

**Curriculum Structure for UG Civil Engineering ( applicable for batch entered into 2023-24)**

| <b>F.Y. B.Tech. Civil AY 2023-24 onwards</b> |     |  |              |          |  |           |          |           |           |           |         |         |     |    |     |
|--|-----|--|--------------|----------|--|-----------|----------|-----------|-----------|-----------|---------|---------|-----|----|-----|
| Sr. No.                                      | Sem | NEP Category                                 | NEP Category | Code     | Course Name  | L         | T        | P         | Hr        | Cr        | MSE/LA1 | ISE/LA2 | ESE | OE | POE |
| 1  | 1   | Basic Science Course                         | BSC          | 7MA101   | Engineering Mathematics-1                              | 3         | 1        |           | 4         | 4         | 30      | 20      | 50  |    |     |
| 2  | 1   | Basic Science Course                         | BSC          | 7PH101   | Engineering Physics                                    | 3         |          |           | 3         | 3         | 30      | 20      | 50  |    |     |
| 3  | 1   | Engineering Science Course                   | ESC          | 7AM101   | Engineering Mechanics                                  | 3         |          |           | 3         | 3         | 30      | 20      | 50  |    |     |
| 4  | 1   | Multy Disp. Minor                            | ESC          | 7ME106   | Basic Mechanical Engineering                           | 2         |          |           | 2         | 2         | 30      | 20      | 50  |    |     |
| 5  | 1   | Professinal Core Course                      | PCC          | 7CV101   | Civil Engineering Infrastructure                       | 2         |          |           | 2         | 2         | 30      | 20      | 50  |    |     |
| 6  | 1   | Basic Science Course                         | BSC          | 7PH155   | Engineering Physics Lab                                |           |          | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| 7  | 1   | Ability Enhancement Course                   | AEC          | 7HS101   | Communication & Generic Skills                         | 1         |          | 2         | 3         | 2         | 30      | 30      | 40  |    |     |
| 8  | 1   | Engineering Science Course                   | ESC          | 7AM155   | Engineering Mechanics Lab                              |           |          | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| 9  | 1   | Multy Disp. Minor                            | ESC          | 7ME156   | Basic Mechanical Engineering Lab                       |           |          | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| 10   | 1   | Professinal Core Course                      | PCC          | 7CV151   | Geology Lab  | 1         |          | 2         | 3         | 2         | 30      | 30      | 40  |    |     |
| 11   | 1   | Vocational Skill Enhancement Course          | VSEC         | 7VS151   | Engineering Skills - I                                 |           |          | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| <b>Total</b>                                 |     |  |              |          |  | <b>15</b> | <b>1</b> | <b>12</b> | <b>28</b> | <b>22</b> |         |         |     |    |     |
| Sr. No.                                      | Sem | NEP Category                                 | NEP Category | Code     | Course Name  | L         | T        | P         | Hr        | Cr        | MSE/LA1 | ISE/LA2 | ESE | OE | POE |
| 1  | 2   | Basic Science Course                         | BSC          | 7MA102   | Engineering Mathematics-II                             | 3         | 1        |           | 4         | 4         | 30      | 20      | 50  |    |     |
| 2  | 2   | Basic Science Course                         | BSC          | 7CH101   | Engineering Chemistry                                  | 3         |          |           | 3         | 3         | 30      | 20      | 50  |    |     |
| 3  | 2   | Engineering Science Course                   | ESC          | 7ME107   | Engineering Graphics                                   | 2         |          |           | 2         | 2         | 30      | 20      | 50  |    |     |
| 4  | 2   | Multy Disp. Minor                            | ESC          | 7EE106   | Electrical & Electronics Engineering                   | 3         |          |           | 3         | 3         | 30      | 20      | 50  |    |     |
| 5  | 2   | Professinal Core Course                      | PCC          | 7CV102   | Strength of Materials                                  | 3         |          |           | 3         | 3         | 30      | 20      | 50  |    |     |
| 6  | 2   | Basic Science Course                         | BSC          | 7CH155   | Engineering Chemistry Lab                              |           |          | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| 7  | 2   | Vocational Skill Enhancement Course          | ESC          | 7CS106   | Computer Programming                                   | 1         |          | 2         | 3         | 2         | 30      | 30      | 40  |    |     |
