

Session Plan

Subject Name: Computer Graphics Multimedia and Animation

Subject Code: 601

Name of Faculty: Mrs. Monika Sahu

Course Outcomes

Subject Name: Computer Graphics Multimedia and Animation

Subject Code: 601

After completion of this course the student will be able to:

CO 601.1 : Understand basic concepts of computer graphics and scanning, and work over the various graphics algorithm.

CO 601.2 : Perform various transformations of objects on paper.

CO 601.3 : Identify the type of projection, shading and colour models.

CO 601.4 : Explain basics of multimedia technology like images, audio, video with their formats.

CO 601.5 : Work over flash player to create animation .

Unit I: Introduction to Computer Graphics

S.No	Topic Name	CO Attempted	Resources Used	Mode of Teaching	Expected Date	Actual Date	Remark
1	Definition of Computer Graphics	CO 601.1	Chalk and Board	Lecture Method	22/01/18		
2	Application of Computer Graphics	CO 601.1	Chalk and Board	Lecture Method	23/01/18		
3	Graphics Hardware	CO 601.1	Chalk and Board	Lecture Method	24/01/18		
4	Input and Output Devices	CO 601.1	Chalk and Board	Lecture Method	25/01/18 27/01/18		
5	Display Devices	CO 601.1	Chalk and Board	Lecture Method	29/01/18 30/01/18		
6	Refreshing Display Devices <ul style="list-style-type: none">• Raster-Scan• Random-Scan	CO 601.1	Chalk and Board	Lecture Method	01/02/18		
7	Revision and doubt solving class	CO 601.1	Chalk and Board	Lecture Method	02/02/18		
8	Unit test	CO 601.1	Pen and paper	Written and quiz	03/02/18		

Expected Study Hours: 10 hrs

Actual Study Hours:

Reason for Delay

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Unit II: Graphics Primitives

S.No	Topic Name	CO Attempted	Resources Used	Mode of Teaching	Expected Date	Actual Date	Remark
1	Points and Lines	CO 601.1	Chalk and Board	Lecture Method	5/02/18		
2	Line-drawing Algorithms <ul style="list-style-type: none">• DDA Algorithm	CO 601.1	Chalk and Board	Lecture Method	6/02/18		
3	Bresenham's line Algorithm	CO 601.1	Chalk and Board	Lecture Method	7/02/18		
4	Circle-generating Algorithm <ul style="list-style-type: none">• Midpoint Circle of Algorithm	CO 601.1	Chalk and Board	Lecture Method	8/02/18		
5	Polygon Filling Algorithm: Scan-Line	CO 601.1	Chalk and Board	Lecture Method	9/02/18 10/02/18		
6	Revision and doubt solving class	CO 601.1	Chalk and Board	Lecture Method	12/02/18		
7	Unit test	CO 601.1	Pen and paper	Written and quiz	13/02/18		

Expected Study Hours:8 hours

Actual Study Hours:

Reason for Delay

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Unit III: Transformation, 2-D Viewing and Clipping

S.No	Topic Name	CO Attempted	Resources Used	Mode of Teaching	Expected Date	Actual Date	Remark
1	Basic Transformations (2D and 3D) <ul style="list-style-type: none"> • Translation • Rotation • Scaling • Shear • Reflection 	CO 601.2	Chalk and Board	Lecture Method	15/02/18 16/02/18 17/02/18		
2	Composite Transformations <ul style="list-style-type: none"> • Rotations about a point • Reflection about a line • Homogeneous Coordinate Systems 	CO 601.2	Chalk and Board	Lecture Method	19/02/18 20/02/18		
3	Clipping <ul style="list-style-type: none"> • Point Clipping • Line Clipping - Cohen-Sutherland Clipping algorithm. • Polygon Clipping: Sutherland Hodgeman Algorithm 	CO 601.2	Chalk and Board, Projector	Lecture Method, Presentation	21/02/18 22/02/18		
4	Windowing Transformation	CO 601.2	Chalk and Board	Lecture Method	23/02/18		
5	Revision	CO 601.2	-	Discussion	24/02/18		
6	Unit Test	CO 601.2	Pen and paper	Written and quiz	26/02/18		

