



Deccan Education Society's

**Fergusson College (Autonomous)
Pune**

Learning Outcomes-Based Curriculum

for 3 / 4 years B. Sc. Programme

as per guidelines of

NEP-2.0

for

F. Y. B. Sc. (Animation)

With effect from Academic Year

2024-2025

Program Outcomes (POs) for B. Sc. Animation	
PO1	<p>Academic Competence:</p> <ul style="list-style-type: none"> (i) Create competence in the fields of Computer Graphics assets creation, Visual Effects, Gaming and Graphic designing. (ii) Understand the ongoing changing trends and keep them updated with the latest technology. (iii) Produce creative and technical skills in various domains of Animation, Gaming, VFX and multimedia. This will enable them to be employed globally.
PO2	<p>Personal and Professional Competence:</p> <ul style="list-style-type: none"> (i) Use critical thinking skills and problem-solving strategies for overall development of the professional growth in the fields like Animation, VFX, gaming, and graphics. (ii) Carry out industry orientated new technologies and new trends in animation, VFX & graphics. (iii) Create ample opportunities to work effectively to emerge as an acceptable team leader by working on team projects & assignments.
PO3	<p>Research Competence:</p> <ul style="list-style-type: none"> (i) Apply technical knowledge and methodologies from animation softwares in order to conduct research and demonstrate appropriate skill to seek solutions to problems that emerge in various fields of 3d animation & VFX simulations
PO4	<p>Entrepreneurial and Social competence:</p> <ul style="list-style-type: none"> (i) Develop Entrepreneurial capabilities considering animation industry works mainly on freelancing and individual creativity. (ii) Build adequate knowledge, skill, dedication and work ethics required for accomplishment of the assigned task and strengthen social competency skills. (iii) Able to demonstrate their acquired knowledge for the growth of social and ethical values in outdoor activities, such as service learning, internships and field work. (iv) Maintain and develop ethics of Media, Animation & Gaming Industry as these industries plays vital role in today's generations

Program Specific Outcomes (PSOs) for F. Y. B. Sc. Animation	
PSO No.	Program Specific Outcomes (PSOs) Upon completion of this programme the student will be able to
PSO1	Academic competence: <ul style="list-style-type: none"> (i) Create competence in the fields of Computer Graphics assets creation, Visual Effects, Gaming and Graphic designing. (ii) Understand the ongoing changing trends and keep them updated with the latest technology. (iii) Produce creative and technical skills in various domains of Animation, Gaming, VFX and multimedia. This will enable them to be employed globally.
PSO2	Personal and Professional Competence: <ul style="list-style-type: none"> (i) Use critical thinking skills and problem-solving strategies for overall development of the professional growth in the fields like Animation, VFX, gaming, and graphics. (ii) Carry out industry orientated new technologies and new trends in animation, VFX & graphics. (iii) Create ample opportunities to work effectively to emerge as an acceptable team leader by working on team projects & assignments.
PSO3	Research Competence: <ul style="list-style-type: none"> (i) Apply technical knowledge and methodologies from animation softwares in order to conduct research and demonstrate appropriate skill to seek solutions to problems that emerge in various fields of 3d animation & VFX simulations
PSO4	Entrepreneurial and Social competence: <ul style="list-style-type: none"> (i) Develop Entrepreneurial capabilities considering the animation industry works mainly on freelancing and individual creativity. (ii) Build adequate knowledge, skill, dedication and work ethics required for accomplishment of the assigned task and strengthen social competency skills. (iii) Able to demonstrate their acquired knowledge for the growth of social and ethical values in outdoor activities, such as service learning, internships and field work. (iv) Maintain and develop ethics of Media, Animation & Gaming Industry as these industries play a vital role in today's generations.

