SCHEME OF EXAMINATION
&
SYLLABUS
of
UG Programme (Interdisciplinary)

B.Sc. (Graphics & Animation)
Scheme: D

As per National Education Policy 2020

(Multiple Entry-Exit, Internships and Choice Based Credit System)

w.e.f. Academic Session: 2023-2024(In Phased Manner)

INSTITUTE OF MASS COMMUNICATION & MEDIA TECHNOLOGY
Kurukshetra University, Kurukshetra
(A+ Grade NAAC Accredited)

under
Faculty of Commerce and Management, Kurukshetra University, Kurukshetra

GENERAL INSTRUCTIONS FOR EXAMINERS / PAPER SETTERS / SUBJECT TEACHERS

EVALUATION AND EXAMINATION
- The students will be assessed through a system of Continuous Comprehensive Assessment (CCA).
- Evaluation will be done by Internal assessment (broadly 30% of total weightage) and by end term exam for rest 70%).

Theory Internal Assessment shall broadly based on the following defined composition:
a) Class Participation
b) Seminar/Presentation/Assignment/Quiz/Class Test, etc.
c) Mid-Term Exam

Total Internal Assessment Marks	Class Participation	Seminar/Demonstration/Presentation/ Assignment/Quiz/Class Test, etc.	Mid-Term Exam
10	03	02	05
15	04	04	07
20	05	05	10
25	05	07	13
30	05	10	15

Practical Internal Assessment shall broadly be based on the following defined composition:
a) Class Participation
b) Seminar/Presentation/Viva-voce/Lab Records, etc.
c) Mid-Term Exam

Total Internal Assessment Marks (Practical)	Class Participation	Seminar/Demonstration/Viva-Voce/Lab Record etc.	Mid-Term Exam
05	-	05	NA
10	-	10	NA
15	05	10	NA
30	05	10	15

MODE OF PAPER SETTING FOR END-TERM EXAMINATION:

Every course irrespective of credit will have an End-Term Examination with every course paper having 09 questions in all. Question No. 1 containing short notes will be compulsory. The students will have to attempt five questions in all selecting at least 1 question from each unit. Duration of the exam will be 3 hours irrespective of credit. These questions shall judge both theoretical and applied knowledge of the students. Case studies may also be given as questions.

Abbreviations used

Abbreviation	Description
AEC	Ability Enhancement Course
C	Credit
CC	Core Course
CC-H	Core Course in Honours Programme (Subject/Discipline)
CC-HM	Core Course in Minor Subject of Honours Programme
CC-M	Core Course in Minor Subject
DSE	Discipline Specific Elective Course
DSE-H	Discipline Specific Elective Course in Honours Programme (Subject/Discipline)
DSEC	Discipline Specific Skill Enhancement Course
MCC	Core Course in Major Subject
MDC	Multidisciplinary Course
PC	Practicum Course
PC-H	Practicum Course in Honours Programme
SEC	Skill Enhancement Course
UG	Under Graduate
V/VOC	Vocational Course
VAC	Value Added Course

Scheme of Examination of UG Programme (Interdisciplinary) B.Sc. (GRAPHICS AND ANIMATION)Scheme: D in accordance with NEP 2020 (Multiple Entry-Exit, Internships and Choice Based Credit System) w.e.f. Academic Session 2023-24(In Phased Manner)

Semester-I

Course Code	Course Title	Course Type	Contact Hours per Week				Credits	Marks					Duration of Exam
			L	T	P	Total		T	IA (T)	P	IA (P)	Total	
B23-GAG-101	Digital Art & Sketching	CC-A1	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-102	Communication Design	CC-B1	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-103	Fundamentals of Animation	CC-C1	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-104	Computer Applications	CC-M1	2	-	-	2	2	35	15	-	-	50	3 Hours
B23-GAG-105	Graphics Design-I	MDC-1	2	-	2	4	3	35	15	20	05	75	3 Hours
	As Available In Pool Of Subjects Approved By KUK	AEC-1	2	-	-	2	2	35	15	-	-	50	3 Hours
	As Available In Pool Of Subjects Approved By KUK	SEC-1	2	-	2	4	3	35	15	20	5	75	3 Hours
	As Available In Pool Of Subjects Approved By KUK	VAC-1	2	-	-	2	2	35	15	-	-	50	3 Hours
						Total Credits :24		**Total Marks**					**600**	

Semester-II

Course Code	Course Title	Course Type	Contact Hours per Week				Credits	Marks					Duration of Exam
			L	T	P	Total		T	IA (T)	P	IA (P)	Total	
B23-GAG-201	Digital Design and Raster Graphics	CC-A2	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-202	Experimental Animation Techniques	CC-B2	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-203	Comic Design and Character Anatomy	CC-C2	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-204	Science of Communication	CC-M2	2	-	-	2	2	35	15	-	-	50	3 Hours
B23-GAG-205	Graphics Design-II	MDC-2	2	-	2	4	3	35	15	20	05	75	3 Hours
	As Available In Pool Of Subjects Approved By KUK	AEC-2	2	-	-	2	2	35	15	-	-	50	3 Hours
	As Available In Pool Of Subjects Approved By KUK	SEC-2	2	-	2	4	3	35	15	20	5	75	3 Hours
	As Available In Pool Of Subjects Approved By KUK	VAC-2	2	-	-	2	2	35	15	-	-	50	3 Hours
						Total Credits :24		**Total Marks**					**600**	

Internship of 4 credits of 4-6 weeks duration after 2ᵗʰsemester
Exit Option: Under Graduate Certificate in B.Sc. Graphics and Animation with 52 credits.

Semester-III

Course Code	Course Title	Course Type	Contact Hours per Week				Credits	Marks					Duration of Exam
			L	T	P	Total		T	IA (T)	P	IA (P)	Total	
B23-GAG-301	2D Animation	CC-A3	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-302	Print Design and Vector Graphics	CC-B3	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-303	3D Modeling and Texturing for Games	CC-C3	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-304	Web Designing	CC-M3	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-305	Experimental Animation	MDC-3	2	-	2	4	3	35	15	20	05	75	3 Hours
	As Available In Pool Of Subjects Approved By KUK	AEC-3	2	-	-	2	2	35	15	-	-	50	3 Hours
	As Available In Pool Of Subjects Approved By KUK	SEC-3	2	-	2	4	3	35	15	20	5	75	3 Hours
						Total Credits :24		**Total Marks**					**600**	

Semester-IV

Course Code	Course Title	Course Type	Contact Hours per Week				Credits	Marks					Duration of Exam
			L	T	P	Total		T	IA (T)	P	IA (P)	Total	
B23-GAG-401	Compositing and Visual Effects	CC-A4	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-402	User Interface Design (UI)	CC-B4	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-403	3D Organic Modeling And Texturing	CC-C4	3	-	2	5	4	50	20	20	10	100	3 Hours
	As Available In Pool Of Subjects Approved By KUK	CC-M4(V)	-	-	-	-	4	-	-	-	-	100	3 Hours
	As Available In Pool Of Subjects Approved By KUK	AEC-4	2	-	-	2	2	35	15	-	-	50	3 Hours
	As Available In Pool Of Subjects Approved By KUK	VAC-3	2	-	-	2	2	35	15	-	-	50	3 Hours
						Total Credits :20		**Total Marks**				500		

Internship of 4 credits of 4-6 weeks duration after 4th semester
Exit Option: Under Graduate Diploma in B.Sc. Graphics and Animation with 96 credits.

