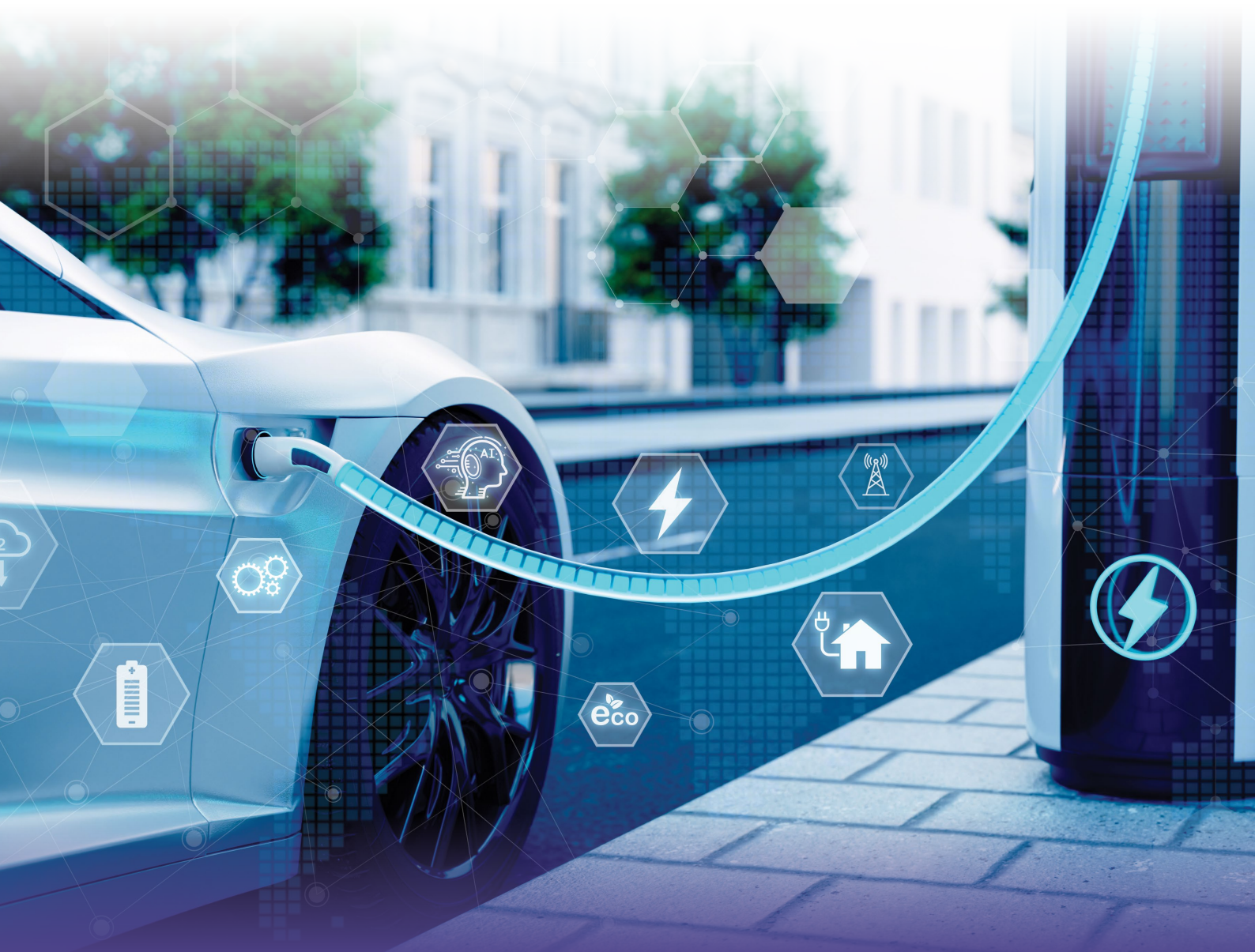




Executive MTech IN Electrical Vehicle Systems



Where Knowledge Meets Innovation - Empower Dreams,
Engineer Success

2 Years | Online Immersive Sessions | Graduate from an IIT

Tech Leadership Redefined - IIT Bhilai's Executive MTech Journey

Indian Institute of Technology (IIT) Bhilai was established in the state of Chhattisgarh by the Ministry of Education in the year 2016.

IIT Bhilai is presently housed in its permanent campus at Kutelabhata, Bhilai, Chhattisgarh.

