

3 Year Diploma Programme in  
**3D Character Design & Development**



**JAGRAN INSTITUTE OF DIGITAL ANIMATION**

An initiative of Jagran Group

620, W-Block, Saket Nagar, Kanpur-208014 (U.P.)

**website: [www.jidakanpur.com](http://www.jidakanpur.com)**

# JAGRAN INSTITUTE OF DIGITAL ANIMATION

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<b>STUDY &amp; EVALUATION SCHEME</b>	
<b>Institute</b>	Jagran Institute of Digital Animation
<b>Programme</b>	3D Character Design & Development
<b>Duration</b>	3 Year Full Time Diploma Programme(6 Module)
<b>Minimum Required Attendance</b>	80%

<b>ASSESSMENT</b>			
<b>Evaluation</b>		<b>Internal</b>	<b>Total</b>
<b>Theory</b>		100	100
<b>Practical/Viva-Voca</b>		100	100
<b>Class test-1</b>	<b>class test-2</b>	<b>Assignment(s) and Attendance</b>	<b>Total</b>
40	40	20	100
<b>Duration of Examination</b>		<b>Internal</b>	
		<i>Theory</i>	<i>Practical</i>
		3 Hours	6 Hours

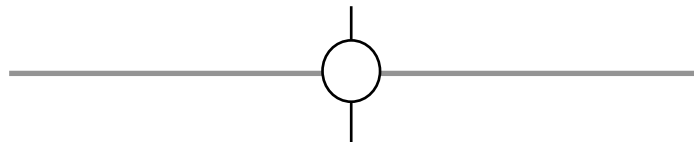
To qualify the course a student is required to secure a minimum of 40% marks in aggregate including the module end examination and teachers continuous evaluation. A candidate who secures less than 40% of marks in a course shall be deemed to have failed in that course. The student should have at least 40% marks in aggregate to clear the module.

## PROGRAM STRUCTURE- 3D CHARACTER DESIGN & DEVELOPMENT

### **Introduction:**

3D character design & development is a 3 year diploma program. The course covers advanced techniques in: Props Modeling, Character Modeling, Robotic Modeling, Texturing, Sculpting. By the end of the course you will be able to create a range of high and low poly character models, props models, Robotics model for both film and Game Design. After completing the program successfully student will be able to;

- Demonstrate techniques of 3D Character Modeling and digital image manipulation.
- Understand the production pipeline.
- Work with high end 3d software.
- Produce work portfolio/showreel for employer engagement.



**MANUL  
MODULE-01**

S. No.	Course Code	Course Name	Periods		Evaluation Scheme	
			T	P	Internal	Total
1	MAN-101	Introduction of Maual Art and Anatomy & Drawing	20	43	100	100
2	MAN-102	Figure Study Drawing	20	33	100	100
3	MAN-103	Prespective Drawing Study and Rhythm & Grace	25	53	100	100
4	MAN-104	Concept Development Study	21	33	100	100
5	MAN-105	Project Development	10	30	100	100
		<b>TOTAL</b>	<b>96</b>	<b>192</b>	<b>500</b>	<b>500</b>

*Theory(T) = 1 Lecture = 1 Hour*

*Practical(P) = 1 Practical Lab = 2 Hours*

*Theory Paper = MAN-101*

*Practical Papers = MAN-102, MAN-103, MAN-104, MAN-105*

**BASICS OF GRAPHIC & VISUAL DESIGN  
MODULE-02**

S. No.	Course Code	Course Name	Periods		Evaluation Scheme	
			T	P	Internal	Total
1	BGVD-101	The Fundamentals of Graphic Design	10	10	100	100
2	BGVD-102	The Fundamentals of color Theory	10	10	100	100
3	BGVD-103	Introduction of Adobe Photoshop	33	65	100	100
4	BGVD-104	Introduction of Vector Graphic & Illustration	33	65	100	100
5	BGVD-105	Project Development	10	42	100	100
		<b>TOTAL</b>	<b>96</b>	<b>192</b>	<b>500</b>	<b>500</b>

