



Indian Institute of Technology Madras

# WEB ENABLED M.TECH. IN E-MOBILITY (WEMEM)

Department of Engineering Design, IIT Madras

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# ABOUT WEMEM



## Features:

- An unique opportunity for working professionals to pursue an MTech Degree at IIT Madras
- Equivalent to degree conferred upon on-campus students
- Intermediate exit with Post Graduate Diploma in E-Mobility
- Flexible learning experience through live classes with faculty on weekends combined with recorded content to view at their convenience
- Exams conducted on weekends at pre-announced dates at centers across India/online remote proctored
- No limit on number of seats. All those who qualify and become eligible in the selection test can join WEMEM
- International candidates can also join WEMEM but will have to come to IIT Madras Campus for completing the lab course

## Eligibility:

- Completed a BTech/BE in any engineering discipline with a minimum CGPA of 6.0 (out of 10) or 60% &
- Minimum 2 years of work experience



## Selection Process:

**Computer-based proctored in-person written test** on fundamental Mathematics and Physics principles. Applicants would be provided with recorded videos and sample questions to help them prepare for this selection test.



## Registration details:

Registration for selection test is open now  
Last date to apply: May 26th, 2024  
Registration fee: Rs 3000/-  
Date of selection test: July 7, 2024

FOR REGISTRATION

[CLICK HERE](#)



Contact [wemem@code.iitm.ac.in](mailto:wemem@code.iitm.ac.in) for more details



# WEMEM FACULTY



**Prof. C. S. Shankar Ram**  
Dept. of Engineering Design  
IIT Madras and  
Coordinator, WEMEM

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**Mr. B. Balaji**  
Professor of Practice  
Dept. of Engineering Design  
IIT Madras

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**Prof. Deepak Ronanki**  
Dept. of Engineering Design  
IIT Madras

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**Prof. R. Sarathi**  
Dept. of Electrical Engineering  
IIT Madras

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**Dr. Kaushal Jha**  
Adjunct Professor,  
Dept. of Engineering Design  
IIT Madras

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**Prof. Kavitha Arunachalam**  
Dept. of Engineering Design  
IIT Madras

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**Prof. Ganapathy Krishnamurthi**  
Dept. of Engineering Design  
and Wadhvani School of Data  
Science and AI, IIT Madras

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**Mr. T. S. Ravi**  
Industry Expert -  
EV Evaluation and Testing



**Mr. Karthick Athmanathan**  
Professor of Practice, IIT Madras  
Industry Expert in eMobility and  
Advisor, WEMEM

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**Prof. Srikanthan Sridharan**  
Dept. of Engineering Design  
IIT Madras

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**Prof. R. Jayaganthan**  
Dept. of Engineering Design  
IIT Madras

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**Prof. R. Kothandaraman**  
Dept. of Chemistry  
IIT Madras

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**Prof. Nilesh Vasa**  
Dept. of Engineering Design  
IIT Madras

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**Prof. Srikanth Vedantam**  
Dept. of Engineering Design  
IIT Madras

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**Prof. Balaji Srinivasan**  
Dept. of Mechanical Engineering  
and Wadhvani School of  
Data Science and AI, IIT Madras

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# STRUCTURE OF WEMEM

## 3 Terms in a year

Term 1: September- December (Start of fresh batch)

Term 2: January- April

Term 3: May- August

## 2 COURSES/TERM



### PG Diploma

**5 TERMS**

**93 credits**

- 6 core courses (54 credits)
- 3 electives (27 credits)
- Mini Project (12 credits)



### MTech Degree

**7 TERMS**

**190 credits**

- 6 core courses (54 credits)
- 3 electives (27 credits)
- Mini Project (12 credits)
- Lab course (12 credits)
- Main Project (85 credits)





