Daffodil Polytechnic Institute, Institute Code: 50238
Lesson Plan – Academic session: April 2022 to August 2022

Marks	Grade Point	Letter Grade	Marks	Grade Point	Letter Grade
80>	4.00	A+	55-59	2.75	B-
75-79	3.75	A	50-54	2.50	C+
70-74	3.50	A-	45-49	2.25	C
65-69	3.25	B+	40-44	2.00	D
60-64	3.00	B	0-39	0.00	F

Subject Teacher   : Shanta Islam, Instructor
Subject Name   : Architecture Rendering & Animation
Subject Code   : 68772
Technology   : Architecture and Interior Design Technology
Semester   : 7th
BTEB Text Book Name   : Architecture Rendering & Animation (Publisher: Haque Prokashani)
Reference Book Name   : Mastering Auto Desk 3ds Max 2013   by -Jeffrey Harper

Mark Distribution (for 150 Marks)			
Theory Marks		Practical Marks	
Midterm	20	PC	25
Class test	10	PF	25
Quiz test	10	-	-
Final	60	-	-
Total	100	Total	50

Class Timing Distribution	
Particulars	Time
Greeting with students	05 Minutes
Previous Class Review	05 Minutes
Present Class Topic Discussion and Lecture Delivery	30 Minutes
Present Class Topics Review	05 Minutes

Subject Aims:

- To be able to develop knowledge, skill and attitude in the field of Computer Rendering & Animation (3D Max and V-ray) with special emphasis on - 3D modeling.
- Materials and mapping.
- Light, camera and render.
- V-Ray; and animation.

Subject Outcome:

- 3D Modeling & Animation Software.
- 3D Modeling, Tool Panels & It's Sub Tools.
- Modeling with primitives and 3D Max main tool bar.
- Modeling with Spline, Compound Object and Modifier Stack.
- Setting and Preferences menu, Massing of Building Project.
- Doors, Windows, AEC Extended and Stair , Finishing of Massing , Materials Basics , Texture Mapping. Lighting Basic, Camera Basic, Rendering Basic.
- V-Ray, Render, V-ray Materials and Lights, Animation Basic, Key frame Animation, Work Throw Animation.

Date	Lecture	Chapter/Exam/Industrial Visit	Learning Area	Learning Outcome	Class/Lab Supporting Equipment's
	01	Chapter 01 & 02 – Practice 3D Modeling & Animation Software (3D Studio Max)	1) Identify the 3D max Interface. 2) Practice create tool and its sub tools like as Geometry, Shapes etc. 3) Identify Modify tool.	After the Class, Students will be able to: • 3d max interface and modify tool.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector

		And Perform Tool Panels & It's Sub Tools. (Practical Class)			3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=KwRkkGzA98k and https://www.youtube.com/watch?v=A2nsS6hSX30
	02	Chapter 01 – Understand 3D Modeling & Animation Software (3D Studio Max). (Theory Class)	1) Define 3D Studio Max. 2) Describe the interface of 3D Studio Max.	After the Class, Students will be able to: • Learn about the interface of 3D Studio Max .	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=D7LaYg5-pB0
	03	Chapter 03 – Practice Modeling with primitives. (Practical Class)	1) Draw Box, Cone, Sphere, Cylinder, Tube, Pyramid, Teapot and Plane by using Standard Primitives.	After the Class, Students will be able to: • Detail about standard primitives and other tools.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=M-WxAH1nu80
	O4	Class Test - 1	Examination Topic: Chapter 01 – Understand 3D Modeling & Animation Software (3D Studio Max). (Theory Based) Examination mark: 10 Passing Mark: 04		1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector

					3) Mobile with Internet Connection
	05	Chapter 02 – Understand 3D Modeling. (Theory Class)	1) Discuss different types of 3D Modeling. 2) Explain modeling with primitives.	After the Class, Students will be able to: • Learn about the types of 3D Modeling.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=OeCyTpnn_ck
	06	Chapter 04 – Practice Main tool bar. (Practical Class)	1) Practice Move, Rotate, Scale Tool, Mirror, Align tool.	After the Class, Students will be able to: • Learn about Move, Rotate, Scale Tool, Mirror, Align tool.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=xfTwNFtMAMM
	07	Quiz Test - 1	Examination Topic: Chapter 02 – Practice Modeling with primitives. (Practical Based) Examination mark: 10 Passing Mark: 04		1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection
	08	Chapter 03 – Understand materials and mapping.	1) Identify Materials editor dialog box. 2) Distinguish between materials and Mapping.	After the Class, Students will be able to: • Learn about the Materials editor dialog box.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System

		(Theory Class)			2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=_Zeuhe1vgxo
	09	Chapter 05 – Modeling with Spline. (Practical Class)	1) Draw line, Rectangle, Circle, Ellipse, Arc, Donut, Star etc. by using spline under Shapes tool.	After the Class, Students will be able to: • Become familiar with line, Rectangle, Circle, Ellipse, Arc, Donut, Star etc. by using spline under Shapes tool.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=VhpesOHL1kU
	10	Chapter 06 – Practice the Compound Object and Modifier Stack. (Practical Class)	1) Chamfer box and Modifier (Lattice, Noise and Smooth).	After the Class, Students will be able to: • Become familiar with Chamfer.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=wvalZ33dQ18
	11	Class Test - 2	Examination Topic: Chapter 03 – Understand materials and mapping. (Practical Based) Examination mark: 10 Passing Mark: 04		1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection

12	Chapter 07 – Practice Setting and Preferences menu. (Practical Class))	1) Apply unit Setup on 3D Max. 2) Prepare a 2D Plan of CAD to import 3D Max	After the Class, Students will be able to: • Learn about 3d max setting.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=0HFFTBAyxGM
13	Chapter 08 & 09 – Perform Massing of Building Project and practice Doors, Windows, AEC Extended and Stair etc. (Practical Class))	1) Crate Opening for Door and Window. 2) Create Door and modify it for the project.	After the Class, Students will be able to: • Make opening for Door and Window.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=Noig5B95brE
14	Quiz Test - 2	Examination Topic: Chapter 04 – Practice Main tool bar. (Practical Based) Examination mark: 10 Passing Mark: 04		1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection
15	Chapter 10 – Perform the Finishing of Massing. (Practical Class)	1) Create GF wall, Column, Boundary wall etc.	After the Class, Students will be able to: • Learn to create GF wall, Column, Boundary wall.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet

					Connection

					Lecture Slide: https://www.youtube.com/watch?v=W6YtdSfS5IE
	16	Chapter 11 – Perform Materials Basics (Practical Class)	1) Practice Material Editor Dialogue box and its necessary Tools.	After the Class, Students will be able to: • Use Material Editor Dialogue box.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=k451oobhJ9Q
	17	Chapter 04 – Understand light, camera and render. (Theory Class)	1) Identify different types of light. 2) Explain different types of camera.	After the Class, Students will be able to: • Use different types of light and camera.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=48_1l0WSCGA
	18	Chapter 12 – Practice Texture Mapping. (Practical Class)	1) Use Texture/Bitmap for material.	After the Class, Students will be able to: • Use Texture/Bitmap for material.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide:

	19	Chapter 13 – Perform Lighting Basic. (Practical Class)	1) Practice standard and Photometric Light.	After the Class, Students will be able to: • Use standard and photometric Light.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=CNhAU6NxBhA
	20	Chapter 01 – 04	Review Class Lecture 02,05,08, 17	After the Class, Students will be able to: • Regarding students problem – resolve their problems.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection
	21	Chapter 01 – 04	Review Class Lecture 02,05,08, 17	After the Class, Students will be able to: • Regarding students problem – resolve their problems.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection
		Chapter 01 – 04	Mid Term	Self-examine the depth of knowledge about drawing instrument, color and print media.	
	22	Chapter 14 – Perform Camera Basic. (Practical Class)	1) Insert Target and free Camera.	After the Class, Students will be able to: • Know the basics of camera tool.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System

