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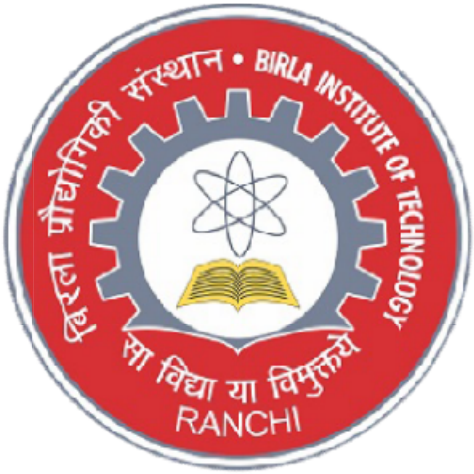

CHOICE BASED CREDIT SYSTEM (CBCS) CURRICULUM

(Effective from Academic Session: Monsoon 2018)

M.Sc. ANIMATION DESIGN

DEPARTMENT OF ANIMATION AND MULTIMEDIA

DETAILED SYLLABUS
FOR
M.Sc. ANIMATION DESIGN

M.Sc. Animation Design
Semester-I

COURSE INFORMATION SHEET

Course Code: AM401

Course Title: Traditional Animation
Pre-requisite (s): Nil
Credits: 4 L:3 T:1 P:0
Class schedule per week: 04
Class: M.Sc. Animation Design
Semester: I
Branch: Animation & Multimedia
Type: Lecture and Tutorial

Course Objectives

This course enables the students to:

1.	Understand the History of Traditional Animation
2.	Learning Step by step procedure for Traditional Animation
3.	Know about principles of animation
4.	Understand fundamentals of timing for Animation
5.	know the various theories of film studies and to relate various technologies and their development

Course Outcomes

After the completion of this course, students will be able to:

CO1	rasp complete information on early attempts of animation, equipments, development, animation studios, and projects.
CO2	Grasp complete animation film production
CO3	Grasp and implementation of Animation Principles
CO4	Understand different types of walks, runs, dialogues, expressions, acting for animation etc. through mini project work.
CO5	Understand the case studies of Classic Animated features and Short Films

Module	**No. of Lectures**
Module 1 Introduction to Traditional animation, Early attempts and Development of Animation in various countries: Mainstream Animation in the United States, Independent Animation in the United States, Canadian Animation, European Animation, Japanese Animation, Animation in Other Asian Countries, Southeast Asian Animation, Animation in Australia and New Zealand, Animation in India, Animation in Iran, and African Animation.	8 Lectures

Module 2 Step By Step Procedure for Traditional Animation: Script, Storyboard, Soundtrack, Track Breakdown, Designs, Animatic (Leica Reel), Layouts, Dope Sheets and Production Folders, Pencil Tests, Pose Tests, Clean-Up, Ink and Paint, Backgrounds, Checking, Final Shoot/Composite, Final Edit and Dub, and The Tools of the Trade.	8 Lectures
Module 3 Principles of Animation: Squash and stretch, Anticipation, Staging, Straight ahead action and pose to pose, Follow through and overlapping action, Slow in and slow out, Arc, Secondary action, Timing, Exaggeration, Solid drawing, and Appeal.	8 Lectures
Module 4 Weight and Weighted Movement, Flexibility and Fluid Joint Movement, Generic Walks, Keys, Passing Position, Inbetweens, Walk Cycles, Personality Walks and Timing, Runs and Run Cycles, Personality Runs and Timing, Silhouetting, Storyboarding & Animatics.	8 Lectures
Module 5 Animating Expressions & Dialogue, Lip Sync, Acting & Emotion, Laughter, Takes, Eyes and Expressions, Sound Track Recording and Editing. Understanding traditional trends in animation making in terms of content, Styling, Techniques and applications, Studying animation films through film viewing, Appreciation, criticism, Theoretical writings, Essays, Research studies, and Mini Project.	8 Lectures

Reference Books:

1. Animation: From Pencil to Pixels by Tony White
2. Animator's Survival Kit – Richard Williams
3. The Illusion of Life – Frank Thomas & OlieJohnstan
4. Animation Script to Screen (Author: Shamus Culhane)
5. Animation Writing and Development: From Script Development to Pitch By Jean Ann Wright
6. The History of Moviemaking: Animation and Live-Action, from Silent to Sound, Black-And-White to Color (Voyages of Discovery), Scholastic Trade

Gaps in the syllabus (to meet industry / Profession requirements): Nil

POs met through Gaps in the syllabus: Nil

Topics beyond syllabus / advanced topics / design: More emphasis on industrial exposure to the students.

POs met through topics beyond syllabus / advanced topics / design: 1, 2, 3, 4, 5, 8, 9, 11

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	50
Semester End Examination	50

Continuous Internal Assessment	% Distribution
3 Quizzes	30 % (3 × 10%)
Assignment (s)	10
Seminar before a committee	10

Assessment Tools			% Contribution during CO Assessment		
Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	3	2	2	1	1	2	2	1	3	2	2	3	3	3	3
CO2	3	2	3	3	3	3	1	2	3	3	1	3	3	3	3

CO3	2	2	2	3	2	2	2	3	2	3	1	3	3	3	3
CO4	3	3	3	2	2	3	3	3	3	3	2	2	1	2	2
CO5	3	3	2	3	2	3	3	3	3	3	2	2	3	2	1

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3, CD4, CD5, CD8
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4,
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD3, CD66, CD7
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM402
Course Title: Writing & Storyboarding
Pre-requisite(s): Basic knowledge of Script and visual storytelling
Credits: 4 L-3 T-1 P-0
Class schedule per week: 04
Class: M.Sc. Animation Design
Semester: I
Type: Theory

Course Objectives

This course enables the students to:

1.	Understand Visual Narration
2.	Learn about Story Structure, Script, Screenplay
3.	Learn about camera and design principles and their use in storyboarding
4.	Understand the different approaches of writing for different medium
5.	Learn about editing and continuity in films

Course Outcomes

After the completion of this course, students will be able to:

CO1.	Knowledge of Visual Narration
CO2.	Know about Story Structure, Script, Screenplay
CO3.	Ability to write for different medium
CO4.	Knowledge of camera, composition and other design principles
CO5.	Storyboard a script/screenplay

Syllabus

MODULES	(NO. OF LECTURE HOURS)
Module I Role and Responsibilities of Storyboarding Artist, career options and applications in the industry – Role of storyboard artist, skills required, career options, use and different approaches of storyboarding in the industry. Intro to visual narration, Comics, Screenplay – Visual Narrative, sequential drawing, comics and graphic novels, screenplay basics	9

Module II Writing for different medium – writing for radio, newspaper & journals, T.V. & films, writing for Animation, Program Proposal & Treatment. Story structure, script structure, handling the 3act play system – Structure of a story, elements of story, script and screenplay, understanding the 3 Act structure & different approaches.	9
Module III Application of art principles – Understanding Balance, Proportion, Contrast, Rhythm, Movement, etc. Composition – scene planning & staging, tools and techniques, Field division, Perspective and camera angles, Picture composition.	9
Module IV Theory of action and gesture – Understanding movement and action, capturing quick gestures in drawing, importance of gesture drawing. Description and visual development, tools for storyboarding – How to describe and develop a shot visually, storyboard elements and guidelines.	9
Module V Elements of the Continuity Style – Transitions, Cuts, Editing styles Pacing – Story beats, thinking for a camera, speeding up and slowing down a scene.	9

Reference Books:

1. The Art of Layout and Storyboarding (Author: Mark Byrne)
2. Shot by shot (Author : Steven D Katz)
3. Animation Script to Screen (Author: Shamus Culhane)

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. More emphasis on practical assignments based on storyboarding, like comic strips and graphic novels
2. Case studies of animation storyboards

POs met through Gaps in the Syllabus: 1, 2, 3, 4, 9, 10

Topics beyond syllabus/Advanced topics/Design

1. Creating comic strips
2. Case Study of storyboards of popular animation films.

POs met through Topics beyond syllabus/Advanced topics/Design: 1, 2, 3, 4, 9, 10

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	50
Semester End Examination	50

Continuous Internal Assessment	% Distribution
3 Quizzes	30 % (3 × 10%)
Assignment (s)	10
Seminar before a committee	10

Assessment Tools			% Contribution during CO Assessment		
Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	1	2	1	1	1	1	1	1	1	2	1	2	1	1
CO2	2	1	2	1	1	1	1	1	1	2	2	1	2	1	1
CO3	2	1	2	1	1	1	1	1	1	2	2	2	2	1	2
CO4	2	2	3	1	2	2	1	1	2	2	2	2	2	2	2
CO5	2	3	3	1	2	2	1	1	2	2	1	2	2	2	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD3
CD2	Tutorial / Assignment		C02	CD1, CD3
CD3	Seminars		C03	CD1, CD3
CD4	Mini Projects / Projects		C04	CD1, CD3, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD4, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM403

Course Title: Character Design
Pre-requisite (s): Basic Knowledge of Character Designing
Credits: 4 L:3 T:1 P:0
Class schedule per week: 04
Class: M.Sc. Animation Design
Semester: I
Branch: Animation & Multimedia
Type: Lecture and Tutorial

Course Objectives

This course enables the students to:

1.	Understand the Fundamentals of Character Design
2.	Develop various types of characters in written form
3.	Learning the process of character creation in visual form
4.	Study characters from live action, animation movies, and real life
5.	know theories of character development & design and to relate various technologies and their development

Course Outcomes

After the completion of this course, students will be able to:

CO1	be characteristics of well-designed and executed characters
CO2	Assess and critique past and current character design trends
CO3	Create accurate and aesthetically appealing character design
CO4	Demonstrate progress in basic drawing skills
CO5	Develop and design character project file as an assignment

MODULE	NO. OF LECTURE HOURS
Module I Introduction to Character Designing, What is Character- A Character is -what he does, Motive, The Past, Reputation, Stereotypes, Network, Habits and Patterns, Talents and Abilities, Tastes and Preferences, Body.	**8**

Module II Human Development- The first year, Toddlers (Age one to three), Pre School (Ages three to five, Age Six to Age Sixteen, Age Seventeen to Age Twenty One, Young Adulthood, Mid-life, Late Adulthood, Old Age and other development issues. Assignment- Develop and design characters for a Game.	**8**
Module III Developing Characters- Types of people, Classic comedy, Character types, Classic Comedy v/s Negative stereotypes, Everyman v/s one-of-a-kind, Complex and original characters, Starting a Profile, Types of characters, More to think about character in a story. Assignment-Develop and design characters for an animated television cartoon series.	**8**
Module IV Written description of characters, important design principles, Color theory etc. Character Studies from animated movies, Character studies from real life, Character studies from live action movies, Character studies from Computer Games. Assignment- Develop and design characters for an animated short film.	**8**
Module V The process of character creation: How to get a good gesture, exaggerate from life, apply a shape language to your characters, how to get good line quality, how to proportion effects your character design, how to use perspective to draw believable characters, how to draw your character in action, how to give your character emotion and expressions. (Study of Human Skeleton, Musculature, Shape, Proportion, Character Construction, Heads, Hands, Feet, Gesture, Acting, Drapery, Body Types, Reference, Prop Design, Analysis, Comparative chart, Model Sheet, Expression Sheet, Pose Sheet, Color chart Noodling and Polished Render.)	**8**

Reference Books:

1. Animation Writing & Development (Author: Jean Ann Wright)
2. Animation Script to Screen (Author: Shamus Culhane)
3. Characters and View Point By Orson Scott Card
4. Illusion of Life By Ollie Johnston & Frank Thomas
5. Figure drawing without a model- by Ron Tiner
6. Creating Characters with Personality: For Film, TV, Animation, Video Games and Graphics Novels By Tom Ban Croft and Glen Keane
7. Creating Animated Cartoons with Character: A Guide to Developing and Producing Your Own Series for TV, the Web, and Short Film By Joy Murray

8. Animation: From Pencil to Pixels by Tony White

Gaps in the Syllabus (to meet Industry/Profession requirements): More emphasis on digital practice while designing the characters.

POs met through Gaps in the Syllabus: 1, 2, 3, 4, 5, 9, 12

Topics beyond syllabus/Advanced topics/Design

POs met through Topics beyond syllabus/Advanced topics/Design: 1, 2, 3, 4, 9, 10

Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	50
Semester End Examination	50

Continuous Internal Assessment	% Distribution
3 Quizzes	30 % (3 × 10%)
Assignment (s)	10
Seminar before a committee	10

Assessment Tools			% Contribution during CO Assessment		
Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

3. Student feedback on Faculty
4. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Self-learning such as use of NPTEL materials and internets
CD8	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	3	2	1	1	1	2	2	1	2	2	1	3	3	2	1
CO2	3	2	3	3	3	3	1	2	3	3	1	3	3	2	2
CO3	2	2	2	3	2	2	2	2	2	3	1	3	3	2	2
CO4	3	3	3	2	3	3	3	2	2	3	2	2	3	2	2
CO5	3	3	2	3	3	3	3	2	3	3	2	2	3	2	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3
CD3	Seminars		C03	CD1, CD2, CD3
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			

COURSE INFORMATION SHEET

Course code: AM404
Course title: Communication-I
Pre-requisite(s): NIL
Co- requisite(s): NIL
Credits: 3 L: 3 T: 0 P: 0
Class schedule per week: 3
Class: M.Sc. Animation Design
Semester: I
Type: Theory

Course Objectives
This course enables the students:

1.	To analyze and demonstrate writing and speaking processes through invention, organization, drafting, revision, editing, and presentation.
2.	To understand the importance of specifying audience and purpose and to select appropriate communication choices.
3.	To interpret and appropriately apply modes of expression, i.e., descriptive, expositive, Narrative, scientific, and self-expressive, in written, visual, and oral communication
4.	To participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
5.	To develop the ability to research and write a documented paper and/or to give an oral presentation.

Course Outcomes
After the completion of this course, students will be able to:

CO1	Apply business communication strategies and principles to prepare effective communication for domestic and international business situations.
CO2	Utilize analytical and problem-solving skills appropriate to business communication.
CO3	Participate in team activities that lead to the development of collaborative work skills.
CO4	Select appropriate organizational formats and channels used in developing and presenting business messages
CO5	Communicate via electronic mail, Internet, and other technologies and deliver an effective oral business presentation.