*Theory(T) = 1 Lecture = 1 Hour*

*Practical(P) = 1 Practical Lab = 2 Hours*

*Theory Paper = BGVD-101, BGVD-102*

*Practical Papers = BGVD-103, BGVD-104, BGVD-105*

**3D CHARACTER DESIGN & DEVELOPMENT  
MODULE-03**

S. No.	Course Code	Course Name	Periods		Evaluation Scheme	
			T	P	Internal	Total
1	CDD-101	Fundamental of Autodesk Maya & Basics of Modeling	20	40	100	100
2	CDD-102	Introduction Of Hard Surface Modelling	36	80	100	100
3	CDD-103	Introduction Of Unwrapping & Textuing	15	20	100	100
4	CDD-104	Introduction of Lighting & Shading	15	20	100	100
5	CDD-105	Project Development	10	32	100	100
TOTAL			96	192	500	500

**Theory(T)** = 1 Lecture = 1 Hour

**Practical(P)** = 1 Practical Lab = 2 Hours

**Theory Paper** = CDD-101

**Practical Papers** = CDD-101, CDD-102, CDD-103, CDD-104, CDD-105

**3D CHARACTER DESIGN & DEVELOPMENT  
MODULE-04**

S. No.	Course Code	Course Name	Periods		Evaluation Scheme	
			T	P	Internal	Total
1	CDD-106	Introduction of Humen Anatomy and Clay Modeling for Character	25	36	100	100
2	CDD-107	3D Character Modeling	26	40	100	100
3	CDD-108	3D Character Unwrapping and Sculpting	30	50	100	100
4	CDD-109	3D Character Lighting & Shading	5	15	100	100
5	CDD-110	Project Development	10	45	100	100
6	CDD-111					
TOTAL			96	192	500	500

**Theory(T)** = 1 Lecture, Means = 1 Hour

**Practical(P)** = 1 Practical Lab Means = 2 Hours

### 3D ADVANCED CHARACTER DESIGN & DEVELOPMENT

#### MODULE-05

S. No.	Course Code	Course Name	Periods		Evaluation Scheme	
			T	P	Internal	Total
1	ACDD-101	Robotic Character Modeling	25	36	100	100
2	ACDD-102	3D Realistic Character Modeling	26	40	100	100
3	ACDD-103	Advanced Unwrapping Techniques	30	50	100	100
4	ACDD-104	Advanced Character Sculpting and Texturing	5	15	100	100
5	ACDD-105	Project Development	10	45	100	100
TOTAL			96	192	500	500

*Theory(T) = 1 Lecture, Means = 1 Hour*      |      *Practical(P) = 1 Practical Lab Means = 2 Hours*

### 3D ADVANCED CHARACTER DESIGN & DEVELOPMENT

#### MODULE-06

S. No.	Course Code	Course Name	Periods		Evaluation Scheme	
			T	P	Internal	Total
1	ACDD-101	Production Work of Showreel Development	10	200	100	100
2	ACDD-102	Project Management and Post Production Work of Showreel Development	10	43	100	100
3	ACDD-103	Communication & Interview Skills	15	0	100	100
4	ACDD-104	Project Presentation	0	0	200	200
TOTAL				243	500	500

*Theory(T) = 1 Lecture, Means = 1 Hour*      |      *Practical(P) = 1 Practical Lab Means = 2 Hours*

	<b>COURSE-01</b> <b>MANUL - MODULE-01</b>
<b>Course Code:</b> MAN-101	<b>Introduction of Maual Art and Anatomy &amp; Drawing</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding Manual Art history.
CO-02	Understanding basic principals of Drawing.
CO-03	Understanding humany Anatomy.
CO-04	understand human anatomy and methods of drawing and will be made drawing human body.
<b>Course Content</b>	
UNIT-01	Introduction of Manual Art, Balance, Unity, rhythm, harmony, pattern;
UNIT-02	Balance, Proportion, Emphasis, Variety, Movement, Rhythm, Harmony;
UNIT-03	Human Anatomy proportion; Line Drawing; Basic details of human Anatomy;
UNIT-04	understand human anatomy and methods of drawing;
	<b>COURSE-02</b> <b>MANUL - MODULE-01</b> <b>Figure Study Drawing</b>
<b>Course Code:</b> MAN-102	
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding gesture art method; Basics Proportion of human figure;
CO-02	Understanding volume constructions; Balance; Muscles;
CO-03	understanding lighting and shading concept;
CO-04	Developing ability to see the flow of action of the figure:

<b>Course Content</b>	
<b>UNIT-01</b>	
<b>UNIT-02</b>	
<b>UNIT-03</b>	
<b>UNIT-04</b>	
<b>COURSE-03</b>	
<b>Course Code: MAN-103</b>	<b>MANUL - MODULE-01</b>
	<b>Prespective Drawing Study and Rhythm &amp; Grace</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Understanding of the eternal rhythm, which in inside on each natural object. It is only through this understanding that you can bring out the inner beauty of each creation of art.
<b>CO-02</b>	Understanding of the perspective projection, drawing – Its types, methods, technical terms, procedure, methods, etc.
<b>Course Content</b>	
<b>UNIT-01</b>	Fashion Figure Study; Portrait Design Method; Coloring & Shading;
<b>UNIT-02</b>	Principles OF Perspective Projection; Technical Terms OF Perspective Drawing ; Parallel Perspective Drawing; Angular Perspective



<b>Course Code:</b> <b>MAN-104</b>	<b>COURSE-04</b> <b>MANUL - MODULE-01</b> <b>Concept Development Study</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Understanding of the live sketching method.
<b>CO-02</b>	Able to design marketing and communication design concepts.
<b>Course Content</b>	
<b>UNIT-01</b>	Understanding of the eternal rhythm, which in inside on each natural object. It is only through this understanding that you can bring out the inner beauty of each creation of art.
<b>UNIT-02</b>	Logo design; Poster Desing; Packaging Design; Label Creation etc.
<b>Course Code:</b> <b>MAN-105</b>	<b>COURSE-05</b> <b>MANUL - MODULE-01</b> <b>Project Development</b>
<b>Course Outcomes:</b>	
<ul style="list-style-type: none"> <li>■ Interior Concept Design with Color &amp; Shading;</li> <li>■ Exterior Design Concept with Color &amp; Shading;</li> <li>■ Portrait Design Concept with Color &amp; Shading;</li> <li>■ Fashion Figure Design Concept Color &amp; Shading;</li> </ul>	

<b>Course Code: BGVD-101</b>	<b>CORE COURSE-01 BASICS OF GRAPHIC &amp; VISUAL DESIGN - MODULE-02 The Fundamentals of Graphic Design</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Understanding the Elements of design.
<b>CO-02</b>	Understanding the principles of graphic design.
<b>CO-03</b>	Understanding the Composition Graphic design
<b>Course Content</b>	
<b>UNIT-01</b>	The Line; The Shape; Color; Value; Space;
<b>UNIT-02</b>	Balance; Proportion; Contrast; Rhythm; Harmony and Unity;
<b>UNIT-03</b>	Single Visual; The Golden Ratio; Focal Point; Grid Design; Gestalt Laws; The "Z" and "F" Layout;
<b>CORE COURSE-02 BASICS OF GRAPHIC &amp; VISUAL DESIGN - MODULE-02 The Fundamentals of color Theory</b>	
<b>Course Code: BGVD-102</b>	
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Understanding the Elements of design.
<b>Course Content</b>	
<b>UNIT-01</b>	RGB: the additive color mixing model; CMYK: the subtractive color mixing model; Color wheel basics; Hue, shade, tint and tone; Color schemes: Complementary colors, Analogous colors, Triadic colors;