Fergusson College (Autonomous), Pune
Proposed First Year Curriculum as per NEP 2020

Department of Animation
Structure for Major / Minor

FYBSc Sem -I	Theory/ Practical	Paper Code	Paper Title	Credits	Exam type
Discipline Specific Core, DSC 1	Theory	ANI-1001	Basics of Animation	2	CE +ESE
Discipline Specific Core, DSC 1	Practical	ANI -1011	Classical Animation -1	2	CE +ESE
Discipline Specific Core, DSC 2	Theory	ANI -1021	Character Design	2	CE +ESE
Discipline Specific Core, DSC 2	Practical	ANI -1031	Drawing for Animation	2	CE +ESE
Discipline Specific Core, DSC 3	Theory	ANI -1041	Visual Communication	2	CE +ESE
Discipline Specific Core, DSC 3	Practical	ANI -1051	Photography for Animation	2	CE +ESE
Open Elective- 1 (For other faculty)	Theory	ANI -1061	Animation Fundamentals - 1	2	Only CE

FYBVoc Sem -II	Theory / Practical	Paper Code	Paper Title	Credits	Exam type
Discipline Specific Core, DSC 1	Theory	ANI-1002	Stop Motion Animation	2	CE +ESE
Discipline Specific Core, DSC 1	Practical	ANI -1012	Drawing for animation 2	2	CE +ESE
Discipline Specific Core, DSC 2	Theory	ANI -1022	Digital Media - 1	2	CE +ESE
Discipline Specific Core, DSC 2	Practical	ANI -1032	Digital Media - 2	2	CE +ESE
Discipline Specific Core, DSC 3	Theory	ANI -1042	Classical Animation -2	2	CE +ESE
Discipline Specific Core, DSC 3	Practical	ANI -1052	Advance Photography Techniques	2	CE +ESE
Open Elective-1 (For other faculty)	Theory	ANI -1062	Animation Fundamentals - 2	2	Only CE
Skill Enhancement Course, SEC-1	Theory/ Practical	ANI -1072	Advance Character Design	2	Only CE

F. Y. B. Sc. Semester I

Title of the Course and Course Code	Basics of Animation (ANI-1001) (Major-Theory)	Number of Credits: 02
Course Outcomes (COs) On completion of the course, the students will be able to:		
CO1	Describe the evolution of animation and its history.	
CO2	Discuss the art of movement and analyze creative work of artist.	
CO3	Examine various processes of animation techniques that are developed with various equipments.	
CO4	Compare and contrast various traditional animation techniques.	
CO5	Explain various concepts of digital art.	
CO6	Illustrate the usage of various tools for graphic software.	

Unit No.	Title of Unit and Contents	No. of Lectures
1	EARLY ANIMATION 1. Pre-History 2. Persistence of Vision 3. History of stop motion	6
2	EARLY STUDIOS AND ANIMATION PIONEERS 1. Walt Disney 2. Max Fleischer 3. Tex Avery 4. Warner bros	6
3	EARLY APPROACHES TO MOTION IN ART 1. Animation Before Films 2. The Magic Latern 3. Thaumatrope 4. Phenakistoscope 5. Zeotrope 6. Flip Book	6
4	ANIMATION TECHNIQUES 1. Stop Motion 2. Puppet 3. Cut-out 4. Clay Etc	6
5	HISTORY OF INDIAN ANIMATION, INDUSTRIES AND STUDIOS 1. Growth of Indian Industry and Studio 2. Animation art in India	6

Learning Resources

1. "Cartoon Animation", Preston Blair, Walter T. Foster, Apple Press, Limited, Eighth Edition, ISBN 1560100842
2. "History of Animation": Facts and Figures, Bredson, Philips Cardiff, Pearson Publications,

F.Y. B.Sc. Semester I		
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Title of the Course and Course Code	Classical Animation (ANI-1011) (Major-Practical)	Number of Credits: 02
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Course Outcomes (COs) On completion of the course, the students will be able to:	
CO1	Describe the production pipeline of animation.
CO2	Discuss the art and style carried in 2D Animation.
CO3	Determine various animation techniques with basic principles of animation.
CO4	Apply action analysis and observations to animated drawings.
CO5	Analyze basic animation movements for characters or objects.
CO6	Create drawings that represent actions and emotions.