Syllabus

MODULE	**(No. of LectureHours)**

Module I **Introduction to Business Communication:** Importance and Objectives of Business communication, Process of communication, Barriers to effective communication, Techniques of effective communication. Forms of communication (Written, Oral, audio-visual communication).	8
Module II **Managing Business Communication:** Formal and Informal communication, Non- verbal communication (Body language, Gestures, Postures, Facial expressions). Techniques to effective listening, methods and styles of reading.	8
Module III Other aspects of communication: Story Writing, Aspects of Story writing, Story telling. Group Discussions, Extempore, Principles of effective speech and presentations, Role playing.	8
Module IV Introduction to managerial writing:Business letters: Inquiries, Circulars, Quotations, Orders, Acknowledgement, Claims & adjustments, Collection letters, Sales letters, Drafting of different resumes, Covering letters Applying for a job, Social correspondence, Invitation to speak. Official Correspondence: Memorandum, Notice, Agenda, Minutes, Circular letters.	8
Module V **Report writing and Technical Proposals:**Business reports, Types, Characteristics, Importance, Elements of structure, Process of writing, Order of writing, the final draft, check lists for reports. Technical proposals, Definitions, types and format.	8

Text Books:

T1. Communication Skills, Sanjay Kumar &PushpLata, Oxford University Press
T2. Business Correspondence and Report Writing,R.C.Sharma, Krishna Mohan.Mcgraw Hill
T3. Communication for Business,Shirley Taylor, V.Chandra, Pearson

Reference Books:
R1. Business Communication- HorySankar Mukherjee, Oxford University Press
R2. Basic Business Communication- .Lesikar I Flatley, McGraw Hill.
R3. Business Communication Today ,Bovee, Thill and Chaterjee, Pearson

Gaps in the syllabus (to meet industry / Profession requirements): Nil

POs met through Gaps in the syllabus: Nil

Topics beyond syllabus / advanced topics / design: Nil

POs met through topics beyond syllabus / advanced topics / design: Nil

Course Outcome (CO) Attainment Assessment tools & Evaluation procedure
Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Quiz(I, II, III)	30
Assignment	10
Seminar	10
End Term Examination Marks	50

Assessment Components	CO1	CO2	CO3	CO4	CO5
Quiz(I, II, III)	√	√	√		
End Sem Examination Marks	√	√	√	√	√
Assignment Marks	√	√	√	√	√

Indirect Assessment –

1. Student Feedback on Faculty
2. Student Feedback on Course Outcome

Course Delivery methods
Lecture by use of boards/LCD projectors/OHP projectors
Tutorials/Assignments
Seminars
Mini projects/Projects
Laboratory experiments/teaching aids
Industrial/guest lectures
Industrial visits/in-plant training
Self- learning such as use of NPTEL materials and internets
Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	1	1	1	1	2	2	2	2	1	2	2	2	2	1	2
CO2	1	1	2	1	1	1	1	2	2	2	2	2	2	2	2
CO3	1	1	2	1	2	1	1	2	3	1	1	2	3	2	1
CO4	1	1	2	1	2	1	1	2	2	1	1	2	3	2	2
CO5	3	1	1	3	3	1	2	3	2	2	2	2	2	2	2

Mapping Between COs and Course Delivery (CD) methods				
CD	**Course Delivery methods**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/LCD projectors/OHP projectors		CO1	CD1,CD2,CD3
CD2	Tutorials/Assignments		CO2	CD1,CD2,CD3
CD3	Seminars		CO3	CD1,CD2,CD3
CD4	Mini projects/Projects		CO4	CD1,CD2,CD3,CO4 CD5
CD5	Laboratory experiments/teaching aids		CO5	CD1,CD2,CO5
CD6	Industrial/guest lectures			
CD7	Industrial visits/in-plant training			
CD8	Self- learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course code: AM405
Course title: 3D Studies-I
Pre-requisite(s): Foundation studies on 3D Modeling & Texturing
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. Animation Design
Semester: I
Branch: M.Sc.
Type: Sessional

Course Objectives

This course enables the students to:

1.	Understand the importance of 3D Sculpting
2.	Understand the role of 3D Modeling & Texturing in animation production
3.	Understand step by step procedure for 3D Modeling & Texturing
4.	Understand 3D Modeling & Texturing for Digital Games, Walk Through, and 3D Film Production
5.	Know about various 3D softwares like Autodesk Maya, Blunder, Z-Brush etc.

Course Outcomes

After the completion of this course, students will be able to:

CO1	Experiment various shapes and volumes in 3D Software
CO2	Create characters and props using 3D Modeling & Texturing
CO3	Grasp the production pipeline for 3D Animation Production
CO4	Create few characters and environments using 3D Modeling & Texturing
CO5	Create a document on 3D Production and give a small presentation

Syllabus

List of Discussion & Experiments

	Discussion & Experiments	**No. of Hours**
1.	Experimenting on 3D modeling Technique	3
2.	3D Production pipeline	3
3.	Editing 3d meshes and creating 3d Texts	3

4. Concept of mesh smooth, mirroring, duplicating, merging, edge looping, and Exporting the models from scene to scene for facilitating faster production flow	3
5. Technical issues related to polygon modelling	4
6. Working with image reference while modelling	4
7. Managing huge sets and models using proxy meshes.	4
8. 3D for architectural walk through	4
9. Concepts of materials and textures, Introduction to UV unwrapping&UV mapping.	4
10. Editing textures for organic and Inorganic object, Use and creation of Bump, displacement and render passes.	4
11. 3D character modelling using Autodesk Maya	4
12. 3D Character Sculpting using Z- Brush Software or Mudbox	4
13. 3D Modeling for Game	4

Book Reference: Autodesk Maya Bible

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. More emphasis on modern technology
2. Work on project with abroad university student to understand global level workflow

POs met through Gaps in the Syllabus: 5, 6,

Topics beyond syllabus/Advanced topics/Design: Nil

POs met through Topics beyond syllabus/Advanced topics/Design: Nil

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	3	2	2	2	1	1	3	1	2	2	2	3	3	1	3
CO2	2	3	3	2	2	1	3	3	3	1	2	2	1	2	2
CO3	2	2	2	2	2	2	3	3	1	1	1	1	2	2	2
CO4	2	2	3	3	2	2	3	3	3	3	2	2	2	2	2
CO5	2	2	2	2	3	3	3	1	2	2	2	3	2	3	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3,
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3, CD4
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM406
Course Title: Life Study
Pre-requisite(s): Basic Drawing Skills
Credits: 2 L:0 T:0 P: 4
Class schedule per week: 4
Class: M.Sc. Animation Design
Semester: I
Branch: M.Sc.
Type: Sessional

Course Objectives

This course enables the students to:

1.	Understand the fundamentals Human and animal anatomy
2.	Learn about Gesture and acting of human body .
3.	Gain proficiency in details human body, muscles anatomy.
4.	Understanding of anatomical differences between carnivorous and herbivorous animals
5.	Understand the forces, movements of different animal figure.

Course Outcomes

After the completion of this course, students will be able to:

CO1	Can Draw human figure and animal figure in realistic manner
CO2	It Helps to create realistic and high detailed 3D models .
CO3	Able to create facial expressions or 3D models or 2D character.
CO4	Able to design different character of human and animal or fusion of human animal character.
CO5	Able to do concept art for movie.

Syllabus

List of Discussion, Experiments and Practical Work:	**(NO. OF LECTURE HOURS)**
Module - I Working on human anatomy .Study of human muscle and anatomy with the help of reference images and Model. Human Body Proportions and	9

differences of human body according to age and sex. Drapery on human body.	
Module - II Study of human gesture and acting with quick sketching (1 Minute, 5 Minutes and 20 Minutes Drawing). Outdoor sketching to understand body movement , action and human behaviour in different environments .	9
Module - III. Working on Human Head. Portrait Study of different types of human races. Facial expressions and emotions.	9
Module - IV. Study of two legs and four legs animals' body balance and behaviour.Understanding of anatomical differences between carnivorous and Herbivorous animals.	9
Module - V. Animal anatomy study with the help of reference images.Outdoor study.	9

Reference Books:

1. Figure study by Aditya Chari
2. Perspective drawing by Joseph D'Amelio
3. Bridgman lectures, Villpu lectures (CD)
4. Drawing & Anatomy by Victor Perard
5. Drawing Animals by Victor Perard
6. Animal Anatomy for Artists, The Elements of Form by Eliot Goldfinger

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. Introduce Dummy skeleton of humans and animals to understand body joint, structure and movements

POs met through Gaps in the Syllabus: 2, 3, 13

Topics beyond syllabus/Advanced topics/Design

1. Creating Prototype model to understand the dimensions and volume of a figure

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	2	3	3	2	3	3	2	2	1	1	1	3	2	2
CO2	3	2	3	3	2	3	3	2	2	1	1	1	3	3	2
CO3	2	2	3	3	3	3	3	2	2	1	1	1	3	2	2
CO4	2	2	2	2	3	2	2	3	3	1	2	1	3	2	2
CO5	2	2	2	2	2	2	2	2	2	1	1	1	3	2	2

Correlation Levels 1, 2 or 3 as defined below:
1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1,CD2
CD2	Tutorial / Assignment		CO2	CD4
CD3	Seminars		CO3	CD2, CD4
CD4	Mini Projects / Projects		CO4	CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD2, CD4
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Subject: Mix Media Animation(Course Code: AM407)
Pre-requisite(s): Basic information of experimental animation
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. Animation Design
Semester: I
Branch: M.Sc.
Type: Sessional

Course Objectives

This course enables the students to:

1.	Understand the fundamentals of Mix-Media Animation
2.	Understanding implementation of Animation Production Process
3.	Learning related hardware, software and other tools for experimental animation
4.	Introduction to Flip Book, clay modeling, cutout animation and set design
5.	Gaining experience of working in a group

Course Outcomes

After the completion of this course, students will be able to:

CO1	t an independent Flip Book, a Short experimental group film in any medium
CO2	Operate relevant animation and camera equipment
CO3	Understanding of character development and storytelling
CO4	Gain experience in handling different raw materials like; Clay, Paper, Sand ,Colours etc.
CO5	Experience in working within a timetable and schedule

Syllabus

Experiments and execution based on different types of animation techniques:

Discussion & Experiments	**No. of Hours**
1.Introduction to Mix Media Animation, Types of Animation , Types of Mix Media Animation, Importance of Pre-production, Production, and Post Production Process	9
2.Idea – script – treatment, designing characters and prop, planning your shots – basic film grammar/composition of shots, the storyboard, editing – Animatics and story reels	9

3.Explore various software like Photoshop, Monkey Jam, Adobe Illustrator, After Effects Rotoscoping Animation, using live action videos, Cutout Animation	9
4.Hardware requirements for stop motion animation, Clay Animation,Stop Motion Techniques, Flip book, Animation set designing- interior & exterior, Clay Character Modeling & Animation, Technique of working in groups, Budgeting, Time and Money	9
5. Mix Media animation work with different tools like: Digital medium, Water colors , Poster colors, Oil Pastel colors, Acrylic colors, Pencil colors, Charcoal, Pen and Ink, Using waste material such as sand , stones, grass, hardboard, different types of color papers & clay etc. For creating experimental animation film.	9

Reference Books:

1. The Advanced Art of Stop Motion By Ken A. Priebe
2. The Kultz Book of Animation: How To Make Your Own Stop Motion Movies By Nicholas Berger and John Cassiday
3. The Animator Inside Of You How To Make Stop Motion and Clay Animation Basic Tricks and Tips By Chris Capps
4. Richard Taylor, "Encyclopedia of Animation Techniques", New Burlington Books, 2002.
5. Tom Gasek, "Frame by Frame Stop Motion: Non Traditional Approaches to Stop Motion Animation", Taylor & Francis, 2013.
6. Tony White, "Animation from Pencils to Pixels: Classical Techniques for Digital Animators", Taylor & Francis, 2006.
7. Stop Motion: Craft skills for model animation By Susannah Shaw

Course Assessment Methods: Use of conventional and unconventional methods to create visual display and motion. Students working in groups and individual basis try to find innovative methods of using various animation tools. Performance test, Mini Project, Viva-voice exam.