| 8  | 2   | Engineering Science Course                   | ESC          | 7ME157   | Engineering Graphics Lab                               |           |          | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| 9  | 2   | Engineering Science Course                   | ESC          | 7EE156   | Electrical & Electronics Engineering Lab               |           |          | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| 10   | 2   | Professinal Core Course                      | PCC          | 7CV152   | Strength of Materials Lab                              |           |          | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| 11   | 2   | Vocational Skill Enhancement Course          | VSEC         | 7VS152   | Engineering Skills - II                                |           |          | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| <b>Total</b>                                 |     |  |              |          |  | <b>15</b> | <b>1</b> | <b>12</b> | <b>28</b> | <b>22</b> |         |         |     |    |     |
| <b>S.Y. B.Tech. Civil AY 2024-25 onwards</b> |     |  |              |          |  |           |          |           |           |           |         |         |     |    |     |
| Sr. No.                                      | Sem | NEP Category                                 | NEP Category | Code     | Course Name  | L         | T        | P         | Hr        | Cr        | MSE/LA1 | ISE/LA2 | ESE | OE | POE |
| 1  | 3   | Basic Science Course                         | BSC          | 7MA201   | Applied Mathematics for Civil Engineering              | 3         | 0        | 0         | 3         | 3         | 30      | 20      | 50  |    |     |
| 2  | 3   | Entrepreneurship/Economics/                  | EEM          | 7EE201   | Understanding Incubation and Entrepreneurship ( NPTEL) | 3         | 0        | 0         | 3         | 3         | 30      | 20      | 50  |    |     |
| 3  | 3   | Value Education Course                       | VEC          | 7VE201   | Value Education  | 2         | 0        | 0         | 2         | 2         | 30      | 20      | 50  |    |     |
| 4  | 3   | Professinal Core Course                      | PCC          | 7CV201   | Fluid Mechanics  | 3         | 0        | 0         | 3         | 3         | 30      | 20      | 50  |    |     |
| 5  | 3   | Professinal Core Course                      | PCC          | 7CV203   | Building Materials and Construction                    | 3         | 0        | 0         | 3         | 3         | 30      | 20      | 50  |    |     |
| 6  | 3   | Professinal Core Course                      | PCC          | 7CV202   | Engineering Surveying                                  | 3         | 0        | 0         | 3         | 3         | 30      | 20      | 50  |    |     |
| 7  | 3   | Professinal Core Course                      | PCC          | 7CV251   | Fluid Mechanics Lab                                    | 0         | 0        | 2         | 2         | 1         | 30      | 30      | 40  | OE |     |
| 8  | 3   | Professinal Core Course                      | PCC          | 7CV252   | Engineering Surveying Lab                              | 0         | 0        | 2         | 2         | 1         | 30      | 30      | 40  |    | POE |
| 9  | 3   | Community Engagement Project / Field Project | CEP/FP       | 7CECV251 | Building Materials and Construction Lab                | 0         | 0        | 2         | 2         | 1         | 30      | 30      | 40  |    | POE |
| 10   | 3   | Vocational Skill Enhancement Course          | VSEC         | 7VSCV251 | Spread Sheet Applications in Civil Engineering         | 0         | 0        | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| <b>Total</b>                                 |     |  |              |          |  | <b>17</b> | <b>0</b> | <b>8</b>  | <b>25</b> | <b>21</b> |         |         |     |    |     |

| Sr. No.  | Sem | NEP Category                        | NEP Category | Code         | Course Name                                   | L         | T        | P        | Hr        | Cr        | MSE/LA1 | ISE/LA2 | ESE | OE | POE |
|--|-----|-------------------------------------|--------------|--------------|---|-----------|----------|----------|-----------|-----------|---------|---------|-----|----|-----|
| 1  | 4   | Multy Disp. Minor                   | MDM          | Refer List   | MDM   | 3         | 0        | 0        | 0         | 3         | 30      | 20      | 50  |    |     |
| 2  | 4   | Ability Enhancement Course          | AEC          | 7AE201       | Employability Skills                          | 2         | 0        | 0        | 2         | 2         | 30      | 20      | 50  |    |     |
| 3  | 4   | Indian Knowledge System             | IKS          | Refer List   | IKS elective                                  | 2         | 0        | 0        | 2         | 2         | 30      | 20      | 50  |    |     |
| 4  | 4   | Professional Core Course            | PCC          | 7CV221       | Open Channel Hydraulics                       | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 5  | 4   | Professional Core Course            | PCC          | 7CV222       | Building Planning and Design                  | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 6  | 4   | Professional Core Course            | PCC          | 7CV223       | Structural Analysis                           | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 7  | 4   | Professional Core Course            | PCC          | 7CV224       | Water Resource Engineering                    | 2         | 1        | 0        | 3         | 3         | 30      | 30      | 40  |    |     |
