

**Mahatma Gandhi University Revised Scheme For  
B Tech Syllabus Revision 2010 (Civil Engineering)**

**Common for All Branches  
SCHEME S1S2**

| Code             | Subject   | Hours/week |           |          | Marks    |         | End-sem duration-hours | Credits   |
|------------------|---|------------|-----------|----------|----------|---------|------------------------|-----------|
|                  |   | L          | T         | P/D      | Internal | End-sem |                        |           |
| EN010 101        | Engineering Mathematics I                               | 2          | 1         | -        | 50       | 100     | 3                      | 5         |
| EN010 102        | Engineering Physics                                     | 1          | 1         | -        | 50       | 100     | 3                      | 4         |
| EN010 103        | Engineering, Chemistry & Environmental Studies          | 1          | 1         | -        | 50       | 100     | 3                      | 4         |
| EN010 104        | Engineering Mechanics                                   | 3          | 1         | -        | 50       | 100     | 3                      | 6         |
| EN010 105        | Engineering Graphics                                    | 1          | 3         | -        | 50       | 100     | 3                      | 6         |
| EN010 106        | Basic Civil Engineering                                 | 1          | 1         | -        | 50       | 100     | 3                      | 4         |
| EN010 107        | Basic Mechanical Engineering                            | 1          | 1         | -        | 50       | 100     | 3                      | 4         |
| EN010 108        | Basic Electrical Engineering                            | 1          | 1         | -        | 50       | 100     | 3                      | 4         |
| EN010 109        | Basic Electronics Engineering. & Information Technology | 2          | 1         | -        | 50       | 100     | 3                      | 5         |
| <i>EN010 110</i> | <i>Mechanical Workshop</i>                              | -          | -         | 3        | 50       | -       | 3                      | 1         |
| <i>EN110 111</i> | <i>Electrical and Civil Workshops</i>                   | -          | -         | 3        | 100      | -       | 3                      | 1         |
|                  | <b>Total</b>  | <b>13</b>  | <b>11</b> | <b>6</b> |          |         | <b>30</b>              | <b>44</b> |

**3<sup>rd</sup> Semester**

| Code      | Subject                            | Hours/week |          |          | Marks    |         | End-sem duration-hours | Credits    |
|-----------|------------------------------------|------------|----------|----------|----------|---------|------------------------|------------|
|           |                                    | L          | T        | P/D      | Internal | End-sem |                        |            |
| EN010 301 | Engineering Mathematics II         | 2          | 2        | -        | 50       | 100     | 3                      | 4          |
| EN010 302 | Economics and Communication Skills | 2          | 2        | -        | 50       | 100     | 3                      | 4<br>(3+1) |
| CE010 303 | Fluid Mechanics                    | 2          | 2        | -        | 50       | 100     | 3                      | 4          |
| CE010 304 | Mechanics of Solids I              | 3          | 1        | -        | 50       | 100     | 3                      | 4          |
| CE010 305 | Surveying I                        | 3          | 1        | -        | 50       | 100     | 3                      | 4          |
| CE010 306 | Engineering Geology                | 3          | 1        |          | 50       | 100     | 3                      | 4          |
| CE010 307 | <i>Material Testing Lab I</i>      | -          | -        | 3        | 50       | 100     | 3                      | 2          |
| CE010 308 | <i>Surveying Practical I</i>       | -          | -        | 3        | 50       | 100     | 3                      | 2          |
|           | <b>Total</b>                       | <b>15</b>  | <b>9</b> | <b>6</b> |          |         |                        | <b>28</b>  |

