|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Code – CE791** | | **Environmental Engineering Lab** | **3P** | **2Credits** |
| **Course Objective** | To learn the methods of concentration of chemical in sewage water . Identify the process of purification of sewage water. | | | |
| **Course Outcome (CO)** | 1. Experiment various physical characteristics for a given sample of water and wastewater. 2. Determine various chemical characteristics for a given sample of water and wastewater. 3. Examine the bacteriological characteristics for a given sample of water and wastewater. 4. Examine the suitability of a few treatment options for a given sample of water and wastewater.   Compare the determined quality parameters with standards to decide on the suitability of use for the tested water and disposal of tested wastewater... | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CO Distribution** | **Assignment 1 (T1)** | **Slot Test 1 (T2)** | **Assignment 2 (T3)** | **Slot Test 2 (T4)** |
| **CO1** | Q1 | Q1,Q2 |  |  |
| **CO2** | Q2, Q3,Q4 | Q2,Q3 | Q1 |  |
| **CO3** | Q5 | Q4, | Q6 |  |
| **CO4** |  |  | Q7,Q8,Q9 | Q3,Q2 |
| **CO5** |  |  |  | Q4 ,Q7,Q8 |

|  |  |  |
| --- | --- | --- |
| **Course outcomes** | **% of students achieved CO** | **Decision on CO result (achieved) (Y/N) with level** |
| **CO1** | 86% | Y (Level: 3) |
| **CO2** | 64% | Y(Level: 2) |
| **CO3** | 76% | Y(Level:2) |
| **CO4** | 75% | Y(Level:2) |
| **CO5** | 88% | Y(Level3) |
| **Average CO attainment for the course through CIE CE701** | 77.8% | Level:2 |

**Overall CO attainment (CE701) in the scale of 3**

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

|  |  |
| --- | --- |
|  | |
| **Subject Code** | **CO1** | | **CO2** | **CO3** | **CO4** | **CO5** | **Average CO Score**  **(CIE)** | **CO Score**  **(SEE)** | **Overall CO Attainment Score** |
| **CE502** | 3 | | 2 | 2 | 2 | 3 | 2.60 | 3 | 2.84 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CO-PO Mapping**  **Design of RC Structure**  **(Course Code – CE701)** | | | | | | | | | | | | | |
|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CO1** | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
| **CO2** | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 3 |
| **CO3** | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 3 |
| **CO4** | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 3 |
| **CO5** | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 |
| **Average CO** | **2.4** | **2.0** | **2.4** | **2.0** | **2.0** | **2.0** | **2.0** | **1.6** | **2.2** | **1.6** | **2.0** | **3.0** |

|  |  |  |  |
| --- | --- | --- | --- |
| **CO-PSO Mapping**  **Design of RC Structure**  **(Course Code – CE701)** | | | |
|  | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | 3 | 3 | 3 |
| **CO2** | 2 | 3 | 3 |
| **CO3** | 2 | 2 | 2 |
| **CO4** | 3 | 3 | 3 |
| **CO5** | 3 | 2 | 3 |
| **Average CO** | 2.6 | 2.6 | 2.8 |

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

For, PO1 mapping value is = 2.4

Target PO = 3

Overall CO1 attainment score = 2.84

**Therefore, contribution to PO1 attainment is 2.84 × (2.4/3) =2.272**

**Others are calculated accordingly**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PO Articulation Matrix** | | | | | | | | | | | | |
|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CE502** | **2.27** | **1.89** | **2.27** | **1.89** | **1.89** | **1.89** | **1.89** | **1.51** | **2.08** | **1.89** | **1.89** | **2.84** |

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

For, PSO1 mapping value is = 2.6

Target PSO = 3

Overall CO1 attainment score = 2.84

**Therefore, contribution to PSO3 attainment is 2.84 × (2.6/3) =2.46. Others are calculated accordingly**

|  |  |  |  |
| --- | --- | --- | --- |
| **PSO Articulation Matrix** | | | |
|  | **PSO1** | **PSO2** | **PSO3** |
| **CE502** | **2.46** | **2.46** | **2.65** |