| 8  | 4   | Professional Core Course            | PCC          | 7CV271       | Open Channel HydraulicsLab                    | 0         | 0        | 2        | 2         | 1         | 30      | 30      | 40  | OE |     |
| 9  | 4   | Vocational Skill Enhancement Course | VSEC         | 7VSCV271     | Mini Project 1: Building Planning and CAD     | 0         | 0        | 2        | 2         | 1         | 30      | 30      | 40  |    | POE |
| 10   | 4   | Vocational Skill Enhancement Course | VSEC         | 7VSCV272     | Advanced Surveying Laboratory                 | 1         | 0        | 2        | 3         | 2         | 30      | 30      | 40  |    | POE |
| <b>Total</b>                                     |     |                                     |              |              |   | <b>19</b> | <b>1</b> | <b>6</b> | <b>23</b> | <b>23</b> |         |         |     |    |     |
| <b>T.Y. B.Tech. Civil AY 2025-26 onwards</b>     |     |                                     |              |              |   |           |          |          |           |           |         |         |     |    |     |
| Sr. No.  | Sem | NEP Category                        | NEP Category | Code         | Course Name                                   | L         | T        | P        | Hr        | Cr        | MSE/LA1 | ISE/LA2 | ESE | OE | POE |
| 11   | 5   | Multy Disp. Minor                   | MDM          | Refer list   | MDM   |           |          |          |           | 3         | 30      | 20      | 50  |    |     |
| 12   | 5   | Open Elective                       | OE           | Refer list   | Open Elective - 1                             | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 13   | 5   | Value Education Course              | VEC          | 7VE301       | Environmental Science                         | 2         | 0        | 0        | 2         | 2         | 30      | 20      | 50  |    |     |
| 14   | 5   | Professional Core Course            | PCC          | 7CV301       | Soil Mechanics                                | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 15   | 5   | Professional Core Course            | PCC          | 7CV302       | Water Supply and Treatment Technology         | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 16   | 5   | Professional Core Course            | PCC          | 7CV303       | Concrete Technology                           | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 17   | 5   | Professional Core Course            | PCC          | 7CV304       | Design of Reinforced Concrete Structures      | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 18   | 5   | Professional Core Course            | PCC          | 7CV351       | Water Quality Analysis Lab                    | 0         | 0        | 2        | 2         | 1         | 30      | 30      | 40  |    | POE |
| 19   | 5   | Professional Core Course            | PCC          | 7CV352       | Soil Mechanics Lab                            | 0         | 0        | 2        | 2         | 1         | 30      | 30      | 40  | OE |     |
| 20   | 5   | Professional Core Course            | PCC          | 7CV353       | Concrete TechnologyLab                        | 0         | 0        | 2        | 2         | 1         | 30      | 30      | 40  | OE |     |
| 5  |     |                                     |              |              |   |           |          |          | 0         | 0         |         |         |     |    |     |
| <b>Total</b>                                     |     |                                     |              |              |   | <b>17</b> | <b>0</b> | <b>6</b> | <b>23</b> | <b>23</b> |         |         |     |    |     |
| Sr. No.  | Sem | NEP Category                        | NEP Category | Code         | Course Name                                   | L         | T        | P        | Hr        | Cr        | MSE/LA1 | ISE/LA2 | ESE | OE | POE |
| 21   | 6   | Professional Elective Course        | PEC          | Refer list   | Program Elective - 1                          | 2         | 0        | 0        | 2         | 2         | 30      | 20      | 50  |    |     |
| 22   | 6   | Multy Disp. Minor                   | MDM          | 7MDCV301     | MDM   |           |          |          |           | 4         | 30      | 20      | 50  |    |     |
| 23   | 6   | Open Elective                       | OE           | Refer List   | Open Elective - 2                             | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 24   | 6   | Entrepreneurship/Economics/         | EEM          | 7EE301       | Finance for Engineers                         | 2         | 0        | 0        | 2         | 2         | 30      | 20      | 50  |    |     |
| 25   | 6   | Professional Core Course            | PCC          | 7CV321       | Highway and Railway Engineering               | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 26   | 6   | Professional Core Course            | PCC          | 7CV322       | Foundation Engineering                        | 2         | 1        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |
| 27   | 6   | Professional Core Course            | PCC          | 7CV323       | Waste Management and Pollution Control        | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  | OE |     |
