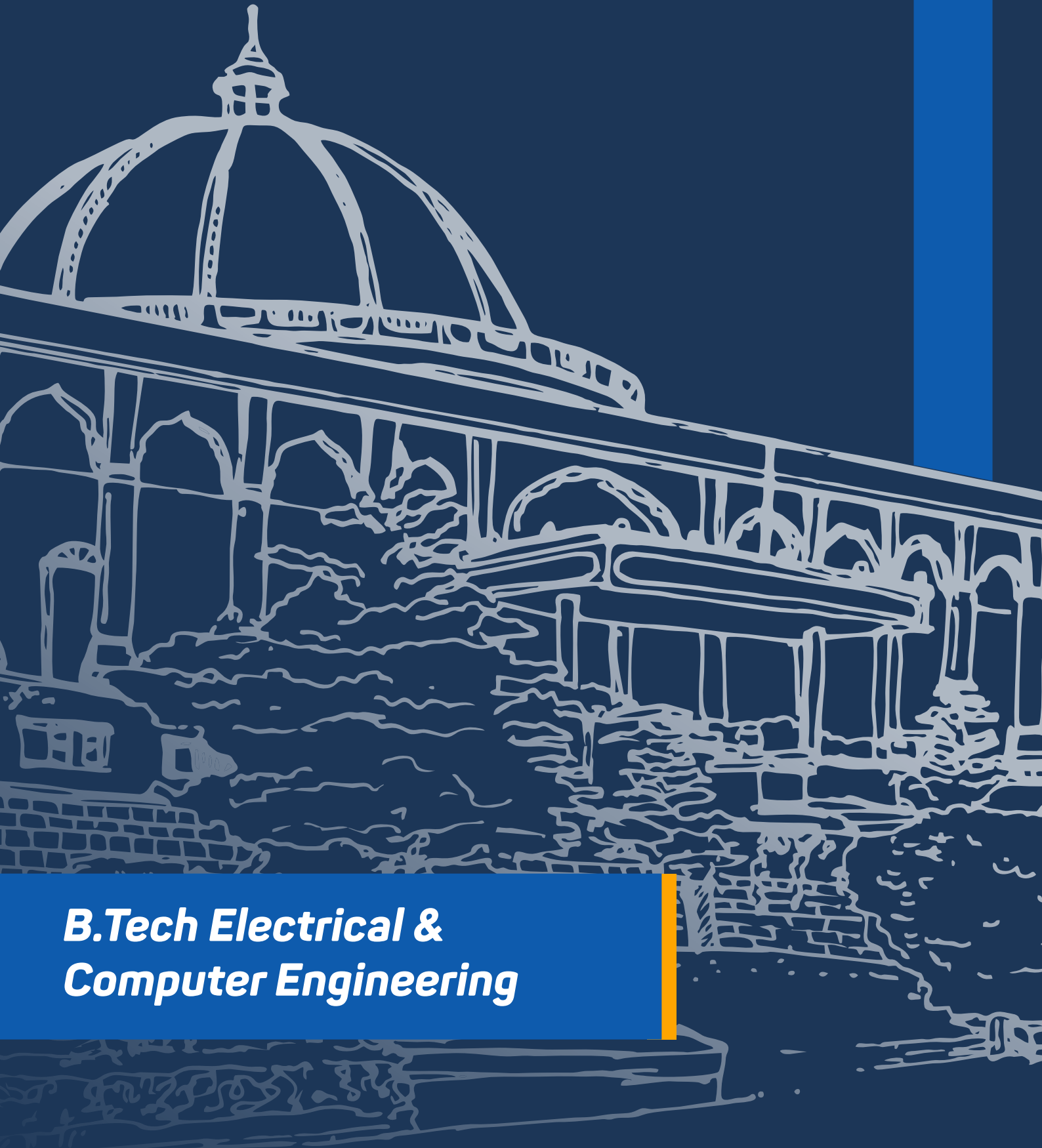




B.Tech Electrical & Computer Engineering

Division	Faculty of Engineering and Technology
School Name	School of Computer Science & Engineering
Department Name	Department of Electrical and Electronics Engineering
Programme Name	B.Tech. Electrical and Computer Engineering

Semester	Odd (I)	Even (II)	Total Credits
First Year	22	22	44
Second Year	22	22	44
Third Year	22	22	44
Fourth Year	16	17	33

+ + + + + + + + + + + + + + + **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 specialise in a particular area connected to their major. |
| University Core | Courses that reflect the core MIT-WPU 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 I

