

### Civil Engineering Workshop

|  |              |                                 |       |                      |     |
|--|--------------|---------------------------------|-------|----------------------|-----|
| <b>Course Code</b>                     | 19CE3251     | <b>Year</b>                     | I     | <b>Semester</b>      | II  |
| <b>Course Category</b>                 | Program Core | <b>Branch</b>                   | CE    | <b>Course Type</b>   | Lab |
| <b>Credits</b>                         | 1.5          | <b>L-T-P</b>                    | 0-0-3 | <b>Prerequisites</b> | Nil |
| <b>Continuous Internal Evaluation:</b> | 25           | <b>Semester End Evaluation:</b> | 50    | <b>Total Marks:</b>  | 75  |

| <b>Course Outcomes</b>  |   |
|---|---|
| Upon successful completion of the course, the student will be able to |   |
| <b>CO1</b>  | Understand the market scenario of various building materials  |
| <b>CO2</b>  | Cast and test the fly ash bricks and construct a brick wall   |
| <b>CO3</b>  | Plaster a given brick surface, paint it and Lay tiles for flooring  |
| <b>CO4</b>  | Assemble a pipe line joints, construct the recharge pit   |
| <b>CO5</b>  | mark a line diagram of a building by using chain/tape and other accessories and develop the model of various structures |

| <b>Contribution of Course Outcomes towards achievement of Program Outcomes &amp; Strength of correlations (H:High, M: Medium, L:Low)</b> |     |     |     |     |     |     |     |     |     |      |      |      |      |      |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
| <b>CO1</b>   |     |     |     |     |     | M   |     |     | H   | H    |      |      | M    | M    |
| <b>CO2</b>   |     |     |     | H   | H   | M   |     |     | H   | M    |      |      | M    | M    |
| <b>CO3</b>   |     |     |     | H   | H   | M   |     |     | H   | M    |      |      | M    | M    |
| <b>CO4</b>   |     |     |     | H   | H   | M   |     |     | H   | M    |      |      | M    | M    |
| <b>CO5</b>   |     |     |     | H   | H   | M   |     |     | H   | M    |      |      | M    | M    |

| <b>Syllabus</b> |   |                  |
|-----------------|---|------------------|
| <b>Unit No.</b> | <b>Contents</b>   | <b>Mapped CO</b> |
| I               | <b>Market survey:</b> For trade/Commercial names, specifications, units of purchase of various types of cements, stones, bricks, flooring tiles, paints, roofing, Sanitary ware pipes, water closets, timber- plywood, hard board, block board etc.   | CO1              |
| II              | 1. Casting and testing of <b>fly ash bricks</b><br>2. Assemble a brick wall using <b>English bond</b> without using mortar<br>3. Assemble a brick wall using <b>Flemish bond</b> without using mortar   | CO2              |
| III             | 1. <b>Plastering and finishing</b> of the wall<br>2. Application of <b>wall putty and painting</b> a wall<br>3. Application of <b>base coat and laying</b> of tile flooring of 1sqm   | CO3              |
| IV              | 1. Installation of <b>plumbing and fixtures</b> like tap, T-joint, Elbow, bend, Threading<br>2. Construction of a <b>Recharge pit</b>   | CO4              |
| V               | 1. Setting out a building : The student should set out a building (single bhk) as per the given plan using <b>chain</b> and other accessories<br>2. Setting out a building : The student should set out a building (single bhk) as per the given plan using <b>tape</b> and other accessories | CO5              |

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|  | 3. <b>Model making</b> of different structures like building, bridges and different types of trusses |  |
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| <b>Learning Resources</b>  |  |
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| <b>Text Books</b>  |  |
| 1. Rangawala, Engineering Materials: Materials Science, Charotar Publishing house, 2017<br>2. B.C.Punmia, Ashok.K.Jain, Arun, K.Jain, Building Construction, 11/e Laxmi Publications   |  |
| <b>Reference Books</b>   |  |
| 1. Mimi Das Saika, Bhargab Mohan Das, Madan Mohan Das, Elements of Civil Engineering, 1/e, PHI Learning Private Limited, 2011<br>2. P.C. Varghese, A text Book Building Materials, 1/e, Prentice- Hall Publication, 2005<br>3. Dala. K,R, Essentials of Civil Engineering, Charotar Publishing House |  |
| <b>e- Resources &amp; other digital material</b>   |  |
| 1. <a href="http://www.constructionnews.co.in">http://www.constructionnews.co.in</a><br>2. <a href="https://nptel.ac.in/courses/105102088/">https://nptel.ac.in/courses/105102088/</a><br>3. <a href="https://theconstructor.org/videos/">https://theconstructor.org/videos/</a>                     |  |