| 28   | 6   | Professional Core Course            | PCC          | 7CV371       | Highway Materials and Traffic Engineering Lab | 0         | 0        | 2        | 2         | 1         | 30      | 30      | 40  | OE |     |
| 29   | 6   | Professional Elective Course        | PEC          | 7CV372       | Probelm Based Lab 1                           | 0         | 0        | 2        | 2         | 1         | 30      | 30      | 40  |    |     |
| 30   | 6   | Vocational Skill Enhancement Course | VSEC         | 7VSCV371     | Computer-Aided Structural Design              | 0         | 0        | 2        | 2         | 1         | 30      | 30      | 40  | OE |     |
| <b>Total</b>                                     |     |                                     |              |              |   | <b>15</b> | <b>1</b> | <b>6</b> | <b>22</b> | <b>23</b> |         |         |     |    |     |
| <b>Final.Y. B.Tech. Civil AY 2026-27 onwards</b> |     |                                     |              | <b>Sem A</b> |   |           |          |          |           |           |         |         |     |    |     |
| Sr. No.  | Sem | NEP Category                        | NEP Category | Code         | Course Name                                   | L         | T        | P        | Hr        | Cr        | MSE/LA1 | ISE/LA2 | ESE | OE | POE |
| 31   | A   | Professional Elective Course        | PEC          | Refer list   | Program Elective - 2                          | 3         | 0        | 0        | 3         | 3         | 30      | 20      | 50  |    |     |

| 32           | A   | Professional Elective Course  | PEC          | Refer list   | Program Elective - 3                               | 3         | 0        | 0         | 3         | 3         | 30      | 20      | 50  |    |     |
|--------------|-----|-------------------------------|--------------|--------------|--|-----------|----------|-----------|-----------|-----------|---------|---------|-----|----|-----|
| 33           | A   | Research Methodology          | RM           | 7RM401       | Research Methodology                               | 2         | 0        | 0         | 2         | 2         | 30      | 20      | 50  |    |     |
| 34           | A   | Co-curricular Course Activity | CCA          | 7CC401       | Techno-Socio Activities                            | 0         | 0        | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| 35           | A   | INTERNSHIP                    | INTERNSHIP   | 7CV445       | Internship   |           |          |           | 0         | 8         | 30      | 30      | 40  | OE |     |
| <b>Total</b> |     |                               |              |              |  | <b>8</b>  | <b>0</b> | <b>2</b>  | <b>10</b> | <b>17</b> |         |         |     |    |     |
|              |     |                               |              | <b>Sem B</b> |  |           |          |           |           |           |         |         |     |    |     |
| Sr. No.      | Sem | NEP Category                  | NEP Category | Code         | Course Name  | L         | T        | P         | Hr        | Cr        | MSE/LA1 | ISE/LA2 | ESE | OE | POE |
| 36           | B   | Professional Core Course      | PCC          | 7CV421       | Estimating and Costing                             | 2         | 0        | 0         | 2         | 2         | 30      | 20      | 50  |    |     |
| 37           | B   | Professional Elective Course  | PEC          | Refer List   | Program Elective - 4                               | 3         | 0        | 0         | 3         | 3         | 30      | 20      | 50  |    |     |
| 38           | B   | Multy Disp. Minor             | MDM          | Refer List   | MDM  |           |          |           |           | 4         | 30      | 20      | 50  |    |     |
| 39           | B   | Professional Core Course      | PCC          | 7CV422       | Design of Steel Structures                         | 3         | 0        | 0         | 3         | 3         | 30      | 20      | 50  |    |     |
| 40           | B   | Professional Core Course      | PCC          | 7CV423       | Construction Project Management and Ethics         | 3         | 0        | 0         | 3         | 3         | 30      | 30      | 40  |    |     |
| 41           | B   | Professional Core Course      | PEC          | Refer List   | Probelm Based Lab 2                                | 0         | 0        | 2         | 2         | 1         | 30      | 30      | 40  |    |     |
| 42           | B   | Professional Core Course      | PCC          | 7CV445       | Mini Project 2: Steel Structure Design and Drawing | 0         | 0        | 2         | 2         | 1         | 30      | 30      | 40  | OE |     |
| 43           | B   | Professional Core Course      | PCC          | 7CV446       | Mini Project 3: Estimating and Costing             | 0         | 0        | 2         | 2         | 1         | 30      | 30      | 40  | OE |     |
| 44           | B   | Research Project              | PROJECT      | 7CV491       | Project  | 0         | 0        | 10        | 10        | 5         | 30      | 30      | 40  | OE |     |
| <b>Total</b> |     |                               |              |              |  | <b>11</b> | <b>0</b> | <b>16</b> | <b>27</b> | <b>23</b> |         |         |     |    |     |
|              |     |                               |              |              |  | 117       | 4        | 68        | 186       | 174       |         |         |     |    |     |