At IIT Bhilai, we understand the demands of the dynamic corporate landscape, and our Executive MTech programs are meticulously crafted to provide a seamless blend of academic excellence and real-world applicability. Whether you aspire to advance in your current role, switch career paths, or stay ahead of industry trends, our Executive MTech courses offer the strategic edge you need to thrive in a competitive landscape.





Program Overview

Executive MTech in Electrical Vehicle Systems is a specialized program designed for professionals in the electric vehicle (EV) industry. It covers a range of topics from basic electric and hybrid vehicle technologies to cutting-edge advancements in battery systems, propulsion methods, and sustainable energy. The curriculum ensures comprehensive knowledge of electric vehicle technology, including energy storage, powertrain engineering, and smart grid integration.

- ⚡ Min 2 years of Experience within preceding 5 Years
- ⚡ Should have B.Tech/ BE/ M.Tech/ MSc (In Relevant Field- 4 Semester Program) / MCA (4 Semester Program) / MS Degree (min. 4 Semester Program).
- ⚡ In the qualifying degree at least 55 percent marks or equivalent 5.5 CGPA/CPI must be there. In case of the candidate belonging to SC, ST, or Persons with Disability (PwD) category, this is relaxed to 50% or equivalent 5.0 CGPA/CPI. For MCA/MSC passed graduates, the percentage score of MCA/MSC would be considered. For BE/BTech Engineering graduates without PG specialization, the percentage score of the undergraduate degree would be considered. For a post graduation in the Engineering field of study, PG score qualification can be considered.
- ⚡ Selection process will be scheduled post counseling & application process, depending on the number of eligible applications as per seat availability for the program. This entire process will be online.

Who Is this Program For?

- ⚡ Engineers and software developers seeking a profound understanding of advanced electric vehicle systems will discover this program to be invaluable for refining their expertise.
- ⚡ This program is also well-suited for entrepreneurs, innovators, and tech enthusiasts who are eager to master the intricacies of Advanced Electrical Vehicle Systems.
- ⚡ The Executive MTech in Electrical Vehicle Systems is designed to meet the needs of individuals who are enthusiastic about advancing their careers and making a significant impact in the digital age, particularly within the rapidly evolving landscape of electric mobility.

PROGRAM OBJECTIVES



To introduce the fundamental concepts and technologies behind electric vehicles (EVs).



To analyze the challenges and future trends in the EV industry.



To gain proficiency in the use of control techniques for electric drives.



To provide an in-depth understanding of various battery technologies, including their chemistry, design, and applications.



To develop skills in analyzing, designing, and managing battery systems for various applications, including electric vehicles and renewable energy storage.



To develop skills in designing and evaluating renewable energy solutions for EV charging and power management.



To explore the design, operation, and optimization of power converters and control strategies for EV applications.



To evaluate the emerging trends and future developments in EV charging technologies and infrastructure.

PROGRAM HIGHLIGHTS



An esteemed certification, campus immersion & alumni status from IIT Bhilai



Learn through Virtual Instructor-Led Training (VILT)



