

Department of Liberal Education
Era University, Lucknow
Course Outline
Effective From: 2023-24

Name of the Program	B.A. / B.Sc. (LIBERAL EDUCATION)			Year/ Semester:	3rd / 6th
Course Name	Introduction to 3D Max	Course Code:	ANI306	Type:	Theory
Credits	04			Total Sessions Hours:	60 Hours
Evaluation Spread	Internal Continuous Assessment:	50 Marks		End Term Exam:	50Marks
Type of Course	<input type="radio"/> Compulsory	<input checked="" type="radio"/> Core	<input type="radio"/> Creative	<input type="radio"/> Life Skill	
Course Objectives	<ol style="list-style-type: none"> The prime objective of this course is to develop Autodesk 3Ds Max, formerly 3D Studio and 3D Studio Max, a professional 3D computer graphics program for making 3D animations, models, games, and images. It is developed and produced by Autodesk Media and Entertainment. 3Ds Max is a 3D professional modeling, animation, and rendering application built for making 3D animations and models. It plays a huge role in designing 2D cross-section shapes for 3D models. 				
Course Outcomes(CO): <i>After the successful course completion, learners will develop following attributes:</i>					
Course Outcome (CO)	Attributes				
CO1	Attaining a strong understanding of modeling, materials, lighting, texturing, camera animation, are rendering etc.				
CO2	Handling advanced tools to create stunning 3D models for architectural interior designing.				
CO3	Creating realistic walk through animations in 3Ds Max.				
CO4	Learners will have the complete knowledge about the coloring, transitions, textures, various kinds of models and professional skills.				
Pedagogy	Interactive, discussion-bases, student-centered, presentation.				
Internal Evaluation Mode	Mid-term Examination: 20 Marks Activity: 10 Marks Class test: 05 Marks Online Test/Objective Test: 05 Marks Assignments/Presentation: 05 Marks Attendance: 05 Marks				
Session Details	Topic			Hours	Mapped CO
Unit 1	3DS Max This software helps with better communicate with designs and create strong narration of the story. 3D Max is widely used software in advertisement, movies, gaming, Interior designing, exterior designing, engineering, games etc.			15	CO1

	<ul style="list-style-type: none"> • Modeling Texturing • Lighting & shading • Rendering • Rigging • Animation <p>Activity: User interface, user interface components. Viewports, viewports configuration. Working in the user interface.</p>		
Unit 2	<p>Modeling & Texturing</p> <p>Modeling is the process of creating objects with the use of different types of methods or approaches with the tools and commands given in 3Ds Max. Architecture Modeling Character Modeling Texturing an object is understand as the process of adding skin and color to an object.</p> <ul style="list-style-type: none"> • UV Unwrapping • Seaming the Rest of the Body • Applying the Color Map • Applying the Bump Map • Applying the Specular Map <p>Activity: 3D Modeling, Advantages & Disadvantages Polygon Modeling UV texturing: Texturing of Characters and Props. Shading Different Maya Shades.</p>	15	CO2, CO4
Unit 3	<p>Animation</p> <p>Animation in Maya is generally measure-using frames that mimic the frames you would find on a film reel. Maya animation provides you with the powerful tools you need to bring the characters and objects in your scenes to life. These tools give you the freedom to animate any attribute of an object and the control you need to success transform joints and bones, IK handles, and models over time.</p> <ul style="list-style-type: none"> • Animation Basics • Key frames Animation • Nonlinear Animation • Path Animation • Motion Capture Animation. <p>Activity: Reflecting on human movement Gaining an insight into creating believable action Practicing the mechanics of biped walks, runs, head turns, gestures Methods of lip-syncing to sound breakdowns Posing characters in scenes</p>	15	CO3
Unit 4	<p>Rendering</p> <p>Rendering creates a 2D image or animation based on your 3D scene. It shades the scene's geometry using the lighting you have set up, the materials you've applied, and environment settings such as background and atmosphere. Rendering is multi-threaded and multiprocessor on multiple-processor configurations.</p> <ul style="list-style-type: none"> • Rendering Parameters 	15	CO4

	<ul style="list-style-type: none"> • Using Network Rendering to Setup a Render Farm • Network Rendering With monitor • Cameras: • Free Camera • Target Camera • Camera Viewport <p>Activity: Rendering: 3D rendering, advance lighting effects, Shading material for objects: Anisotropic, Blind, Lambert, Pong, Layer Shade, Ocean Shade, Hair tube shade, Ramp shade, Shading Map, Surface shade, Refining shading materials, Mental ray rendering and Toon shade rendering. IPR rendering, Software, Hardware rendering, Batch rendering, Creating various output as per the end user requirements and maintaining the resolution.</p>		
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CO-PO and PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO6
CO1	1					2			2	2			1	
CO2	2								3	1			1	
CO3	2		2			1			1				1	1
CO4	2					2			3	2			1	

Strongcontribution-3, Averagecontribution-2, Lowcontribution-1,

Suggested Readings:

Text- Books	<ol style="list-style-type: none"> 1. Autodesk 3Ds Max 2021 Fundamentals Published August 18, 2020 By ASCENT 2. Autodesk 3Ds Max 2023 for Beginners: A Tutorial Approach, 23rd Edition CAD/CIM Technologies, USA Prof. Sham Tickoo, Purdue University Northwest, USA
Reference Books	<p>file:///C:/Users/Ishu/Downloads/Documents/0672336995.pdf</p> <p>file:///C:/Users/Ishu/Downloads/Documents/Beginner%E2%80%99s%20Guide%20to%20Create%20Models%20With%203ds%20Max.pdf</p>
Para Text	<p>Unit 1:</p> <ol style="list-style-type: none"> 1. https://youtu.be/8TAFh-a6gac 2. https://youtu.be/hS4b6eSwUBQ <p>Unit 2:</p> <ol style="list-style-type: none"> 1. https://youtu.be/DkeEjByWr-I 2. https://youtu.be/wyPDUfeKhsM <p>Unit 3:</p> <ol style="list-style-type: none"> 1. https://youtu.be/23EZnaJxm-E 2. https://youtu.be/SjXG4gjVexE <p>Unit4:</p> <ol style="list-style-type: none"> 1. https://youtu.be/GdkJWXiaS3E

Recapitulation & Examination Pattern		
Internal Continuous Assessment:		
Component	Marks	Pattern
Mid Semester	20	Section A: Contains 10 MCQs/Fill in the blanks/One Word Answer/ True-False type of questions. Each question carries 0.5 mark. Section B: Contains 07 descriptive questions out of which 05 questions are to be attempted. Each question carries 03 marks.
Class Test	05	Contains 05 descriptive questions . Each question carries 01 mark.
Activity/ Practical	10	Will be decided by subject teacher
Online Test/ Objective Test	05	Contains 10 multiple-choice questions . Each question carries 0.5 mark.
Assignment/ Presentation	05	Assignment to be made on topics and instruction given by subject teacher
Attendance	05	As per policy
Total Marks	50	

Course created by: **Ms. Iffat Jahan**

Signature:

Approved by: **Mr. Gaurav Rawat**

Signature: 