# COURSE CURRICULUM

## Core Courses

- Electric Vehicle Engineering and Development
- Power Electronics and Motor Drives for Electrified Vehicles
- Design and Control of AC Machines for Electrified Vehicles
- Battery Charging Technology
- Energy Storage Devices and Systems
- Electric Vehicle System Dynamics and Control

## Elective Courses

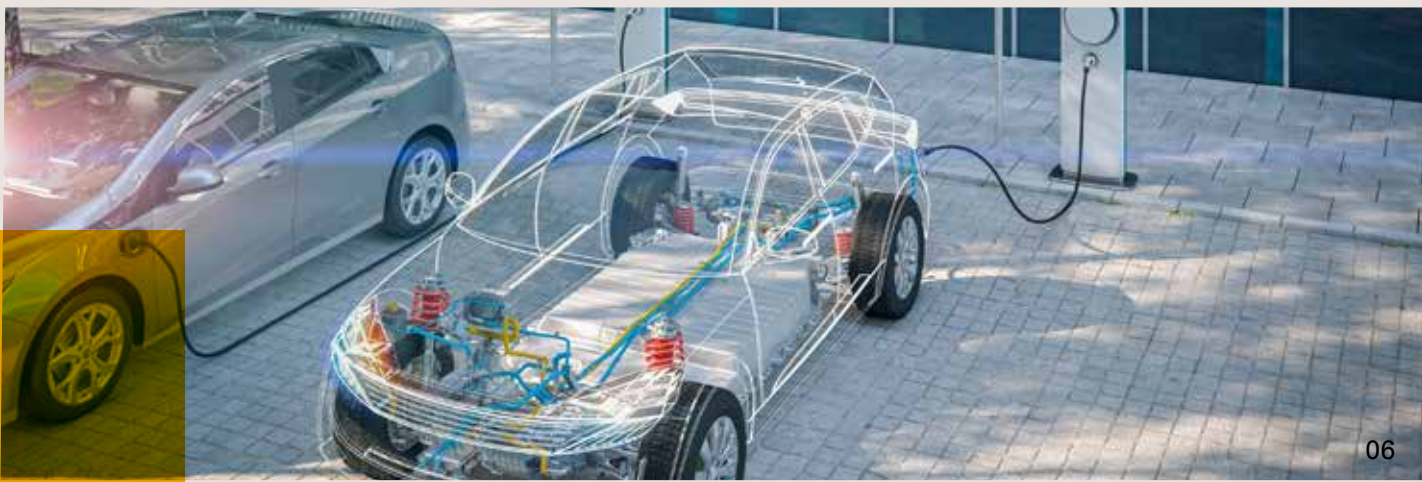
- Electrochemistry: Fundamentals and Applications
- High Voltage Technology
- Mechatronics System Design
- Powertrain and Fuels
- Fundamentals of Thermal Management in Electric Vehicles
- Electromagnetic Compatibility for Automotive Electronics
- Electric Vehicle Evaluation and Testing
- AI Algorithms for E-Mobility Applications

## Lab

E-Mobility Lab

## Project

- Mini Project
- Main Project for WEMEM- with employer / company support





# MODES OF ADMISSION

## PG Diploma

- Any candidate who satisfies the eligibility of the UG degree and work experience can apply to study in the PG Diploma program. No documents are required in this case apart from qualifying in the “Selection test” to enter the program.
- Once they complete the course work and mini project and become eligible for the PG diploma, if they want to proceed with the main project in order to get the MTech degree, they can provide the NOC and Letter of support from the company they work in at this time and if IITM approves, continue with the MTech requirements.

## MTech Degree

- **MoU between IIT Madras and companies**  
A company can nominate their employees for admission to this program by signing a MoU with IIT Madras. As part of the MoU, the company should agree to permit them to carry out their projects in the company and provide senior employees who will be the guides from the company for the projects.
- **No MoU with IIT Madras**  
Candidate should provide:
  - a) No-Objection Certificate (NOC) from their company, and
  - b) letter of support from their company that states that the company will facilitate and support them to carry out their projects within the company and provide senior employees who will guide them from the company.