Explore top-notch learning with industry experts

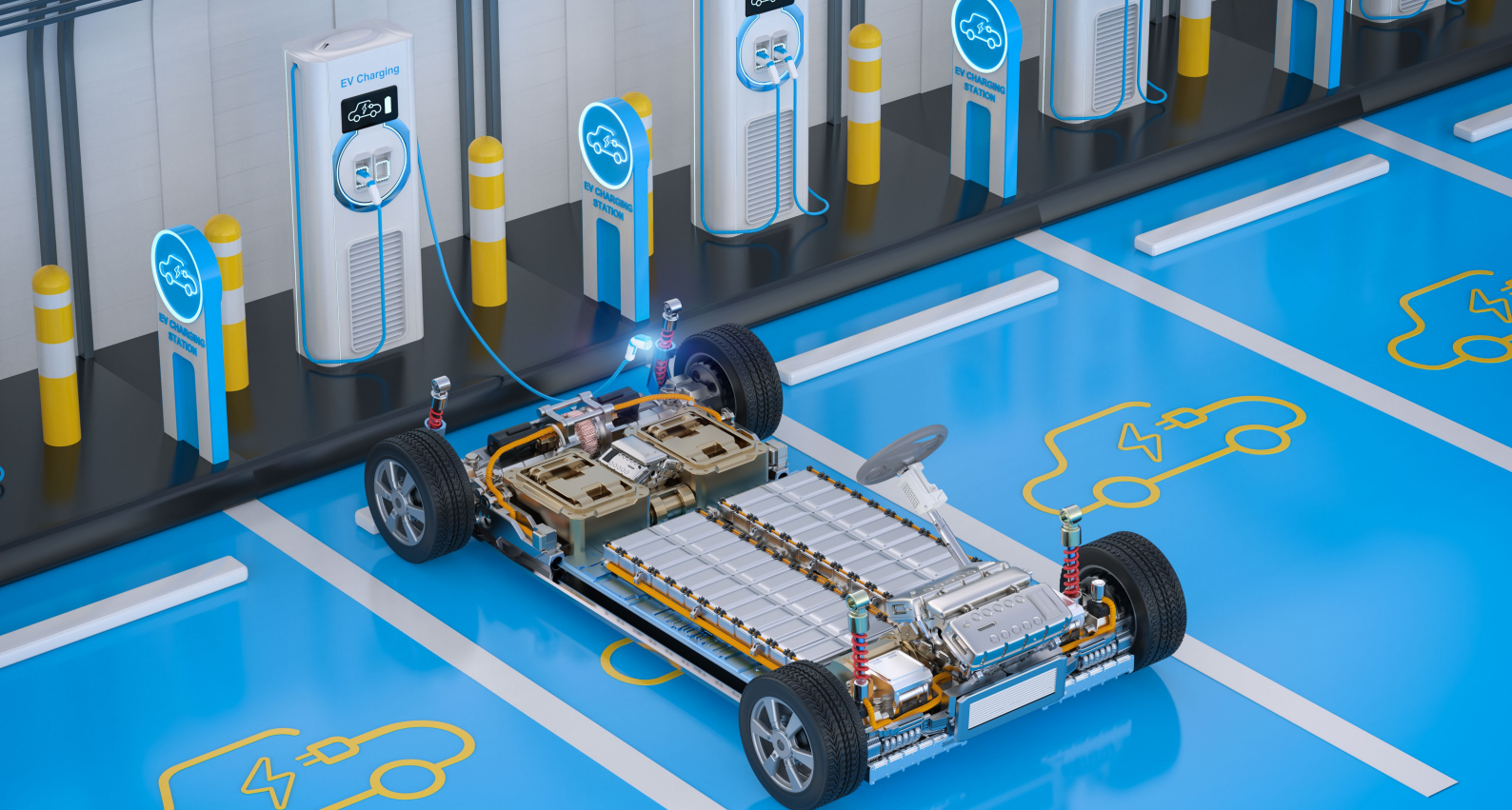


PROGRAM STRUCTURE

Sem	Course Code	Course Name	L-T-P-C	Credits	
I	EVL501	Fundamentals of Electric Vehicles	3-0-0-3	3	Core
I	EVL504	Renewable Energy Systems for EVs	3-0-0-3	3	Core
I	EVL601	Elective - 1	3-0-0-3	3	Elective (E)
II	EVL502	Electric Drives and Control	3-0-0-3	3	Core
II	EVL503	Battery Technology and Management Systems	2-1-0-3	3	Core
II	EVL602	Elective - 2	3-0-0-3	3	Elective (E)
II	EVL500	Elective - 3	2-0-0-2	2	Elective (E)
II	EVL799	Capstone Project	0-0-8-4	4	Project (P)
III	EVP799	Minor Project	0-0-4-2	2	Project
III	EVL600	Elective - 4	2-0-0-2	2	Elective (E)
III	EVL603	Elective - 5	3-0-0-3	3	Elective (E)
IV	EVL610	Elective - 6	3-0-0-3	3	Elective (E)
IV	EVP899	Major Project	0-0-12-6	6	Project
IV		Campus immersion program / Electives	0-1-6-4	4	
				44	