Unit No.	Title of Unit and Contents	No. of hours
I	Introduction to 2D classical animation.	5
II	2D classical animation pipeline. 1.1 Pre-Production 1.2 Production 1.3 Post - Production	15
III	12 principles of animation. 1 Squash and stretch 2 Anticipation 3 Staging 4 Straight-ahead action and pose-to-pose 5 Follow through and overlapping action 6 Slow in and slow out 7 Arc 8 Secondary action 9 Timing 10 Exaggeration 11 Solid drawing 12 Appeal	12
IV	Introduction to Light box	10
V	Classical Animation Practical- 1.1 Bouncing Ball 1 1.2 Bouncing ball Progressive 1.3 Jumping Sack 1.4 Pendulum Animation 1.5 Bird Fly 1.6 Wave Principle 1.7 FX Animation 1.8 Smears in animation	18

Reference Books	<ol style="list-style-type: none"> 1. The Animator's Survival kit (Richard Williams) 2. Disney Animation: The Illusion of Life 3. Cartoon Animation 4.. Timing for Animation
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F. Y. B. Sc. (ANIMATION) SEMESTER - I
ANIMATION PAPER - I
TITLE: Character Design
Paper CODE: ANI-1021

Title of the Course and Course Code	Character Design (ANI-1021) Theory	Number of Credits: 02
Course Outcomes (COs) On completion of the course, the students will be able to:		
CO1	Recall the basics of drawing and sketching	
CO2	Illustrate the importance of character designing	
CO3	Demonstrate the usage of expressions in character design	
CO4	Identify, analyze types of characters and their styles	
CO5	Review different type of concept arts in context of characters	
CO6	Create Character Bible, Model Sheets for a newly designed character.	

Unit No.	Title of Unit and Contents	No. of hours
I	Introduction to Character design for animation.	5
II	Character design for different industries.	5
III	Introduction to Caricaturing. 1.1 Human Face Proportions 1.2 Exaggeration 1.3 Caricaturing faces from photo references Creating multiple variations for one face	7
IV	Exaggerating poses	3
V	Principles of Character Design 1.1 Proportions 1.2 Exaggeration 1.3 Basic shapes (Circle, Square, Triangle) 1.4 Volume 1.5 Body Construction 1.6 Silhouette 1.7 Contrast 1.8 Rhythm 1.9 Color	10

Learning Resources:

Reference Books	<ol style="list-style-type: none"> 1. The Animator's Survival kit (Richard Williams) 2. Disney Animation: The Illusion of Life 3. Acting for Animators 4. Cartoon Animation 5. Timing for Animation
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F.Y. B.Sc. (ANIMATION) SEMESTER – I
ANIMATION PAPER - IV
TITLE: DRAWING FOR ANIMATION
Paper CODE: ANI1031

Title of the Course and Course Code	DRAWING FOR ANIMATION (ANI1031)	Number of Credits : 02
On completion of the course, the students will be able to:		Bloom's Cognitive level
CO1	Recall the basics of drawing and material handling.	1
CO2	Illustrate the importance of elements of designs	2,3
CO3	Demonstrate the usage of positive and negative space in a design composition.	3
CO4	Identify, analyze color theory and color harmony in drawing and sketching.	1,4
CO5	Review different type of art forms.	5
CO6	Create backgrounds and compositions with the help of color theory and color harmony.	6

Practical No.	Title
1	Basics of Drawing
2	Elements of Design 1. Point 2. Line 3. Shape 4. Texture 5. Colors 6. Form 7. Space 8. Value
3	Colour theory : 1. Grayscale 2. Colour wheel 3. Colour scheme 4. Trying different materials (Water colour & poster colour)
4	Object drawing _1: 1. Object Drawing Basics 2. 3d Objects (Creating Object and Shading as per texture of Creating object)
5	Perspective: 1. 1 point perspective 2. 2 point perspective 3. 3 point perspective
6	Object Drawing _2: 1. Manmade objects 2. Nature objects
7	Composition study: 1. Application of Design Elements 2. Positive space negative space

Learning Resources

1. The Animation survival kit by Richard Williams.

F.Y. B.Sc. (ANIMATION) SEMESTER – I
ANIMATION PAPER - V
TITLE: VISUAL COMMUNICATION
Paper CODE: ANI 1041

Title of the Course and Course Code	Visual Communication (ANI 1041)	Number of Credits : 02
On completion of the course, the students will be able to:		Bloom's Cognitive level
CO1	Describe basics of Communication.	1
CO2	Explain theory of Visual Communication.	2,4
CO3	Apply rules of communication theory.	3
CO4	Analyze various camera angles and shots.	4