### Academic Calendar

Important dates for the selection test and first term are:

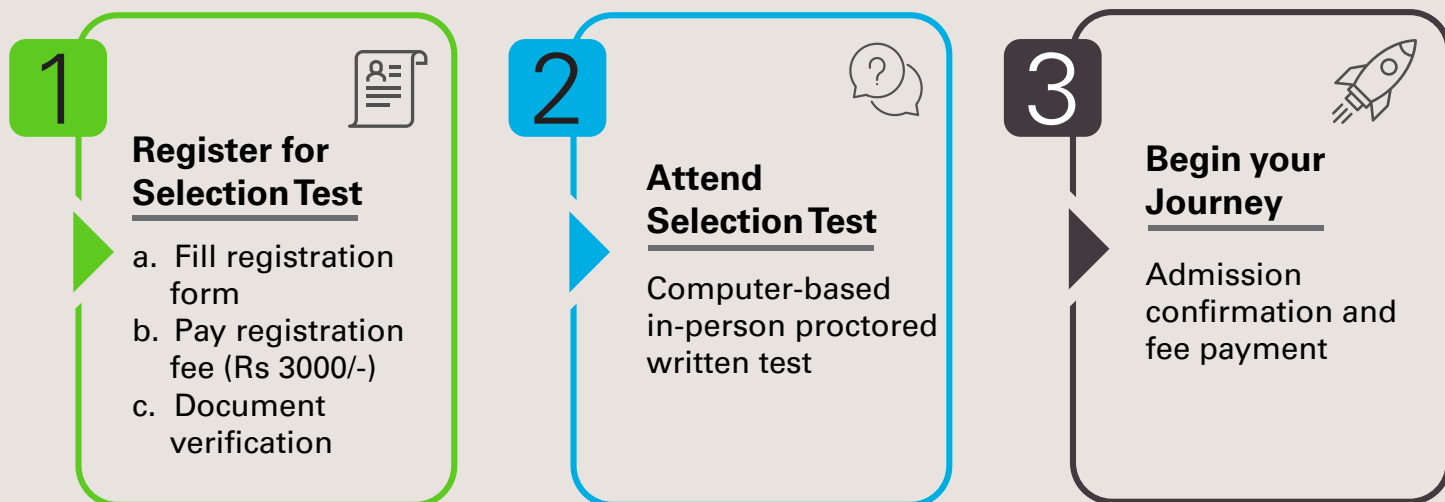
- Last date to receive applications: May 26, 2024
- Date of selection test: July 7, 2024
- Date of release of results and selection list: July 21, 2024
- Date within which to accept and register to the program: August 10, 2024
- Start date of Term 1: September 20, 2024 (Friday)
- Final exam date: December 22, 2024 (Sunday)





# ADMISSION AND FEE STRUCTURE

## How to Enroll



## Fee Structure

Registration Fee for Selection Test ₹ 3000/-

Term 1	₹1,44,000/-
Term 2	₹1,44,000/-
Term 3	₹1,44,000/-
Term 4	₹1,44,000/-
Term 5	₹92,000/-



Total ₹ 6,71,000

PG Diploma

Term 5*	₹96,000/-	E-Mobility Lab
Term 6	₹40,000/-	Project I
Term 7	₹50,000/-	Project II

