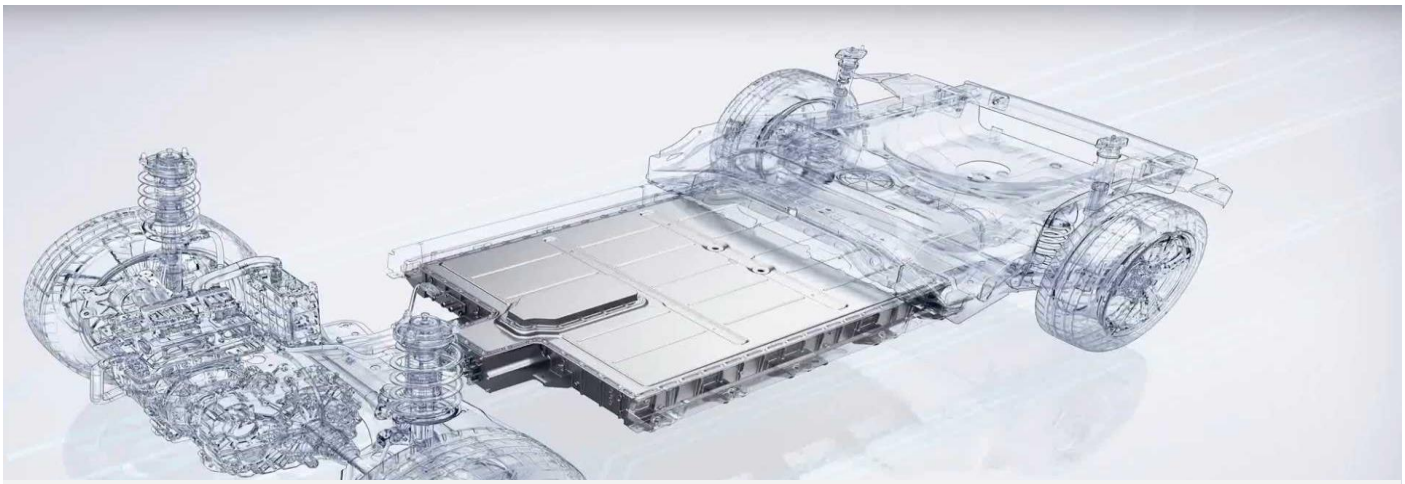
Organizer

PMANIFOLD EV ACADEMY

Certification Partner

ASDC AUTOMOTIVE SKILLS DEVELOPMENT COUNCIL



BATTERY MODELING AND SIMULATION

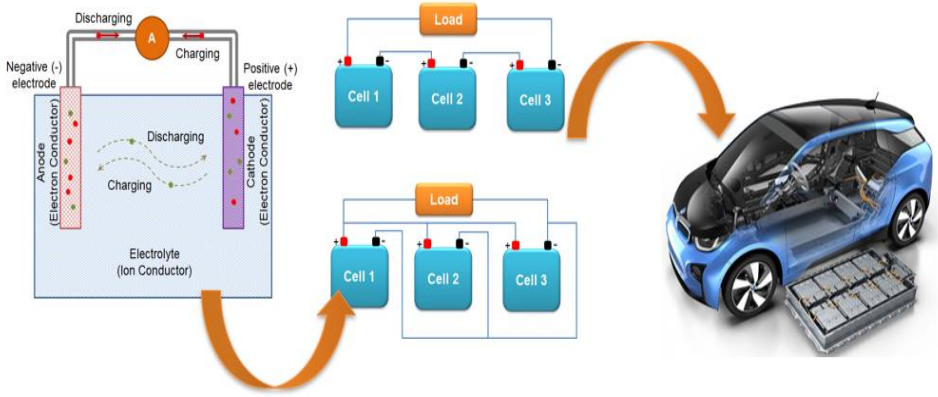
Live Online Certification Program

The Battery Modeling and Simulation – training program will provide you an overview of batteries and their integration aspects for e-mobility. This program will introduce the concepts and terminology, the global best practices in virtual model-based development, EV sub-system working principles, systems engineering and basics of control systems.

