

**2-year M.Tech course curriculum**  
**Geotechnical Engineering, Department of Civil Engineering**  
**Curriculum: August 2021 onwards**

**Course Curriculum**

**Semester 1**

| Sr. No.              | Course Name             | Code    | Credit    | Course type         |
|----------------------|-------------------------|---------|-----------|---------------------|
| 1                    | Advanced Soil Mechanics | CE50310 | 3         | Department core     |
| 2                    | Soil Dynamics           | CE50330 | 3         | Department core     |
| 3                    | Elective I              | XXXX    | 3         | Department elective |
| 4                    | Elective II             | XXXX    | 3         | Department elective |
| 5                    | English Communication   | XXXX    | 1         | Soft skills         |
| <b>Total credits</b> |                         |         | <b>13</b> |                     |

**Semester 2**

| Sr. No.              | Course Name                     | Code    | Credit    | Course type         |
|----------------------|---------------------------------|---------|-----------|---------------------|
| 1                    | Advanced Foundation Engineering | CE50300 | 3         | Department core     |
| 2                    | Ground Modification Techniques  | CE50340 | 3         | Department core     |
| 3                    | Elective III                    | XXXX    | 3         | Department elective |
| 4                    | Elective IV                     | XXXX    | 3         | Department elective |
| 5                    | Industrial Seminar              |         | 1         | Life skills         |
| <b>Total credits</b> |                                 |         | <b>13</b> |                     |

**Semester 3**

| Sr. No. | Course Name     | Code    | Credit | Course type |
|---------|-----------------|---------|--------|-------------|
| 1       | Master's Thesis | CE60015 | 12     | Thesis      |

**Semester 4**

| Sr. No. | Course Name     | Code    | Credit | Course type |
|---------|-----------------|---------|--------|-------------|
| 1       | Master's Thesis | CE60025 | 12     | Thesis      |

**All Electives**

| Course Name                         | Code    | Credit |
|-------------------------------------|---------|--------|
| Introduction to Railway Engineering | CE50320 | 1      |
| Design of Earth Structures          | CE50352 | 3      |
| Design studio                       | CE60302 | 3      |
| Experimental Soil Mechanics         | CE60323 | 3      |
| Railway Geotechnics                 | CE60350 | 3      |
| Geotechnical Earthquake Engineering | CE60360 | 3      |
| Soil Structure Interaction          | CE60370 | 3      |
| P60392avement Geotechnics           | CE60390 | 3      |
| Designing with Geosynthetics        | CE60392 | 3      |
| In-situ Testing                     | CE60410 | 3      |

|                                     |         |   |
|-------------------------------------|---------|---|
| Finite Element Analysis             |         | 3 |
| Computational Methods for Engineers | CH50050 | 2 |
| Mathematical Methods for Engineers  | ME50010 | 3 |