Expected Study Hours: 10 hrs

Actual Study Hours:

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Unit IV: Projection

S.No	Topic Name	CO Attempted	Resources Used	Mode of Teaching	Expected Date	Actual Date	Remark
1	Parallel Projection: <ul style="list-style-type: none">• Orthographic• Axonometric• Oblique	CO 601.3	Chalk and Board, Computer	Lecture & Demo	27/02/18 28/02/18		
2	Perspective Projection: <ul style="list-style-type: none">• Standard Perspective• Projection General• Perspective Projection• Vanishing Points	CO 601.3	Chalk and Board, Computer	Lecture & Demo	1/03/18 5/03/18 6/03/18		
3	Revision	CO 601.3	-	Discussion	7/03/18		
4	Unit Test	CO 601.3	Pen and paper	Written and quiz	8/03/18		

Expected Study Hours: 07 hrs

Actual Study Hours:

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Unit V: Memory Shading, Colour model and Illumination

S.No	Topic Name	CO Attempted	Resources Used	Mode of Teaching	Expected Date	Actual Date	Remark
1	Chromaticity diagram <ul style="list-style-type: none"> • RGB • CMY • HSV • HLS • CIE model 	CO 601.3	Chalk and Board	Lecture Method	9/03/18 10/03/18 12/03/18		
2	Realism in rendering	CO 601.3	Chalk and Board	Lecture Method	13/03/18		
3	Image manipulation: Illumination models	CO 601.3	Chalk and Board	Lecture Method	14/03/18		
4	Shading models for polygons <ul style="list-style-type: none"> • Gouraud shading • Phong shading • Shadows • Transparency 	CO 601.3	Chalk and Board	Lecture Method	15/03/18		
5	Image Filtering image processing	CO 601.3	Chalk and Board	Lecture Method	16/03/18		
6	Geometric Transformation of images	CO 601.3	Chalk and Board	Lecture Method	17/03/18		
7	Revision	CO 601.3	-	Discussion	20/03/18		
8	Unit Test	CO 601.3	Pen and paper	Written and quiz	21/03/18		

Expected Study Hours: 08 hrs

Actual Study Hours:

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Unit VI: Basics of Multimedia Technology

S.No	Topic Name	CO Attempted	Resources Used	Mode of Teaching	Expected Date	Actual Date	Remark
1	Concepts of Multimedia: <ul style="list-style-type: none"> Types Data Streams Hardware and Software Requirements and Applications Multimedia Authoring 	CO 601.4	Chalk and Board	Lecture Method	22/03/18 23/03/18		
2	Digital Audio: <ul style="list-style-type: none"> Audio Sampling Recording Digital Audio Audio Standards for Multimedia Applications 	CO 601.4	Chalk and Board	Lecture Method	24/03/18		
3	MIDI File Formats, MIDI Hardware and Software.	CO 601.4	Chalk and Board	Lecture Method	26/03/18		
4	Image Compression Standards: Types.	CO 601.4	Chalk and Board	Lecture Method	27/03/18		
5	Video Compression and Standards: <ul style="list-style-type: none"> Compression Standards MPEG Compression Basics MPEG-1 MPEG-2 MPEG-4 	CO 601.4	Chalk and Board	Lecture Method	28/03/18 31/03/18		
6	Hypertext and Hypermedia	CO 601.4	Chalk and Board, Projector	Lecture Method, Presentation	2/04/18		
7	Revision	CO 601.4	-	Discussion	3/04/18		
8	Unit Test	CO 601.4	Pen and paper	Written and quiz	4/04/18		

Expected Study Hours:10 Hrs

Actual Study Hours:

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Unit VII: Graphics Image File Formats

