



FACULTY OF  
ENGINEERING AND  
TECHNOLOGY



## ***M.Tech Artificial Intelligence and Machine Learning***

|                 |  |
|-----------------|--|
| Division        | Faculty of Engineering and Technology                |
| School Name     | School of Engineering and Technology                 |
| Department Name | Department of Electrical and Electronics Engineering |
| Programme Name  | M.Tech Artificial Intelligence and Machine Learning  |

| Semester    | Odd (I) | Even (II) | Total Credits |
|-------------|---------|-----------|---------------|
| First Year  | 23      | 21        | 44            |
| Second Year | 20      | 20        | 40            |

### COURSE BASKET

| Course Type              | Description  |
|--------------------------|--|
| Programme Major [PM]     | Courses dealing with foundations, depth and breadth of the major in which a 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. |
| Program Research [PR]    | Includes credits from internship, thesis, seminar, mini project, and research.                                 |
| University Core [UC]     | Courses that reflect the core MIT-WPU values and the mission of Life Transformation of students.               |

### Semester I

| Semester | Course Type | Course Name / Course Title                                   | Total Credits |
|----------|-------------|--|---------------|
| I        | PM          | Mathematics for AI   | 4             |
| I        | PM          | Artificial Intelligence                                      | 4             |
| I        | PM          | Advanced Machine Learning                                    | 4             |
| I        | PM          | Deep Learning Networks                                       | 4             |
| I        | PM          | Research Methodology   | 4             |
| I        | UC          | Scientific Studies of Mind, Matter, Spirit and Consciousness | 2             |
| I        | UC          | Yoga   | 1             |
|          |             | <b>Total Credits:</b>  | <b>23</b>     |

### Semester II

| Semester | Course Type | Course Name / Course Title           | Total Credits |
|----------|-------------|--------------------------------------|---------------|
| II       | PM          | Large Language Models and Agentic AI | 4             |
| II       | PM          | Big Data Analytics                   | 4             |
| II       | PM          | Full Stack Development               | 3             |
| II       | PR          | Seminar                              | 2             |
| II       | PM          | Advanced Certificate Course in AI ML | 2             |
| II       | PE          | Program Elective - I                 | 4             |
| II       | UC          | Peace Building: Global Initiatives   | 2             |
|          |             | <b>Total Credits:</b>                | <b>21</b>     |

### Semester - III

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|----------------------------|---------------|
| III      | PM          | Graph Neural Network       | 4             |
| III      | PE          | Program Elective - II      | 4             |
| III      | PE          | Program Elective - III     | 4             |
| III      | PR          | Research Project - I       | 8             |
|          |             | <b>Total Credits:</b>      | <b>20</b>     |

### SEMESTER - IV

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|----------------------------|---------------|
| IV       | PR          | Internship                 | 8             |
| IV       | PR          | Research Project - II      | 12            |
|          |             | <b>Total Credits:</b>      | <b>20</b>     |

### Program Electives

| Semester | Course Type | Course Name / Course Title               | Total Credits |
|----------|-------------|--|---------------|
| II       | PE - I      | Deep Reinforcement Learning              | 4             |
| II       | PE - I      | Computer Vision                          | 4             |
| II       | PE - I      | Multimodal Information Retrieval         | 4             |
| II       | PE - II     | Machine Learning for Applied Electronics | 4             |
| II       | PE - II     | AI for Robotics                          | 4             |
| II       | PE - II     | AI and ML Techniques for Cybersecurity   | 4             |
| III      | PE-III      | Cloud Storage and Edge Computing         | 4             |
| III      | PE-III      | Augmented Reality and Virtual Reality    | 4             |
| III      | PE-III      | Mobile Forensics                         | 4             |

\*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.