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|--|--|---------------|
| I | UC | Indian Constitution | 1 |
| I | UC | Environment and Sustainability | 1 |
| I | UC | Yoga - I | 1 |
| I | UC | Social Leadership Development Program | 1 |
| I | UC | Financial Literacy | 1 |
| I | PF | Linear Algebra and Differential Calculus | 3 |
| I | PF | Engineering Physics | 3 |
| I | PF | Basics of Electrical Engineering | 4 |
| I | PF | Engineering Mechanics | 3 |
| I | PF | Programming and Problem Solving | 3 |
| I | Program Capstone Project/Seminar and Internships | Python Programming | 1 |
| | | Total Credits: | 22 |

Semester II

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|-----------------------------------|---------------|
| II | UC | Yoga - II | 1 |
| II | UC | Co-creation | 1 |
| II | UC | AI for everyone | 2 |
| II | UC | Foundation of Peace | 2 |
| II | UC | Indian Knowledge System (General) | 2 |
| II | UC | Sports | 1 |
| II | PF | Integral Calculus | 3 |
| II | PF | Basics of Electronics Engineering | 3 |
| II | PF | Digital Electronics | 4 |
| II | PF | Engineering Chemistry | 3 |
| | | Total Credits: | 22 |

Semester - III

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|--|---------------|
| III | UC | Spiritual and Cultural heritage: Indian Experience | 2 |
| III | UC | Research Innovation Design Entrepreneurship (RIDE) | 1 |
| III | UE | University Electives - I | 3 |
| III | PF | Calculus and Numerical Methods | 3 |
| III | PF | Data Structures and Algorithms | 3 |
| III | PM | Electrical Machines | 3 |
| III | PM | Power Systems and Protection | 4 |
| III | PF | Renewable Energy Systems | 3 |
| | | Total Credits: | 22 |

SEMESTER - IV

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|--|--|---------------|
| IV | UC | Rural Immersion | 1 |
| IV | University Core | Life Transformation Skills | 1 |
| IV | University Electives | University Electives - II | 3 |
| IV | Program Foundation | Discrete Mathematics and Basic Statistics | 3 |
| IV | Program Major | Advanced Electrical Machines | 4 |
| IV | Program Major | Analog Circuits and Applications | 3 |
| IV | Program Major | Computer Organizations and Operating Systems | 3 |
| IV | Program Major | Control Systems | 3 |
| IV | Program Capstone Project/
Seminar and Internships | Object Oriented Programming | 1 |
| | | Total Credits: | 22 |

Semester - V

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|---|---------------|
| V | UC | Managing Conflicts Peacefully: Tools and Techniques | 2 |
| V | UE | University Electives - III | 3 |
| V | PE | Program Elective - I | 4 |
| V | PM | Communication Networks | 3 |
| V | PM | Power Electronics | 4 |
| V | PM | Database Management Systems | 2 |
| V | PM | Microcontrollers and Applications | 3 |
| V | PM | Data Science | 1 |
| | | Total Credits: | 22 |

Semester - VI

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|--|--|---------------|
| VI | UC | National Academic Immersion Program | 2 |
| VI | PE | Program Elective - II | 4 |
| VI | PM | Robotics and Automation | 3 |
| VI | PM | Electric Vehicle Technology | 4 |
| VI | PM | Artificial Intelligence and Machine Learning | 4 |
| VI | PM | Smart Grid Systems | 4 |
| VI | Program Capstone Project/Seminar and Internships | Power Quality and Smart Metering | 1 |
| | | Total Credits: | 22 |

Semester - VII

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|--|----------------------------|---------------|
| VII | PE | Program Elective - III | 4 |
| VII | Program Capstone Project/Seminar and Internships | Capstone Project | 12 |
| | | Total | 16 |

Semester - VIII

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|--|----------------------------|---------------|
| VIII | Program Electives | Program Elective - IV | 4 |
| VIII | Program Capstone Project/Seminar and Internships | Internship | 13 |
| | | Total | 17 |

Program Electives

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|---------------------------------|---------------|
| V | PE - I | PLC and SCADA | 4 |
| V | PE - I | Java Programming | 4 |
| V | PE - I | Smart Grid Systems | 4 |
| V | PE - I | Optimization Techniques | 4 |
| VI | PE - II | IoT Architectures and Protocols | 4 |
| VI | PE - II | Cloud Computing | 4 |
| VI | PE - II | Battery Management Systems | 4 |
| VI | PE - II | Deep Neural Networks | 4 |
| VII | PE - III | Embedded System Design and RTOS | 4 |
| VII | PE - III | Cyber Security | 4 |
| VII | PE - III | Energy Storage Systems | 4 |
| VII | PE - III | Edge Intelligence | 4 |
| VIII | PE - IV | Autonomous Drones | 4 |
| VIII | PE - IV | Full Stack Development | 4 |
| VII | PE - IV | Intelligent Transport Systems | 4 |
| VIII | PE - IV | Natural Language Processing | 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.