Unit No.	Title of Unit and Contents	No. of Lectures
	Introduction to Visual Communication 1. Visual language 2. Visual grammar- perception, composition, grouping and organization, balance, ratio and proportion, rule of thirds, light, color harmony and contrast 3. Classification of shots 4. Principles of visual grammar 5. Film, video, e books, art, modern ways	12
2	Socio cultural history of Visual Communication 1. History of visual communication 2. Visual literacy 3. How to read visuals 4. Impact of Visual Communication on People	7
3	Symbolic communication 1. Symbolism 2. Indian Context	7
4	Presentation Methods of Visual Communication 1. Forms of visual communication 2. Approaches to visual communication 3. Design principles 4. Design processes	8
5	Visual analytics and models 1. Color theory 2. Visual analysis (motion, static) 3. Visual aids and advance techniques	8

Learning Resources

- Visual Communication: Images with Messages by Paul Martin
- Visual Communication: Integrating Media, Art, and Science By Rick Williams, Julianne Newton

F.Y. B.Sc. (ANIMATION) SEMESTER – I
ANIMATION PAPER - VI
TITLE: PHOTOGRAPHY FOR ANIMATION
Paper CODE: ANI 1051

Title of the Course and Course Code	PHOTOGRAPHY FOR ANIMATION ANI 1051	Number of Credits : 02
On completion of the course, the students will be able to:		Bloom's Cognitive level
CO1	Recall history of Photography	1
CO2	Explain camera functioning	2,4
CO3	Operate camera and its accessories	3
CO4	Compare lighting techniques and types of lenses	2,4,5

	Title and Contents	No. of Lectures
Unit - I	Evolution of Photography <ul style="list-style-type: none"> • Definition of Photography • Origin of Camera World • Urge of Invention of Photography • Camera obscura - Pinhole - Box camera - DSLR 	08
Unit - II	Digital Photography <ul style="list-style-type: none"> • Basics of Digital Photography • Camera Equipment • Camera Settings • Basics of Image Formation 	12
Unit - III	Various Camera and Lenses <ul style="list-style-type: none"> • Introduction to Mirror less camera technology / working • Types of Lenses (Distortions, properties, focal length, Depth) • Crop Factor and effective focal length calculation) • Creative Photography (Angles in Photography) 	08
Unit - IV	Color Theory and Lightning Techniques <ul style="list-style-type: none"> • Color Space + Colour symbolism + Colour harmonies • Histogram • What are major sources of lights? • Types of Lights in Photography. (Main / Key Light, Fill Light, Cut Light/Kick Light, Background Light). • Flash Operating Modes • Green Screen Lighting 	10
Unit - V	Composition <ul style="list-style-type: none"> • What is composition in Photography? Its significance. • Types of Composition: Symmetrical, Radial, Diagonal, Letter Box, Tall Crop, Rule of third, Overlapping, Frame in Frame, Geometrical Shapes & Forms. 	12
Unit - VI	Camera Handling sessions	10

References:

- Fundamentals of Photography Book by Tom Ang.
- Cinematography: Theory and Practice: Image Making for Cinematographers and Directors, by Blain Brown.
- The Filmmaker's Handbook: A Comprehensive Guide for the Digital Age: 2013 Edition.
- Guide to Postproduction for TV and Film: Managing the Process by Barbara Clark.

F.Y. B.Sc. (ANIMATION) SEMESTER – I
ANIMATION PAPER - VII
TITLE: Basics of Animation
Paper CODE: ANI 1061 (GE/OE)

F.Y. B.Sc. Semester I		
Title of the Course and Course Code	Basics of Animation (ANI 1061) (GE/OE)	Number of Credits : 02
Course Outcomes (COs)		
On completion of the course, the students will be able to:		
CO1	Describe the evolution of animation and its history.	
CO2	Discuss the art of movement and analyze creative work of artist.	
CO3	Examine various processes of animation techniques that are developed with various equipment.	
CO4	Compare and contrast various traditional animation techniques.	