Total ₹ 8,57,000

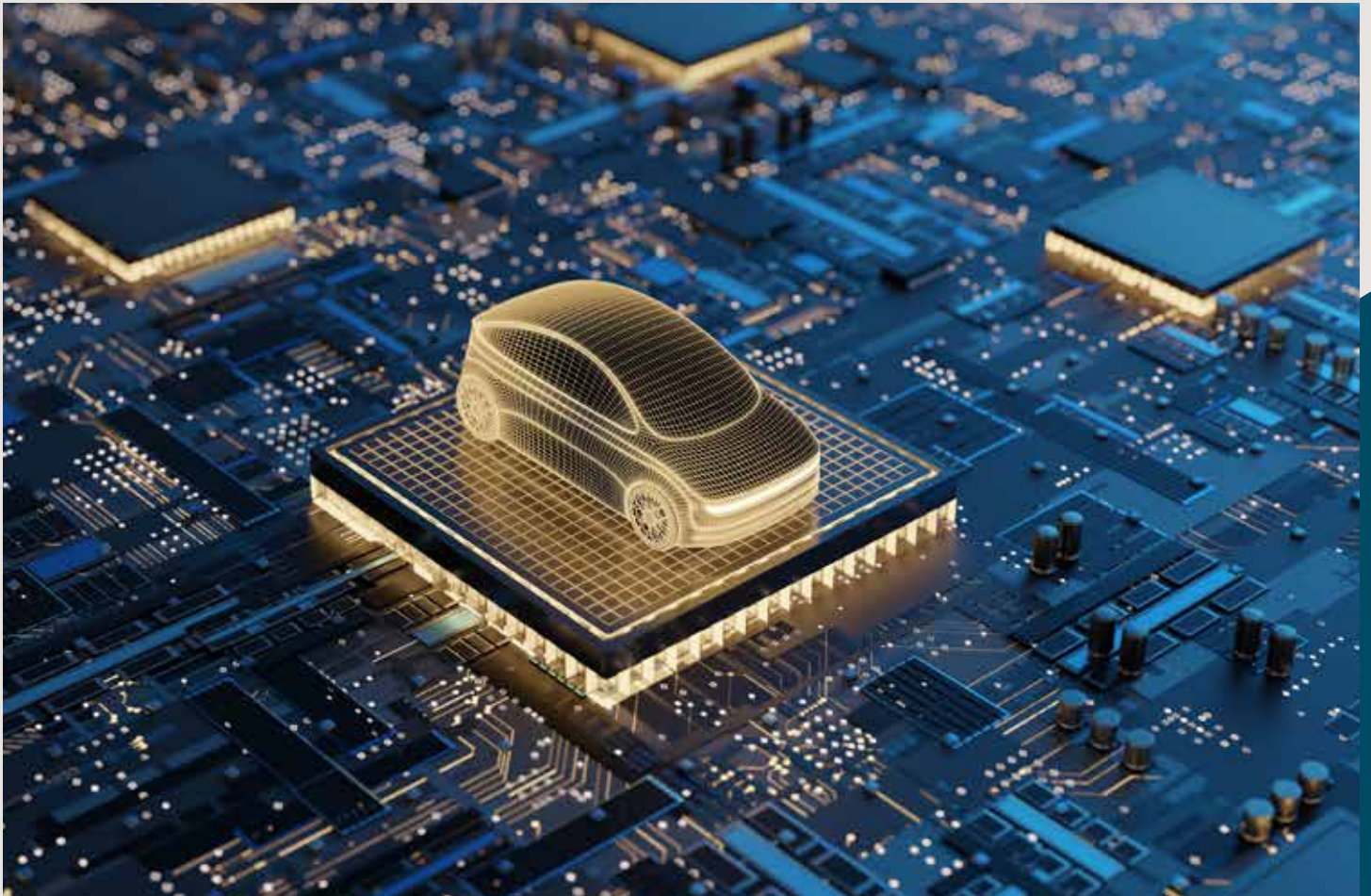
MTech Degree

\*Term 5 fees for MTech candidates - ₹1,88,000/- (₹ 92,000 + ₹ 96,000)





# Indian Institute of Technology Madras



 **Visit us**

[code.iitm.ac.in/emobility](http://code.iitm.ac.in/emobility)

 **Contact us**

[wemem@code.iitm.ac.in](mailto:wemem@code.iitm.ac.in)

