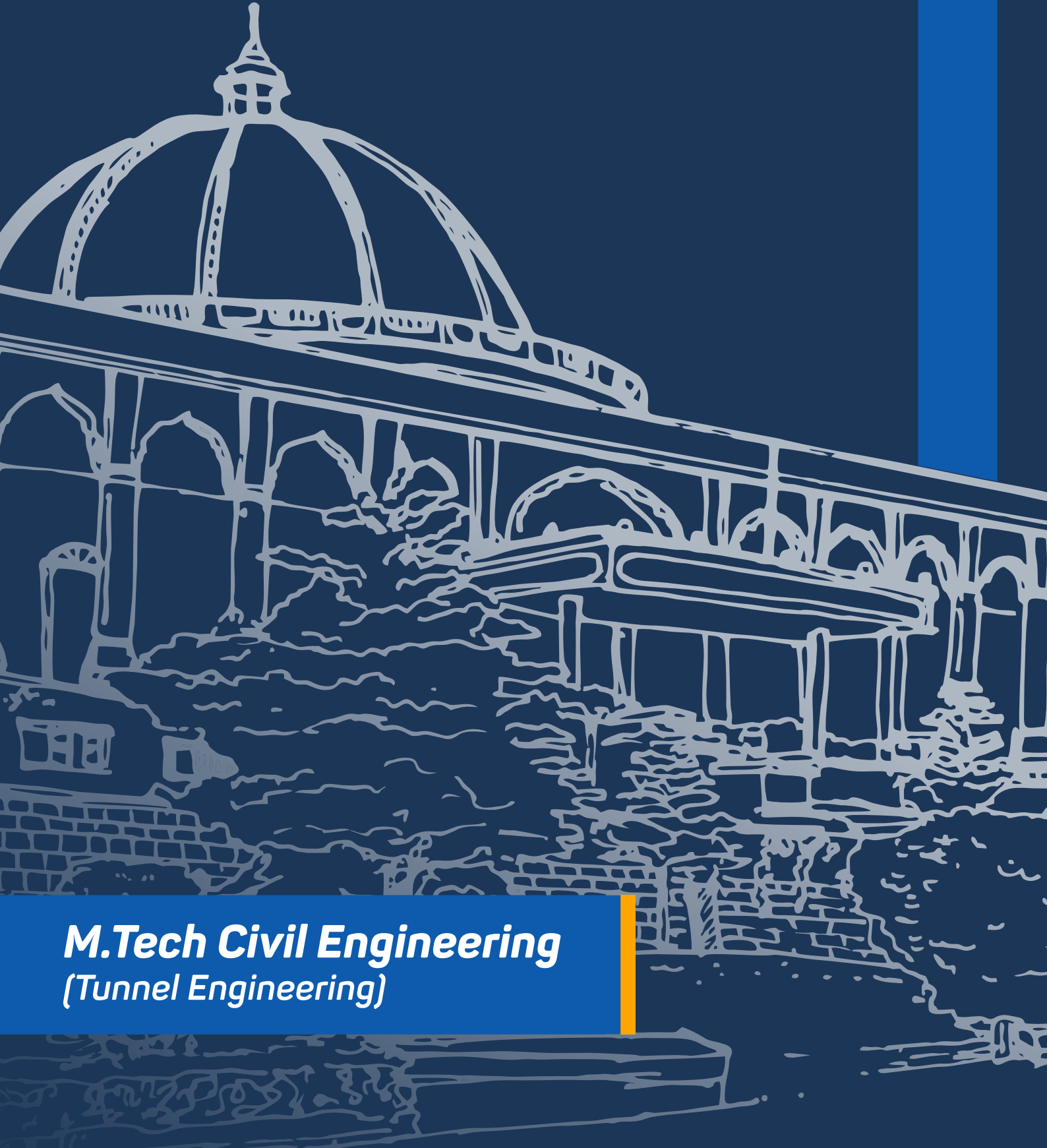




FACULTY OF
ENGINEERING AND
TECHNOLOGY



M.Tech Civil Engineering (Tunnel Engineering)

Division	Faculty of Engineering and Technology
School Name	School of Engineering & Technology
Department Name	Department of Civil Engineering
Program Name	M.Tech Civil Engineering (Tunnel Engineering)

+ + + + + + + + + + + + + + + **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 | Advanced Geology and Rock Mechanics | 4 |
| I | PC | Investigation, Planning and Layout of Tunnels | 4 |
| I | PC | Conventional Tunnel Construction | 4 |
| I | PC | Analysis and Design of Tunnels | 4 |
| I | PC | Research Methodology for Civil Engineers | 4 |
| I | UC | Scientific Studies of Mind, Matter, Spirit, and Consciousness | 2 |
| I | UC | Yoga | 1 |
| | | Total | 23 |

Semester II

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|---|---------------|
| II | PC | Mechanised Tunnelling | 4 |
| II | PC | Instrumentation and Monitoring of Tunnels | 4 |
| II | PC | Software Lab Tunnel | 2 |
| II | PC | Seminar | 2 |
| II | PE | Program Elective - I | 4 |
| II | UC | Peace Building: Global Initiatives | 2 |
| | | | 18 |

Semester - III

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|----------------------------|---------------|
| III | PC | Advance Design of Tunnel | 4 |
| III | PC | Software Lab II Tunnel | 1 |
| III | PC | Research Project I | 8 |
| III | PE | Program Elective-II | 4 |
| III | PE | Program Elective-III | 4 |
| | | | 21 |

SEMESTER - IV

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|----------------------------|---------------|
| IV | PC | Internship | 4 |
| IV | PC | Research Project II | 12 |
| IV | PE | Program Elective – IV | 4 |
| | | | 20 |

Professional Elective Tracks

| Semester | Name of the Course | Type |
|----------|--|----------------------|
| II | Slope Stabilization Techniques | Program Elective I |
| II | Ventilation in Tunnel and Underground Space | Program Elective I |
| II | Project Finance and Accounting Systems | Program Elective I |
| III | Tunnel Portals & Shafts | Program Elective II |
| III | Trenchless methods and Micro-tunneling | Program Elective II |
| III | Estimation Costing and Tendering in Tunneling | Program Elective II |
| III | Tunnel Project Management | Program Elective III |
| III | Geophysics for Tunnel Engineers | Program Elective III |
| III | Design and Construction of Caverns | Program Elective III |
| IV | Tunnel Safety and hazard analysis | Program Elective IV |
| IV | BIM for Tunnels and Underground Infrastructures | Program Elective IV |
| IV | Contracts, Legal aspects in tunnels and underground construction | Program Elective IV |
| IV | Geophysical Investigation for Tunnel Projects | 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.