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. More emphasis on modern technology
2. Work on project with abroad university student to understand global level workflow

POs met through Gaps in the Syllabus

5, 6,

Topics beyond syllabus/Advanced topics/Design

POs met through Topics beyond syllabus/Advanced topics/Design

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	3	3	1	1	1	1	1	1	1	1	1	1	3	1	1
CO3	3	3	3	1	3	1	2	1	1	2	1	1	3	1	2
CO4	3	3	3	3	3	1	3	1	1	2	2	1	3	2	3
CO5	3	3	3	3	3	2	3	1	1	2	2	1	3	2	3

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3,
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3, CD4
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Level 4: Animatics(Course Code: AM408)
Pre-requisite(s): Understanding of storyboarding and visual editing
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. Animation Design
Semester: I
Branch: M.Sc.
Type: Sessional

Course Objectives

This course enables the students to:

1.	Understand Visual Narration
2.	Understand Story Structure, Script, Screenplay
3.	Learn about camera angles, camera moves, and design principles
4.	Study storyboards and animatics from various animated movies and commercials
5.	Understand editing and continuity in films

Course Outcomes

After the completion of this course, students will be able to:

CO1	Ability to create Visual Narratives
CO2	Know about Story Structure, Script, Screenplay
CO3	Ability to create storyboards
CO4	Knowledge of camera, composition and other design principles
CO5	Storyboard any script/screenplay & Convert into Animatics with proper sound and voice over

Syllabus

List of Discussion and Experiments

Discussion & Experiments	No. of Hours
1. Study Animatics	9
2. Interpreting the script /screenplay	9

3. Developing the Story visually, Necessary Drawing Skills	9
4. Thumbnailing in Storyboarding, Quick Method for Producing fastand Rough Storyboards	9
5. Perspective, Pans, Compositions, Lighting & Rendering, Staging, Techniques and Motifs, Scene Planning, Adding Rough sounds and voice overs & timing the shots. The Animatic (Mini Project & Experiments)	9

Reference Books:

The Art of Layout and Storyboarding By Mark T. Byrne
Shot By Shot By Stevan D. Katz

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

3. Student feedback on Faculty
4. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	**Program Outcomes (POs)**												**Program Specific Outcomes (PSOs)**		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	3	1	1	1	2	1	1	1	3	1	1	3	3	1	1
CO2	3	3	1	1	2	1	1	1	3	1	1	2	3	1	1
CO3	3	3	3	1	3	1	2	1	3	2	1	3	3	1	2
CO4	3	3	3	3	3	1	3	1	3	2	2	3	3	2	1
CO5	3	3	3	3	3	2	3	1	3	2	2	3	3	2	3

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3,
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3, CD4
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

M.Sc. Animation Design
Semester-II

COURSE INFORMATION SHEET

Course Code: AM 409
Course Title: ADVERTISING AND NEW MEDIA
Pre-requisite(s): To Understand various aspects of Advertising and new media
Credits: 4
Class schedule per week: L:03 T:01 P:0
Class: MAD (Animation & Multimedia)
Semester: II
Branch: MAD
Type: Lecture and Tutorial

Course Objectives

This course enables the students to:

1	Understand the basics of advertising
2	learn the dynamics of new media marketing and advertising
3	understand the new trends and technological advancement in the new media space
4	understand the importance of digital and web advertising
5	learn to use the new medium in advertising

Course Outcomes

After the completion of this course, students will be able to:

CO1	Understand history of Advertising
CO2	Understand various aspects of Advertising
CO3	Gain Knowledge of traditional and emerging new media of Advertising
CO4	Gain Application Knowledge of Ad Designing for new platforms
CO5	Have knowledge on Advertising and emerging media

Syllabus

MODULE	(NO. OF LECTURE/ HOURS)
Module I Advertising: Introduction , Definition , Functions and criticism , History of Advertising , Types of Advertising , Ethics and ethical issues. Concepts of Branding	8

Module II Creativity in advertising , Copywriting: A creative exercise- classification of copy and it's characteristics ,Designing and layouting of a print ad , designing for digital medium , USP ,Corporate identities , Role And Rules Of Visual Communication In Advertising	8
Module III Media and medium ; traditional and folk media, mass media, broadcasting and narrowcasting, emerging media ,understanding new media, Online Marketing Basics, web revolution in Marketing & Advertising , Online advertising and its forms , impact .	8
Module IV Psychological Aspects and Advertising , Understanding ICT and Challenges to and from ICT ,E-Commerce ,E-Governance ,Role of Animation in Advertising	8
Module V Social Media :Defining and understanding , Social Networking sites and Marketing: Introduction, Nature Scope and application. Overview, origin popularity and evaluation of Facebook, Orkut, Twitter, Linked In and other SNWs. Friendvertising : Advertising and Brand Building with Social Networks, virtual reality, RSS , SEO, SEM , The Formidable Fourth Screen (Mobile), advantages and dis-advantages	8

Text Book:

1 .Integrated Advertising, Promotion and Marketing Communications, Kenneth E. Clow and Donald Baack, Second Edition, Prentice Hall of India.

2 .Marketing Communications Management, Concepts & Theories, Cases and practices, Paul Copley,
Elsevier

3. Advertising management,David A.Aaker, Rajeev bata,John G.Myes,,Pearson education

4 .Advertising management, Jafar Mahmud, shubhi publications

Reference Book:

1 Ogilvy on Advertising,Prion books

2. Social psychology, Arun Kr. Singh,PHI

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. Industrial visit must be here in this course to understand the whole aspects practically

POs met through Gaps in the Syllabus: 1,9,10,15

Topics beyond syllabus/Advanced topics/Design

1. Printing techniques
2. Structure of Ad agency

POs met through Topics beyond syllabus/Advanced topics/Design

2, 7, 9

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	50
Semester End Examination	50

Continuous Internal Assessment	% Distribution
3 Quizzes	30 % (3 × 10%)
Assignment (s)	10
Seminar before a committee	10

Assessment Tools			% Contribution during CO Assessment		
Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes into Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	1	3	2	1	1	3	3	1	1	2	1	2	3	2	2
CO2	3	3	3	3	2	3	3	2	3	2	3	2	3	3	3
CO3	3	2	2	3	2	3	3	2	2	3	3	2	3	3	2
CO4	2	3	3	3	2	3	2	2	2	2	2	1	3	2	2
CO5	2	3	3	3	2	3	3	3	2	3	3	2	3	3	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1
CD2	Tutorial / Assignment		C02	CD1, CD2
CD3	Seminars		C03	CD1, CD3
CD4	Mini Projects / Projects		C04	CD1, CD2,CD3
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD3
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM410

Course Title: ANIMATION THEORY

Pre-requisite(s): Basic knowledge of animation
Credits: 4
Class schedule per week: 04 **L:03** **T:01** **P:0**
Class: M.Sc. (Animation & Multimedia)
Semester / Level: I
Branch: MAD
Type: Lecture and Tutorial

Course Objectives
This course enables the students to:

1.	Explore the Science, History & Evolution of Animation
2.	Explore the Psychology of Animation
3.	Learn about the process of studio animation and feature animation
4.	Explore contemporary trends in animation making
5.	Develop personal films and expression through animation

Course Outcomes
After the completion of this course, students will be able to:

CO1.	Have knowledge of Science, History & Evolution of Animation
CO2.	Understand the Psychology of Animation
CO3.	Follow a pipeline for animation production
CO4.	Have exposure of various contemporary trends in animation
CO5.	Work on personal films and expressed through unique storytelling and stylization.

Syllabus

MODULES	NO. OF LECTURE HOURS
Module I **The History and Science of Animation –** Persistence of Vision, Old Technologies, Animation before Disney **Introduction to major art movements** – Art Movements and Aesthetics (Indian and Western)	9

Module II **Introduction to Narrative Structures –** Different modes and mediums of storytelling **Traditional animation** – Traditional Animation Process, Terms and definitions, early examples, classic films.	9
Module III **Digital Animation –** Digital technology, CGI **Contemporary trends in Animation –** Contemporary storytelling, stylization and techniques	9
Module IV **Ideas for short animation films** – Developing ideas, research on subject, creating the world for the story. **Description and visual development, tools for storyboarding** – How to describe and develop a shot visually, storyboard elements and guidelines.	9
Module V **Role of Sound in Animation** – importance of sound,sound design,tools and techniques **Elements of the Continuity Style –** Transitions, Cuts, Editing styles	9

Reference Books:

1. Animation Script to Screen (Author: Shamus Culhane)
2. The Art of Layout and Storyboarding (Author: Mark Byrne)
3. Shot by shot (Author : Steven D Katz)
4. The Illusion of Life – Essays on Animation, Edited by Alan Cholodenko, Power Publication in association with Australian Film Commission, SYD, 1991

Gaps in the Syllabus (to meet Industry/Profession requirements):NIL

Topics beyond syllabus/Advanced topics/Design: NIL

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	50
Semester End Examination	50

Continuous Internal Assessment	% Distribution
3 Quizzes	30 % (3 × 10%)
Assignment (s)	10
Seminar before a committee	10

Assessment Tools			% Contribution during CO Assessment		
Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

CO1	2	2	3	1	1	2	2	3	3	2	2	3	3	3	2
CO2	2	2	3	1	2	2	2	2	2	2	2	3	2	2	2
CO3	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2
CO4	2	2	3	1	2	2	2	2	2	2	2	2	2	2	2
CO5	2	2	3	1	2	2	2	2	2	2	2	3	3	3	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD3
CD2	Tutorial / Assignment		C02	CD1, CD3
CD3	Seminars		C03	CD1, CD3
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD4, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM411
Course Title: Western Art
Pre-requisite(s): Basic Art History
Credits:4 L:3 T:1 P:0
Class schedule per week: 4
Class: M.Sc. Animation Design
Semester: II
Branch: M.Sc.
Type: Lecture and Tutorial

Course Objectives

This course enables the students to:

1.	Understand the Development of human civilization, Art of oldest civilization of the World.
2.	Learn about development of Geek art and its stylization
3.	Learn about highly developed geek phase of Geek art. Understand about highly detailed human figure study.
4.	Understanding about the development of various fields of art and science in the period of Renaissance.
5..	Understand the modernization, simplification and stylization in Art.

Course Outcomes

After the completion of this course, students will be able to:

CO1.	understand style and philosophy of Egyptian Art
CO2.	find out the style, and create / or develop own style.
CO3.	Understand high detailed Greek style and its implementation
CO4.	implement variety of art experiments of renaissance period
CO5.	understand and implement modernization, experiments of modern period. Also can do experiment for style .

Syllabus

MODULE	(NO. OF LECTURE HOURS)
Module I	8

Topics: About world Art and Western Art. Egyptian civilization its philosophy and Art Form.	
Module II: Topics: About Greek Art. Greek Geometric period and Greek Vas Painting. Sculpture of Greek Archaic Period	8
Module III Topic: Artwork of Greek Classical period Artwork of Greek Hellenistic period	8
Module IV Topic: Evaluation of Greek Renaissance Art. Art of High Renaissance	8
Module V Topic: Modernization of Western Art. Romanticism, Impressionism, Cubism, Surrealism	8

Reference Book

1. The History of Western Art by Sandhya Ketkar
2. ART OF THE WESTERN WORLD From Ancient Greece to Post Modernism Paperback – 1989 by Michael Wood
3. ARCHAIC AND CLASSICAL GREEK ART (OXFORD HISTORY OF ART) ROBIN OSBORNE
4. HISTORY OF MODERN ART (7TH EDITION)H. H. ARNASON, ELIZABETH C. MANSFIELD
5. Greek Sculpture: The Classical Period, a Handbook (World of Art), 1985 by John Boardman (Author)
6. Greek Art (Fourth Edition) (World of Art) –1996 by John Boardman (Author)
7. The Story of Art by E.H. Gombrich
8. Art Through the Ages by Helen Gardner
9. An Introduction to Art and Culture in Ancient Egypt Art in Ancient Egypt Volume Christopher Witcombe
10. A Survey of Art in Ancient Egypt from Predynastic Times to the Graeco-Roman Period
11. Art in Ancient Egypt Volume 2 By Christopher Witcombe
12. Art in the Hellenistic World: An Introduction Paperback – October 6, 2014 by Andrew Stewart (Author)
13. Greek Art: A Study of the Formal Evolution of StyleBy Rhys Carpen

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. Can Introduce Hollywood movies where colour and composition concepts are influenced by renaissance painting or other estern paintings

POs met through Gaps in the Syllabus: 2,3,4,5,7,12

Topics beyond syllabus/Advanced topics/Design

1. Review of paintings and sculpture2. Art Gallery visit and review

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	50
Semester End Examination	50

Continuous Internal Assessment	% Distribution
3 Quizzes	30 % (3 × 10%)
Assignment (s)	10
Seminar before a committee	10

Assessment Tools			% Contribution during CO Assessment		
Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Continuous Internal Assessment	Yes	Yes	Yes		
Semester End Examination	Yes	Yes	Yes	Yes	Yes

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Self-learning such as use of NPTEL materials and internets
CD8	Simulation

Mapping of Course Outcomes into Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	3	3	2	2	1	2	3	3	1	2	1	3	2	1	2
CO2	2	3	2	3	1	3	2	2	2	2	2	2	2	2	2
CO3	3	3	3	2	1	2	2	2	1	2	2	3	3	2	2
CO4	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2
CO5	3	3	3	3	3	2	2	2	1	2	2	2	2	2	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3
CD3	Seminars		C03	CD1, CD2, CD3
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM412
Course Title: FIELD STUDY
Pre-requisite(s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. Animation Design
Semester: II
Type: Sessional

Course Objectives

This course enables the students to:

1.	To understand human figure movement, pose and expression. Improve ability to draw human figure with proportion
2.	To improve observation different human gesture in different environment and
3.	To improve observation of environment, detail of monuments and architectural design.
4.	Understand different animals' anatomy, behavior and visual characteristics
5.	Improve animal study from life references.

Course Outcomes

After the completion of this course, students will be able to:

CO1	Enable to draw human figure movement, pose and expression. Improve ability to draw human figure with proportion Enable to draw perspective drawing.
CO2	Enable to draw human figure movement, pose and expression. Understand and able to draw different types of human figure as per requirement.
CO3	Able to draw architectural structure and create environment as per requirement,
CO4	Able to draw different type of animal figure.
CO5	Able to draw different type of animal figure and create characters for animated / Live action movie with animal.

Syllabus

List of Discussion, Experiments and Practical Work:	**(NO. OF LECTURE**

	HOURS)
Module I. Gesture Drawing, Rapid sketches. Gesture Drawing and Rapid sketches with life reference, Perspective drawing with digital references	9
Module II: Rapid Sketches and written report. Assignment: Visit any Bus stand or Railway station to observe and do rapid sketches. Categorized different types of characters e.g. According to Costume, according to physical appearance, According to age etc. Make a written report on it.	9
Module III: Photography and Rapid Sketches and written report Assignment: Visit Any monuments to photography and rapid sketches. Photographs and sketches must cover Human figure, Architectural beauty and detail artwork on the monument. Make a written report based on category of visitors. Architectural and artistic beauty	9
Module IV. Visit any Museum or Art Gallery and review	9
Module V: Field study, Animal Assignment: 1. Visit a Zoo for wildlife animal study. 2. Visit any places for domestic animal study e.g. Goshala , dog cannel etc. Students have to Submit Drawing and sketches.	9

Reference Books:

1. Fast Sketching Techniques, David Rankin,Sketching, Pratap Mulick
2. Everyday Sketching and Drawing: Learn the Five-Step Technique to Illustrating Your Life, Steven B. Reddy
3.Drawing Nature, Stanley Maltzman
4.Exercises in Nature Study: With Directions for Observation Drawing, Description and Modelling,James Nisbet

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. Industrial visit can be included

POs met through Gaps in the Syllabus: 5,6,9,11

Topics beyond syllabus/Advanced topics/Design

1. Industrial Visit
2. Outdoor Landscape painting

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes into Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	3	3	2	3	2	2	3	3	1	2	1	3	3	3	2
CO2	3	3	2	3	2	3	2	2	2	2	2	2	3	2	2
CO3	3	3	3	2	2	2	2	2	2	2	2	3	3	3	2
CO4	3	3	3	3	2	2	2	2	2	2	2	2	3	2	2
CO5	3	3	3	3	3	2	2	2	2	2	2	2	3	2	2

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1,CD2
CD2	Tutorial / Assignment		CO2	CD4
CD3	Seminars		CO3	CD2, CD4
CD4	Mini Projects / Projects		CO4	CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD2, CD4
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Programme Elective -II

Course Code: AM413

Course Title: Documentary Animation-I

Pre-requisite(s): Nil
Credits: 2 L-0 T-0 P-4
Class schedule per week: 04
Class: M.Sc. (Animation Design)
Semester: II
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1.	Provide the student with a thorough introduction to the field of animation Documentary
2.	The development of writing skills for Documentary Animation Films
3.	Range of documentary animated films which help to develop the fundamentals of a critical understanding of animation production terminology.