### 4<sup>th</sup> Semester

| Code          | Subject                                  | Hours/week |          |          | Marks    |         | End-sem duration-hours | Credits   |
|---------------|--|------------|----------|----------|----------|---------|------------------------|-----------|
|               |  | L          | T        | P/D      | Internal | End-sem |                        |           |
| EN010 401     | Engineering Mathematics III              | 2          | 2        | -        | 50       | 100     | 3                      | 4         |
| CE010 402     | Construction Engineering and Management  | 3          | 1        | -        | 50       | 100     | 3                      | 4         |
| CE010 403     | Mechanics of Solids II                   | 2          | 2        | -        | 50       | 100     | 3                      | 4         |
| CE010 404     | Open Channel Flow and Hydraulic Machines | 3          | 1        | -        | 50       | 100     | 3                      | 4         |
| CE010 405     | Surveying II                             | 3          | 1        | -        | 50       | 100     | 3                      | 4         |
| CE010 406     | Civil Engineering Drawing                |            |          | 4        | 50       | 100     | 3                      | 4         |
| CE010 407     | <i>Surveying Practical II</i>            | -          | -        | 3        | 50       | 100     | 3                      | 2         |
| CE010 408(ME) | <i>Hydraulics Lab</i>                    | -          | -        | 3        | 50       | 100     | 3                      | 2         |
|               | <b>Total</b>                             | <b>16</b>  | <b>8</b> | <b>6</b> |          |         |                        | <b>28</b> |

### 5<sup>th</sup> Semester

| Code       | Subject                             | Hours/week |          |          | Marks    |         | End-sem duration-hours | Credits   |
|------------|-------------------------------------|------------|----------|----------|----------|---------|------------------------|-----------|
|            |                                     | L          | T        | P/D      | Internal | End-sem |                        |           |
| EN010 501A | Engineering Mathematics IV          | 2          | 2        | -        | 50       | 100     | 3                      | 4         |
| CE010 502  | Computer Programming                | 3          | 1        |          | 50       | 100     | 3                      | 4         |
| CE010 503  | Design of Concrete Structures I     | 2          | 2        | -        | 50       | 100     | 3                      | 4         |
| CE010 504  | Geotechnical Engineering I          | 3          | 1        | -        | 50       | 100     | 3                      | 4         |
| CE010 505  | Quantity Surveying and Valuation    | 3          | 1        | -        | 50       | 100     | 3                      | 4         |
| CE010 506  | Structural Analysis I               | 3          | 1        | -        | 50       | 100     | 3                      | 4         |
| CE010 507  | <i>Computing Techniques Lab</i>     | -          | -        | 3        | 50       | 100     | 3                      | 2         |
| CE010 508  | <i>Geotechnical Engineering Lab</i> | -          | -        | 3        | 50       | 100     | 3                      | 2         |
|            | <b>Total</b>                        | <b>16</b>  | <b>8</b> | <b>6</b> |          |         |                        | <b>28</b> |

## 6<sup>th</sup> Semester

| Code         | Subject                                | Hours/week |          |          | Marks    |         | End-sem duration -hours | Credits   |
|--------------|--|------------|----------|----------|----------|---------|-------------------------|-----------|
|              |  | L          | T        | P/D      | Internal | End-sem |                         |           |
| CE010 601    | Design of Steel Structures             | 2          | 2        | -        | 50       | 100     | 3                       | 4         |
| CE010 602    | Geotechnical Engineering II            | 2          | 2        | -        | 50       | 100     | 3                       | 4         |
| CE010 603    | Structural Analysis II                 | 3          | 1        | -        | 50       | 100     | 3                       | 4         |
| CE010 604    | Transportation Engineering I           | 3          | 1        | -        | 50       | 100     | 3                       | 4         |
| CE010 605    | Water Resources Engineering            | 3          | 1        | -        | 50       | 100     | 3                       | 4         |
| CE010 606Lxx | Elective I                             | 2          | 2        | -        | 50       | 100     | 3                       | 4         |
| CE010 607    | Computer Aided Design and Drafting Lab | -          | -        | 3        | 50       | 100     | 3                       | 2         |
| CE010 608    | <i>Material Testing Lab II</i>         | -          | -        | 3        | 50       | 100     | 3                       | 2         |
|              | <b>Total</b>                           | <b>15</b>  | <b>9</b> | <b>6</b> |          |         |                         | <b>28</b> |

### Elective I

- CE010 606L01 Advanced Surveying
- CE010 606L02 Open Channel and Coastal Hydraulics
- CE010 606L03 Airport Engineering
- CE010 606L04 Advanced Mechanics of Materials
- CE010 606L05 Concrete Technology
- CE010 606L06 Soil Stability Analysis.