<b>Course Code:</b> <b>BGVD-103</b>	<b>CORE COURSE-03</b> <b>BASICS OF GRAPHIC &amp; VISUAL DESIGN - MODULE-02</b> <b>Introduction of Adobe Photoshop</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Understanding the basic concepts of graphics and image editing in Adobe Photoshop.
<b>CO-02</b>	Understanding the basics of print media design and digital typography in Adobe Photoshop.
<b>CO-03</b>	Understanding the techniques of digital painting, matte painting and image retouching in Adobe Photoshop
<b>CO-04</b>	Applying the techniques and tools in Adobe Photoshop.
<b>CO-05</b>	Creating the elements of Web page template design in Adobe Photoshop
<b>Course Content</b>	
<b>UNIT-01</b>	Introduction: Photoshop and its interface, Navigation and All tools, Layer concept, working with basic selections, advanced, transform ,selection transform, Selections-1(on the basis of channels, colour range, extract, filter etc), Exercises on marquee tools,
<b>UNIT-02</b>	Pen tool ,Shapes ,Path, path selection, Text tool, types of text tools, digital typography, print designs, blending options, gradient tool, blending modes, RGB channels.
<b>UNIT-03</b>	Perspective drawing Lights and shadows day night scenes, Concept of layers, Back ground, stage, foreground elements, Layout designs.
<b>UNIT-04</b>	Color theory, basic of color, fill type, layer style, adjustment layer, group layer, Layer menu, Color adjustment, Image menu. Convert a B&W image into color (Use variation), Choose a theme (Music, Festivals, Sports, Dance) and Design 5-8 graphics based on it, Color Modes, Color Corrections, Advanced color correction techniques (levels, Curves, Hue, Saturation etc), Design an graphical Ad from your own style and imagination.
<b>UNIT-05</b>	Filters, vector Mask, layer mask, clipping path mask, Concepts of matte painting, Creation of digital matte painting. Action, creation of panorama image. Camera raw tools. tribal art, create an animal character, “Plan a story of that character & Make its backgrounds in three/four frames”, Make posters on nature/earth, Matte Painting, Composition, Creating images for the web: Exporting images from Photoshop.

<b>Course Code:</b> BGVD-104	<b>CORE COURSE-04</b> <b>BASICS OF GRAPHIC &amp; VISUAL DESIGN - MODULE-02</b> <b>Introduction of Vector Graphic &amp; Illustration</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Understanding the concepts of Graphic Design & vector illustration in Adobe illustrator and its application using various tool.
<b>CO-02</b>	Understanding the knowledge drawing & colors to create the 2D animation background in Adobe illustrator.
<b>CO-03</b>	Understanding the uses of advance tools of Adobe illustrator in creation of advertisement and infographics.
<b>CO-04</b>	Analyzing the elements used for graphics designing and print media in adobe illustrator.
<b>CO-05</b>	Applying the techniques and tools in Adobe illustrator.
<b>Course Content</b>	
<b>UNIT-01</b>	Introduction to Adobe Illustrator: Introduction to Adobe Illustrator, work area, work-spaces and tools. Opening files, importing art work, viewing art work, rulers and grids.
<b>UNIT-02</b>	Drawing in Illustrator, drawing lines and shapes, pencil tool, pen tool, editing drawing, tracing, symbols, colouring, applying colours, swatches, adjusting colour and colour settings.
<b>UNIT-03</b>	Painting with Illustrator, fills, strokes, brushes, transparency, blending, gradient, meshes and colour blending. Selecting, Transformation, Scaling, Grouping, Reshaping, Cutting, Blending of objects.
<b>UNIT-04</b>	Creating 3D object, text and typing, special effects, filters, shadows, glow, feathering graphic styles.
<b>UNIT-05</b>	Clipping mask, Create outlines, templates, graphic style, file formats, Export illustrator Files in Other Formats.
<b>Course Code:</b> MAN-105	<b>CORE COURSE-05</b> <b>MANUL - MODULE-01</b> <b>Project Development</b>
<b>Course Outcomes:</b>	

<b>Course Code:</b> CDD-101	<b>COURSE-06</b>
	3D CHARACTER DESIGN & DEVELOPMENT - MODULE-03 <b>Fundamental of Autodesk Maya &amp; Basics of Modeling</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding the interface and come to know about various tools available in Maya.
CO-02	Understanding modeling with Maya.