Course Outcomes

After the completion of this course, students will be able to:

CO1	A deeper understanding of story structure
CO2	Broader knowledge of storytelling in documentary and factual filming
CO3	Confidence and ability to tell a story in a variety of documentary and factual filmmaking styles
CO4	Work on pre-production designs like Character Design, Storyboards, Layout Design etc.

Syllabus

Discussion & Experiments	**No. of Hours**
1. Introduction to Documentary Animation Films	3
2. Study and discussions on few awarded and Oscar nominated animation documentary films	3

3. Case Studies	3
4. Documentary Animation Film Makers	3
5. Discussion: Story structures, Story stages from prep to edit, Defining a story style, Scene-based storytelling, Theme-based storytelling, Visual storytelling, Characters and narrators, Research and access, Production and timescales.	3
6. Discussion: Production Designs-Camera Rules, Composition, Staging & Formats, Rhythm & Style Variety, Value & Color.	3
7. Discussion and Practice: Concept writing on various topics on social issues.	3
8. Discussion and Practice: Implementation of concept into visual storytelling.	3
9. Discussion and Practice: Audio-visual presentation by the end of semester.	3
Assignment & workshop based on Pre-Production: Concept, Story, Script, Screen-Play, Voice Recording, Inspirational Sketches, Character Design, Prop Design, Story Boarding, Animatic, Layout (Final Posing with Background Design)	20

Suggested Reading:

1. Producing Independent 2D Character Animation: Making and Selling a Short Film By Mark Simon
2. Animation From Script To Screen By Shamus Culhane
3. Animated Documentary By Annabelle Honess Roe
4. Simplified Drawing for Planning Animation By Wayne Gilbert
5. Sketching for Animation: Developing Ideas, Characters and Layouts in Your Sketchbook by Peter Parr

6. Dream Worlds: Production Design for Animation (Library Binding) by Hans Bacher, Don Hahn
7. Layout and Composition for Animation By Ed Ghertner
8. Producing with passion: Making Films that Change the World (Author: Dorothy Fadiman, Tony Levelle
9. The Five C's of Cinematography (Author: Joseph V. Mascelli)
10. Television Production Hand Book (Author: Herbert Zettl)

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping Between Course Outcomes And Programme Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	3	1	1	3	2	1	1	1	2	1	1	3	3	1	1
CO2	3	3	1	3	2	2	1	1	3	1	1	2	3	1	1
CO3	3	3	3	3	3	2	1	1	2	2	1	3	3	1	2
CO4	3	3	3	3	3	1	1	1	3	2	2	3	3	2	1

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1,CD2
CD2	Tutorial / Assignment		CO2	CD4
CD3	Seminars		CO3	CD2, CD4
CD4	Mini Projects / Projects		CO4	CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD2, CD4
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM414
Course Title: Narrative Animation-I
Pre-requisite(s): Traditional Animation, and Animation Theory
Credits: 2
Class schedule per week: 04 L-0 T-0 P-4
Class: M.Sc. (Animation Design)
Semester / Level: IV
Type: Sessional

Course Objectives

This course enables the students to:

1.	Provide the student with a thorough introduction to the field of Core Animation
2.	The development of storytelling skills for Narrative Animation
3.	The development of Visual Storytelling Skills for Animation
4.	Understand Production Processes for Narrative Animation
5.	Work on various animation 2D/ 3D softwares like Adobe Animate, Adobe After effects, Monkey Jam, Dragon Frames, Maya, and Blender

Course Outcomes

After the completion of this course, students will be able to:

CO1	Work on Animation exercise
CO2	Broader knowledge of visual storytelling
CO3	Confidence and ability to animate according to the concept
CO4	Work on Acting for Animation

Discussion, Demonstration, and Practice based on the following topics:

DISCUSSION & PRACTICAL	**No. of Hours**
1. Idea Creation for Animation	4
2. Concept Development	4
3. Visual Storytelling	4
4. Animation Characters	4
5. Principles of Animation	4
6. Various Runs, Walks, Jumps, Skip and Leap	4
7. Flexibility	3
8. Overlap	3
9. Overlapping Action	3
10. Weight & Force	3
11. Anticipation	3
12. Takes & Accents	3
13. Timing, Staggers, Wave & Whip	3
14. Dialogue & Action	3

Suggested Reading:

1. Simplified Drawing for Planning Animation by Wayne Gilbert
2. The Animator's Survival Kit By Rechard Williams
3. Animation: The Mechanics of Motion By Chris Webster
4. Timing For Animation By Harold Whitaker
5. Acting for Animators By Ed Hooks
6. Sketching for Animation: Developing Ideas, Characters and Layouts in Your Sketchbook By Peter Parr
7. Character Animation Fundamentals: Developing Skills for 2D and 3D Character Animation by Steve Roberts
8. Cartoon Character Animation with Maya: Mastering the Art of Exaggerated Animation By Keith Osborn
9. Animation and Performance Capture Using Digitized Models (Cognitive Systems BMonographs) by de Aguiar, Edilson

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

15. Student feedback on Faculty
16. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	**Program Outcomes (POs)**												**Program Specific Outcomes (PSOs)**		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	3	2	2	1	1	1	1	1	1	1	1	1	2	1	1
CO2	3	2	2	1	2	1	1	1	1	1	1	1	3	1	1
CO3	3	2	3	1	3	1	2	1	1	2	1	1	3	1	2
CO4	3	2	3	3	3	1	2	1	1	2	2	1	3	2	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1,CD2
CD2	Tutorial / Assignment		CO2	CD4
CD3	Seminars		CO3	CD2, CD4
CD4	Mini Projects / Projects		CO4	CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD2, CD4
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM 415

Course Title: EXPERIMENTAL VISUAL EFFECTS - I

Pre-requisite(s): Basic knowledge of Compositing & VFX
Credits: 2
Class schedule per week: 04 L-0 T-0 P-4
Class: M.Sc. (Animation & Multimedia)
Semester: II
Branch: MAD
Type: Sessional

Course Objectives
This course enables the students to:

1.	Understand the history of visual effects & special effects
2.	Understand Green or Blue screen Composites
3.	Explore 2D and 3D CGI
4.	Create physical sets and miniatures to use in VFX production
5.	Breakdown the VFX production for integration in the filmmaking process

Course Outcomes
After the completion of this course, students will be able to:

CO1.	Know about the history of visual effects & special effects
CO2.	Use Green or Blue screen Composites effectively
CO3.	Differentiate between 2D and 3D CGI
CO4.	Develop physical sets and miniatures to use in VFX production
CO5.	Visualise and follow an efficient pipeline to use VFX in their films

Syllabus

MODULE	(NO. OF LECTURE HOURS)
Module I **Visual Effects before Computers** - Stop Motion Animation, Puppets and Animatronics **Matte Painting, Miniatures, Projections, Forced Perspective with Live Action** – Techniques of creating and extending sets and backgrounds.	8

Module II **Blue or Green Screen Composites –** Using Chroma keying **Digital Effects, 2D and 3D CGI** – Two dimensional and three dimensional computer generated imagery.	8
Module III **Production Breakdown –** Analyzing and breaking down the production process **Pre-Production and Preparation –** Arranging Team, Basic VFX Technologies and Equipments.	8
Module IV **Production** – Shooting, On Set Operations, On-Set References, Motion Control, In-Camera Practical Effects, Motion Capture **Post Production** – Digital Workflow, Changes, Rendering	8
Module V **Rendering** – Completing and exporting the shot. **Assignment Review –** Review the assignment shots completed during the course	8

Reference Books:

- The Visual Effects Producers: Understanding the Art and Business of VFX By Charles Finance and Susan Zwerman.
- The VES Handbook of Visual Effects Edited by Jeffrey A. O Kun and Susan Zwerman.
- Compositing, Visual Effects, Essential for aspiring artists By Steve Wright
- The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics by Ron Brinkmann
- The Visual Effects Producer: Understanding the Art and Business of Vfx by Charles Finance
- Digital Compositing for Film and Video by Steve Wright

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. More emphasis on the pipeline of visual effects, roles and responsibilities in the industry.

POs met through Gaps in the Syllabus 4, 5, 8, 9, 10

Topics beyond syllabus/Advanced topics/Design

1. Understanding the Visual Effects Pipeline.
2. Roles & Responsibilities in the VFX industry.

POs met through Topics beyond syllabus/Advanced topics/Design 4, 5, 8, 9, 10

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars

CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	**Program Outcomes (POs)**												**Program Specific Outcomes (PSOs)**		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	2
CO2	3	1	3	1	2	1	1	1	2	1	2	1	2	1	2
CO3	3	1	2	2	3	1	1	1	2	1	2	1	2	1	2
CO4	3	2	3	2	3	2	1	1	2	2	2	1	2	1	3
CO5	2	2	2	2	3	2	1	1	2	2	2	1	2	2	3

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1, CD3
CD2	Tutorial / Assignment		CO2	CD1, CD2, CD4, CD5
CD3	Seminars		CO3	CD1, CD3, CD5
CD4	Mini Projects / Projects		CO4	CD1, CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD1, CD2, CD4, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM 416

Course Title: EXPERIMENTAL MOTION GRAPHICS - I

Pre-requisite(s): Basic knowledge of Motion Graphics
Credits: 2 L-0 T-0 P-4
Class schedule per week: 04
Class: M.Sc. (Animation & Multimedia)
Semester: II
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1.	Create motion graphics from a variety of static sources
2.	Recognize and define common animation techniques
3.	Apply common animation techniques to simulate realistic movement
4.	Create a short visual story from a script
5.	Use audio, typography and design to make a visual production

Course Outcomes

After the completion of this course, students will be able to:

CO1.	Use industry standard tool to create a complete presentation
CO2.	Summarize design principles, concepts, styles and terminologies.
CO3.	Define and apply motion principles and theories.
CO4.	Create motion graphics based on current industry trends and practices
CO5.	Plan and follow an efficient pipeline to create effective motion graphics

Syllabus

MODULES (Discussion & Experimental)	NO. OF LECTURE HOURS
Module I **Introduction to Motion Graphics** – What is Motion Graphics, key concepts and applications **Multiplaning, Keyframing** – Using layers to create depth, adding key frames, layer attributes and effects, graphic editor	**8**

Module II **Camera –** Camera types, Orientation, Depth of Field, limitations **Camera Movements –** realistic camera,purpose driven camera movements	**8**
Module III **Effects and Presets** – Using the inbuilt effects and presets **Particle Systems –** Using customized particle systems	**8**
Module IV **Storytelling** – Script, Story, Message, Pacing, Hierarchy **Time Remapping** – Slowing, speeding up, remapping	**8**
Module V **Kinetic Typography** – Storytelling with text Animation **Assignment Review –** Review the assignment shots completed during the course	**8**

Reference Books:

- The Visual Effects Producers: Understanding the Art and Business of VFX By Charles Finance and Susan Zwerman.
- The VES Handbook of Visual Effects Edited by Jeffrey A. O Kun and Susan Zwerman.
- Compositing, Visual Effects, Essential for aspiring artists By Steve Wright
- The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics by Ron Brinkmann
- The Visual Effects Producer: Understanding the Art and Business of Vfx by Charles Finance
- Digital Compositing for Film and Video by Steve Wright

Gaps in the Syllabus (to meet Industry/Profession requirements)

NIL

Topics beyond syllabus/Advanced topics/Design

NIL

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	2	3	3	3	1	2	3	2	2	2	2	2	2	2

CO2	2	2	1	2	2	2	2	2	2	3	2	2	2	2	2
CO3	2	1	3	3	3	2	3	2	3	2	2	2	2	2	3
CO4	2	1	1	1	2	2	2	2	1	3	2	2	2	2	3
CO5	2	2	1	1	2	1	3	2	2	2	2	2	2	2	3

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1, CD2, CD3
CD2	Tutorial / Assignment		CO2	CD1, CD3, CD4, CD5
CD3	Seminars		CO3	CD1, CD3, CD5
CD4	Mini Projects / Projects		CO4	CD1, CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD1, CD2, CD4, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM 417
Course Title: Game Design I
Pre-requisite(s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. (Animation & Multimedia)
Semester: II
Branch: MAD
Type: Sessional

Course Objective

This course enables the students to:

1.	To make students learn the art and techniques of designing digital games and document it in a systematic way.

Course Outcomes

This course enables the students to:

CO1	Students will understand the process of designing games
CO2	Students will be able to undertake Game Production

Syllabus

Module	No. of Hours
Module I Making Games 1.Game Play and Game Data 2. Designers and Development Process 3. The Designer's role in Game Development Process	6
Module II Game Play and Game Mechanics 1. Game play and the fun factor 2. Play Elements 3. Mechanics of Game Play 4. Modeling Reality	6

Module III On Movement 1. Graphic Interface Requirements 2. Game Statistics for Movement 3. Terrain Features 4. Movement Algorithm	6
Module IV Game Characters and Items 1. Creating Player Characters 2. Item Categories 3. Game functions of Items	6
Module V Storytelling in Games 1. Stories in Games 2. Structuring Stories in Games 3. Linking plot o game play 4. Creating a Game Story	6
Assignment on Game Design and Development Pre-Production Production Post-Production	18

Reference Book:

1. Basics of Game Design by Michael Moore (2011), CRC Press

Suggested Readings:

1. Level Up! - The Guide to Great Video Game Design, by Scott Roge
2. Fundamentals of Game Design, By Ernest W Adams

Gaps in the syllabus (to meet industry / Profession requirements)

POs met through Gaps in the syllabus

Topics beyond syllabus / advanced topics / design

POs met through topics beyond syllabus / advanced topics / design

Course Delivery Method
Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture

Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tools	**% Contribution during CO Assessment**
Internal Marking	60
External Marking	40
Total	100

Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Lab Quiz (Mid Sem.)	✔	✔	✔		
End Sem Lab Examination	✔	✔	✔	✔	✔

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	**Program Outcomes (POs)**												**Program Specific Outcomes (PSOs)**		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	2	3	3	3	1	2	3	2	2	2	2	2	2	2
CO2	2	2	1	2	2	2	2	2	2	3	2	2	2	2	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD8
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3, CD8
CD3	Seminars		C03	CD1, CD2, CD3, CD8
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5, CD8
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5, CD6, CD7, CD8
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM418
Course Title: Programming for Games-I
Pre-requisite(s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 03
Class: M.Sc. (Animation & Multimedia)
Semester: II
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1.	Learn the programming concepts while working on a project in any game engine. However, the mentioned syllabus is in reference to Unreal game engine, but students are free to use any game engine and programming language.
2.	Learn Game Engines and Programming Language for Game Development

Course Outcomes

This course enables the students to:

CO1	Develop a game using programming skills in a game engine

Syllabus

This is a project-based paper. First students will learn the basic interface and functions of Unreal Development Kit (UDK) Game Engine then they will develop a game project and learn. Students may choose any project under guidance of the teacher. The project should help student to explore basic concepts of Game Engine and Programming Language.

