonstrations.
- Career Opportunities**  
Builds technical skills in diagnostics, repair, system integration, and safety protocols specific to electric vehicles.
- Skill Development**  
Learn from industry professionals with real-world experience in EV technology and green mobility solutions.

## Course Module

- 1. Introduction to Electric Vehicles**
  - » Evolution of EVs
  - » Types of EVs (BEV, HEV, PHEV, FCEV)
  - » EV vs ICE vehicles
  - » Global & Indian EV market overview
  - » EV regulations & standards

## **2. EV Vehicle Architecture**

- » EV powertrain layout
- » Chassis & body structure
- » Weight distribution & packaging
- » Vehicle dynamics basics
- » Comparison of EV platforms

## **3. Battery Technology & BMS**

- » Lithium-ion battery fundamentals
- » Cell, module & pack design
- » Battery chemistry comparison
- » Battery Management System (BMS)
- » Thermal management basics

## **4. EV Design Calculations**

- » Vehicle performance calculations
- » Tractive force & power calculation
- » Range estimation
- » Battery sizing
- » Motor power calculation

## **5. Transmission, Braking & Thermal Systems**

- » Single-speed gearbox
- » Differential & driveline
- » Regenerative braking
- » Cooling systems (battery, motor, inverter)
- » HVAC basics for EVs

## 6. Charging Systems & Infrastructure

- » AC vs DC charging
- » On-board & off-board chargers
- » Charging standards (CCS, CHAdeMO, Type 2)
- » Fast charging concepts
- » Charging safety

## 7. EV Safety, Standards & Testing

- » Electrical safety
- » Functional safety (ISO 26262 – basics)
- » Battery safety & crash protection
- » EMC & compliance standards
- » EV testing procedures

## 8. EV CAD Design

- » Introduction to EV CAD tools
- » Battery pack layout design
- » Motor mounting & enclosure design
- » Chassis integration basics
- » GD&T fundamentals

## 9. EV Simulation & Analysis

- » MATLAB/Simulink overview
- » Drive cycle simulation
- » Range & efficiency simulation
- » Thermal analysis basics
- » Performance optimization

# Build **Skills** Build Your Future



Start Your  
**Skill Journey Today !**



**+91 859 0000 938**



**info@skillzyn.com**



**www.skillzyn.com**



**Skillzyn Academy Private Limited**  
**Building No. S/257A8, Suite No.27B**  
**Heiley Spaces, Basement Floor Pallath Square**  
**FACT Kalamassery Road Kalamassery P.O**  
**Ernakulam -683104.**

