|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Code – CE692** | | **Detailing of RC and Steel Structures** |  |  |
| **Course Outcome (CO)** | CO1. Assess different type of loads and prepare layout for reinforced concrete structures.  CO2. Identify and apply the applicable industrial design codes relevant to the design of reinforced concrete members.  CO3. Analyze and design various structural elements of reinforced concrete building like beam, slab, column, footing, and staircase. CO4. Identify the material properties of structural steel. Moreover, the students will identify different bolted and welded connections, analyze and design them for axial and eccentric loads.  CO5. Design different steel sections subjected to axial compression and tension following Indian codes of practices | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CO Distribution** | **Class Test 1**  **(T1)** | **Class Test 2**  **(T2)** | **Class Test 3**  **(T3)** | **Class Test 4**  **(T4)** |
| **CO1** | Q1, Q2 | Q1 |  |  |
| **CO2** | Q3 | Q2 |  |  |
| **CO3** | Q4 | Q3, Q4 |  | Q1 |
| **CO4** |  |  | Q1, Q2 | Q2 |
| **CO5** |  |  | Q3, Q4 | Q3, Q4 |

|  |  |  |
| --- | --- | --- |
| **Course outcomes** | **% of students achieved CO** | **Decision on CO result (achieved) (Y/N) with level** |
| **CO1** |  |  |
| **CO2** |  |  |
| **CO3** |  |  |
| **CO4** |  |  |
| **CO5** |  |  |
| **Average CO attainment for the course through CIE EC502** | 75.2% | Level: 2.4 |

**Overall CO attainment (EC502) in the scale of 3**

= (40% of target level of average CO attainment through CIE) +(60% of target level of CO attainment through SEE)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CO Articulation Matrix** | | | | | | | | |
| **Subject Code** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** | **Average CO Score**  **(CIE)** | **CO Score**  **(SEE)** | **Overall CO Attainment Score** |
| **CE502** | 2 | 2 | 2 | 2 | 3 | 2.4 | 0 | 0.96 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CO-PO Mapping**  **Design of RC Structure**  **(Course Code - CE502)** | | | | | | | | | | | | | |
|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CO1** | 3 | 2 | 3 | 3 | - | - | 2 | - | - | - | 1 | 3 |
| **CO2** | 3 | 3 | 3 | 2 | 3 | 1 | 2 | - | - | 1 | 1 | 2 |
| **CO3** | 3 | 1 | 2 | 1 | 3 | - | - | 2 | - | 1 | - | 1 |
| **CO4** | 3 | - | 2 | - | 3 | 2 | 2 | - | - | - | - | 2 |
| **CO5** | 3 | 3 | - | 2 | 2 | 2 | 3 | - | 2 | 1 | - | 2 |
| **Average CO** | **3** | **2.25** | **2.5** | **2** | **2.75** | **1.67** | **2.25** | **2** | **2** | **1** | **1** | **2** |

|  |  |  |  |
| --- | --- | --- | --- |
| **CO-PSO Mapping**  **Design of RC Structure**  **(Course Code - CE502)** | | | |
|  | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | 1 | 2 | 1 |
| **CO2** | 3 | 2 | 3 |
| **CO3** | 2 | 2 | 3 |
| **CO4** | 3 | 3 | 3 |
| **CO5** | 3 | 2 | 3 |
| **Average CO** | 2.4 | 2.2 | 2.6 |

Following table has been generated considering mapping of CO-PO and CO attainment.

For, PO1 mapping value is = 2.2

Target PO = 3

Overall CO1 attainment score = 0.96

**Therefore, contribution to PO3 attainment is 0.96 × (2.2/3) =0.59. Others are calculated accordingly**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PO Articulation Matrix** | | | | | | | | | | | | | |
|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CE502** | **0.96** | **0.72** | **0.8** | **0.64** | **0.88** | **0.53** | **0.72** | **0.32** | **0.32** | **0.32** | **0.32** | **0.64** |

Following table has been generated considering mapping of CO-PSO and CO attainment.

For, PSO1 mapping value is = 2.4

Target PSO = 3

Overall CO1 attainment score = 0.96

**Therefore, contribution to PO3 attainment is 0.8 × (2.4/3) =0.64. Others are calculated accordingly**

|  |  |  |  |
| --- | --- | --- | --- |
| **PSO Articulation Matrix** | | | |
|  | **PSO1** | **PSO2** | **PSO3** |
| **CE502** | **0.77** | **0.70** | **0.83** |

1. The students will be able analyze behavior of structures subjected to lateral loading system as well as gravity loading system