### Course Content

<b>UNIT-01</b>	Introduction to the interface of Maya, Menu bar, Tool bar, hot box, The channel box, Using the shelf, hot keys, Hot keys, manipulating a view. Creating objects: Simple primitives, Cameras. Selecting objects, types of selection, Single selection, adding and subtracting selection. Edit menu selection options, Marquee selection, Lasso selection, hyper shade, Relationship editor, hyper graph and outliner.
<b>UNIT-02</b>	Duplicating objects, Pivot points, Introduction to snapping, Types of Snapping, Layer Editors, Introduction to Maya Shaders, Introduction to Polygon modeling, Poly modeling tools, NURBS modeling, Nurbs and surface Modeling tools, Creating backgrounds, interiors, exteriors etc.

<b>Course Code:</b> CDD-102	<b>COURSE-07</b>
	3D CHARACTER DESIGN & DEVELOPMENT - MODULE-03 <b>Introduction Of Hard Surface Modelling</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding the hard surface modeling techniques.
CO-02	able to design hard surface 3D Gun Modeling in Autodesk Maya.
CO-03	able to design hard surface 3D vehical Modeling in Autodesk Maya.

### Course Content

<b>UNIT-01</b>	Modeling a high poly model, Technical issues related to managing high poly model. Difference between hi-poly & low-poly props moeling.
<b>UNIT-02</b>	Modeling different part of props bodies, Modeling the Gun(Hard Surface Model) using templates & view port references, Optimizing the final model, refining the mesh, testing the model.
<b>UNIT-03</b>	Modeling different part of props bodies, Modeling the Bike(Hard Surface Model) using templates & view port references, Optimizing the final model, refining the mesh, testing the model.

<b>Course Code:</b> CDD-103	<b>COURSE-08</b> 3D CHARACTER DESIGN & DEVELOPMENT - MODULE-03 <b>Introduction Of Unwrapping &amp; Textuing</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding the Unwrapping techniques.
CO-02	able to Unwrap and Texture hard surface 3D Gun Model in Autodesk Maya.
CO-03	able to Unwrap and Texture hard surface 3D Bike Model in Autodesk Maya.
<b>Course Content</b>	
UNIT-01	Introduction of Unwapping, UV Editor, UV Set Editor, Mapping method: Automatic, Camera-based, Normal-Based, Cylindrical, Planeer, Spherical; UV Tools: Cut UV Edges, Sew UV Ediges, Split UV Edges, Sew UV Edges, Split UVs, Delete Uvs, Merge UVs etc.
UNIT-02	Unwrap different part of props bodies, Texture the props(Gun) using photoshop, testing the model.
UNIT-03	Unwrap different part of props bodies, Texture the props(Gun) using photoshop, testing the model.
<b>Course Code:</b> CDD-104	<b>COURSE-09</b> 3D CHARACTER DESIGN & DEVELOPMENT - MODULE-03 <b>Introduction of Lighting &amp; Shading</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding the different kinds of lights and light setup in a Maya scene.
CO-02	Able to create lighting setup for hard surface Modelilng Environment in Autodesk Maya.
<b>Course Content</b>	
UNIT-01	Introduction to CG Lighting, Working with Maya Lights 1-Point, Direct, Spot, Working with Maya Lights 2-Ambient, Area and Volume, Direct Illumination-Creating and Illuminating a Stage Show, Three Point Lighting and Exterior Lighting.
UNIT-02	Lighting setup for Gun and Bike hard surface models.

