



# KONGU ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

**ERODE – 638 107**

**DEPARTMENT OF COMPUTER SCIENCE (UG)**

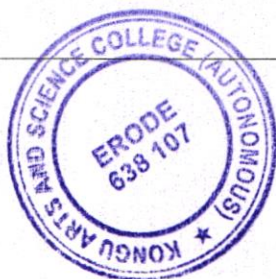
**VALUE ADDED COURSE – SYLLABUS**

**20VCSAD – 3D ANIMATION AND DESIGN**

**PAPER I: 3D ANIMATION AND DESIGN**

**Course Objective:** The objective of the programme is to inculcate knowledge in 3D animation and design that can be used for modeling, texturing, animating, Lighting and rendering in 3D objects and make the students to expertise in creating 3D objects.

|   |  |                    |          |
|---|--|--------------------|----------|
| <b>UNIT I</b>   |  | 4 Hours            |          |
| The Blender Interface: The Blender Screen - Viewport Types -Ready-Made Screens -The User Preferences Window - Open, Saving and Appending Files - Packing Data. Working with Viewports: Moving Around in 3D Space - Window and Button Control.   |  |                    |          |
| <b>UNIT II</b>  |  | 4 Hours            |          |
| Creating and Editing Objects: Working with Basic Meshes: Placing objects on the Screen - Mesh Types - Using Main Modifiers to Manipulate Meshes - Joining/Separating Meshes - Materials and Textures: Basic Material Settings.  |  |                    |          |
| <b>UNIT III</b>   |  | 4 Hours            |          |
| Setting Up a World: Using Color, Mist and Images: Blender Internal Render Engine - Mist Settings- Creating a 3D Cloud Backgrounds- Using Cloud Textures With World Mist Settings-Using a Background Image in Cycles. Lighting and Cameras: Cameras- Lighting Types and Settings – spotlight settings. |  |                    |          |
| <b>UNIT IV</b>  |  | 4 Hours            |          |
| Render Settings: Basic Setup Options: The Rendering Interface and Settings - Scene Settings - Rendering Movies and Images: Steps to Create an MPEG Movie File - Rendering a PNG or JPEG (.jpg) Image.   |  |                    |          |
| <b>UNIT V</b>   |  | 4 Hours            |          |
| Animation Basics: Basic Key-framing and Auto Key-framing:Moving Through Time - Moving, Rotating and Scaling- Automatic Key Framing - Viewing Your Animation.Adding 3D Text: Blender 3D Text Settings - Creating Text on a Curve.  |  |                    |          |
|   |  | <b>Total Hours</b> | 20 Hours |



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**Text Book:**

1. James Chronister, "Blender Basics Classroom Tutorial Book", 5<sup>th</sup> Edition, Based on the Blender 2.7X series, 2017.

**Book for Reference:**

1. Jonathan Lampel, "The Beginner's Guide to Blender", 2015.


**Web Reference :**

1. <https://www.blenderhd.com/wp-content/uploads/2015/08/BeginnersGuideToBlender.pdf>

**Course Outcome:** On Completion of this course the students will be able to

- Describe the basics of Blender Interface and Viewports.
- Elaborate the concepts of Meshes and Textures.
- Acquire knowledge in Render Engine, Lighting and Cameras.
- Explore the rendering Movies and Images basic concepts.
- Explain the ideas of Animation Basics and Blender 3D Text Settings.



  
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