Unit No.	Title of Unit and Contents	No. of Lectures
1	History of Animation	4
2	Early animations	4
3	Early approaches to motion in art	6
4	Animation Techniques	6
5	History of Indian Animation	6
6	Principles of Animations	4

Learning Resources

1. "Cartoon Animation", Preston Blair, Walter T. Foster, Apple Press, Limited, Eighth Edition, ISBN 1560100842
2. "History of Animation": Facts and Figures, Bredson, Philips Cardiff, Pearson Publications, 1972

SEMESTER II

F. Y. B. Sc. (ANIMATION) SEMESTER - II

ANIMATION PAPER - I

TITLE: Stop Motion Animation

Paper CODE: ANI-1002 (Major)

Title of the Course and Course Code	Stop Motion Animation (ANI 1002) (Major-Theory)	Number of Credits: 02
Course Outcomes (COs) On completion of the course, the students will be able to:		
CO1	Describe the working of stop motion industry.	
CO2	Explain the process of handling materials for clay modelling and cut out animation.	
CO3	Classify armature and miniature modelling.	
CO4	Differentiate techniques between cut-out animation and clay-mation.	
CO5	Create an animated clip by using the cut out and clay animation techniques.	

Unit No.	Title of Unit and Contents	No. of hours
I	Introduction to Stop Motion Animation.	2
II	Stop Motion Animation Production pipeline. 1.1 Pre-Production 1.2 Production 1.3 Post - Production	3
III	Types of Stop Motion Animation 1.1 Puppet animation 1.2 Cutout Animation	5
IV	History of Stop Motion Animation	2
V	Supplies for Stop Motion Animation	2
VI	Puppet Animation 1 Types of Clays 1.1 Water Based Clay 1.2 Oil Based Clay 2 Armatures 1.1 Wire Armature 1.2 Ball-Socket Armature 3 Character Design for Stop Motion Animation 4 Molds Mold making techniques & its importance. 5 Foam Latex Material 6 Latex buildup Puppets 7 Clay Puppets	5

VII	Introduction to Cutout Animation 1 History of Cutout animation 2 Style of cutout animation 3 Pipeline For cutout animation	5
VIII	Group Project (Clay Animation / Cutout Animation) 1 Preproduction 2 Animation 3 Final Project Presentations and Viva	5

Learning Resources:

Reference Books	1 The Art of Stop-Motion Animation (Ken A. Priebe)
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F.Y. B. Sc. Animation SEMESTER – II
ANIMATION PAPER - I
TITLE: DRAWING FOR ANIMATION - 2
Paper CODE: ANI 1012

Title of the Course and Course Code	DRAWING FOR ANIMATION – 2 ANI 1012	Number of Credits: 02
Course Outcomes (COs)		
On completion of the course, the students will be able to:		
CO1	Recall the basics of drawing and sketching	
CO2	Illustrate the importance of color theory	
CO3	Demonstrate the usage of 1-2 point perspective in drawing	
CO4	Identify, analyze color theory and color harmony in drawing and sketching.	
CO5	Review different type of art forms.	
CO6	Create backgrounds, compositions and storyboards with the help of color theory and color harmony.	

Sr. No.	Title	
1	Human Anatomy 1. Basic proportions (Human Body & Face) 2. Hands 3. Legs & Feet	10
2	Figure drawing Advance sketching 1. Time sketching 2. Outdoor sketching 3. Action base sketching 4. Line of action 5.	10
3	Landscape Sketching	10
4	Advance Colour theory 6. Color psychology 7. color schemes 8. character color schemes 9. Project on Color	10
5	1 point perspective 1. Create an object in which student can understand the depth, hollow, extrude and overlapping objects. 2. Project in 1 point	10
6	2 point perspective 1. Create an object in which student can understand the depth, hollow, extrude and overlapping objects. 2. Project in 2 point	10

F.Y. B. Sc. Animation SEMESTER – II

ANIMATION PAPER - III

TITLE: Digital Media - 1

Paper CODE: ANI 1022

Title of the Course and Course Code	DIGITAL Media – 1 (ANI 1022)	Number of Credits : 02
On completion of the course, the students will be able to:		Bloom's Cognitive level
CO1	Recall theoretical knowledge of print and digital media.	1
CO2	Explain various concepts of digital art.	2,4
CO3	Illustrate the usage of various tools for graphic software.	2,3
CO4	Identify various points of switching from hand drawings to digital platforms.	1,4
CO5	Create background for 2d animation, texturing for 3d animation using digital platforms.	6

