



HYBRID & ELECTRIC VEHICLES

About Us

InternsForge is the bridge that takes you from books to the on-field application of any and everything you want to learn. You should be trained to apply all your learnings in the real world right from the start. This not only makes your learning process a lot more fun but sets you apart from the dense competition through your exceptional skills from our holistic learning approach.



“We're not here to just teach;
we're here to transform”

30,000+ Students Turned Industry-Ready Professionals

4.5+ Star rating on Google from 325+ Happy customers

Have our presence in over 4000+ colleges including top IITs, IIMs, NITs, IIITs etc

Students from InternsForge are working in Top MNCs like IBM, Accenture, Innodata, Cognizant etc



HYBRID ELECTRIC VEHICLES



What is HEV ??

Ah, the Hybrid Electric Vehicle (HEV) – the automotive world's answer to the age-old dilemma: "Do I go green or stick with the gas guzzlers?" Picture yourself at the intersection of Eco-Friendly Avenue and Gasoline Alley, pondering life's deepest questions. That's where the HEV comes rolling in, like a quirky superhero with a split personality.

So, what exactly is an HEV? It's like a car that's trying to find its Zen moment between sipping fuel and savoring electrons. It's the vehicular equivalent of someone who wears a suit during the day and pajamas at night – versatile, practical, and maybe a little confused.

Scope of HEV ??

Congrats!! 🎉
You just made a great
choice



Did You Know ??

According to data from market research firms such as Allied Market Research and Market Research Future, the global HEV market size is projected to continue growing at a steady pace, with a **compound annual growth rate (CAGR) of around 10% to 15% over the forecast period**. Leading automakers such as **Toyota, Honda, Ford, Hyundai, and Volkswagen** have introduced various HEV models in their vehicle lineup, offering consumers a range of options across different vehicle segments. Data from industry reports and market analyses show that HEVs typically account for a significant share of the global electric vehicle (EV) market, alongside **BEVs and PHEVs**.

Are We Really Different ??



‘This is NOT a Course, This is a Commitment’

The internet is full of online courses- free as well as paid, college students have access to top professors and high quality study materials.

Still our unemployment ratio continues to grow.

At the same time, the stress and worry faced by today's college students reach the sky!



“ Now it's time to leave all your worries up to us and experience a transformed way to learning ”



4 Gaps That We Fill for You

1 Learn From Your Idols

- **Learn from Your Idols Currently Working At Your Dream Jobs**

You are already getting trained by top quality college professors, now time to cover the gap between theory and actual industry work. Get trained by professionals working at your dream jobs, get inspired, get guided, and get ready to reach your dreams.

- **Interactive-Live Classes**

90% of the students never finish the online courses they enroll in. Get ready of an entirely different experience, where you learn while interacting with your mentors in a motivational environment where you can't wait for the next session. Get Inspired! Get Going!



2 Certifications

- **Course Completion Certificate & Project completion certificate in collaboration with E-Cell IIT Indore**

At the end of course you will get some time to submit your project report. After submission of your project report you will get a course completion certificate and project completion certificate in collaboration with E-Cell IIT Indore.

- **Internship certificate from our partnered companies :**

We have some of our partnered Companies like Datex, Corevo, Smart swift Innovation etc which operates in different type of technologies. You will get a chance to work on some live-projects from these companies and after the completion of project and submission of project report; you will be awarded with an internship certificate from these companies.



3 Experience Working on Live Industry Level Projects

- **4 Live Industry Level Projects**

There is a humongous difference between learning from your classroom, books, notes vs. having industry experience where you know the current industry demands and are an expert at fulfilling those demands.

At InternsForge we make sure that your learning runs parallel to the applications of your learning, i.e right from the start till the end you are consistently applying everything you are learning in form of 4 main projects that are going on in the current industry



- **Projects Assigned and Guided by Industrial Mentors**

Since the purpose of this program is to get you industry ready. You will be assigned projects through your mentors who are working in the industry. You get to work on the projects that are highest in demand as per the industry requirements of the time you are taking the course.

You get consistent guidance from your mentors with additional doubt clearing sessions as per your demand for the smooth running of your projects.



ROADMAP

Introduction Webinar

Between 20 to 25th of the month, you will have your introduction webinar where you will get expert insights on the scope of the subject and your growth graph with the selected career.

During 2 Months of Intensive Training

During your training the following will be covered:

- 25+ hrs of interactive-live sessions with industry experts
- 2 Industry Level Projects

Orientation Session

Within the first week of initial payment you will have your first orientation session where you will get an in-depth introduction to our process.