Course				
Group	Code	List of Elective Courses	L-T-P-C	Credits
Elective - 1	EVL601	EV Charging Technology and Infrastructure	3-0-0-3	3
	EVL602	Energy Storage and Conversion	3-0-0-3	3
	EVL625	EV Charging Standards and Protocols	2-0-0-2	2
	EVL626	Renewable Energy for EV Charging Networks	2-0-0-2	2
Elective - 2	EVL604	Environmental Impact of EVs	3-0-0-3	3
	EVL606	Smart Grids and EV Integration	3-0-0-3	3
	EVL627	Grid-to-Vehicle (G2V) and Vehicle-to-Grid (V2G)	2-0-0-2	2
	EVL628	Energy Policy and Regulation for EVs	2-0-0-2	2
Elective - 3	EVL607	Advanced Vehicle Dynamics	3-0-0-3	3
	EVL608	Battery Manufacturing	3-0-0-3	3
	EVL629	Recycling and Disposal of EV Batteries	2-0-0-2	2
	EVL630	Testing and Certification of EV Batteries	2-0-0-2	2
Elective - 4	EVL609	High Voltage Systems in EVs	3-0-0-3	3
	EVL610	Thermal Management Systems for EV Batteries	3-0-0-3	3
	EVL631	Safety Standards in High Voltage EV Systems	2-0-0-2	2
	EVL632	Advanced Materials for Thermal Systems	2-0-0-2	2
Elective - 5	EVL611	Project Management in EV Industry	3-0-0-3	3
	EVL612	EV Business Models and Market Analysis	3-0-0-3	3
	EVL633	EV Supply Chain and Logistics	2-0-0-2	2
	EVL634	EV Industry Standards and Certifications	2-0-0-2	2
Elective - 6	EVL613	Autonomous and Connected Vehicles	3-0-0-3	3
	EVL614	Sustainable Mobility Solutions	3-0-0-3	3
	EVL635	IoT and AI for EV Fleet Management	2-0-0-2	2
	EVL636	Simulation and Modeling of EV Systems	2-0-0-2	2

Program Elective and Open Elective courses, along with their credits, are tentative and subject to change



CORE LEARNING OUTCOMES

- ⚡ Students will gain a comprehensive understanding of the principles and components of electric vehicles.
- ⚡ Ability to design and evaluate key components of electric vehicles, such as battery systems and electric motors.
- ⚡ Proficiency in analyzing the performance of various electric drive systems.
- ⚡ Capability to select appropriate drive systems for industrial applications.
- ⚡ Capability to apply knowledge of battery systems in real-world scenarios, particularly in electric vehicles and renewable energy solutions.
- ⚡ Knowledge of the impact of renewable energy integration on EV performance and sustainability.
- ⚡ Insight into emerging trends and technological advancements in renewable energy for electric vehicles.
- ⚡ Capability to utilize simulation tools for designing and testing power electronic systems in EV contexts.
- ⚡ Understanding of the integration of EV charging infrastructure with renewable energy sources.
- ⚡ Skills to analyze and predict the impact of EV charging technology on the energy sector.

PROGRAM ADMISSION JOURNEY



STEP 1:

Fill up an online application form, upload the required documents and submit application



STEP 2:

Make the application payment



STEP 3:

Shortlisting based on work, and education profile



STEP 4:

If shortlisted, you will receive an offer letter from IIT Bhilai



STEP 5:

Pay admission confirmation fee within 7 days of receiving the offer letter

Note: The application fee once paid is not refundable. IIT Bhilai reserves the right to conduct the admissions process. By submitting the application, the students agree that any decision regarding Admissions from IIT Bhilai will be final and binding.

Fee Structure

Executive MTech in Electrical Vehicle Systems

Application Fee (Non-Refundable)	₹ 5,000/-			
Fees	Instalment 1	Instalment 2	Instalment 3	Instalment 4
	₹ 91,250/-	₹ 91,250/-	₹ 91,250/-	₹ 91,250/-
Total Fees	₹ 3,70,000/-			

Optional Fees

Head	Sem 1	Sem 2	Sem 3	Sem 4	Total
Optional Campus Immersion Fee	₹ 0/-	₹ 10,000/-	₹ 0/-	₹ 10,000/-	₹ 20,000/-
Optional Institute Alumni Fee	₹ 0/-	₹ 0/-	₹ 0/-	₹ 6,000/-	₹ 6,000/-

Cancellation & Fee Refund Policy:

➤ Application Fee: Non-refundable.

➤ Course Fee Refund:

A refund of 90% of the paid course fee will be issued if a request is raised before the Batch commencement date.

No refund will be provided on or after the batch commencement date.



Proficiency Gained - Tools and Technologies

Simulation Software



EV Design and Simulation

Battery Management Systems



Practical experience in EV design, battery technology,
and energy management

Cloud Computing Platforms



Google Cloud



Azure

Data storage, high-performance computing, specialized software

Virtual Labs



Virtually Testing EV Systems and
Conducting practical experiments virtually

Programming Environments



Learning programming for EV systems analysis and development



Get In Touch With Us

For registration and any other information please get in touch with us at admission.iitbhilai@digiversity.com

Contact us: 033-4058-6356