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| **Course Code – CE401** | | **Fluid Mechanics** | **3L** | **4 Credits** |
| **Course Objective** | To introduce properties of fluids which are required to understand behavior of fluids in irrigation and through hydraulic structure | | | |
| **Course Outcome (CO)** | CO1. define basic terms, values and laws in the areas of fluids properties, statics, kinematics  and dynamics of fluids, and hydraulic design of pipe systems;  CO2. describe methods of implementing fluid mechanics laws and phenomena while analyzing  the operational parameters of hydraulic problems;  CO3. practically apply tables and diagrams, and equations that define the associated laws;  CO4. calculate and optimize operational parameters of hydraulic problems;  CO5. select engineering approach to problem solving based on the acquired physics and  mathematical knowledge. | | | |

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

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| **Course outcomes** | **% of students achieved CO** | **Decision on CO result (achieved) (Y/N) with level** |
| **CO1** | 91% | Y (Level: 3) |
| **CO2** | 68% | Y(Level: 2) |
| **CO3** | 62% | Y(Level:2) |
| **CO4** | 68% | Y(Level:2) |
| **CO5** | 64% | Y(Level:2) |
| **Average CO attainment for the course through CIE CE401** | 71 | Level: 2 |

**Overall CO attainment (CE401) in the scale of 3**

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

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| **Subject Code** | **CO1** | | **CO2** | **CO3** | **CO4** | **CO5** | **Average CO Score**  **(CIE)** | **CO Score**  **(SEE)** | **Overall CO Attainment Score** |
| **CE502** | 3 | | 3 | 2 | 2 | 2 | 2.40 | 0 | 0.96 |

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| **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 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 3 |
| **CO2** | 1 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 3 |
| **CO3** | 2 | 2 | 2 | 3 | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 3 |
| **CO4** | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 2 | 2 | 3 |
| **CO5** | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| **CO6** | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 2 | 2 | 2 | 3 |
| **Average CO** | **2.0** | **2.6** | **2.6** | **2.3** | **2.3** | **1.6** | **2.0** | **1.1** | **1.6** | 1 | **1.8** | **3** |

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| **CO-PSO Mapping**  **Soil Mechanics**  **(Course Code – CE403)** | | | |
|  | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | 2 | 3 | 3 |
| **CO2** | 3 | 3 | 3 |
| **CO3** | 2 | 3 | 3 |
| **CO4** | 2 | 3 | 3 |
| **CO5** | 2 | 3 | 3 |
| **CO6** | 3 | 3 | 3 |
| **Average CO** | 2.3 | 3.0 | 3.0 |

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

For, PO1 mapping value is = 2.0

Target PO = 3

Overall CO1 attainment score = 0.96

**Therefore, contribution to PO3 attainment is 0.8 × (2.2/3) =0.59. Others are calculated accordingly**

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| **PO Articulation Matrix** | | | | | | | | | | | | |
|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CE403** | **0.64** | **0.83** | **0.73** | **0.73** | **0.73** | **0.51** | **0.64** | **0.35** | **0.56** | **0.32** | **0.57** | **0.96** |

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

For, PSO1 mapping value is = 2.3

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**

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| **PSO Articulation Matrix** | | | |
|  | **PSO1** | **PSO2** | **PSO3** |
| **CE403** | **0.73** | **0.96** | **0.96** |