Semester-V

Course Code	Course Title	Course Type	Contact Hours per Week				Credits	Marks					Duration of Exam
			L	T	P	Total		T	IA (T)	P	IA (P)	Total	
B23-GAG-501	Rigging and Lighting	CC-A5	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-502	Commercial Design	CC-B5	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-503	3D Creature Animation and Rendering	CC-C5	3	-	2	5	4	50	20	20	10	100	3 Hours
	As Available In Pool Of Subjects Approved By KUK	CC-M5(V)	-	-	-	-	4	-	-	-	-	100	3 Hours
	INTERNSHIP						4					100	
						Total Credits :20		**Total Marks**				500		

Semester-VI

Course Code	Course Title	Course Type	Contact Hours per Week				Credits	Marks					Duration of Exam
			L	T	P	Total		T	IA (T)	P	IA (P)	Total	
B23-GAG-601	Visual Effect	CC-A6	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-602	Gaming Technology	CC-B6	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-603	UX Design	CC-C6	3	-	2	5	4	50	20	20	10	100	3 Hours
B23-GAG-604	Artificial Intelligence and Cyber Security	CC-M6	3	-	2	5	4	50	20	20	10	100	3 Hours
	As Available In Pool Of Subjects Approved By KUK	CC-M7 (V)	-	-	-	-	4	-	-	-	-	100	-
						Total Credits :20		**Total Marks**					**500**	

Exit Option: Bachelor in Graphics and Animation (B.Sc. Graphics And Animation) with 132 credits

SEMESTER I

<table>
<tr><td colspan="4" align="center">B23-GAG-101
Digital Art & Sketching

<div align="right">Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100</div></td></tr>
</table>

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: Know about Art and Indian concept of Art and Diversity of Shapes.
- CLO 2: Know about the Color Concept and different Color schemes.
- CLO 3: Understand the Anatomy and Proportions of human body.
- CLO 4: Develop knowledge of Digital Drawing in Photoshop

UNIT	Topic		Contact Hours
UNIT- I	- Define Art - Origin of Art: - Study of Prehistoric Indian Art - Visual Arts & Its Forms & Creative Pedagogies - Diversity of Shapes, Form, Lines, Textures - Drawing: Line, Contour, Stippling and Hatching - Sketching and Concept Drawing - Understanding of Light and Shadow - Landscapes and Composition - Mandala art: Concept - Doodling: Concept	**CLO 1**	**12**
UNIT- II	- Perception of Color and Color Wheel - Mixing of Primary, Secondary and Tertiary Colors - Tint, Shades, Hues, Tones. - Warm Colors and Cool Colors. - Different Color schemes (Complimentary, Split Complimentary, Analogous, Triadic etc.	**CLO 2**	**12**
UNIT-III	- Pattern Design and 3D Design - Perspectives on the Creative Process - Anatomy & Proportions: Body Types, Poses, Facial Expression - Painting: Water color, Pencil color - Typography: Elements and Features	**CLO 3**	**12**

	• Calligraphy: Elements and Features		
UNIT- IV	• Overview of Photoshop Interface • Understanding of Pen tool, Brush Tool and Brush Panel • Shading and Painting techniques in Photoshop • Use of Opacity, Flow and Pattern • Digital Panting: Object, Character and Illustration	**CLO 4**	**12**

Practical
- Drawing Anatomy   - Pencil shading techniques   - Still Life Drawing & Landscape drawing   - Cartoon character sketch   - Calligraphy & Typography   - Analogous Colors and Color Wheel   - Stone art and Mandala art   - Patterns and 2D design   - Textures and 3d Art   - Poster Designing   - Digital Illustrations (Digital Painting)

References:

- Indian painting by Lokesh Chandra Sharma

- Indian cartoon Art by VeenaBansal

- Aesthetic of art, Krishna's publisher, Author Nupur Sharma

- Graphic design by Narender Singh Yadav

B23-GAG-102
Communication Design

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: Become aware of the principles and elements of aesthetic including Indian concept.
- CLO 2: Understand the grammar of visual narratives.
- CLO 3: Gain the ability to compose visuals and visual narratives
- CLO 4: Develop creative problem-solving skills used in communicating visually as an artist.

UNIT	Topic		Contact Hours
UNIT- I	• Historical overview of advertising and its evolution • Advertising: Scope and features • Elements of Advertising • Principals of Advertising • Process of Advertising • Advertising Model: AIDA Model • Understanding the role of graphic design in advertising • Design Theory: Gestalt Principal, Visual Perception • Graphic Communication: Meaning and Definition	CLO 1	12
UNIT- II	• Meaning and Definition of Art • Elements of Art: Point, Line, Form, Shape, Space, Colour, Texture, Value, • Principles of Art: Balance, Rhythm, Harmony, Contrast, Proportion, • Dominance, Unity • Process of Designing and A-B Testing	CLO 2	12
UNIT-III	• Aesthetics of Art: Origin of Aesthetics • Meaning and definition of Aesthetics, importance of Aesthetics in arts and animation • Indian concept of Aesthetics and theory of Ras, Bhava, Shadaang, Auchitya, Alankaar, Rasa Nispatti	CLO 3	12
UNIT- IV	• Golden Rules: Rule of Third, Golden Section,	CLO 4	12

		Golden Triangles, Spiral Section, Diagonal, Radial,		
		• Perspective: One Point, Two Point and Three Point		
		• Positive & Negative space		

Practical

- Comparative Table of different logo designs
- Comparative Table of different Business Cads
- Icon designing by gestalt principal
- Logo Designing by rule of third
- Perspective drawing
- Testing

References:

- Golombisky, K., & Hagen, R. (2017). White space is not your enemy: A beginner's guide to communicating visually through graphic, web & multimedia design. CRC Press.
- Smith, K. (2005). Handbook of visual communication: Theory, methods, and media.
- Lester, E (2000) Visual Communications: Images with Messages. Thomson Learning
- Schildgen, T (1998). Pocket Guide to color with digital applications. Thomsom Learning
- Picture this: Media Representation of Visual Arts and artists. University of Luton Press
- Palmer, Frederic: Visual Elements of Art and Design, 1989, Longman
- Porter, Tom and Goodman, Sue: Manual of Graphic Technique 2: For Architects,
- Graphic Designers, and Artists, 1982, Astragal Books. London
- Palmer. F: Visual Awareness (Batsford, 1972)

B23-GAG-103
Fundamentals of Animation

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: Know the History of Animation
- CLO 2: Know about the Animation Industry.
- CLO 3: Learn production Stages and Means of Animation
- CLO 4: Get complete knowledge of the different types of Animation

UNIT	Topic		Contact Hours
UNIT- I	• Introduction and Definitions of Animation • Working and usage of: Zoetrope, Phenakistoscope and Thaumatrope. • Types of Animation: Frame by Frame, Stop Motion, Clay Animation and Computer Animation • Terms Used in Animation: FPS, Thumbnail, Blueprint, Pencil Test, Screenplay, Blocking and Animatics	**CLO 1**	**12**
UNIT- II	• Overview of Animation Film History: Earlier Stage and Modern Era • Walt Disney, Dream Works, Pixar, J-Stuart Blackton, Winsor Mc Cay • Overview of Animated Television Channels: Cartoon Network, Discovery Kids, Disney, Pogo, Disney XD and ZEEQ. • Indian Animation Industry • Father of Indian Animation	**CLO 2**	**12**
UNIT-III	**Pre-Production** • Idea Generation • Story Writing: Structure & Genres Principals of Story Writing: Point of view, Characterization, Plot and Conflict. • Script / Dialogue Writing: Types and Structure • Model Sheet: Types and Features	**CLO 3**	**12**

	• X-Sheet: Types and Features • Storyboard: Structure & Advantages • Sound Recording: Process and Features • Animatics: Structure, Advantages and Process		
UNIT- IV	**Production** • Layout and Illustrations Designing: Process and Features • Key-Frames: Types and Uses • In-betweens – Cleanups: Process and Features • Rendering: Types and Process **Post-Production** • Video Editing: Types • Sound Mixing: Features • Dubbing: Features • Color Correction: Features • Rendering Authoring	**CLO 4**	12

<table>
<tr><td colspan="1" align="center">Practical</td></tr>
<tr><td>

- Create Concept of Story
- Script Concept
- Model Sheet
- Create Storyboard
- X-Sheet
- Sound Recording
- Animatics

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</table>

References:

- 'How to Write for Animation' by Jeffrey Scott's book
- THE TOOLS OF SCREENWRITING: A WRITER'S GUIDE TO THE CRAFT AND ELEMENTS OF A SCREENPLAY by David Howard and Edward Mobley; St. Martins/Griffin; New York; 1993.

- Storyboard Design course by Giuseppe Cristiano--- Barron's
- How to write for animation—Jeffery Scott
- The art of layout and storyboarding- Mark T. Byrne
- Egleiter, Marcie (2011) From Word to Image: Storyboarding and the Filmmaking Process. Michael
- Wiese Productions. Beiman, Nancy. (2012) Prepare to board. Focal Press.
- Animation History and Production by AparnaVats , New Delhi Publisher ,New Delhi.
- Fraioli, James O.(2000) Storyboarding 101: A Crash Course in Professional Storyboarding. Michae
- Wiese Productions. Glebas, Francis.(2008) Directing the Story. Routledge.
- Hart, John. (2007).The Art of the Storyboard: Storyboarding for Film, TV, and Animation. Focal
- Press. Simon, Mark.(2006) Storyboards: Motion In Art. Focal Press.
- Tumminello, Wendy. (2004) Exploring Storyboarding. Course Technology.

B23-GAG-104
Computer Applications

Time- 3Hours
Credits – 02
Theory- 35
Internal Assessment- 15
Total Marks – 50

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1:Understand the basic knowledge of computer system.
- CLO 2: Know about the functioning of different parts of computer.
- CLO 3: Knowledge about Operating System.
- CLO 4:Understand the basics of Application Software.

UNIT	Topic		Contact Hours
UNIT- I	• Computer- Origin, Evolution and Generation of Computer • Characteristics of Computer • Types of Computers • Block Diagram of Computer	**CLO 1**	**12**
UNIT- II	• Basic Components of a Computer-: • Input Devices • Output Devices • Storage organization: Primary & Secondary Memory	**CLO 2**	**12**
UNIT-III	• Introduction to Software • Types of Software - System software, Application software • Operating system and its functions • Introduction of MS Window and its various versions	**CLO 3**	**12**
UNIT- IV	• Introduction to MS Word and its uses • Various Menus, Toolbars & Buttons • Paragraph and Page Formatting • Creation &Working with Tables, Mail Merge • Introduction to MS PowerPoint and its uses • Creating a New Presentation	**CLO 4**	**12**

References:

- Help files from Apache Open Office, https://wiki.openoffice.org/wiki/Documentation
- Channelle Andy, "Beginning OpenOffice 3: From Novice to Professional", aPress Publications
- Beginning OpenOffice 3: From Novice to Professional, Andichannele, Apress.
- Microsoft Office 2016 Step by Step: MS Office 2016 Step by S_p1, By Joan Lambert, Curtis Frye
- Computer Fundamentals - By Pradeep K. Sinha, Priti Sinha, BPB Publications, 6th Edition
- Getting Started with LibreOffice 5.0, Friends of OpenDocuments Inc., Http://friendsofopendocument.com
- Documentation from LibreOffice, https://documentation.libreoffice.org/en/english-documentation/

Graphics Design-I

Time-3 Hours
Total Credits – 03
Theory - 35
Internal assessment (T) – 15
Practical-20
Internal assessment (P) – 5
Total Marks – 75

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: To understand about the graphic design and types
- CLO 2:Develop the ability to explore the Graphics Design
- CLO 3: Know about the levels of Colour
- CLO 4: Enhance the knowledge of Poster Design

UNIT	Topic		Contact Hours
UNIT- I	• Visual Communication: Concept and Features • Graphic Design: concept and scope • History and Development of Graphic Design • Types of Graphics • Info-Graphics: Concept and Features	CLO 1	12
UNIT- II	• Drawing: Line Drawing, Contour Drawing • Layout and Compositing: concept and elements • Elements of Graphic Design • Principles of Graphic Design	CLO 2	12
UNIT-III	• Perception of Color and Color Wheel • Mixing of Primary, Secondary and Tertiary Colors • Tint, Shades, Hues, Tones. • Warm Colors and Cool Colors. • Different Color schemes (Complimentary, Split Complimentary, Analogous, Triadic etc.	CLO 3	12
UNIT- IV	• Poster:Types and Elements • Design Process • Types of Typography • Calligraphy	CLO 4	12