S.No	Topic Name	CO Attempted	Resources Used	Mode of Teaching	Expected Date	Actual Date	Remark
1	Raster Format,	CO 601.4	Chalk and Board	Lecture Method	5/04/18		
2	Bitmap (BMP) Format,	CO 601.4	Chalk and Board	Lecture Method	6/04/18		
3	Graphics Interchange Format (GIF),	CO 601.4	Chalk and Board	Lecture Method	7/04/18		
4	Joint Photographic Experts Group (JPEG),	CO 601.4	Chalk and Board	Lecture Method	9/04/18		
5	Tagged Image File Format (TIFF),	CO 601.4	Chalk and Board	Lecture Method	10/04/18		
6	Portable Network Graphics (PNG) and their differences.	CO 601.4	Chalk and Board, Projector	Lecture Method, Presentation	11/04/18		
7	Revision	CO 601.4	-	Discussion	12/04/18		
8	Unit Test	CO 601.4	Pen and paper	Written and quiz	13/04/18		

Expected Study Hours:08 Hrs

Actual Study Hours:

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Unit VIII: Computer Animation

S.No	Topic Name	CO Attempted	Resources Used	Mode of Teaching	Expected Date	Actual Date	Remark
1	Development of Animations: <ul style="list-style-type: none"> Non Computer and Computer Based Animations Different Types of Animations. 	CO 601.5	Chalk and Board	Lecture Method	16/04/18 17/04/18		
2	Flash Basics: Flash Work Flow, Animation Using Flash	CO 601.5	Chalk and Board	Lecture Method	19/04/18		
3	The Flash Work Environment: <ul style="list-style-type: none"> The Stage and the Time Line Symbols and Instances Symbols and Interactive Movies Using the Tool Box Using Panels Using Context Menus Moving the Play Head 	CO 601.5	Chalk and Board	Lecture Method	20/04/18 21/04/18 23/04/18		
4	Working the Frames using time line.	CO 601.5	Chalk and Board	Lecture Method	24/04/18 25/04/18		
5	Drawing Overview: <ul style="list-style-type: none"> Flash Drawing and Painting Tools Working With Color Using Imported Art Work Adding Sound Representation of Animation 	CO 601.5	Chalk and Board	Lecture Method	26/04/18 27/04/18		
6	Using Layers: <ul style="list-style-type: none"> Adding and Deleting Layers Viewing Layers 	CO 601.5	Chalk and Board, Projector	Lecture Method, Presentation	28/04/18		
7	Creating Text Boxes for User input.	CO 601.5			1/05/18		
8	Creating Animations: <ul style="list-style-type: none"> Creating Key Frames Layers in Animations Frame Rates Frame Rates Steps for creating 	CO 601.5			2/05/18 3/05/18 4/05/18		

	animations <ul style="list-style-type: none"> • Frame by Frame Animations 						
9	Publishing and Exporting.	CO 601.5			5/05/18		
10	Revision	CO 601.5	-	Discussion	7/05/18		
11	Unit Test	CO 601.5	Pen and paper	Written and quiz	8/05/18		

Expected Study Hours:19 Hrs

Actual Study Hours:

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Practical Plan

S.No	Name of Practical	CO Attempted	Resources Used	Mode of Teaching	Expected Date	Actual Date	Remark
1	Write a program for 2D line drawing as Raster Graphics Display.	CO 601.1	Computer	Practical	5/03/18		
2	Write a program for circle drawing as Raster Graphics Display	CO 601.1	Computer	Practical	6/03/18		
3	Write a program for polygon filling as Raster Graphics Display	CO 601.1	Computer	Practical	12/03/18		
4	Write a program for line clipping.	CO 601.2	Computer	Practical	13/03/18		
5	Write a program for polygon clipping.	CO 601.2	Computer	Practical	21/03/18		
6	Write a program for displaying 3D objects as display using perspective transformation.	CO 601.2	Computer	Practical	22/03/18		
7	Devise a routine to produce the animation effect of a square transforming to a triangle and then to a circle	CO 601.5	Computer	Practical	19/04/18		
8	Write a program to show a bitmap image on your computer screen.	CO 601.5	Computer	Practical	20/04/18		
9	Write a program to play “wave” or “midi” format sound files.	CO 601.5	Computer	Practical	21/04/18		
10	Create animations using Adobe FLASH. Flash Drawing and Painting Tools. Flash Drawing Modes. Pencil Tools Importing artwork into Flash	CO 601.5	Computer	Practical	23/04/18 24/04/18 25/04/18		

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