



FACULTY OF  
ENGINEERING AND  
TECHNOLOGY



***B.Tech after 10<sup>th</sup> (3 years Diploma + 3 years Degree) in Civil Engineering - Smart Infrastructure & Construction***

Division	Faculty of Engineering and Technology
School Name	School of Engineering & Technology
Department Name	Department of Polytechnic
Program Name	B.Tech. After 10th (3 years Diploma + 3 years Degree) in Civil Engineering - Smart Infrastructure & Construction

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

| Course Type                                          | Description                                                                                                                   | % Credit Allotment | Credits Assigned |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------|
| Discipline Specific Core (DSC)                       | These courses are mandatory and provide the foundational knowledge within a student's chosen discipline at MIT-WPU            | 53                 | 67               |
| Discipline Specific Elective (DSE)                   | DSEs offer a pool of courses within a student's discipline, allowing them to specialize or explore related areas of interest. | 5                  | 06               |
| Ability Enhancement Course (AEC)                     | AECs focus on enhancing language skills, communication, and other soft skills.                                                | 11                 | 14               |
| Skill Enhancement Course (SEC)                       | SECs provide hands-on training and practical skills to enhance employability and other practical applications of knowledge.   | 10                 | 12               |
| Value Education Course (VEC)                         | These courses aim to develop values, ethics, and societal awareness beyond the specific academic discipline.                  | 4                  | 05               |
| Internship/ Apprenticeship/ Project/ Community (INP) | INP courses provide practical experience through internships, apprenticeships, research projects, or community engagement.    | 14                 | 18               |
| University Core (UC)                                 | Courses that reflect the core MIT-WPU values and the mission of Life Transformation of students.                              | 3                  | 04               |
| <b>Total</b>                                         |                                                                                                                               | <b>100</b>         | <b>100</b>       |

### Semester I

| Semester | Course Type | Course Name / Course Title                   | Total Credits |
|----------|-------------|----------------------------------------------|---------------|
| I        | AEC         | Basic Mathematics                            | 4             |
| I        | DSC         | Basic Physics                                | 3             |
| I        | DSC         | Basic Chemistry                              | 2             |
| I        | SEC         | Essentials of Computers                      | 2             |
| I        | AEC         | Communicative Competence                     | 3             |
| I        | VEC         | YOGA AND MEDITATION                          | 1             |
| I        | DSC         | Engineering Graphics (Comp,Civil n ECS)      | 3             |
| I        | SEC         | Civil Engineering Workshop                   | 2             |
|          |             | <b>Total</b>                                 | <b>20</b>     |
| I        | UC          | Social Leadership Development Program [SLDP] | 1             |

### Semester II

| Semester | Course Type | Course Name / Course Title                 | Total Credits |
|----------|-------------|--------------------------------------------|---------------|
| II       | AEC         | Applied Mathematics                        | 2             |
| II       | DSC         | Applied Physics                            | 2             |
| II       | DSC         | Applied Chemistry                          | 2             |
| II       | DSC         | Engineering Mechanics                      | 3             |
| II       | DSC         | Building Material And Construction         | 4             |
| II       | SEC         | Surveying                                  | 4             |
| II       | VEC         | Social and Life Skills                     | 1             |
| II       | VEC         | Environmental Education and Sustainability | 2             |
|          |             | <b>Total</b>                               | <b>20</b>     |
| II       | UC          | Sports                                     | 1             |

### First Year Exit

| Semester | Course Type | Course Name / Course Title | Total Credits |
|----------|-------------|----------------------------|---------------|
| I        | AEC         | Surveying                  | 4             |
| I        | INP         | Exit Internship            | 4             |
|          |             | <b>Total Credits</b>       | <b>8</b>      |

### Semester - III

| Semester | Course Type | Course Name / Course Title             | Total Credits |
|----------|-------------|----------------------------------------|---------------|
| III      | DSC         | Mechanics of Structure                 | 3             |
| III      | AEC         | Advanced Surveying                     | 4             |
| III      | DSC         | Concrete Technology                    | 3             |
| III      | DSC         | Highway Engineering                    | 3             |
| III      | AEC         | Building Planning & Drawing With Cad   | 3             |
| III      | VEC         | Essence of Indian Constitution         | 1             |
| III      | DSC         | Geotechnical Engineering               | 3             |
|          |             | <b>Total Credits:</b>                  | <b>20</b>     |
| III      | AEC         | Linear Algebra & Differential Calculus | 1             |

### SEMESTER - IV

| Semester | Course Type | Course Name / Course Title                     | Total Credits |
|----------|-------------|------------------------------------------------|---------------|
| IV       | DSC         | Water And Wastewater Engineering               | 4             |
| IV       | DSC         | Hydraulics                                     | 4             |
| IV       | DSC         | Estimating, Costing And Valuation              | 4             |
| IV       | DSC         | Theory of Structures                           | 3             |
| IV       | DSC         | Construction Management with Microsoft Project | 2             |
| IV       | DSE         | Energy Conservation & Green Building           | 3             |
| IV       |             | Road Traffic Engineering                       |               |
| IV       |             | Building Services                              |               |
|          |             | <b>Total Credits</b>                           | <b>20</b>     |
| IV       | AEC         | Integral Calculus                              | 1             |
| IV       | UC          | Co-Creation                                    | 1             |
| IV       | UC          | Foundation of Peace                            | 1             |

### Second Year Exit

| Semester | Course Type | Course Title / Course Name [Any one] | Credits  |
|----------|-------------|--------------------------------------|----------|
| IV       | INP         | Exit Internship 2                    | 4        |
| IV       | SEC         | Second Year Exit Course [Online]     | 4        |
|          |             | <b>Total Credits</b>                 | <b>4</b> |

### Semester - V

| Semester | Course Type | Course Name / Course Title                                | Total Credits |
|----------|-------------|-----------------------------------------------------------|---------------|
| V        | INP         | Project                                                   | 2             |
| V        | DSC         | Maintenance and Repairs of Structures                     | 3             |
| V        | DSC         | Irrigation Engineering                                    | 3             |
| V        | DSC         | Contracts and Account                                     | 3             |
| V        | DSC         | Design of Steel and Reinforced Cement Concrete Structures | 4             |
| V        | DSC         | Railway, Bridge and Tunnel Engineering                    | 2             |
| V        | DSE         | Precast and Prestressed Concrete                          | 3             |
| V        |             | Solid Waste Management                                    |               |
| V        |             | Earthquake Resistant Building                             |               |
|          |             | <b>Total Credits</b>                                      | <b>20</b>     |

### Semester - VI

| Semester | Course Type | Course Name / Course Title                    | Total Credits |
|----------|-------------|-----------------------------------------------|---------------|
| VI       | INP         | Internship                                    | 15            |
| VI       | INP         | Project Seminar                               | 1             |
| VI       | AEC         | Management                                    | 2             |
| VI       | AEC         | Entrepreneurship Development                  | 1             |
| VI       | DSC         | Emerging trends in civil engineering (online) | 1             |
|          |             | <b>Total</b>                                  | <b>20</b>     |

\*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.