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Practical

- Line / Contour Drawing
- Still Life Drawing & Landscape drawing
- Light and Shade chart
- Layout and Compositing
- Color Mixing
- Color Wheel
- Calligraphy & Typography
- Mandala art
- Poster Designing

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References:

- Indian painting by Lokesh Chandra Sharma

- Indian cartoon Art by VeenaBansal

- Aesthetic of art, Krishna's publisher, Author Nupur Sharma

- Graphic design by Narender Singh Yadav

SEMESTER II

B23-GAG-201
Digital Design and Raster Graphics

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: Develop knowledge of software to design raster graphical images
- CLO 2:Understand the difference between different graphics and image file formats
- CLO 3: Develop knowledge of using Photoshop's various tools and techniques.
- CLO 4: Understand Image Retouching and Image Manipulation for Advertising

UNIT	Topic		Contact Hours
UNIT- I	• Define graphics & types of graphics • Elements and Principles of graphic design • Difference between vector and raster images. • Fonts: Serif, San-Serif, Slab-Serif and Decorative • Overview of Designing Industry and Designing Trends • Common Image Formats: JPEG, PNG, SVG, TIFF and GIF	**CLO 1**	**12**
UNIT- II	• Introduction to Photoshop: Tools and Menus • Layers & Layer styles, Opacity, Masking, Adjustment layers, Blending modes, • Image Editing: Retouching, Color Correction, Smoothing skin & wrinkles. • Image Manipulation, Filter Gallery • Portrait enhancements • Working with typography: Threading text, changing font size and Color, using styles, wrapping text, text on a path, creating Outlines, wrapping text around an object, sampling text.	**CLO 2**	**12**

UNIT-III	**Pre-Production** • Gradient tool and Gradient Map • Cloning / Stamping, Patch Tool • Noise Reduce and edges sharpness • Dodge & Burn Tool • Page setup • Action and Batch Render • Effects: Orton Effect, Retro, Bokeh • Filters: Liquify, Vanishing Point, Pattern Maker, Artistic • Sound Recording: Process and Features • Animatics: Structure, Advantages and Process	CLO 3	12
UNIT- IV	**Production** • Photo Collage, Black & White images to Color, Web Banner • Social Media: Features, Process and Sizes • Magazine cover design: Process, Types and Sizes • Digital Flyer Designs: Features and • Cartoon character design • Promotional designs • Layout process: (create press and magazine layouts) • Poster design: productive & social • Newsletter design	CLO 4	12

Practical
• Black & White to color conversion of image • Portrait Enhancement & Photo Retouching • Image Manipulation • Day to night conversion of Image • Effects passed exercise • Typography Designs • Social Media Designs • Web Banners • Magazine Cover page and layouts • Newsletter Design • Cartoon Character Designs

References:

- Golombisky, K., & Hagen, R. (2017). White space is not your enemy: A beginner's guide to communicating visually through graphic, web & multimedia design. CRC Press.
- Harrington, R. (2012). Understanding Adobe Photoshop CS6: The essential techniques for imaging professionals. Peachpit Press.
- Gulbins, J. (2013). Mastering Photoshop layers: A photographer's guide. Rocky Nook.

B23-GAG-202
Experimental Animation Techniques

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: Understand and apply Principals of Animation
- CLO 2: Learnvarious techniques and styles of Animation.
- CLO 3: Do ideation and imagination of animation.
- CLO 4: Recognize and identify the power of animation which is not restricted to any medium.

UNIT	Topic		Contact Hours
UNIT- I	**Introduction:** • Define Script, Key terms used in script (Layout of the story, Characters, Situation, Background) • Terminology (scene, shot, Fade in and Fade out, Cut to, Scene number, EXT and INT etc.) **Classical & Traditional Animation:** • Define Animation, • Persistence of Vision, • Animation & Motion • Animation Principals • Flip Book / Flick Book	CLO 1	12
UNIT- II	**Introduction to Storyboard** • Camera Shots and Compositions • Different Layouts of Storyboard • Parts of Storyboard • Tools of Storyboard **Stop Motion Animation** • Define Stop Motion • Process of Stop Motion • Key-Framing and Timing, • Animation Different Techniques • Basic Lighting Techniques & Camera Setup	CLO 2	12

UNIT-III	**Timing & Spacing (On Flipbook and Lightbox)** • Pendulum Animation • Vehicle Animation • Walk Cycle (Adolescent & Adult) • Jump and Run • Leaf Animation • Water Drop & Water Splash	**CLO 3**	**12**
UNIT- IV	**Developing a Short Experimental Animation Film** • Cut-Out Animation • Mix Media Animation • Add Sound and Audio • Export and Authoring • Stop Motion Animation in Animation & VFX Industry • Student will choose a specific technique and implement his idea as a short film or gag.	**CLO 4**	**12**

<table>
<tr><td align="center">**Practical**</td></tr>
<tr><td>

- Animate Time on flip book
- Develop a Story
- Understand Time and Spacing principal by Pendulum animation
- Squash and Stretch exercise with the use of ball animation
- Object Weight Impact on animation
- Leaf animation to understand staging rules
- Normal walk cycle of cartoon character
- Slow walk cycle of old age character
- Magazine Cover page and layouts
- Animate Humans /Objects with Stop Motion Animation Techniques
- Cut-out / Clay, used to produce story-based animation clip

</td></tr>
</table>

References:

- Golombisky, K., & Hagen, R. (2017). White space is not your enemy: A beginner's guide to communicating visually through graphic, web & multimedia design. CRC Press.
- Harrington, R. (2012). Understanding Adobe Photoshop CS6: The essential techniques for imaging professionals. Peachpit Press.
- Gulbins, J. (2013). Mastering Photoshop layers: A photographer's guide. Rocky Nook.

B23-GAG-203
Comic Character and Character Anatomy

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:
- CLO 1: Get knowledge about different types of characters design
- CLO 2:Get knowledge of comic history
- CLO 3: Understand the anatomy of organic and non-organic characters.
- CLO 4: Understand the different comic styles along with presentation styles.