2 Months of Intensive Training

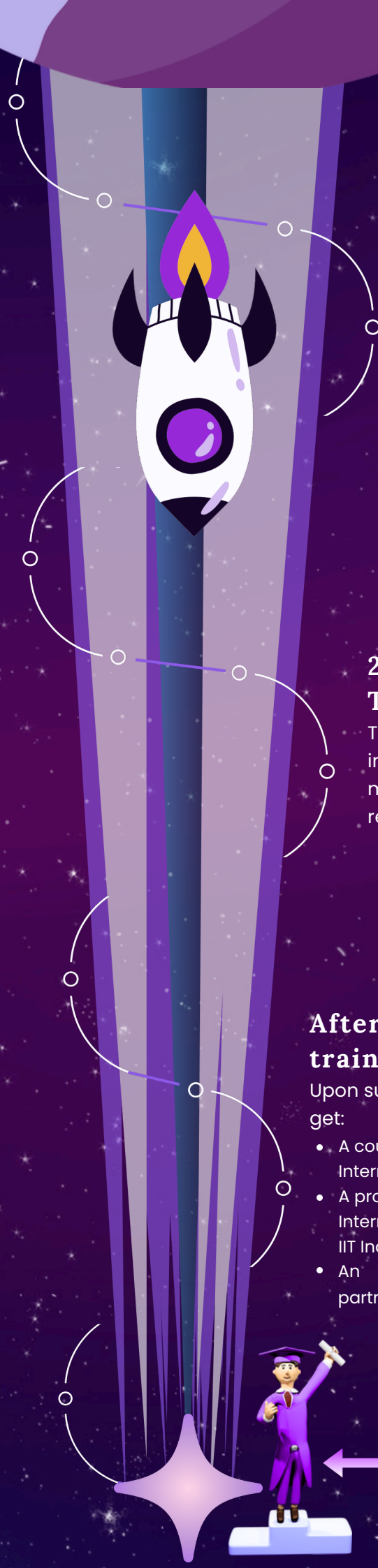
Then we will start your 25+ hrs of intensive training. Where we make sure you are industry-ready.

After Completion of training:

Upon submission of project report You will get:

- A course completion certificate from InternsForge
- A project completion certificate from InternsForge in collaboration with E-cell of IIT Indore
- An internship certificate from our partnered companies

“The best version of you all set to conquer your Dreams”



Curriculum

MODULE 1

Introduction : why EV?

- ***Why EV?***
- ***Why HEV?***
- ***Why PHEV?***
- ***Hybridisation Ratio***
- ***Architectures of HEV***
- ***Comparison of IC & EV***



MODULE 2

Batteries :

- ***Battery Parameters***
- ***Lithium Batteries***
- ***Metal- Air Batteries***
- ***Hybrid Batteries Super- Capacitors***
- ***Comparison b/w Hybrid batteries & super-capacitors***
- ***C-rates***

MODULE 3

Vehicle Modelling :

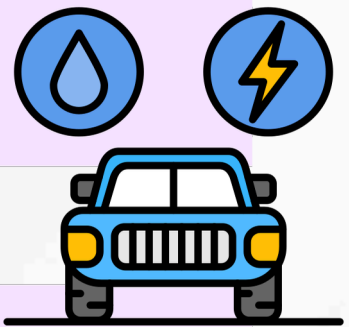
- ***Duty Cycles***
- ***Vehicle Model***
- ***Vehicle Performance***
- ***EV Powertrain Component Sizing Vehicle Efficiency***



Curriculum

MODULE 4

Minor Project Discussion



MODULE 5

Battery Thermal Management :

- *Thermal Runaway*
- *Cooling Systems*
- *Active Cooling*
- *Passive Cooling*
- *Safety Systems in EV to avoid Thermal Runaway*



MODULE 6

Motors & Control Systems :

- *Types of Motors*
- *Motor Configurations*
- *Asynchronous Motors*
- *Synchronous : Permanent Switch Reluctance Motors*
- *Axial Flux Motors*
- *Motor Torque & Power Characteristics*
- *Motor Efficiency*
- *Control Systems*



Curriculum

MODULE 7

Battery Pack Design & Calculations (Major Project)

MODULE 8

Battery Management System in EV :

- ***Background***
- ***Battery Management Systems***
- ***Basic Functions of BMS Topology of BMS***

MODULE 9

Battery Charging :

- ***Charging Standards***
- ***Wireless Power Transfer***
- ***Solar – Charging Case Study***

THANK YOU



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