<b>Course Code:</b> <b>MAN-105</b>	<b>CORE COURSE-10</b> <b>MANUL - MODULE-01</b> <b>Project Development</b>
<b>Course Outcomes:</b>	
<b>Course Code:</b> <b>CDD-106</b>	<b>COURSE-11</b> <b>3D CHARACTER DESIGN &amp; DEVELOPMENT - MODULE-04</b> <b>Introduction of Human Anatomy and Clay Modeling for Character</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Understanding the character human anatomy using clay modeling.
<b>Course Content</b>	
<b>UNIT-01</b>	Introduction of human anatomy, Clay Modeling;
<b>Course Code:</b> <b>CDD-107</b>	<b>COURSE-12</b> <b>3D CHARACTER DESIGN &amp; DEVELOPMENT - MODULE-04</b> <b>3D Character Modeling</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Understanding 3D character modeling techniques using The Autodesk Maya Software.
<b>Course Content</b>	
<b>UNIT-01</b>	Modeling a high poly model, Technical issues related to managing high poly model. Modeling different part of Human and Animal bodies, Modeling the character using templates & view port references, Optimizing the final model, refining the mesh, basic posture, testing the model, Difference between hi-poly & low-poly characters.

<b>Course Code:</b> CDD-108	<b>COURSE-13</b>  3D CHARACTER DESIGN & DEVELOPMENT - MODULE-04  <b>3D Character Unwrapping and Sculpting</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Understanding 3D character Unwrapping techniques using The Autodesk Maya Software.
<b>CO-02</b>	Understanding the concept of Z-brush, working with layout, palettes, canvas, etc.
<b>CO-03</b>	Understanding to combination of Autodesk Maya with Z-brush for a final output.
<b>CO-04</b>	Understanding to use various lighting, shadows and texturing technique.
<b>CO-05</b>	Applying the mapping and skinning of the Z-brush Models.
<b>CO-06</b>	Applying the brushes , render and final posing of 3D characters in Z-brush.
<b>Course Content</b>	
<b>UNIT-01</b>	canvas, working with layouts, working with layouts, working with palettes, Z-Brush configuration, using startup documents, tray modes, working with Z-Script palette and working with the preference palette.
<b>UNIT-02</b>	Types of tools in Z-Brush 4, modes, options and related palettes, explaining the tool palette, working with tools, working with pixel based tools, working with gyro tool, Autodesk Maya and Autodesk 3ds max settings, Introduction to Go-Z, introduction to curves, the alpha adjust curve, the edit curve, the smoothing curve, the diffuse curve, the specular curve, the trans curve, the reflect curve, the noise curve and the intensity curve
<b>UNIT-03</b>	Strokes, lighting, shadows, transformation, working with alphas, texture concepts, texture inventory, understanding the texture palette, texture mapping, seamless textures, spot light texturing, painting textures and materials. Imm-plugins.
<b>UNIT-04</b>	Creases mesh visibility, multi-resolution modeling, edge loop, different maps, explain projection master, working with Z-Spheres, understanding adaptive skinning and understanding unified skinning.
<b>UNIT-05</b>	Sculpting, sculpting brushes, using stencils, sculpting using projection master, understanding and render palette and posing characters.



<b>Course Code:</b> CDD-109	<b>COURSE-14</b> 3D CHARACTER DESIGN & DEVELOPMENT - MODULE-04 <b>3D Character Lighting &amp; Shading</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>
<b>CO-01</b>	Analyzing the use of lights and to set their attributes more precisely in Autodesk Maya Software.
<b>CO-02</b>	Analyzing how to get final output of their scene using various rendering techniques in Autodesk Maya Software.
<b>CO-03</b>	Understanding to use various lighting, shadows and texturing technique and applying various rendering techniques of maya lighting to achieve desired output.
<b>CO-04</b>	Understanding the light setup for 3D Character in a Maya scene.
<b>Course Content</b>	
<b>UNIT-01</b>	
<b>UNIT-02</b>	
<b>UNIT-03</b>	
<b>UNIT-04</b>	
	<b>COURSE-15</b>
<b>Course Code:</b> CDD-110	3D CHARACTER DESIGN & DEVELOPMENT - MODULE-05 <b>Project Development</b>
<b>Course Outcomes:</b>	