UNIT	Topic		Contact Hours
UNIT- I	**Introduction:** • Character Designing: History, Types and Process • Caricature: Features and Types • Concept of Model Sheet / Expression Sheet • Comic Book: History and Development	CLO 1	12
UNIT- II	**Shape Language and Design** • Cartoon Character Anatomy & Proportions • Body Types and Poses, (Fingers, Hands, Arms, Foot and Legs) • Eyes, Nose, Lips and Hairs: Structure and types (Realistic and Cartoonish) (Male & Female) • Facial Expression: Anger, Disgust, Fear, Happiness, Sadness and Surprise • Development of Character Design; Design Character with Shapes and Forms	CLO 2	12
UNIT-III	**Comic Design** • Comic Book: Types & Sizes • Study Comic Characters • Principals of Comic Book • Understand composition in comic • Designing Process of Comic Book • Elements of Comic Book	CLO 3	12
UNIT- IV	**Production** • Hand Drawing and Coloring Techniques • Splash, Explosion, Cracking, Fire • Concept Character: Features and Scope • Techniques and use Perspective Angles	CLO 4	12

Practical

- Human & Cartoon Character Anatomy
- Design Pattern and Layout
- Reviews of any Comic Book
- Model Sheet & Expression Sheet
- Composition in Comic
- Cartoon character sketch and Conversation
- Comic Book Strip
- Action Sheet of Cartoon Character
- Perspective Angles
- Study of Comic Characters and make Slam Book
- Final Output (Comic Book)

References:

- Blair, P. (1994). Cartoon animation. Walter Foster Publishing.
- Indian painting by Lokesh Chandra sharma
- Indian cartoon Art by VeenaBansal
- Aesthetic of art, Krishna's publisher, Author Nupur Sharma
  sGraphicdesign by Narender Singh Yadav

B23-GAG-204
Science of Communication

Time- 3Hours
Credits – 02
Theory- 35
Internal Assessment - 15
Total Marks – 50

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:
After completing the Course, the student will be able to:
- CLO1: Understand the basic concepts, functions and barriers of communication.
- CLO 2:Know about the principles and forms of communication.
- CLO3: Learn about the various levels of communication and Indian concept of communication
- CLO4: Understand the different models of communication

UNIT	Topic		Contact Hours
UNIT-I	• Definition, concept, process and elements of communication • Need and scope of communication in society • Functions of communication • Barriers in communication	CLO 1	12
UNIT-II	• Principles of communication • Socialization and communication • Verbal communication • Non-verbal communication • Traditional forms of Communication	CLO 2	12
UNIT-III	• Levels of communication and interaction :intra-personal, interpersonal, Group, public and mass communication. • Indian concept of communication	CLO 3	12
UNIT-IV	Models of Communication • Aristotle • SMR • SMCR • Berlo • Shannon ad Weaver • Osgood • Schramm	CLO 4	12

References:

- Dennis, Mcquail, Mass Communication Theory, Sage Publication, New Delhi.
- Schramm, W. &Roberts ,D.F., The Process and Effects of Mass Communication, Urbana, IL: University of Illinois Press.
- Rayudu. C.S., Communication, Himalaya Publishing House, Mumbai
- Joshi,P.C., Communication &Nation–Building – Perspective and Policy, Publication Division, New Delhi.
- Malhan P.N., Communication Media, Yesterday, Today and Tomorrow, Publication Division, New Delhi.
- Agee, Warren K., Ault Philip H., Introduction to Mass Communication, Oxford &IBH Publishing Company, New Delhi

B23-GAG-205
Graphics Design-II

Time-3 Hours
Total Credits – 03
Theory - 35
Internal assessment (T) – 15
Practical-20
Internal assessment (P) – 5
Total Marks – 75

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: Get knowledge about design application software
- CLO 2:Get knowledge of design enhancement
- CLO 3: Understand the concept of formatting
- CLO 4:To know about the different communication design

UNIT	Topic		Contact Hours
UNIT- I	• Introduction to Adobe Photoshop • Page Setup and margins • Layer: Concept and Types • Layer panel: Components • Selection Tools: Types and uses	**CLO 1**	**12**
UNIT- II	• Alignment and Distribution • Ruler and Guidelines • Editing Tools: cropping and sizing • Image Enhancement Levels, Curve and HSB	**CLO 2**	**12**
UNIT-III	• Background & foreground Colour • Gradient: Types and Uses • Colour Modes and Swatches • Effects and Filters • Text and Paragraph Tools	**CLO 3**	**12**
UNIT- IV	• Digital and communication design • Digital Flyer: Sizes and Process • Google Banners: Types • Logo: Concept and Types • Communication Designs	**CLO 4**	**12**

Practical
• Image Enhancement • Photo Manipulation • Digital Flyer • Google Banners • Typography Design • Logo

References:

- Golombisky, K., & Hagen, R. (2017). White space is not your enemy: A beginner's guide to communicating visually through graphic, web & multimedia design. CRC Press.
- Harrington, R. (2012). Understanding Adobe Photoshop CS6: The essential techniques for imaging professionals. Peachpit Press.
- Gulbins, J. (2013). Mastering Photoshop layers: A photographer's guide. Rocky Nook.

SEMESTER III

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO1: Explore the Classical and Traditional Animation Terms and Techniques
- CLO 2: Defining and Types of 2D Animation
- CLO 3: Understanding the Principals of Animation.
- CLO 4: Gain skills in the Character Design and Character Animation.

UNIT	Topic		Contact Hours
UNIT- I	**Traditional Animation techniques** • Traditional Animation History, Types and Process: Classical, Traditional, Cutout, Puppet, Stop Motions • 12 Principles of Animation • Straight Ahead Action and Pose to Pose Techniques • X-Sheet • Timing and Spacing Chart: Slow and Fast Action, General principles of timing, • Usage of Acting into animation: Character acting, Mass and weight, Volume, Line of action, Path of action	CLO 1	12
UNIT- II	**Classical Animation techniques** • Head Rotation: Human, Animal and Bird • Facial expressions: Lip movement, Eyebrows and Change of expression • Follow through and overlapping action: Hair and Cloth animation • Style of Animation-Parallax, Multilane and Morph Animation • Typographical Animation: Tittle Animation & Logo Animation • Loop Animation	CLO 2	12

UNIT-III	**Interface of Animate**	CLO 3	12
	• Drawing Tools, Color • Timeline, Keyframes, Framerate • Importing vectors, bitmap, video • Tracing and illustrations • Understanding graphics and symbols • Onion skins, Nesting Animation • Publishing for Flash, HTML5 etc.		
UNIT- IV	**Advance Traditional Animation Techniques in Animate**	CLO 4	12
	• Understanding Tweens: Motion Tween, Classical Tween, Shape Tween • Easing, Editing Property Curves • Creating and Using Masks • Bones and Workflows, Inverse Kinematics, Disabling and Constraining Joints • Bouncing Ball Animation Theory • Walk Cycle Study • Run Cycle Study • Character Jump Study		

Practical
• Human & Cartoon Character Anatomy • Develop Character • Model Sheet & Expression Sheet • Bouncing Ball: Heavy and Light weigh • Cartoon character sketch and Conversation • Walk Cycle: Adult, Old Age and Heroic Walk • Acting with Animation • Feather falling • Character jumping over a gap • 360deg Character Head Turn • Logo Animation

References:

- Richard Williams Expanded Edition; The Animator's Survival Kit

- Preston Blair; Cartoon Animation

- The ILLUSION OF LIFE: DISNEY ANIMATION, Ollie Johnston, Frank Thomas
- Richard Williams Expanded Edition; The Animator's Survival Kit
- Preston Blair; Cartoon Animation
- Harold Whitaker and John Halas, Timing for Animation, Focal Press; 2 editions (2September 2009)
- John Culhane, Disney's Aladdin – The Making of an Animated Film Hyperion, Disney Editions; Reprint edition (2 September 1993)

B23-GAG-302
Print Design and Vector Graphics

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: Understand Vector Graphic tools
- CLO 2: Able to Create Communication Material
- CLO 3: To Know About Design Process.
- CLO 4: Gain Knowledge of Different Printing Technologies.