Practical No.	Title
1	Black and White photo to Color
2	Photo Manipulation
3	Digital Painting Object
4	Digital Painting Nature Object
5	Digital Painting Landscape
6	Character Design
7	Layout Design for Animation
8	Matte Painting
9	1 Introduction to digital sketching 2 Tracing traditional sketches / designs in digital image editing software

References: <https://helpx.adobe.com/in/creative-cloud/tutorials-explore.html>

F.Y. B. Sc. Animation SEMESTER – II

ANIMATION PAPER - IV

TITLE: Digital Media - 2

Paper CODE: ANI 1032

Title of the Course and Course Code	Digital Media - 2 ANI 1032	Number of Credits : 02
On completion of the course, the students will be able to:		Bloom's Cognitive level
CO1	Recall theoretical knowledge of print and digital media.	1
CO2	Explain various concepts of digital art.	2,4
CO3	Illustrate the usage of various tools for vector graphic software.	2,3
CO4	Identify various points of vector design styles & raster designing	1,4
CO5	Recall theoretical knowledge of print and digital media.	6

Practical No.	Title
1	Logo Design
2	Typography
3	Visiting Card Design
4	Brochure design
5	Cover page design
6	Cartoon Character design
7	Cartoon Character design
8	Landscape Design
9	Character Design
10	Character Design

References: <https://helpx.adobe.com/in/creative-cloud/tutorials-explore.html>

F.Y. B. Sc. Animation SEMESTER – II
ANIMATION PAPER - V
TITLE: CLASSICAL ANIMATION - 2
Paper CODE: ANI 1042

Title of the Course and Course Code	CLASSICAL ANIMATION – 2 ANI 1042	Number of Credits: 02
Course Outcomes (COs)		
On completion of the course, the students will be able to:		
CO1	Describe the production pipeline of animation.	
CO2	Discuss the art and style carried in 2D Animation.	
CO3	Determine various animation techniques with basic principles of animation.	
CO4	Apply action analysis and observations to animated drawings.	

Sr. No.	Title	
1	Basic walk cycle 1. Profile 2. Front	10
2	Run Cycle 1. Profile 2. Front	10
3	Character turn table animation 1. Face 2. Full body	10

Learning Resources:

Reference Books	<ol style="list-style-type: none"> 1. The Animator's Survival kit (Richard Williams) 2. Disney Animation: The Illusion of Life 3. <i>Acting for Animators</i> 4. <i>Cartoon Animation</i> 5. <i>Timing for Animation</i>
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F.Y. B.Sc. (ANIMATION) SEMESTER – II
ANIMATION PAPER - VI
TITLE: ADVANCE PHOTOGRAPHY TECHNIQUES
Paper CODE: ANI 1052

Title of the Course and Course Code	ADVANCE PHOTOGRAPHY TECHNIQUES (ANI 1052)	Number of Credits : 02
On completion of the course, the students will be able to:		Bloom's Cognitive level
CO1	Recall basics of Camera	1
CO2	Explain lighting & cinematography techniques	2,4
CO3	Execute video shoots with lighting setups	3
CO4	Compare different cameras with lenses	2,4,5

	Title and Contents	No. of Lectures
Unit - I	<p>Development</p> <ol style="list-style-type: none"> 1. Before a film can get started, it needs to go through the “development” phase. This phase includes the creation, writing, organizing and planning of a film project. The budget must be set, cast goes through auditions, the location is decided, and multiple scripts are written. Many times, writers and directors create storyboards to entice producers to finance the film. 2. Responsibility of the Cinematographer + Story boarding 3. Pre-Production, Production and Post-Production stages 	05
Unit - II	<p>Basic Grammar of Video</p> <ol style="list-style-type: none"> 1. Camera Angles 2. Types of Shots 3. Composition Rules (+ Revision) 4. Stop Motion (Animation - Photography) 5. What is Stop-Motion Imagery? 6. Applications / Impacts 7. How to create stop motion animation (Techniques, do's / Don'ts) 	11
Unit - III	<p>Advance Lighting</p> <ol style="list-style-type: none"> 1. Conventional, Soft and Diffused, Bounce, Source, Hard and Creative Lighting Revision + Use of colours in Films (Colour theory Revision + Colour symbolism) Outdoor Lighting Wide and Huge Sets - Day Effect, Night Effect and Creative Lighting. Matching Indoor With Outdoor 2. Exposure Metering - Incident Light, Reflected Light, Spot Light, etc. Study about different kinds of Lights - Incandescent Lamps, Tungsten Halogen, HMI, PAR Lights, Kinoflo, etc. 	10