Module	No. of Hours
Module I 1. Basic interface and commands of UDK 2. Intro to Static Mesh Browser, Actor Class Browser, Emitters, Kismet	9
Module II 1. Project 1: Creating Environments	9

2. Project 1: Building the Stage 3. Project 1: Creating the backdrop and placing the assets in the level	
Module III 1. Project 2: Advanced Kismet: Creating a Third Person Plat former 2. Project 2: Mission Design	9
Module IV 1. Project 2: Level and Camera Creation 2. Project 2: Adding player functionality	9
Module V 1. Project 2: Collectables 2. Project 2: Finalising the Mission	9

Text Books:

1. Mastering UDK Game Development Hotshot, eight projects specifically designed to help you exploit the Unreal Development Kit to its full potential, John P. Doran, Packt

Suggested Readings:

1. Learning Unreal Engine Android Game Development, Nitish Mishra, Packt
2. The Essential Beginner's Guide to Getting Started with UDK: How to techniques, tips and insight by Alex Galuzin, World of Level Design.com

Gaps in the syllabus (to meet industry / Profession requirements)

POs met through Gaps in the syllabus

Topics beyond syllabus / advanced topics / design

POs met through topics beyond syllabus / advanced topics / design

Course Delivery Method
Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture
Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tools	% Contribution during CO Assessment
Internal Marking	60
External Marking	40
Total	100

Assessment Components	CO1	CO2	CO3	CO4	CO5
Lab Quiz (Mid Sem.)	✔	✔	✔		
End Sem Lab Examination	✔	✔	✔	✔	✔

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	3	2	1	1	1	2	2	1	2	2	1	3	3	3	3

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD8, CD5
CD2	Tutorial / Assignment		C02	CD1, CD2, CD8, CD5

CD3	Seminars		C03	CD1, CD2, CD8,
CD4	Mini Projects / Projects		C04	CD1, CD2, CD8
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD8, CD4, CD6, CD7, CD3
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM419
Course Title: 3D Sculpting & Texturing-I
Pre-requisite(s): Nil
Credits: 3 L:0 T:0 P:4
Class schedule per week: 03
Class: M.Sc. (Animation & Multimedia)
Semester: II
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1.	Understand various techniques of 3D sculpting and texturing
2.	Gained basic concepts and understanding of tools related to 3D production
3.	Become comfortable with basics of 3D sculpting and texturing
4.	Understand to work with material.
5.	Understand the fundamentals of strong 3D design and texturing

Course Outcomes

After the completion of this course, students will be able to:

CO1	Students will be able to create a high quality CG digital figure that can be used for customizing games, machinima, animations, portfolios, 3D prints and programming based computer science graphics course consistent with industry standards and strategies
CO2	Students will learn the ability to apply complex software packages used in industry for sculpting human figures
CO3	Students will learn the ability to distinguish and demonstrate critical elements of digital figure sculpting that distinguish levels of quality and refinement in figure sculpting
CO4	Students will learn the ability to apply complex software packages used in industry for figure sculpting
CO5	Students will learn to improve there drawing, sculpting, critiquing, and presenting skills

Syllabus

MODULE	(NO. OF LECTURE HOURS)
Module – I **Introduction of 3D** Topics: What is 3D, Elements of 3D in detail, what is texture and various methods of texturing, Uses of sculpting and texturing in multimedia. Difference between low and high poly.	9
Module – II **Low poly to high Poly detailing**: Topics: how to prepare basic figure using default shapes, work with sub tools and layers, making mask for detail in specific part, setup posing	9
Module – III **Refine or polishing and applying texture.** Topics: Introduction of Zbrush and substance painter,How to use alpha maps for more detailed sculpting, Use of different brushes and spotlight tool.	9
Module – IV **Optimizing Model** Topics: How use decimation process, convert model high to low poly , Uses of color profiles for further texturing process.	9
Module – V **Various texturing techniques** Topics: Learn to apply texture on model, learn uv mapping process.	9

Text Book:

1. Vitamin 3-D: New Perspectives in Sculpture and Installation Adriano Pedrosa
2. Sculpting the Figure in Clay: An Artistic and Technical Journey to Understanding the Creative and Dynamic Forces in Figurative Sculpture 1st Edition

Reference Link/ Reference Book:

- www.cgtalk.com
- www.highend3d.com
- www.pixologic.com
- www.deviantart.com
- www.daz3d.com
- www.pixar.com

- www.ilm.com

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. Lake of Industrial visit
2. Requirement of communication with worldwide Artist

POs met through Gaps in the Syllabus: 5,10

Topics beyond syllabus/Advanced topics/Design

1. Various 3D Hardware.

POs met through Topics beyond syllabus/Advanced topics/Design

5

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping Between Course Outcomes And Programme Outcomes

Course Outcome	**Program Outcomes (POs)**												**Program Specific Outcomes (PSOs)**		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	1	1	2	2	3	2	3	2	3	2	3	2	3	2	2
CO2	2	2	2	3	3	3	2	3	2	2	3	3	3	3	1
CO3	2	2	2	2	2	3	3	3	3	3	2	2	2	2	3
CO4	2	1	2	1	2	3	2	1	2	3	2	3	2	2	3
CO5	2	2	2	1	3	3	2	2	2	3	3	2	2	1	2

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD4
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3
CD3	Seminars		C03	CD1, CD2, CD3

CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM420
Course Title: 3D Rigging and Animation
Pre-requisite(s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. (Animation & Multimedia)
Semester: II
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1.	To build a framework of skills and vocabulary to create 3D animation
2.	To understand the fundamental components and their position in various 3D animation workflows
3.	To apply theory and concept in 3D animation art-making
4.	To appreciate the interdisciplinary research attitudes of art and technology, invest independent and artistic expression along with problem solving processes during construction
5.	To develop and awareness of current 3D animation practices through diverse examples of animation, films, videogames, art, etc.

Course Outcomes

After the completion of this course, students will be able to:

CO1	Students will be able to animate a 3D rigged character, in a walk cycle, using inverse kinematics.
CO2	Students will be able to refine the character's walk cycle animation using the graph editor
CO3	Students will be able to Apply principles of composition and animation in objective and subjective analysis of work appropriate for demo reel
CO4	Students will be able to identify an area of focus within the 3D animation field
CO5	Demonstrate ability to evaluate a mesh, and design appropriate rigging techniques to make it animatable, Demonstrate ability to skin and paint weights on organic deformable meshes, and hard non-deformable meshes ,The ability to design control systems that are user friendly, and intuitive to the end user, the animator.

Syllabus

MODULE	(NO. OF LECTURE HOURS)
Module – I **Introduction to Animation** Topics: Review course outline, intro to projects. Intro to digital animation: Intro to Maya animation interface and keyframing animation.	9
Module – II **Using of Key frame**: Topics: History of animation: Preparing a scene for key framing using groups. Node Hierarchy. Overview of Bouncing ball animation (squash and stretch). Creating Playblast animations.	9
Module – III **Rigging with IK/FK.** Topics: Introduction to Rigging : Adding a joints to simple objects. FK and IK kinematics	9
Module – IV **Skinning** Topics: Skinning and painting weights: Painting skin weights and adjusting joint orientation.	9
Module – V **Driver and Driven Key, Motion path** - Topics: Advanced rigging systems and controls: Using HumanIK to rig a character. Integrating Maya into various workflows Lab: Maya animation techniques: Motion Path animation & Set Driven Key, expressions and dynamics	9

Text Book:

1. Maya Help File (in Maya menu, F1 key)
2. The Art of Maya: An Introduction to 3D Computer Graphics by Autodesk Maya Press
3. Getting Started in 3D with Maya by Adam Watkins, Focal Press, 2012
4. Introducing Autodesk Maya 2016: Autodesk Official Press by Dariush
5. Derakhshani, Sybex, 2015

6. Mastering Autodesk Maya 2016: Autodesk Official Press by Todd Palamar, Sybex, 2015
7. Autodesk Maya 2014 Essentials by Paul Naas, Sybex, 2013
8. Digital Art Masters series by 3DTotal publishing
   Character Animation Fundamentals by Steve Roberts, Focal Press, 2012
9. Rig it Right! Maya Animation Rigging Concepts by Tina O'Hailey, Focal Press, 2013
10. Sculpting the Figure in Clay: An Artistic and Technical Journey to Understanding the Creative and Dynamic Forces in Figurative Sculpture 1st Edition

Reference Link/ Reference Book:

http://knowledge.autodesk.com/support/maya
http://forums.cgsociety.org/
http://www.creativecrash.com/maya/

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. Project management
2. Meetup with professional

POs met through Gaps in the Syllabus: 11,15

Topics beyond syllabus/Advanced topics/Design

1. Industrial visit

POs met through Topics beyond syllabus/Advanced topics/Design: 13

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	**Program Outcomes (POs)**												**Program Specific Outcomes (PSOs)**		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	2	2	3	2	2	1	2	3	3	2	2	1	2	3
CO2	2	3	2	2	3	2	3	2	3	2	3	2	2	2	2
CO3	1	2	3	2	3	2	3	2	2	2	2	3	3	3	2
CO4	2	2	2	3	2	2	2	3	2	3	3	2	2	2	2
CO5	2	2	2	3	2	2	2	2	3	2	2	3	2	2	3

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD4

CD2	Tutorial / Assignment		C02	CD1, CD2, CD3
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM421
Course Title: Fundamentals of Research
Pre-requisite(s): Nil
Credits: 3 L:3 T:0 P:0
Class schedule per week: 03
Class: B.Sc. (Animation & Multimedia)
Semester: II
Branch: MAD
Type: Lecture and Tutorial

Course Objectives

This course enables the students to:

1.	Make student learn the process of research in context of multimedia and games
2.	Become aware of the major researches taken place so far in the domains of Digital Games and Multimedia

Course Outcomes

After the completion of this course, students will be able to:

CO1	Develop the skills to conduct a successful research required to conduct any project or develop strategies in today's competitive environment
CO2	Write a research paper.
CO3	Can take up research as a career or further study (Masters and PhD)

Syllabus

Module	No. of Lectures
Module I 1. Introduction to Research 2. Research Process 3. Research Design	6
Module II 1. Research Problem 2. Variables and Their Types 3. Formulation of Hypothesis	6
Module III 1. Sampling 2. Tools of Data Collection 3. Data Analysis 4. Interpretation of Data	6

Module IV 1. Research Methods 2. Descriptive or Survey Method 3. Experimental Method	6
Module V 1. Research Proposal 2. Research Report 3. Exercise: Literature Review of Research Papers	6

Reference Books:

1. RESEARCH METHODOLOGY: TOOLS AND TECHNIQUES by Dr. Prabhat Pandey and Dr. Meenu Mishra Pandey. Publisher BRIDGE CENTER
2. Research Design_ Qualitative, Quantitative, and Mixed Methods Approaches by John W. Creswell
3. RESEARCH DESIGN: Qualitative, Quantitative, and mixed methods approaches, SECOND EDITION by JOHN W. CRESWELL

Suggested Readings:

1. A Handbook of Qualitative Methodologies for Mass Communication Research, Klaus Bruhn Jensen and Nicholas W Jankowski

2. Game Research Methods: An Overview by By Patri Lankoski, Staffan Björk, et al.

Gaps in the syllabus (to meet industry / Profession requirements)

POs met through Gaps in the syllabus

Topics beyond syllabus / advanced topics / design

POs met through topics beyond syllabus / advanced topics / design

Course Delivery Method
Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture
Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Assessment Components	CO1	CO2	CO3	CO4	CO5

Quiz (I, II)	✔	✔	✔		
End Sem Examination Marks	✔	✔	✔		
Mid-Term Examination Marks	✔	✔	✔		

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	3	2	1	1	1	2	2	1	2	2	1	3	3	3	3
CO2	3	2	3	3	3	3	1	2	3	3	1	3	3	3	3
CO3	2	2	2	3	2	2	2	3	2	3	1	3	3	3	3
CO4	3	3	3	2	3	3	3	3	2	3	2	2	1	2	3
CO5	3	3	2	3	3	3	3	3	3	3	2	2	1	2	3

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD8
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3, CD8
CD3	Seminars		C03	CD1, CD2, CD3, CD8
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5, CD8
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5, CD8
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