UNIT	Topic		Contact Hours
UNIT- I	**Introduction** • Design: Function and Process • User Interface: Title Bar, Menu Bar, Color Palette, and Toolbox • Page Counter Bar: Add Page, Remove page and Master pages • Create and Edit Geometric and organic Shapes: Bezier, linear, angular, smooth and close path. • View Modes: Normal, Wireframe, Draft, Enhanced and Pixels • Selection and Distributing: Skewing, Blending, Curve Lines, Straight Lines, Rotating an Object, Group and Ungroup, Break Apart and Coloring. • Shape tools - Weld, Trim, Intersect, Simplify, and Front minus Back, Back minus Front.	**CO 1**	**12**
UNIT- II	**Create and Edit** • Font and Different Types of Font Family's: Application and Characteristics • Text Tool: Entering Artistic Text, Entering Paragraph Text, Converting Text Formatting Text, Font Size Characteristics • Image Tool: Import, Trace and Edit then Export • Color: Color Scheme, Color Theory, Gradient tool. • Effects - Lens, Power Clip, Perspective, Rollover,	**CO 2**	**12**

	Convert to Bitmap • Page Setup: Size Setup and Edit • Business Card: Size, Elements and Functions • Poster: Size, Element, Characteristics and Functions • Logo: Types, Process and Characteristics • Editing Tools: Attach, Detach Bevel, Chamfer, Extrude, Bridge, Insert Vertex, Weld, Target Weld, Connect.		
UNIT-III	• Adobe InDesign: Interface, Menu and Toolbar • Master page: Function and Characteristics • Managing and Transforming Objects • Text Formatting: Heading and Body Text • Column and Layout: Functions • Graphics, Styles sheet and Pre-flight, printing and PDF's	**CO 3**	**12**
UNIT- IV	**Printing Technology** • Printing: Definition and Scope • Various Types of Printing Process: Letter Press, Offset, Flexography, Gravure, Screen Digital and Thermography Printing • Application and Functions of Different Printing Techniques	**CO 4**	**12**

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Practical

- Business Card: For Company and Individual
- Poster : Commercial ,Typography Poster
- Logo Designfor Commercial and Government Organizations
- Label Design
- Package Design
- Hoarding/banner
- Two pagers
- Book cover
- Newsletter Design
- Magazine Cover
- Printing Process

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References:

- Corel Draw Training Guide, Author: Satish Jain, M. GeethaBasics of Illustration
- Corel draw 2020 User Guide
- A Textbook of Vector Calculus by Shanti Narayan (Author), P.K. Mittal (Author)
- Guide to Graphics Design By Scott W. Santoro, Library of Congress Cataloging-in-Publication Data, ISBN 978-0-13-230070-4 (pbk.)
- Graphic Designer's Essential Reference, Visual Elements, Techniques, and Layout Strategies for Graphic Designers By Timothy Samara, ROCKPORT PUBLISHER
- The Complete Graphic Design By Ryan Hembree, ROCKPORT PUBLISHER
- Adobe InDesign CC Classroom in a Book by Kelly Kordes Anton, Tina DeJarld

B23-GAG-303
3D Modeling and Texturing

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: Know about 3D Modeling concept
- CLO 2: Know about the different techniques of 3D Modeling
- CLO 3: Understand Texture & Shading.
- CLO 4: Develop knowledge of UVW Unwrapping.

UNIT	Topic		Contact Hours
UNIT- I	**Introduction** • Introduction to 3Dimenstions and 2 Dimensions • 3DS Max Interface: Workspace, Toolbar, Menu and Command Panel • 3D Production Process • Project and Reference Setup in 3Ds Max	CLO 1	12
UNIT- II	**Polygon Modelling** • 3D Modeling: Primitives Objects and Compound • Polygon Modeling Technique: Shift Drag and Extrude • Polygon Modeling: Creating and Editing 3d models • Elements of polygon modeling: Vertex, Edges, Boarder, Polygon and Element • Modifiers: Twist, Bend, Path Deform, Smooth, Mesh Smooth and Turbo Smooth, Boolean, Symmetry, Copy & Clone • Editing Tools: Attach, Detach Bevel, Chamfer, Extrude, Bridge, Insert Vertex, Weld, Target Weld, Connect.	CLO 2	12
UNIT-III	**Surface Modeling** • Spline Modeling: Creating and Editing 3d models • Tools of polygon modeling: Vertex, line and Spline • Patch Modeling: Creating and Editing 3d models • Tools of polygon modeling: CV and EP Curves	CLO 3	12

UNIT- IV	Texturing	CLO 4	12
	• Material Editor • Different Materialand Shader • Texturing and Mapping • UVW Maps and Unwrapping • Creating Texture in Adobe Photoshop • Different Types of Rendering • Timeline and Camera Animation		

Practical
- Interface, Tools and Panels   - Primitive Modeling   - Modeling Objects Through Different Modeling Techniques   - Introduce Modeling Modifiers   - Low Poly Furniture / Architectural / Mechanical Modeling   - High Poly Furniture / Architectural ModelingTwo pagers   3D Scene / Interior Modeling   - Games Assets Modeling   - Object Coloring and Texturing   - Texturing Through Unwrapping   - Create Texture in Adobe Photoshop   - Different 3D Maps   - Virtual Camera Setup   - Timeline and Output

References:

- Mastering Autodesk 3ds Max by Jeffrey M. Harper
- 3Ds Max bible by Kelly L. Murdock
- 3ds Max Modeling for Games Volume II by Andrew Gahan
- Architectural rendering with 3ds Max and V-Ray Photorealistic Visualization by Markus Kuhlo, Enrico Eggert (z-lib.org)

B23-GAG-304
WEB DESIGNING

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1 Become familiar with web design and learn how to implement web theories into practice.
- CLO 2: Learn the Software of the web designing using Dreamweaver and CSS.
- CLO 3: Use knowledge of HTML tags and CSS code to create personal and business websites following current professional and/or industry standards.
- CLO 4: Use critical thinking skills to design and create websites.

