# FACULTY OF ENGINEERING AND TECHNOLOGY

**MIT-WPU**

MIT WORLD PEACE UNIVERSITY

SHRI SAINT JNANESHWARA WORLD PEACE LIBRARY

**2024 - 25**

# M.Tech (Data Science and Analytics)

## Programme Structure

| Division | Faculty of Engineering and Technology |
|---|---|
| School Name | School of Computer Science & Engineering |
| Department Name | Department of Computer Engineering and Technology |
| Programme Name | Data Science and Analytics |

## Course Basket

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

| Semester | Course Type | Course Name / Course Title | Total Credits |
|---|---|---|---|
| I | PM | Research Methodology | 4 |
| I | PM | Computational Statistics for Data Science | 4 |
| I | PM | Advances in Machine Learning | 4 |
| I | PM | Advances in AI | 4 |
| I | PM | Deep Generative Models | 4 |
| I | UC | Scientific Studies of Mind, Matter, Spirit and Consciousness | 2 |
| I | UC | Yoga | 1 |
| | | Total | 23 |

| Semester | Course Type | Course Name / Course Title | Total Credits |
|---|---|---|---|
| II | PM | Natural Language Processing | 4 |
| II | PM | Data Analytics for Data Science | 4 |
| II | PE | Programme Elective I<br>Soft Computing Techniques<br>Reinforcement Learning | 4 |
| II | PM | Software Lab I Data Science and Analytics | 2 |
| II | PR | Seminar | 2 |
| II | UC | Peacebuilding: Global Initiatives | 2 |
|  |  | Total | 18 |

| Semester | Course Type | Course Name / Course Title | Total Credits |
|---|---|---|---|
| III | PM | Image and Video Analytics | 4 |
| III | PE | Programme Elective II<br>1. Data Privacy for Data Science<br>2. Cloud and Blockchain for data Analytics | 4 |
| III | PE | Programme Elective III<br>1. Healthcare Data Analytics<br>2. Social Media Analytics | 4 |
| III | PM | Software Lab II Data Science and Analytics | 1 |
| III | PR | Research Project I | 8 |
|  |  | Total | 21 |

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|----------------------------|---------------|
| IV | PE | Programme Elective IV<br>1. Business Data Analytics and Applications<br>2. Quantum Computing and Machine Learning | 4 |
| IV | PR | Internship | 4 |
| IV | PR | Research Project II | 12 |
| | | Total | 20 |

*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.