* * * * *

COURSE INFORMATION SHEET

Course Code: AM422

Course Title: Writing for Animation

Pre-requisite(s): Nil
Credits: 3 L-3 T-0 P-0
Class schedule per week: 03
Class: M.Sc. (Animation Design)
Semester: II
Branch: MAD
Type: Theory

Course Objectives

This course enables the students to:

1.	Provide the student with a thorough introduction to the field of animation writing
2.	The development of writing skills for Animation Writing

Course Outcomes

After the completion of this course, students will be able to:

CO1	Improvise their writing skills for Animation Field
CO2	Write professionally as per industry standards
CO3	Confidence and ability to tell a story through words

Syllabus

MODULE	NO. OF LECTURES
MODULE 1 Writing Skills Effective Writing Skills Condensed Writing, Expansion, Idiomatic Usages Figurative language & Figures of Speech	6
MODULE 2 Finding Ideas Human Development Developing Characters Development and the Animation Bible	6

MODULE 3 Basic Animation Writing Structure Storyboards for Writers Scene Writing	6
MODULE 4 Animation Comedy and Gag Writing Dialogue Writing Script Writing	6
MODULE 5 Editing & Rewriting The Animated Feature Types of Animation and the Animation Media	6

Suggested Reading:

1. How To Write For Animation By Jeffrey Scott
2. Pixar Storytelling: Rules for Effective Storytelling Based on Pixar's Greatest Films By Dean Movshovitz
3. Animation Writing and Development: From Script Development to Pitch By Jean Ann Wright
4. M.H Abrams, 'A Glossary of Literary Terms', Macmillan
5. Arun Kr Singh, 'Social Psychology', PHI
   CS Rayudu, Media & Communication Management, Himalaya, Publishin

Gaps in the syllabus (to meet industry / Profession requirements)

1.Make the students aware of the culture of animation

POs met through Gaps in the syllabus

Topics beyond syllabus / advanced topics / design

1. Major companies working in industry
2. Popular people and pioneers in the industry all over the world

POs met through topics beyond syllabus / advanced topics / design

Course Delivery Method
Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture
Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tools	% Contribution during CO Assessment
Quiz (I, II)	20
Mid-term Examination Marks	25
Attendance	5
End-term Examination Marks	50

Assessment Components	CO1	CO2	CO3	CO4	CO5
Quiz (I, II)	✓	✓	✓		
End Sem Examination Marks	✓	✓	✓		
Mid-Term Examination Marks	✓	✓	✓		

Indirect Assessment

1. Student feedback on Course outcome

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	3	2	1	1	1	2	2	1	2	2	1	3	2	2	2
CO2	3	2	3	3	3	3	1	2	3	3	1	3	2	2	2
CO3	2	2	2	3	2	2	2	3	2	3	1	3	2	2	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Course Delivery Method

Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture
Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Mapping Between COs and Course Delivery (CD) methods

CD Code	Course Delivery Method	Course Outcome	Course Delivery Method Used
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors	C01	CD1, CD2, CD3
CD2	Tutorial / Assignment	C02	CD1, CD2, CD3
CD3	Seminars	C03	CD1, CD2, CD3
CD4	Mini Projects / Projects	C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids	C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture		
CD7	Industrial Visits / in-plant training		
CD8	Self-learning such as use of NPTEL materials and internets		
CD9	Simulation		

* * * * *

M.Sc. Animation Design
Semester-III

COURSE INFORMATION SHEET

Course Code: AM501

Course Title: INDIAN ART & ANIMATION

Pre-requisite(s): Basic knowledge of art history and animation
Credits: 3 L-3 T-0 P-0
Class schedule per week: 03
Class: M.Sc. (Animation & Multimedia)
Semester / Level: III
Branch: MAD
Type: Theory

Course Objectives
This course enables the students to:

1.	familiarize them with the various styles and modes of art expressions from different parts of India
2.	be acquainted with brief glimpses of the development of Indian Visual Art as are required for concept formation
3.	Learn about the influence and use of Indian Art in graphic storytelling
4.	Learn about the influence and use of Indian Art in animation

Course Outcomes
After the completion of this course, students will be able to:

CO1	Expend their vision
CO2	have an opportunity to observe and study the evolution of its mutations and synthesis with other style and the rise of an altogether new style.
CO3	Have exposure of various contemporary trends in Indian animation
CO4	Knowledge about the unique styles and features of Indian Animation films

Syllabus

MODULE	(NO. OF LECTURE HOURS)
Module 1 **Pre-Historic rock paintings and Art of Indus valley,Buddhist and Jain Art -** Pre-Historic Art -Period and location, sites, objective and characteristics . Mohenjo-daro and Harrappa (study of seals, sculptures, terracotta) .Art in caves of Ajanta,(Location, period, No. of caves, Chaitya and Vihara, Paintings and Sculptures subject matters and technique etc.)	**8**

Ellora. Pal and Jain school.	
Module 2 **The Mughal, Rajasthani and Pahari schools of Miniature painting-** Origin and Development . Sub-Schools of Rajasthani painting-Mewar, Bundi, Jodhpur, Bikaner, Kishangarh, and Jaipur. Sub-Schools of Pahari painting-Basoli,Guler,Kangra Main features of the Rajasthani,Mugal and Pahari Schools .	**8**
Module 3 **The Bengal School of Painting and the Modern Trends in Indian Art -** Introduction to the Bengal school of painting, Origin and development ,main features of Bengal school of painting. Artists and their famous paintings- Nandlal Bose, Abanindranath Tagore, Kshitindranath Majumdar, Ram gopal vijayvargiya. Study and appreciation of contemporary(Modern) Indian artist and their paintings-Raja Ravi verma, Jamini Roy, Amrita sher gil, M.F.Hussain.	**8**
Module 4 **Graphic Storytelling in India** – An overview of graphic narratives and their evolution **Understanding Comics and Sequential Art** – Comic art and its derivatives **Planning character design, layout design, illustration style, composition, staging, backgrounds pertaining to Indian culture & tradition** – Concept art and production design for Indian stories **Indian Archetypes v/s Stereotypes** – Exploring heroes and villains in Indian mythology **Popular Indian Graphic novels** – Case studies of some graphic novels	**8**
Module 5 **Animation as a storytelling (narrative) medium** – Exploring the art of storytelling through animation **Visual Concepts** - Character Exploration, Backgrounds & Storyboards for animation **Feature animation** – Case studies of some Indian Animation feature films **Personal films and expression** - Case studies and scope of independent animation films **Advertisements and Education** - Use of animation in advertisements in India	**8**

Reference Books:

1. History of Indian Art by Devender kumari ,Paperback.
2. Bhartiya chitrakala ka Itihas- Dr. Avinash Bahadur verma, Prakash book dipo,Bareli(U.P.)
3. The Heritage of Indian art-Dr. Vasudev Sharan Agarwal
4. Indian Painting-Percy brown,YMCA Publishing house,Massey hall,Jai singh road, New Delhi
5. Story of Indian Art- S.k.Bhattacharya, Atma Ram & sons, Kashmiri gate, Delhi.
6. History of India and Indonesian Art- A.K.Coomaraswamy, Dover publication,Inc., New york.
7. A Passage to India: From Traditional Miniature Paintings to Contemporary Multi-Media Works, Art from India Is Strengthening Its Presence on the American Art Scene By Hart, JaneArt Business News, Vol. 29, No. 5, May 2002
8. Rajput PaintingBy Sherman E. Lee; George MontgomeryUnknown, 1960
9. The Art of Mughal IndiaBy Stuart C. WelchH.N. Abrams, 1963
10. Indian Painting in the Punjab Hills: EssaysBy W. G. Archer; Victoria and Albert MuseumH. M. Stationary Off., 1952
11. Animation Script to Screen (Author: Shamus Culhane)
12. The Art of Layout and Storyboarding (Author: Mark Byrne)
13. Shot by shot (Author : Steven D Katz)
14. The Illusion of Life – Essays on Animation, Edited by Alan Cholodenko, Power Publication in association with Australian Film Commission, SYD, 1991

Gaps in the syllabus (to meet industry / Profession requirements)
POs met through Gaps in the syllabus
Topics beyond syllabus / advanced topics / design
POs met through topics beyond syllabus / advanced topics / design

Course Delivery Method
Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture
Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Course Outcome (CO) Attainment Assessment tools & Evaluation procedure
Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Quiz(I, II, III)	30
Assignment	10
Seminar	10
End Term Examination Marks	50

Assessment Components	CO1	CO2	CO3	CO4	CO5
Quiz(I, II, III)	√	√	√		
End Sem Examination Marks	√	√	√	√	√
Assignment Marks	√	√	√	√	√

Indirect Assessment –

1.Student Feedback on Faculty

2. Student Feedback on Course Outcome

Mapping of Course Outcomes into Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	1	2	3	1	2	3	1	3	2	2	1	2	3	3	2
CO2	1	3	3	2	2	3	2	1	1	2	2	2	3	3	3
CO3	1	2	3	3	3	3	3	2	2	3	3	1	3	3	2
CO4	1	3	3	2	3	2	2	2	2	3	3	1	3	2	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3
CD3	Seminars		C03	CD1, CD2, CD3
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM502

Course Title: Digital painting
Pre-requisite (s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. Animation Design
Semester: III
Branch: Animation & Multimedia
Type: Sessional

Course Objectives

This course enables the students to:

1.	Understand the Fundamentals of painting
2.	Develop various types of paintings in digial form
3.	Learning the process of creating digital painting and its production
4.	Study special techniques from case studies
5.	know basic theories of art , their development and utility

Course Outcomes

After the completion of this course, students will be able to:

CO1	Describe digital paintings and it's utility
CO2	Assess and critique past and current digital painting trends
C03	Create fantastic Digital BG paintings, landscapes ,portraits etc. for various domain
CO4	Demonstrate progress in basic drawing and painting skills
CO5	Work as an efficient digital painter

SYLLABUS

MODULE	(NO. OF LECTURE/ HOURS)
Module 1 Introduction to Art ,digital Art ,What is digital painting- it's various forms - techniques, utility , Talents and Abilities	8
Module 2 Digital tools , various softwares used for digital painting , hardwares	8

Module 3 Developing paintings- Types of paintings, BG paintings, landscapes, portraits, illustrations, matte paintings etc.	8
Module 4 Written description of digital paintings, , important Art principles, Art elements, Color theory , Study of light on various surfaces, Study of reflection and refraction, Creating textures , Using layers, Understanding Hue, Saturation and Histogram, Color level and curves, Using brushes etc.	8
Module 5 Advantages of digital painting for production, comparison between traditional and digital paintings, case studies on digital artists and their work	8

Assignments:

1) Develop and design BG paintings for an animated short film.
2) Develop and design Matte paintings for a Game.
3) Develop and design portraits on a theme.

Reference Books:

1. Illusion of Life By Ollie Johnston & Frank Thomas
2. Figure drawing without a model- by Ron Tiner
3. The Digital Matte Painting Handbook by David B. Mattingly

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. few sessions of industrial Artist are required

POs met through Gaps in the Syllabus: 1,2,4,7,10

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes into Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	2	3	1	2	3	1	3	3	3	3	2	3	3	2
CO2	3	3	2	2	2	3	2	3	3	2	3	3	3	3	3
CO3	3	3	3	3	3	3	3	2	2	3	3	2	3	3	2
CO4	3	3	3	2	3	2	2	2	2	3	3	2	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1,CD3
CD2	Tutorial / Assignment		CO2	CD1,CD3
CD3	Seminars		CO3	CD1,CD2,CD3,CD4,CD5,
CD4	Mini Projects / Projects		CO4	CD2,CD3
CD5	Laboratory Experiments / Teaching Aids		CO5	CD1,CD2,CD4,CD5,CD7
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM503

Course Title: COMPOSITING & EDITING TECHNIQUES

Pre-requisite(s): Basic knowledge of Compositing & Editing
Credits: 2
Class schedule per week: L:0 T:0 P:04
Class: M.Sc. (Animation & Multimedia)
Semester: III
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1.	Understand the fundamental techniques of compositing
2.	Understand Green or Blue screen Composites
3.	Combine and composite moving imagery, still images, graphics, text, and sound
4.	Learn to apply effects and objects to automatically tracked motion paths
5.	Breakdown the VFX production for integration in the filmmaking process

Course Outcomes

After the completion of this course, students will be able to:

CO1.	Apply the fundamental techniques of compositing
CO2.	Analyze current movies in order to learn the most recent techniques used in VFX
CO3.	Plan and execute a Visual Effects production, from conception to final execution and compositing
CO4.	Edit footage using advanced transitions, video effects, titles, and compositing
CO5.	Produce professional quality videos, with CGI and live action footage

Syllabus

MODULE	NO. OF LECTURE HOURS
Module I **Introduction To Compositing** – Basics concepts about compositing **Matching Foreground & Background** – Techniques of matching and extending sets and backgrounds.	8
Module II **Masking –** Creating Masks, Using alpha channels	8

Isolating A Moving Object From A Footage – Rotoscopy, Using Roto Brush and masking to isolate an area of a frame	
Module III **Camera –** Camera types, properties and movements **Tracking –** Motion Tracking, Camera Tracking	8
Module IV **Creating A Cinematic Look** – Using color correction, depth of field and other effects to create cinematic look **Creating Transparent Screens** – Using layers and effects to create screens and HUDs	8
Module V **Transitions & Editing Techniques** – Understanding transitions and continuity editing **Case Studies –** Review films and analyze the effects used	8

Reference Books:

- The Art and Science of Digital Compositing by Ron Brinkmann
- Digital Compositing for Film and Video Compositing, Visual Effects By Steve Wright
- Digital Visual Effects and Compositing by Jon Gress
- In the Blink of an Eye by Walter Murch
- Art of the Cut: Conversations with Film and TV Editors by Steve Hullfish

Gaps in the Syllabus (to meet Industry/Profession requirements):NIL

Topics beyond syllabus/Advanced topics/Design: NIL

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	1	2	1	3	3	3	1	2	2	2	2	1	2	2	2
CO2	1	2	1	2	3	2	2	2	2	2	3	2	2	2	2
CO3	1	2	1	2	3	2	2	2	2	1	2	2	2	2	3
CO4	2	2	1	2	3	1	3	2	3	1	1	2	2	2	3
CO5	1	2	1	2	3	3	3	2	3	1	2	2	2	2	3