Unit - IV	Cinematography <ol style="list-style-type: none"> 1. Different Types of Film Movie Cameras. + Basics of Aspect ratios (Cinemascope / IMAX / 4:3 / 16:9 / 1:1) (No need to study each camera individually , reference reading and websites (ARRI / RED / Canon ,etc.) Will be provided to students in order to read out the info about the digital Film cameras) 2. Slow and Fast Motions, Changing of Shutter Angles and Ramping 3. Special Effects using In-Camera techniques + Camera Movements (Simple to Complex) 	10
Unit - V	Post Production, Color Grading, Digital Intermediate <ol style="list-style-type: none"> 1. Image Processing 2. Color Gradations 3. Digital Audio recording, Editing and Reproduction 4. Video Editing - Media Management, Working in the audio, Effects & Transition, Animation, Titles 5. Special Effects 6. Budget, Timelines, Recce 	09
References: <ol style="list-style-type: none"> 1. Picture Perfect Practice and Picture Perfect Posing by Roberto Valenzuela. 2. Understanding Exposure by Bryan Peterson. 3. Film is not Dead by Jonathon Canlas. 4. The Art of Color by Itten. 		

F. Y. B. Sc. (ANIMATION) SEMESTER - II
ANIMATION PAPER - VII
TITLE: ANIMATION FUNDAMENTALS -2
Paper CODE: ANI-1062 (GE/OE)

Title of the Course and Course Code	ANIMATION FUNDAMENTALS -2 (ANI-1062)(GE/OE)	Number of Credits: 02
Course Outcomes (COs) On completion of the course, the students will be able to:		
CO1	Describe the evolution of animation and its history.	
CO2	Discuss the art of movement and analyze creative work of artist.	
CO3	Examine various processes of animation techniques that are developed with various equipments.	
CO4	Compare and contrast various traditional animation techniques.	

Unit No.	Title of Unit and Contents	No. of Lectures
1	2D Animation a) Digital Animation b) Classical Animation c) Vector Animation	6
2	3D Animation a) Modelling b) Texturing c) Rigging d) Animation e) Lighting f) FX	6
3	Stop Motion Animation a) Clay Animation b) Cutout Animation	6
4	Gaming a) Classification of Games b) Generations of Games c) Game process	6
5	VFX a) Early VFX b) Modern VFX c) Rotoscopy d) Chroma Removal e) Tracking	6

F. Y. B. Sc. (ANIMATION) SEMESTER - II
ANIMATION PAPER - VIII
TITLE: ADVANCE CHARACTER DESIGN
Paper CODE: ANI-1072 (SEC)

Title of the Course and Course Code	ADVANCE CHARACTER DESIGN (SEC) ANI 1072	Number of Credits: 02
Course Outcomes (COs)		
On completion of the course, the students will be able to:		
CO1	Recall the basics of drawing and sketching	
CO2	Illustrate the importance of character designing	
CO3	Demonstrate the usage of expressions in character design	
CO4	Identify, analyze types of characters and their styles	
CO5	Review different type of concept arts in context of characters	
CO6	Create Character Bible, Model Sheets for a newly designed character	

Unit No.	Title of Unit and Contents	No. of hours
I	Creating Characters from basic shapes	10
II	Character design Process	10
III	Character designing from live Action characters	5
IV	Character designing demo- 1 Brainstorming / Conceptualizing character's description 2 Creating basic body construction through rough sketches 3 Creating multiple options for the same character 4 Finalising the design	10
V	Introduction to character Model Sheets	5
VI	Creating a Character Model Sheet 1 Three Fourth angle 2 Front Angle 3 Side / Profile Angle 4 Back Angle 5 Back Three Fourth Angle	10