



FACULTY OF  
ENGINEERING AND  
TECHNOLOGY



## *M.Tech e-Mobility*

Division	Faculty of Engineering and Technology
School Name	School of Engineering & Technology
Department Name	Department of Electrical and Electronics Engineering
Program Name	M.Tech e-Mobility

+ + + + + + + + + + + + + + + + **COURSE BASKET** + + + + + + + + + + + + + + + +

| Course Type               | Description  |
|---------------------------|--|
| Programme Core [PC]       | Courses dealing with foundations, depth and breadth of the major in which student is admitted at MIT-WPU       |
| Programme Electives [PE]  | Open electives under the programme allow students to specialise in a particular area connected to their major. |
| University Core [UC]      | Courses that reflect the core MIT-WPU values and the mission of Life Transformation of students.               |
| University Electives [UE] | Multidisciplinary courses across the faculties at MIT-WPU and outside the programme core.                      |

### Semester I

| Semester | Course Type | Course Name / Course Title                                   | Total Credits |
|----------|-------------|--|---------------|
| I        | PC          | Electric and Hybrid Vehicles                                 | 4             |
| I        | PC          | Power Electronics for EV                                     | 4             |
| I        | PC          | Automotive Embedded Systems                                  | 4             |
| I        | PC          | Research Methodology for eMobility                           | 4             |
| I        | PC          | Seminar – I  | 3             |
| I        | UC          | Scientific Studies of Mind, Matter, Spirit and Consciousness | 2             |
| I        | UC          | Yoga   | 1             |
|          |             | <b>Total</b>   | <b>22</b>     |

### Semester II

| Semester | Course Type | Course Name / Course Title              | Total Credits |
|----------|-------------|---|---------------|
| II       | PC          | Drivetrain Control and Vehicle Dynamics | 4             |
| II       | PC          | EV Motor Drives                         | 4             |
| II       | PE          | Program Elective I                      | 4             |
| II       | PE          | Program Elective II                     | 4             |
| II       | PC          | Dissertation Stage – I                  | 10            |
| II       | UC          | Peacebuilding: Global Initiatives       | 2             |
|          |             | <b>Total</b>                            | <b>28</b>     |

### Semester - III

| Semester | Course Type | Course Name / Course Title          | Total Credits |
|----------|-------------|-------------------------------------|---------------|
| III      | PC          | Energy Storage & Battery Technology | 4             |
| III      | PE          | Program Elective III                | 4             |
| III      | PC          | Dissertation Stage – II             | 14            |
|          |             | <b>Total</b>                        | <b>22</b>     |

### SEMESTER - IV

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|----------------------------|---------------|
| IV       | PE          | Program Elective IV - MOOC | 4             |
| IV       | PC          | Internship                 | 4             |
|          |             | <b>Total</b>               | <b>8</b>      |

## Professional Elective Tracks

| Semester | Name of the Course                              | Type                 |
|----------|---|----------------------|
| II       | TR1- Vehicular Networks and Communication       | Program Elective I   |
| II       | TR2- Battery Management Systems                 | Program Elective I   |
| II       | TR1 - Advanced Driver-Assistance Systems (ADAS) | Program Elective II  |
| II       | TR2 -Smart Grid Systems                         | Program Elective II  |
| III      | TR1 – Intelligent Systems and EV Security       | Program Elective III |
| III      | TR2 -Electric Charging Infrastructures          | Program Elective III |
| IV       | Program Elective – IV - MOOC                    | Program Elective IV  |

\*Modifications to the programmes and courses are contingent upon adherence to university guidelines and procedures. Any proposed changes must undergo a thorough review process, including consultation with relevant academic departments, approval from the appropriate administrative bodies, and compliance with accreditation standards.

Additionally, consideration will be given to feedback from students, faculty, and other stakeholders to ensure that modifications align with the overall educational objectives and mission of the university. The implementation of any approved changes will be communicated transparently to the university community, and appropriate measures will be taken to facilitate a smooth transition for all affected parties.