UNIT	Topic		Contact Hours
UNIT- I	**Introduction** • The Basic Dreamweaver Environment • Creating a site profile, the importance of a site profile • Organizing the files & folders, folder and file naming rules • Creating folders and webpage files	**CLO 1**	**12**
UNIT- II	• Opening a file for editing, titling pages, creating divisions • Adding headings, Paragraph vs. line breaks, tags: logical vs. physical, lists, • linking to other websites, linking to the user files, inserting images on web pages, changing images into links, adding an Email link.	**CLO 2**	**12**
UNIT-III	• CSS design, its types • Working of style sheet: font, margins, link colors, stylish headlines, paragraphs, • Types of images, organizing images, • Inserting and formatting tables.	**CLO 3**	**12**

UNIT- IV	• Form elements, Head elements, Page templates • Form objects, accessible forms • Flash elements, Multimedia contents, browser compatibility testing • Uploading the website on web, uploading changes, maintaining website	CLO 4	12

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Practical

- Introduction to Dreamweaver workspace.
- Page setting in Dreamweaver.
- Create a dynamic web page which defines all text formatting tags of HTML.
- Create a Time table using Dreamweaver.
- Use flash elements on webpage.
- Create webpage to include image and various options related to image.
- Create link on webpage using CSS.
- Create a layout of webpage.
- Create employee registration form using HTML tag.
- Apply style sheet in Web page (inline, embedded and link)

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References:

- Macromedia Dreamweaver 8 for Windows and Macintosh: Visual QuickStart Guide by Dori Smith; Peachpit Press. Copyright.
- Macromedia Dreamweaver 8 Unleashed by Zak Ruvalcaba; Sams Publishing. Copyright
- Macromedia Dreamweaver MX: Training from the Source, Volume 1 by Khristine Annwn Page; Macromedia Press. Copyright.
- Macromedia Dreamweaver MX Killer Tips by Joseph Lowery, Angela C. Buragli; New Riders. Copyright.
- Macromedia Dreamweaver 8: Training from the Source by Khristine Annwn Page; Prentice Hall Professional. Copyright.

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1: Understand and apply Principals of Animation
- CLO 2: Learn various techniques and styles of Animation.
- CLO 3: Do ideation and imagination of animation
- CLO 4: Recognize and identify the power of animation which is not restricted to any medium.

UNIT	Topic		Contact Hours
UNIT- I	**Classical & Traditional Animation:** • Define Animation • Types of Animation • Persistence of Vision, • Animation & Motion • Animation Principals • Flip Book / Flick Book	**CLO 1**	**12**
UNIT- II	**Introduction to Storyboard** • Camera Shots and Compositions • Different Layouts of Storyboard • Parts of Storyboard • Tools of Storyboard	**CLO 2**	**12**
UNIT-III	**Stop Motion Animation** • Define Stop Motion • Process of Stop Motion • Key-Framing and Timing, • Animation Different Techniques • Basic Lighting Techniques & Camera Setup	**CLO 3**	**12**
UNIT- IV	**Developing a Short Experimental Animation Film** • Cut-Out Animation • Mix Media Animation	**CLO 4**	**12**

	• Add Sound and Audio • Export and Authoring • Stop Motion Animation in Animation & VFX Industry • Student will choose a specific technique and implement his idea as a short film or gag.		

Practical

- Develop a Story
- Motion and Animation
- Understand Time and Spacing principal by Pendulum animation
- Squash and Stretch exercise with the use of ball animation
- Object Weight Impact on animation
- Animate Humans /Objects with Stop Motion Animation Techniques
- Cut-out / Clay, used to produce story-based animation clip

References:

- Williams, R. (2012). The animator's survival kit: A manual of methods, principles and formulas for classical, computer, games, stop motion and internet animators. Macmillan.
- Animation History and Production by Aparna vats, publisher New Delhi.
- Thomas, F., & Johnston, O. (1995). The illusion of life: Disney animation. Hyperion.
- Laura Moreno (2014) THE CREATION PROCESS OF 2D ANIMATED MOVIES
- Wells, P. Understanding animation. Routledge.
- Blair, P. (1994). Cartoon animation. Walter Foster Publishing.
- Gasek, T. (2017). Frame-by-frame stop motion: The guide to non-puppet photographic animation techniques (2nd ed.). CRC Press.
- Priebe, K. A. (2011). The advanced art of stop-motion animation. Cengage Learning.

SEMESTER IV

B23-GAG-401
Compositing and Visual Effects

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

-   CLO 1Understand the Concept of Composition and Visual Effects
-   CLO 2: To Know different Techniques of Post Production
-   CLO 3: Gain Knowledge about Post Production Tools.
-   CLO 4: Learn about functions of keys as tool.

UNIT	Topic		Contact Hours
UNIT- I	**Introduction** • Introduction to after effects • Adobe After Effect Interface: Workspace, Toolbar and Menu • Project Setup: Elements of Project Panel • Create and Edit Composition • Slide Show of Multiple Images	CLO 1	12
UNIT- II	**Compositing** • Timeline: Elements and Parts of Timeline • Layer Parenting (Parent and Child Relationship) • Animation: Key, and Types of Keys • Graph Editor: Curve Tools • 2D Composition, Pre-Comp and 3D Composition • Motion Graphics: Typography, lines, Shapes and Images	CLO 2	12
UNIT-III	**Techniques** • Motion Tracking: Single Point and Multi Point • 3D Tracking with MOCHA • Masking: Create, Edit and Animate	CLO 3	12

	• Roto-Scoping: Roto Brush and Organic and Geometrical Mask • Stamp Tool: Wire Removal and Object Removal • Rig or wire removal with clone stamp tool		
UNIT- IV	**Effects & Rendering** • Wiggle, Stroke, Beam, CC Sphere and Blur • Particles: Create, Edit and Animation • Keying: Chroma Key, Colour Range • Colour Correction and Colour Balance • Camera: Create, Edit and Animate • Rendering Setup: Sequence and Video with Audio	**CLO 4**	**12**

Practical

- Interface, Tools and Panels
- Project Setup, Key Animation
- 2D Composition: Slide Show of Images
- Typography Animation
- Motion Poster
- Opening Titling / Logo Animation
- Produce a video based on Character Cloning
- Motion Graphics Advertisement
- Roto-scoping: Copy Character from Video and Compose it in New Video
- Tracking: Track Organic and Non- Organic Objects
- News Channel Interface Animation

References:

- Adobe Creative Cloud AFTER EFFECT CC 2015, Classroom in a book, The official training workbook from adobe, By - Brie Gyncild& Lisa Fridsma
- Secrets of Hollywood Special Effects by Robert E. McCarthy, Focal Press
- Creating Motion Graphics with After Effect, third edition: Volume-2: Advanced Techniques by Trish & Chris Meyer, CMP BOOKS
- Creative After Effects 7Workflow Techniques for Animation, Visual Effects and Motion Graphics ByAngie Taylor, Focal Press is an imprint of Elsevier
- The VES Handbook of Visual Effects, Industry standard VFX Practices and Procedures Edited By: Jeffery A. Okun and Susan Zwerman, Focal Press is an imprint of Elsevier
- HOW TO READ A FILM The World of Movies, Media, and Multimedia, Language, History, TheoryThird Edition, Completely Revised and Expanded by Jame s Monaco, New York Oxford OXFORD UNIVERSITY PRESS

B23-GAG-402
User Interface Design (UI)

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1 Understand the Function and Application of Digital Advertising
- CLO 2: Learn the Techniques to Create Digital Graphics
- CLO 3: To Know the Process of User Interface Designing.
- CLO 4: Understand the Elements of Digital Design.

UNIT	Topic		Contact Hours
UNIT- I	**Digital Advertising** • Meaning and Definition of digital advertising • Social media optimization • Sizes and resolution for social media • Types and Elements • Production process of Digital Advertising and Graphics • Function and Characteristics of Digital Advertising	CLO 1	12
UNIT- II	**Tools and Techniques** • Interface: Workspace, Tools, Rulers, Grids, Guides, and Crop Marks and other panels • Concept of Art board and Layer, Page Property • Create and Edit Shapes, Shape Builder Tool • Align and Distribution, Grouping, Blending Modes, Clipping masks • Image: Import, Placement, Tracing and Edit • Color & Painting:Colors Selection, Color Swatches, Color Guide, Brushes and Strokes, Gradient panel and Gradient tool	CLO 2	12

UNIT-III	**Effects & Output**	CLO 3	12
	• Masking: Function and Characteristics • Drop shadows, Glow, 3D Effect and Distortion and Transformation • Path finder, Rasterize, Stylize and Wrap • Export: Export for Web and Print, Export Selection • Function and application of Different File Formats: .PDF, PNG JPEG, SVG, TIFF		
UNIT- IV	**Adobe Experience Design (XD)** • Overview of User Experience Design (UX) vs. User Interface Design (UI) • Understanding common file formats and Working with the Design and Prototype views • Principals and Process of User Interface Design • Create Prototypes: low fidelity and high fidelity • Create and Combine Shapes, Add Images • Buttons: Types and Functions • Information Hierarchy, Color: Solid, Gradient and Transparent • Text: Choose and Treatment • Drop Shadow, Background Blur, Stroke size and Color • Navigating around the user interface **UI Kits:**Android and IOS	CLO 4	12

Practical

- Interface of Adobe Illustrator
- Web banners / Social Media Post Design
- Google ad Banners
- Classified Advertisements
- Newspaper Advertisement
- Social Media Cover Design
- E-Mailers Design
- Interface of Adobe XD
- Button and Card Design
- User Interface design
- Prototype Design for Android and IOS

References:

- The Essential Guide to User Interface Design an Introduction to GUI Design Principles and Techniques, Third Edition by Wilbert O. Galitz, Wiley Publishing, Inc.
- The Elements of Graphic Design, Second Edition by Alexw. White, Published by Allworth Press
- A Designer's Research Manual, Second Edition by Jenn + Ken Visocky O'Grady
- Adobe Illustrator CC, Classroom in a Book, The official training workbook from Adobe by Brian Wood, ADOBE PRESS
- UI Design with Adobe Illustrator by Rick Moore, ADOBE PRESS
- Adobe XD in CC,Classroom in a Book, The official training workbook from Adobe By Brian Wood, ADOBE PRESS
- UX AND UI DESIGN STRATEGY A STEP-BY-STEP GUIDE ON UX AND UI DESIGN By PAMALA B. DEACON, Printed in the United States of America 2020 by Pamala B. Deacon

B23-GAG-403
3DOrganic Modeling and Texturing

Time-3 Hours
Total Credits – 04
Theory - 50
Internal assessment (T) – 20
Practical-20
Internal assessment (P) – 10
Total Marks – 100

Note- The question paper will contain nine questions. Students are required to attempt five questions in all. There will be two questions in each Unit from Unit-I to Unit-IV. Students are required to attempt one question from each unit from I to IV. Q. No. 1 containing short notes covering the entire syllabus is compulsory. All the questions will carry equal marks. The students can attempt question paper either in English or in Hindi language.

COURSE LEARNING OBJECTIVES:

- CLO 1 Understand the basic 3D animation MAYA software
- CLO 2: Know about the different types of Modeling
- CLO 3: Production Stages how to build the character.
- CLO 4: Understand the basics types of texturing.

UNIT	Topic		Contact Hours
UNIT- I	**Introduction** • 3D Animation: Features and Application • Production Pipeline of 3d Animation • Overview of 3D Animation Industry and Artist Profiles in Industry • Interface of Autodesk 3Ds Maya: Workspace, Tools, Menu and other Panels • Create and Edit: Standard Primitive & Extended Primitives Objects, Pivoting andAligning etc.	**CLO 1**	**12**
UNIT- II	**Quadruped Modeling** • 3D Modeling Types and Characteristics • Modeling Tools and Techniques • Objects and Gaming Assets Modeling • Environment and Scenes Modeling • Concept Character Modeling	**CLO 2**	**12**
UNIT-III	**Biped Modeling** • Human Body Parts with Low poly and High poly Modeling and anatomy • Upper Body Modeling	**CLO 3**	**12**

	• Lower Body Modeling • Face and Head Models • Cloth and Hair Modeling		
UNIT- IV	**Texturing** • Hyper shade: Features and Application • Material and Shader: Types, Features and Application • Texturing Maps (Opacity, Bump, Reflection) • Process of UVW Unwrapping (Flatter, Cylindrical, Spherical) • Create 2d Texture in Adobe Photoshop	**CLO 4**	**12**

Practical

- Interface, Tools and Panels
- Object Modeling and Texturing
- Environment and Scenes Modeling
- Environment and Scenes Texturing
- Human Body Parts Modeling and Texturing
- Lower Body Modeling of Character
- Upper Body Modeling of Character
- Face and Head Modeling
- Cloth and Hair Modeling
- Skin Texturing
- Concept Character Modeling

References:

- Autodesk Maya 2019 Workbook Author: Sham Tickoo
- Advanced Maya Texturing and Lighting Paperback – Illustrated, 29 May 2015 by Lee Lanier .
- Mastering Autodesk Maya 2016: Autodesk Official Press BY Palamar T.