## 7<sup>th</sup> Semester

| Code         | Subject                               | Hours/week |          |          | Marks    |         | End-sem duration-hours | Credits   |
|--------------|---------------------------------------|------------|----------|----------|----------|---------|------------------------|-----------|
|              |                                       | L          | T        | P/D      | Internal | End-sem |                        |           |
| CE010 701    | Design of Hydraulic Structures        | 2          | 2        | -        | 50       | 100     | 3                      | 4         |
| CE010 702    | Environmental Engineering I           | 2          | 2        | -        | 50       | 100     | 3                      | 4         |
| CE010 703    | Design of Concrete Structures II      | 2          | 1        | -        | 50       | 100     | 3                      | 3         |
| CE010 704    | Architecture and Town Planning        | 2          | 1        | -        | 50       | 100     | 3                      | 3         |
| CE010 705    | Transportation Engineering II         | 2          | 1        | -        | 50       | 100     | 3                      | 3         |
| CE010 706Lxx | Elective II                           | 2          | 2        | -        | 50       | 100     | 3                      | 4         |
| CE010 707    | Computer Applications Lab             | -          | -        | 3        | 50       | 100     | 3                      | 2         |
| CE010 708    | <i>Transportation Engineering Lab</i> | -          | -        | 3        | 50       | 100     | 3                      | 2         |
| CE010 709    | Seminar                               | -          | -        | 2        | 50       | -       | -                      | 2         |
| CE010 710    | <i>Project</i>                        | -          | -        | 1        | 50       | -       | -                      | 1         |
|              | <b>Total</b>                          | <b>12</b>  | <b>9</b> | <b>9</b> |          |         |                        | <b>28</b> |

### Elective II

- CE010 706L01 Building Automation and Smart Structures
- CE 010 706L02 Ground Improvement Techniques
- CE 010 706L03. Prestressed Concrete.
- CE 010 706L04 Environmental Impact Assessment
- CE 010 706L05 Theory of Plates and Shells
- CE 010 706L06 Traffic Engineering and Management

## 8<sup>th</sup> Semester

| Code         | Subject                            | Hours/week |           |          | Marks     |         | End-sem duration -hours | Credits   |
|--------------|------------------------------------|------------|-----------|----------|-----------|---------|-------------------------|-----------|
|              |                                    | L          | T         | P/D      | Inte-rnal | End-sem |                         |           |
| CE010 801    | Advanced Structural Design         | 3          | 2         | -        | 50        | 100     | 3                       | 4         |
| CE010 802    | Building Technology and Management | 2          | 2         | -        | 50        | 100     | 3                       | 4         |
| CE010 803    | Environmental Engineering II       | 2          | 2         | -        | 50        | 100     | 3                       | 4         |
| CE010 804Lxx | Elective III                       | 2          | 2         | -        | 50        | 100     | 3                       | 4         |
| CE010 805Gxx | Elective IV                        | 2          | 2         | -        | 50        | 100     | 3                       | 4         |
| CE010 806    | Environmental Engineering Lab      | -          | -         | 3        | 50        | 100     | 3                       | 2         |
| CE010 807    | Project                            | -          | -         | 6        | 100       | -       | -                       | 4         |
| CE010 808    | Viva Voce                          | -          | -         | -        | -         | 50      | -                       | 2         |
|              | <b>Total</b>                       | <b>11</b>  | <b>10</b> | <b>9</b> |           |         |                         | <b>28</b> |

### **Electives III**

- CE010 804L01 Advanced Foundation Design
- CE010 804L02 Environmental Geotechniques
- CE010 804L03 Earthquake Engineering and Design
- CE010 804L04 Advanced Hydrology and System Analysis
- CE010 804L05 Highway and Airfield Pavements
- CE010 804L06 Structural Dynamics and Stability Analysis

### **Electives IV**

- CE010 805G01 Finite Element Analysis
- CE010 805G02 Environmental Pollution Control Techniques
- CE010 805G03 Optimization Techniques
- CE010 805G04 Land Use Planning
- CE010 805G05 Numerical Methods
- CE010 805G06 Remote Sensing and GIS Applications