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| **Course Code – CE392** | | **Surveying Practice I** | **3P** | **2 Credits** |
| **Course Objective** | Student will be able to function as a member of a team and have the ability to use techniques, skills, and modern engineering tools necessary for engineering practice. | | | |
| **Course Outcome (CO)** | 1. State the interdependency and advancement of different surveying methods with help of Chain & Compass Surveying in the field. 2. Comprehend the working principles of different surveying and experiments like Plane Table Surveying. 3. Execute the different methods of surveying and Levelling to measure the horizontal & vertical distance on the field. 4. Examine the results obtained from the Contouring survey. 5. Critically appraise the different techniques of surveying and Geomatics in measuring and assessing the features of interest with the help modern Survey equipment’s. | | | |

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| **CO Distribution** | **Assignment 1 (T1)** | **Slot Test 1 (T2)** | **Assignment 2 (T3)** | **Slot Test 2 (T4)** |
| **CO1** | Q1, Q2 |  |  |  |
| **CO2** |  | Q1 |  |  |
| **CO3** |  | Q2 | Q1 | Q1 |
| **CO4** |  |  |  | Q2 |
| **CO5** |  |  | Q2 |  |

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| **Course outcomes** | **% of students achieved CO** | **Decision on CO result (achieved) (Y/N) with level** |
| **CO1** | 82% | Y(Level: 3) |
| **CO2** | 83% | Y(Level: 3) |
| **CO3** | 78% | Y(Level:2) |
| **CO4** | 90% | Y(Level:3) |
| **CO5** | 80% | Y (Level: 3) |
| **Average CO attainment for the course through CIE CE392** | 82.6% | Level: 3 |

**Overall CO attainment (CE392) 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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| **CO Articulation Matrix** | | | | | | | | |
| **Subject Code** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** | **Average CO Score**  **(CIE)** | **CO Score**  **(SEE)** | **Overall CO Attainment Score** |
| **CE392** | 3 | 3 | 2 | 3 | 3 | 2.8 | 3 | 2.92 |

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| **CO-PO Mapping**  **Surveying Practice I (Course Code - CE392)** | | | | | | | | | | | | | |
|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CO1** | 3 | 2 | 3 | - | - | 2 | 1 | 1 | 3 | 3 | 2 | - |
| **CO2** | 3 | 3 | 3 | - | - | 2 | 1 | 1 | 2 | 2 | 3 | 1 |
| **CO3** | 3 | 2 | 3 | - | - | 2 | 1 | 1 | 3 | 2 | 3 | 1 |
| **CO4** | 3 | 3 | 3 | 1 | - | 2 | 1 | 3 | 3 | 3 | 2 | 3 |
| **CO5** | 2 | 3 | 2 | - | 1 | 1 | 3 | 1 | 1 | 3 | 3 | 2 |
| **Average CO** | **2.8** | **2.6** | **2.8** | **1** | **1** | **1.8** | **1.4** | **1.4** | **2.4** | **2.6** | **2.8** | **1.4** |

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| **CO-PSO Mapping**  **Surveying Practice I (Course Code – CE392)** | | | |
|  | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | 3 | 2 | 1 |
| **CO2** | 2 | 3 | 3 |
| **CO3** | 3 | 2 | 2 |
| **CO4** | 3 | 2 | 3 |
| **CO5** | 1 | 2 | 2 |
| **Average CO** | 2.4 | 2.2 | 2.2 |

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

For, PO1 mapping value is = 2.8

Target PO = 3

Overall CO1 attainment score = 2.92

**Therefore, contribution to PO3 attainment is 2.92 × (2.8/3) =2.75. Others are calculated accordingly**

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| **PO Articulation Matrix** | | | | | | | | | | | | |
|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CE392** | **2.75**  (2.8/3)\*2.92 | **2.53**  (2.6/3)\*2.92 | **2.75**  (2.8/3)\*2.92 | **0.97**  (1/3)\*2.92 | **0.97**  (1/3)\*2.92 | **1.75**  (1.8/3)\*2.92 | **1.36**  (1.4/3)\*2.92 | **1.36**  (1.4/3)\*2.92 | **2.34**  (2.4/3)\*2.92 | **2.53**  (2.6/3)\*2.92 | **2.75**  (2.8/3)\*2.92 | **1.36**  (1.4/3)\*2.92 |

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 = 2.92

**Therefore, contribution to PO3 attainment is 2.92 × (2.4/3) =2.34. Others are calculated accordingly**

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| **PSO Articulation Matrix** | | | |
|  | **PSO1** | **PSO2** | **PSO3** |
| **CE392** | **2.34**  (2.4/3)\*2.92 | **2.14**  (2.2/3)\*2.92 | **2.14**  (2.2/3)\*2.92 |