<b>COURSE-14</b>	
<b>Course Code:</b> CDD-111	3D ADVANCED CHARACTER DESIGN & DEVELOPMENT - MODULE-05 <b>3D Robotic Inorganic Modeling</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding to advanced 3D Robotic character modeling using Autodesk MayaSoftware.
<b>Course Content</b>	
UNIT-01	
<b>COURSE-15</b>	
<b>Course Code:</b> CDD-112	3D ADVANCED CHARACTER DESIGN & DEVELOPMENT - MODULE-05 <b>Advanced Character Sculpting and Texturing</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding to advanced unwrapping techniques using Autodesk Maya & 3D Coat Software.
<b>Course Content</b>	
UNIT-01	Advanced Unwrapping Techniques, 3D Coat Software Introduction and UV Unwrapping.
<b>COURSE-16</b>	
<b>Course Code:</b> CDD-113	3D ADVANCED CHARACTER DESIGN & DEVELOPMENT - MODULE-05 <b>3D Realistic Character Modeling</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding to use various advanced sculpting and texturing technique using Z-brush and Substance Painter Software.
<b>Course Content</b>	
UNIT-01	Advanced Sculpting in Zbrush; Introduction of substance painter: Model Import and Map Baking, Types of layer, Laayer stack and blen modes, Adding folder, Paint Layer Workflow, Dirt layer, Fill Layers Intro Components,Fill Layers And Masks,Fill Layers And Generators,Smart Materials Editing Mesh,Creating texture set, Painting with Opacity, Alpha patch etc.

<b>COURSE-17</b>	
<b>Course Code:</b> CDD-114	3D ADVANCED CHARACTER DESIGN & DEVELOPMENT - MODULE-05 <b>Project Development</b>
<b>Course Outcomes:</b>	
<b>COURSE-18</b>	
<b>Course Code:</b> CDD-112	3D ADVANCED CHARACTER DESIGN & DEVELOPMENT - MODULE-06 <b>Production Work of Showreel Development</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding to advanced rendering and render passes techniques using Autodesk Maya Software.
<b>Course Content</b>	
UNIT-01	render layer,Arnold rendering, AOVs and Render Settings, Introduction to multi-render passes: Diffuse without shadow pass for layer, Reflection pass for layer, Shadow pass for layer, Specular without shadow pass for layer, Beauty pass for layer, Ambient Occlusion Pass, Lighting Pass etc.
<b>COURSE-19</b>	
<b>Course Code:</b> CDD-112	3D ADVANCED CHARACTER DESIGN & DEVELOPMENT - MODULE-06 <b>Project Management and Post Production Work of Showreel Development</b>
<b>Course Outcome:</b>	<b>On completion of the course, the students will be :</b>
CO-01	Understanding to Project Management Workflow.
CO-02	Understanding to Post Production work flow using Adobe Photoshop Software, Adobe Premiere Pro Software and After Effect Software.
<b>Course Content</b>	
UNIT-01	Folder Management, Naming Convention etc.
UNIT-02	Composite Render Passes in Adobe Photoshop for Still Output. Composite Render Passes in Adobe After Effect for Video Output. Render final output in .MP4 format using Adobe Premiere with Sound Effect and Background Music.

**COURSE-20****Course Code:**  
CDD-112

3D ADVANCED CHARACTER DESIGN &amp; DEVELOPMENT - MODULE-06

**Communication & Interview Skills****Course Outcome:****On completion of the course, the students will be :**

CO-01

Utilizing effective verbal and non-verbal communication techniques in formal and informal settings

CO-02

Understanding and analyzing self and devising a strategy for self growth and development.

CO-03

Adapting a positive mindset conducive for growth through optimism and constructive thinking.

**Course Content**

UNIT-01

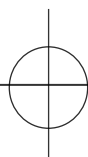
Personal Development: Personal growth and improvement in personality, Perception, Positive attitude, Values and Morals, High self motivation and confidence, Grooming;

UNIT-02

Professional Development: Goal setting and action planning, Effective and assertive communication, Decision making, Time management, Presentation Skills, Happiness, Risk taking and facing unknown;

UNIT-03

Career Development: Resume Building, Occupational Research, Group discussion (GD) and Personal Interviews

**JAGRAN INSTITUTE OF DIGITAL ANIMATION**

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