					2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=JO1kNNoqnYY
	23	Chapter 05 – Understand V-Ray. (Theory Class)	1) Define V-Ray. 2) Describe V-Ray render setup.	After the Class, Students will be able to: • Learn about the V-Ray render setup.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=BGvmzPHk1FQ
	24	Chapter 15 – Perform Rendering Basic. (Practical Class)	1) Practice Render Setup dialogue Box.	After the Class, Students will be able to: • Learn about Render Setup dialogue Box.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=SvA1k8BbZLw
	25	Class Test - 3	Examination Topic: Chapter 05 – Understand V-Ray. (Theory Based) Examination mark: 10 Passing Mark: 04		1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection

	26	Chapter 06 – Understand Animation. (Theory Class)	1) Discuss basic concept of animation.	After the Class, Students will be able to: • Learn about the basic concept of animation.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=hxbMppi3gRg
	27	Chapter 16 – Perform V-Ray Render. (Practical Class)	1) Install V-ray software for 3d max.	After the Class, Students will be able to: • Install V-ray software for 3d max.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=h6yz01WHUAA
	28	Quiz Test - 3	Examination Topic: Chapter 06 – Understand Animation. (Theory Based) Examination mark: 10 Passing Mark: 04		1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection
	29	Chapter 06 – Understand Animation. (Theory Class)	1) Describe set key and auto key animation.	After the Class, Students will be able to: • Use set key and auto key animation.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet

					Connection Lecture Slide: https://www.youtube.com/watch?v=486qN4jWpl0&t=48s
	30	Chapter 17 – Perform V-ray Materials and Lights. (Practical Class)	1) Create a V-ray material slot for color and assign it to an object.	After the Class, Students will be able to: • Learn about V-ray material slot for color.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=5dXvVzIBMko
	31	Chapter 18 – Perform Animation Basic (Practical Class))	1) Practice time line & time track, Set Key, Auto key, play animation & time Configuration.	After the Class, Students will be able to: • Set Key and Auto key.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=1HWkiLwPWwE
	32	Class Test - 4	Examination Topic: Chapter 15 – Perform Rendering Basic. (Practical Based) Examination mark: 10 Passing Mark: 04		1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection
	33	Chapter 19 – Perform Key	1) Create a bouncing ball animation.	After the Class, Students will be able to: • Learn about bouncing ball	1) PC with internet connection, 3ds Max

		frame Animation. (Practical Class)		animation.	Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=GXtThw9QHiQ
	34	Chapter 20 – Perform Work Throw Animation. (Practical Class)	1) Setup Camera with walk through assistant.	After the Class, Students will be able to: • Learn about Camera with walk through assistant.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection Lecture Slide: https://www.youtube.com/watch?v=7EgvaYXm1LU
	35	Quiz Test -4	Examination Topic: Chapter 18 – Perform Animation Basic. (Practical Based) Examination mark: 10 Passing Mark: 04		1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection
	36	Chapter 10 – Three Dimensional Projection. (Practical Class)	1) Draw an isometric view of a simple object. 2) Draw an oblique view of a simple object.	After the Class, Students will be able to: • Draw objects in isometric and oblique view process.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection

					Lecture Slide: https://www.youtube.com/watch?v=kYgn4QhUqe4
	37	Presentation	Practical presentation on 3d Studio Max.		1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection
	38	Chapter 05 – 06	Review Class Lecture 22, 25, 28	After the Class, Students will be able to: • Regarding students problem – resolve their problems.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection
	39	Chapter 05 – 06	Review Class Lecture 22, 25, 28	After the Class, Students will be able to: Regarding students problem –resolve their problems.	1) PC with internet connection, 3ds Max Software, V-ray rendering software, Sound System 2) Projector 3) Mobile with Internet Connection