Starting
29th March
2021
Limited seats

You can learn here...

- ☑ How to integrate a battery pack for EV applications
- ☑ To understand the requirements of a battery-management system in an electric vehicle
- ☑ How to model, simulate, and enable product decisions using the results



Our Uniqueness

Industry Valued Certification
Joint Certification with ASDC on completion

Global EV Experts
Trainers worked on global EV platforms & programs

Hands-on Modeling
In a single session, trainees learn theory and apply it into a simulation model – Excel and Scilab

Practical on Hardware
In-lab data measurement & practical on hardware battery models

Live Online Delivery + Revise from Video Recordings
Join and learn from anywhere, also 2 months of content access

Easy time outside work
Theory sessions in evenings on alternate weekdays and practice sessions in afternoon on Saturdays

Contact : +91 72496 85682 evacademy@pManifold.com www.pManifold.com

BATTERY MODELING AND SIMULATION

Program Schedule

Module Title	Session	Coverage	Hours	Week
Module 1: Battery basics and application	Session-1	Battery Basics – Electrochemistry	1.5	Week-1
	Session-2	Battery Basics – Electric Circuits	1.5	
		Battery Basics – Series – Parallel Configurations	1.5	
	Session-3	EV Application – Types of battery as per applications	1.5	
		EV Application – Battery packaging and cooling	1.5	
	Practice-01	Tutorial on using Scilab for Battery Modeling	2	
	Session-4	Battery specifications and pack sizing	1.5	Week-2
Module 2: Battery management and control	Session-5	Cell balancing	1.5	Week-2
		Ambient sensitivity	1.5	
	Session-6	Operational sensitivity	1.5	
	Session-7	Basics of control systems	1.5	Week-3
	Session-8	Battery Management System (BMS)	1.5	
		BMS Interfaces	1.5	
Module 3: Battery Modelling & Simulation	Session-9	Basics Functional Representation	1.5	Week-3
		Unit cell modeling and scaling	1.5	
	Session-10	Pack modeling	1.5	Week-4
		Pack thermal modeling	1.5	
	Session-11	BMS modeling	1.5	
		Electrical peripherals modeling	1.5	
	Session-12	Data-based modeling and tuning	1.5	
		Battery ageing modeling	1.5	
Final Exam		MCQ with e-proctering	1	Week-5
	Practice-02	Mentoring for and debugging of project	2	
Project Evaluation		Project Reviews	2	

14 Theory + Practice sessions

3 Assignments
1 Final assessment

Certification after course completion based on Attendance, Assignment, and Final assessment

Our Trainers

Mr. Vikrant Vaidya

Lead and VP, EV Academy
pManifold

20+ years experience in global automotive industry with expertise in product development through powertrain-vehicle integration, computer aided engineering, model-based controller development and powertrain-in-vehicle calibration. A Six-Sigma Green Belt, recruiter and technical trainer for 10+ years and has three records of invention in hybrid powertrain, battery controls and repurposing.

Mr. Rahul Bagdia

Managing Director and Partner
pManifold

20+ years of diversely global experience in various industries like energy & utilities, electric vehicles, health & life sciences, banking, finance & education. Has worked with Government of India for Electric Vehicle Program Management Cell in areas of policy making, EV infrastructure development, distribution networks and power generation.

Eligibility:

- Working Professionals, Consultants, Researchers
- Students pursuing master degree in engineering, battery modeling enthusiasts

Fees:

Professionals: INR 25,424
Educational Institutions: INR 16,950
Prices are Exclusive of GST
Group Discounts are as below
- 2 Candidates = 10% each
- 3 Candidates = 15% each
- 4 Candidates = 20% each
- 5 or Above Candidates = 25% each

Win scholarships of up to 100%

Apply Now

Click here to enroll !

About Us

pManifold is a Strategic Research and Consulting company, enabling Smart and Clean Tech Markets development and growth in Energy, E-Mobility, Solar, LVDC, Enviro and Urban sectors. It's EV Training Practice specialized in niche EV system-oriented courses to help the industry build new skills and drive improved EV adoption & experience.

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