**20CE22SC -3D MODELLING**

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| **Course Category**  | Skill oriented course  | **Credits**  | 2  |
| **Course Type**  | Theory and practical  | **Lecture - Tutorial - Practical**  | 0-1-2  |
| **Prerequisite**  | None  | **Sessional Evaluation**  | 40  |
| **Semester End Exam. Evaluation**  | 60  |
| **Total Marks**  | 100  |

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| **Course** **Objective(s)** | 1. To introduce the 3D modelling, navigating and 3D view commands in AUTOCAD.2. To make use of Extrude, Press pull, Revolve and Sweep Commands. 3. To develop editing and visualizing solids by using various operational commands. 4. To illustrate the User Coordinate system and originating 2D layout from3D drawings. 5. To explain about various tools of making basic surfaces.6. To study about creation and saving renderings and to produce Walkthrough videos.  |
| **Course Outcomes** | CO1  | Know about 3D modelling, navigating and 3D view commands in AUTOCAD  |
| CO2  | Be aware of Extrude, Press pull, Revolve and Sweep Commands.  |
| CO3  | Demonstrate about editing and visualizing the solids  |
| CO4  | Acknowledge the User Coordinate system  |
| CO5  | Comprehend the making of basic surfaces using tools.  |
| CO6  | Generating the walk through videos. |
| **Course Content** | **LIST OF EXPERIMENTS**1. Introduction to 3D solid modelling, navigating to workspace and 3D view Commands.
2. Extrude, Press pull, Revolve and Sweep Commands.
3. Editing and visualizing solids using Boolean operation, fillet, chamfer, extrude, taper, move face, 3D Array.
4. Understanding the UCS (User Coordinate system) and creating 2D layout from 3D drawings.
5. Making basic surfaces using Patch, Fillet, Offset and surface blend tool
6. Creating, saving renderings and making walkthrough video.
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 **CO-PO Mapping:** 3-High Mapping, 2-Moderate Mapping, 1-Low Mapping, - - Not Mapping

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|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CO1**  | 1  | -  | -  | -  | 2  | 1  | 1  | -  | 2  | -  | 1  | -  |
| **CO2**  | 2  | -  | 1  | 1  | 3  | -  | -  | -  | 2  | -  | 2  | 2  |
| **CO3**  | 1  | -  | 1  | -  | 3  | -  | -  | -  | 2  | -  | 1  | -  |
| **CO4**  | 2  | -  | -  | -  | 3  | 1  | -  | -  | 3  | -  | 2  | -  |
| **CO5**  | 1  | -  | -  | -  | 2  | -  | -  | -  | 2  | -  | 1  | -  |
| **CO6**  | 2  | 1  | 1  | -  | 3  | 1  | 2  | -  | 2  | -  | 3  | 2  |