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1, CD2, CD4
CD2	Tutorial / Assignment		CO2	CD1, CD2, CD4
CD3	Seminars		CO3	CD1, CD2, CD5
CD4	Mini Projects / Projects		CO4	CD1, CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD1, CD2, CD4, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM504

Course Title: Graphics
Pre-requisite (s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. Animation Design
Semester / Level: 5
Branch: Animation & Multimedia
Type: Lecture, Tutorial and Workshop

Course Objectives

This course enables the students to:

1	Understand the Fundamentals of graphics
2	Develop Ad campaigns on various topics
3	Learning the process of Graphic designing
4	Study successful campaign from case studies
5	Introduce with latest marketing and Advertising trends

Course Outcomes

After the completion of this course, students will be able to:

CO1	Work as an efficient graphic designer
CO2	Assess and critique past and current Graphic designing trends
CO3	Have vast knowledge on designing
CO4	Develop their strength in visualization
CO5	Develop and design effective Ad campaign projects on any topic

MODULE	(NO. OF LECTURE HOURS)
Module 1 Introduction to Graphics , Understanding graphic designing process , Interrelation between graphic designing and Advertising , Introduction to Advertising , Design basics - conventional forms -techniques, Tools , utility.	8
Module 2	8

Understanding the vast area of Ad designing, various types of Advertisements , corporate Identities , Introduction to typography, Advanced typography .Campaign designing	
Module 3 Principles and elements of design , Layout and references , Visualizing idea , Introduction to visualisation and copy writing for an Ad , Illustration designing , designing for various media , Print media and digital media , printing techniques .	8
Module 4 Introduction to emerging media , understanding the latest trends , soft wares and hard wares used in designing , developing raster and vector illustrations.	8
Module 5 Creating images for print & web , Managing image size, Managing file size, Web page designs , Packaging design, presentation skills., case studies on famous Ad campaign	8

Graphic design assignments:

1. Design an Ad campaign for a product
2. Develop an Ad campaign on a social topic
3. Presentation

Reference Books:

1. Advertising management, Jaishree jethwaney ,Shruti jain , Oxford university
2. The design process by Karl Aspelund
3. Fundamentals of Graphic Design by Gavin Ambrose/Paul Harris
4. Adobe Photoshop CC Classroom
5. Adobe Illustrator CC Classroom
6. Mass Communication in India by Keval J. Kumar
    a. Web Design in a Classroom by Jeremy Osborn , Jennifer Smith
    b. Killer UX Design by Jodie Moule

Gaps in the syllabus (to meet industry / Profession requirements)

1.Industrial visit and submission of a file based on it must be added in this course

2.expert session must be included

POs met through Gaps in the syllabus

1,6,10,14

Topics beyond syllabus / advanced topics / design

1.Printing techniques

2.History of Graphic design

POs met through topics beyond syllabus / advanced topics / design

4,6,10,12

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes into Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	3	2	3	2	3	3	1	3	3	3	3	2	3	3	3
CO2	1	3	2	2	2	3	2	3	3	2	3	3	3	3	2
CO3	2	3	3	3	3	3	3	2	2	3	3	2	3	3	2
CO4	3	3	3	2	3	1	2	2	2	3	3	2	3	3	2
CO5	2	3	3	3	2	3	2	3	3	3	3	2	3	3	2

Correlation Levels 1, 2 or 3 as defined below:
1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1,CD2
CD2	Tutorial / Assignment		CO2	CD1,CD3
CD3	Seminars		CO3	CD1,CD2,CD3,CD4,CD5,CD7
CD4	Mini Projects / Projects		CO4	CD3
CD5	Laboratory Experiments / Teaching Aids		CO5	CD4,CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM505

Course Title: Documentary Animation-II

Pre-requisite(s): Documentary Animation-I

Credits: 2 L-0 T-0 P-04
Class schedule per week:
Class: M.Sc. (Animation Design)
Semester: III
Branch: MAD
Type: Sessional

Course Objectives
This course enables the students to:

1.	Provide the student with a thorough introduction to the field of animation Documentary
2.	The development of visual skills for Documentary Animation Films
3.	Range of documentary animated films which help to develop the fundamental of a critical understanding of animation production terminology.

Course Outcomes
After the completion of this course, students will be able to:

CO1	A deeper understanding of visual story telling through animation techniques
CO2	Broader knowledge of storytelling in documentary and factual filming
CO3	Confidence and ability to tell a story in a variety of documentary and factual filmmaking styles
CO4	Work on Production and Post-Production efficiently

Syllabus

Discussions and Assignment	**No. of Hours**
Discussion and Case Studies of various productions	9
Finalization of Pre-Production work as per the selected concept and animatics in previous semester. Working on Animatic with proper voice over and sound.	9
Production & Practice : Key Framing, Break-down, In-between, Final Drawing, Final Line Test, Background Painting	9
Post-Production & Practice: Ink& Paint, Compositing, Effects & Sound,	9
Final Editing, Final Submission & Presentation.	9

Suggested Reading:

1. Producing Independent 2D Character Animation: Making and Selling a Short Film By Mark Simon
2. Animation From Script To Screen By Shamus Culhane
3. Animated Documentary By Annabelle Honess Roe
4. Simplified Drawing for Planning Animation By Wayne Gilbert
5. Sketching for Animation: Developing Ideas, Characters and Layouts in Your Sketchbook by Peter Parr
6. Dream Worlds: Production Design for Animation (Library Binding) by Hans Bacher, Don Hahn

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training

CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	3	2	1	1	1	2	2	1	2	2	1	3	3	3	3
CO2	3	2	3	3	3	3	1	2	3	3	1	3	3	3	3
CO3	2	2	2	3	2	2	2	3	2	3	1	3	3	3	3
CO4	3	3	3	2	3	3	3	3	2	3	2	2	1	2	3
CO5	3	3	2	3	3	3	3	3	3	3	2	2	1	2	3

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1,CD2
CD2	Tutorial / Assignment		CO2	CD4
CD3	Seminars		CO3	CD2, CD4
CD4	Mini Projects / Projects		CO4	CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD2, CD4
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM506

Course Title: Narrative Animation-II

Pre-requisite(s): Narrative Animation-I
Credits: 2 L-0 T-0 P-04
Class schedule per week:4
Class: M.Sc. (Animation Design)
Semester: III
Branch: MAD
Type: Sessional

Course Objectives
This course enables the students to:

1.	Provide the student with a thorough introduction to the field of Core Animation
2.	The development of storytelling skills for Narrative Animation
3.	The development of Visual Storytelling Skills for Animation
4.	Understand Production Processes for Narrative Animation
5.	Work on various animation 2D/ 3D softwares like Adobe Animate, Adobe After effects, Monkey Jam, Dragon Frames, Maya, and Blender

Course Outcomes
After the completion of this course, students will be able to:

CO1	Produce an Animation Showreel
CO2	Broader knowledge of visual storytelling
CO3	Confidence and ability to animate according to the concept
CO4	Work on Acting for Animation

Syllabus

Discussion & Practical	**No. of Hours**
1. Demonstration and Practice: Layout, Planning for Animation, Animation Posings	6
2. Demonstration and Practice: Camera Blocking	6
3. Discussion, Demonstration and Practice: Dialogue- Voice Over, Phrasing, Picture and Sound Sync, Accents, and Attitude.	6
4. Discussion, Demonstration and Practice: Acting for Animation- Change of Expressions, Look for the Contrast, An Acting Point, Body Language, Symmetry and Twinning, Eyes & Expressions.	6
5. Discussion, Demonstration and Practice: Key Animation,	6

Breakdown, In-betweenings, Final Line etc.	
6. Discussion, Case Studies, and Demonstration : Character Animation in 3D	6
7. Discussion, Case Studies, and Demonstration: Character Animation in 2D	6
8. Discussion, Case Studies, and Demonstration: Character Animation in Stop motion	6

Suggested Reading:

1. The Animator's Survival Kit By Richard Williams
2. Animation: The Mechanics of Motion By Chris Webster
3. Timing For Animation By Harold Whitaker
4. Acting for Animators By Ed Hooks

Gaps in the syllabus (to meet industry / Profession requirements)

POs met through Gaps in the syllabus

Topics beyond syllabus / advanced topics / design

POs met through topics beyond syllabus / advanced topics / design

Course Delivery Method
Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture
Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tools	**% Contribution during CO Assessment**
Quiz (I, II)	20
Mid-term Examination Marks	25
Attendance	5
End-term Examination Marks	50

Assessment Components	CO1	CO2	CO3	CO4	CO5
Quiz (I, II)	✓	✓	✓		
End Sem Examination Marks	✓	✓	✓	✓	✓
Mid-Term Examination Marks	✓	✓	✓		

Indirect Assessment

2. Student feedback on Course outcome

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	3	2	1	1	1	2	2	1	2	2	1	3	3	2	2
CO2	3	2	3	3	3	3	1	2	3	2	1	3	3	2	2
CO3	2	2	2	3	2	2	2	2	2	2	1	3	3	2	2
CO4	3	3	3	2	3	3	3	2	2	2	2	2	3	2	2
CO5	3	3	2	3	3	3	3	2	3	2	2	2	3	2	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Course Delivery Method

Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture
Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Mapping Between COs and Course Delivery (CD) methods

CD Code	Course Delivery Method	Course Outcome	Course Delivery Method Used
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors	C01	CD1, CD2, CD3

CD2	Tutorial / Assignment	C02	CD1, CD2, CD3
CD3	Seminars	C03	CD1, CD2, CD3
CD4	Mini Projects / Projects	C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids	C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture		
CD7	Industrial Visits / in-plant training		
CD8	Self-learning such as use of NPTEL materials and internets		
CD9	Simulation		

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COURSE INFORMATION SHEET

Course Code: AM507

Course Title: Experimental Visual Effects - II

Pre-requisite(s): Basic knowledge of visual effects
Credits: 2
Class schedule per week: L-0 T-0 P- 4
Class: M.Sc. (Animation & Multimedia)
Semester: III
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1.	Understand the use of visual effects & special effects
2.	Understand basic image processing techniques
3.	Track motion data using various techniques
4.	Learn and experiment with the compositing process and identify major techniques used in industry
5.	Develop a visual effects pipeline for integration in the filmmaking process

Course Outcomes

After the completion of this course, students will be able to:

CO1.	Use visual effects & special effects in there projects
CO2.	Use image processing and matte painting techniques
CO3.	Use motion tracking and camera tracking in there film projects
CO4.	Experiment with compositing & editing techniques
CO5.	Visualise and follow an efficient pipeline to use VFX in their films

Syllabus

MODULES	NO. OF LECTURE HOURS

Module I **Introduction to Compositing & VFX** – Use of VFX in films, basic concepts of compositing	8
Module II **Matching foreground & background** – Matching perspective, scale, colour & lighting.	8
Module III **Chroma,Masking, Rotoscopy** – Chroma keying, Masking, Rotoscopy	8
Module IV **Effects & Presets** – CC Presets, adjustments, Plugins	8
Module V **Camera, Tracking –** Using virtual camera, motion tracking, camera tracking	8

Reference Books:

1. The Visual Effects Producers: Understanding the Art and Business of VFX By Charles Finance and Susan Zwerman.
2. The VES Handbook of Visual Effects Edited by Jeffrey A. O Kun and Susan Zwerman.
3. Compositing, Visual Effects, Essential for aspiring artists By Steve Wright
4. The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics by Ron Brinkmann
5. The Visual Effects Producer: Understanding the Art and Business of Vfx by Charles Finance
6. Digital Compositing for Film and Video by Steve Wright

Gaps in the Syllabus (to meet Industry/Profession requirements): NIL

Topics beyond syllabus/Advanced topics/Design: NIL

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	1	2	2	3	2	1	1	2	2	3	2	1	3	2	2
CO2	1	1	1	3	2	2	3	2	1	3	2	2	3	3	2
CO3	1	2	2	3	2	1	2	2	2	3	1	1	2	2	3
CO4	1	2	2	3	3	2	3	3	1	3	2	1	3	3	3
CO5	1	2	2	3	2	2	3	2	1	2	2	1	2	3	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1, CD2, CD4
CD2	Tutorial / Assignment		CO2	CD1, CD2, CD4
CD3	Seminars		CO3	CD1, CD2, CD5
CD4	Mini Projects / Projects		CO4	CD1, CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD1, CD2, CD4, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM 508

Course Title: Experimental Motion Graphics-II

Pre-requisite(s): Basic knowledge of graphics and animation principles
Credits: 2
Class schedule per week: 4 L-0 T-0 P-4
Class: M.Sc. (Animation & Multimedia)
Semester: III
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

A.	Get familiar with the use of Adobe After Effects Software
B.	Learn about different type of layers, elements and their properties
C.	Learn and experiment with the properties and layer attributes to create motion and transitions
D.	Understand the different approaches of storytelling through motion graphics
E.	Learn about editing and continuity in films

Course Outcomes

After the completion of this course, students will be able to:

CO1.	Create animation/motion graphics from a variety of static sources like images, shapes, Text, etc.
CO2.	Recognize and experiment with the commonly used animation techniques
CO3.	Apply the animation techniques to simulate realistic and stylized movement
CO4.	Create a short visual from a script to demonstrate storytelling
CO5.	Use audio, video, images, typography and design to make a visual production

Syllabus

MODULES	NO. OF LECTURE HOURS
Module I	8

Intro to Adobe After Effects Software – User Interface, Project Panel, Timeline, Layers, Tools & Effects.	
Module II **Types of Layers** – Shape, solid, text, null, camera, adjustment, light	8
Module III **Composition, Layer attributes, Object Elements & Properties** – Stack order, 3D layers, Pre-comps, Blending modes, Position, Rotation, Opacity, Keying, Graph Editor.	8
Module IV **Effects & Presets** – CC Presets, adjustments, Plugins	8
Module V **Rendering and Project management –** Render settings, collecting files and folder management	8

Reference Books:

- The Visual Effects Producers: Understanding the Art and Business of VFX By Charles Finance and Susan Zwerman.
- The VES Handbook of Visual Effects Edited by Jeffrey A. O Kun and Susan Zwerman.
- Compositing, Visual Effects, Essential for aspiring artists By Steve Wright
- The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics by Ron Brinkmann
- The Visual Effects Producer: Understanding the Art and Business of Vfx by Charles Finance
- Digital Compositing for Film and Video by Steve Wright

Gaps in the Syllabus (to meet Industry/Profession requirements)

NIL

Topics beyond syllabus/Advanced topics/Design

NIL

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	1	2	2	3	2	1	2	2	2	3	2	2	2	3	2
CO2	1	2	2	3	1	2	2	2	2	3	1	2	2	3	2
CO3	1	2	1	3	1	1	2	1	2	2	2	2	3	2	2
CO4	1	1	2	3	3	2	2	2	2	3	1	2	2	3	2
CO5	1	1	2	3	2	2	2	2	2	3	1	2	3	3	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		CO1	CD1, CD2, CD4
CD2	Tutorial / Assignment		CO2	CD1, CD2, CD4
CD3	Seminars		CO3	CD1, CD2, CD5
CD4	Mini Projects / Projects		CO4	CD1, CD2, CD4
CD5	Laboratory Experiments / Teaching Aids		CO5	CD1, CD2, CD4, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM509
Course Title: Game Design II
Pre-requisite(s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. (Animation & Multimedia)
Semester: III
Branch: MAD
Type: Sessional

Course Objectives and Outcomes

This course enables the students to:

1.	To make students learn the art and techniques of designing digital games and document it in a systematic way.

Course Outcomes

This course enables the students to:

CO1	Students will understand the process of designing games
CO2	Students will be able to undertake Game Production

Syllabus

Discussion & Practical	**No. of Hours**
Module I 1. Game, Design and Play: Basic elements of play design 2. Play Experiences 3. Basic Game Design tools: Constraint, Direct and Indirect Actions, Goals, Challenge, Skill-strategy-chance and uncertainty, Decision Making and Feedback, Abstraction, Theme, Storytelling, Context of Play	9
Module II 1. The kinds of play 2. The Player Experience	9
Module III 1. The Iterative Game Design Process 2. Design Values	9
Module IV 1. Game Design Documentation 2. Principles of Game Design 3. Game Engines 4. Artificial Intelligence	9
Module V 1. Exercise: Conceptualizing your game 2. Prototyping your game	9

3. Playtesting your game 4. Evaluating your game	

Reference Books:

1. Games, Design and Play - A Detailed Approach to Iterative Game Design by Colleen Macklin John Sharp

Suggested Readings:

1. The Art of Game Design: A Deck of Lenses, by Jesse Schell
2. Game Design Workshop: A Playcentric Approach to Creating Innovative Games, Fourth Edition by Tracy Fullerton
3. Level Up! The Guide to Great Video Game Design by Scott Rogers
4. Game Design by Bob Bates
5. Game Design Foundations by Roger E. Pedersen, Wordware Publishing, Inc.

Gaps in the syllabus (to meet industry / Profession requirements)

POs met through Gaps in the syllabus

Topics beyond syllabus / advanced topics / design

POs met through topics beyond syllabus / advanced topics / design

Course Delivery Method
Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture
Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure
Direct Assessment

Assessment Tools	**% Contribution during CO Assessment**
Internal Marking	60
External Marking	40
Total	100

Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Lab Quiz (Mid Sem.)	✔	✔			
End Sem Lab Examination	✔	✔			

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Mapping of Course Outcomes into Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
CO1	2	2	2	2	1	2	1	1	2	2	1	2	2	1	1
CO2	2	2	2	2	1	1	1	1	2	2	1	2	2	1	1

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD8
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3, CD8
CD3	Seminars		C03	CD1, CD2, CD3, CD8
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5, CD8
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5, CD6, CD7, CD8
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

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COURSE INFORMATION SHEET

Course Code: AM510
Course Title: Programming for Games-II

Pre-requisite(s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. (Animation & Multimedia)
Semester: III
Branch: MAD
Type: Sessional

Course Objectives and Outcomes
This course enables the students to:

1.	Learn the programming concepts while working on a project in any game engine. However, the mentioned syllabus is in reference to Unity game engine but students are free to use any game engine and programming language.
2.	Learn Game Engines and Programming Language for Game Development

Course Outcomes
This course enables the students to:

CO1	Develop a game using programming skills in a game engine

Syllabus
This is a project-based paper. First students will learn the basic interface and functions of Unity Game Engine then they will develop a game project and learn. Students may choose any project under guidance of the teacher. The project should help student to explore basic concepts of Game Engine and Programming Language.

Discussion & Practical	**No. of Hours**
Module I: 1. Getting Started 2. Define Game Layout and Environment	9
Module II: 1. Create Positioning and Movement 2. Scripting a Game Manager	9
Module III: 1. Adding Sound and Music	9

Module IV: 1. Game Power-Ups	9
Module V: 1. Level Manager and Menu	9

Text Book:

1. Make a 2D Arcade Game in a Weekend with Unity, by Jodessiah Sumpter, Apress
2. Learning Resources on Unity.com website

Suggested Readings:

1. Learning Unreal Engine Android Game Development, Nitish Mishra, Packt
2. The Essential Beginner's Guide to Getting Started with UDK: How to techniques, tips and insight by Alex Galuzin, World of Level Design.com

Gaps in the syllabus (to meet industry / Profession requirements)

POs met through Gaps in the syllabus

Topics beyond syllabus / advanced topics / design

POs met through topics beyond syllabus / advanced topics / design

Course Delivery Method
Lecture by use of boards/ LCD/ Projectors / OHP Projectors
Tutorial / Assignment
Seminars
Mini Projects / Projects
Laboratory Experiments / Teaching Aids
Industrial / Guest Lecture
Industrial Visits / in-plant training
Self-learning such as use of NPTEL materials and internets
Simulation

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tools	**% Contribution during CO Assessment**
Internal Marking	60
External Marking	40
Total	100

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Mapping of Course Outcomes into Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	2	2	2	1	2	1	1	2	2	1	2	2	1	1

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD8
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3, CD8
CD3	Seminars		C03	CD1, CD2, CD3, CD8
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5, CD8
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5, CD6, CD7, CD8
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

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COURSE INFORMATION SHEET

Course Code: AM511
Course Title: 3D Sculpting & Texturing-II
Pre-requisite(s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 03
Class: M.Sc.
Semester: III
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1	Get perfect knowledge of human and animal anatomy
2	Creation of a biped and quadruped model complete with perfection as production level.
3	Know what makes a model "good", including a clean topology and edge flow, project structure, and texture mapping. Great skill in manipulation of tools and technique used to express creative idea.
4	Gain comfort working in Zbrush software to create a model, advance knowledge of texture with Photoshop and substance painter.
5	Be able to create descriptive, detailed and interesting textures & normal map

Course Outcomes

After the completion of this course, students will be able to:

CO1	Students will be able to create a high quality CG digital figure that can be used for customizing games, machinima, animations, portfolios, 3D prints and programming based computer science graphics course consistent with industry standards and strategies
CO2	Students will learn the ability to apply complex software packages used in industry for sculpting human figures, Some degree of skill in manipulation of tools and technique used to express creative idea.
CO3	Students will learn the ability to distinguish and demonstrate critical elements of digital figure sculpting that distinguish levels of quality and refinement in figure sculpting, Superior degree of originality throughout; very unique solution; theme has been elaborated on to a high degree; ability to take initiative in assignment that augments what is learned; self-initiated; complex solution.

CO4	Above average degree of originality throughout; theme is present with little elaboration; some initiative in working and independent thinking
CO5	SUpon successful completion of the course, the student will have a good grasp of design as it applies to their forms and animation; identify good and bad composition & staging; identify and build an emotional impact using color, light, and camera perspective within a scene; create and use technical drawings to build models; create surfaces and lighting set-ups that strengthen the overall project design; create strong, narrative illustrations and animation with 3D.

Syllabus

MODULE	(NO. OF LECTURE HOURS
Module I: Preparing a model sheet Topics: what is T pose of a model, Develop ability to create own character,	8
Module II: Work with cloth, Hair and fur: Topics: learn different technique to make cloths and hairs.	8
Module III:Refine or polishing and applying texture. Topics: How to use alpha maps for more detailed sculpting, Use of different brushes and spotlight tool. Deep knowledge of Photoshop and substance painter.	8
Module IV: **UV coordinates** Topics: handling uv coordinates, create uv sets, Uses of color profiles for further texturing process.	8
Module V:All texture maps Topics: Learn to apply texture on model, learn uv mapping process. Occlusion map, shadow map, specular map, specular roll off map, transparency map, alpha map etc.	8

Text Book:

1. Vitamin 3-D: New Perspectives in Sculpture and Installation Adriano Pedrosa
2. Sculpting the Figure in Clay: An Artistic and Technical Journey to Understanding the Creative and Dynamic Forces in Figurative Sculpture 1st Edition

Reference Link/ Reference Book:www.cgtalk.com

- www.highend3d.com
- www.pixologic.com
- www.deviantart.com
- www.daz3d.com
- www.pixar.com
- www.ilm.com

Gaps in the Syllabus (to meet Industry/Profession requirements): NIL

POs met through Gaps in the Syllabus: Nil

Topics beyond syllabus/Advanced topics/Design: NIL

POs met through Topics beyond syllabus/Advanced topics/Design: Nil

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes into Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	2	2	2	1	2	1	1	2	2	1	2	2	1	1
CO2	2	2	2	2	1	1	1	1	2	2	1	2	2	1	1
CO3	2	2	2	2	1	2	1	1	2	2	1	2	2	1	1
CO4	2	2	2	2	1	2	1	1	2	2	1	2	2	1	1
CO5	2	2	2	2	1	2	1	1	2	2	1	2	2	1	1

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD4
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM512
Course Title: Dynamics and Rendering
Pre-requisite(s): Nil
Credits: 2 L:0 T:0 P:4
Class schedule per week: 04
Class: M.Sc. (Animation & Multimedia)
Semester: III
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1	To understand how objects move with low of physics.
2	How to simulate natural forces in Maya
3	Students can specify the actions you want the object to take, then let the software figure out how to animate the object.
4	Able to create realistic motion that's hard to achieve with traditional key frame animation.
5	Able to make effects such as tumbling dice, waving flags, and exploding fireworks, how to do render an object.

Course Outcomes

After the completion of this course, students will be able to:

CO1	Students will be able to make motion graphic in movies.
CO2	Can make animation with simulation same as low of physics.
CO3	Students will be able to Apply principles of physics.
CO4	Students will be able to make water wave, cloth simulation, fire works, dust etc.
CO5	Students will be able to make realistic Animation and can make final rendered output for same.

Syllabus

MODULE	**(NO. OF LECTURE HOURS)**
Module I: Introduction of Dynamics Topics: Rigid Bodies Overview • Fields and dynamic movement	8

Module II: using of particles: Topics: • Workflow, emitter values, Instancer • creating emission of particles from emitter.	8
Module III:Field and solver. Topics: understanding of various fields like gravity, turbulence, vortex etc	8
Module IV: **N Cloth** Topics: study of behavior of various cloth, create simulation according to them with N cloth,	8
Module V:Fluid, Fog, Sea, fire works etc Topics: Smoke, fire, rain, dust, sorcery, sparks, lasers, swarms, and other applications • Particle disk cache • Per particle attributes. Rendering engines (Mental Ray, Renderman, VRay)	8

Text Book:

1. Maya Help File (in Maya menu, F1 key)
2. The Art of Maya: An Introduction to 3D Computer Graphics by Autodesk Maya Press
3. Getting Started in 3D with Maya by Adam Watkins, Focal Press, 2012
4. Introducing Autodesk Maya 2016: Autodesk Official Press by Dariush
5. Derakhshani, Sybex, 2015
6. Professional MEL Solutions For Production Paperback – March 5, 2009by Kevin Mannens

Reference Link/ Reference Book:

1. Robert Bridson's Fluid Notes6
2. Gnomon expressions I & II
3. Gnomon Dynamics 1-14
4. Gnomonology

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. NIL

POs met through Gaps in the Syllabus

Topics beyond syllabus/Advanced topics/Design

1. For better visual and imagination development visit to world's top production industries

POs met through Topics beyond syllabus/Advanced topics/Design: 10

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Assessment Components	CO1	CO2	CO3	CO4	CO5
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	3	3	2	2	2	2	3	2	3	2	2	3	2	2
CO2	2	3	3	2	2	2	3	1	2	2	3	2	1	2	3
CO3	2	3	3	2	2	1	2	2	2	3	2	2	3	2	2
CO4	2	3	3	2	2	3	3	3	2	2	3	2	2	2	2
CO5	2	3	3	2	2	2	1	2	3	2	2	1	2	3	2

Correlation Levels 1, 2 or 3 as defined below:
1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD4
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM513
Course Title: Entrepreneurship
Pre-requisite(s): Nil
Credits:3 L:3 T:0 P:0
Class schedule per week: 3
Class: M.Sc. Animation Design
Semester: III
Type: Theory

Course Objectives

This course enables the students to:

1	To provide knowledge on how to start and operate a small business
2	How to prepare a business plan
3	How to assess financial needs
4	How to formulate marketing strategies
5	To understand legal issues involved in starting a firm.

Course Outcome

After the completion of this course, students will be able to:

CO1	Evaluate Entrepreneur & Entrepreneurship
CO2	Explain Entrepreneurial Development
CO3	Discuss Overview of Project Management
CO4	Discuss the Institutional support for small businesses
CO5	Analyze the challenges of Entrepreneurship

Syllabus

Module	No. of Lectures
Module 1 **Introduction:** Definition, Concept of Entrepreneurship & Intrapreneurship, Characteristics and skills of entrepreneurs	**7**
Module 2 **Entrepreneurial Development:** Entrepreneurship & Economic development, Contribution of Small enterprises to the economy, Entrepreneurial environment, Types of Entrepreneurs.	**7**
Module 3 **Developing the Business Plan** Identification of Business idea, Elements of a Business Plan, Building	**7**

Competitive Advantage, Conducting feasibility Analysis.	
Module 4 **Sources of Finance &Forms of Business Ownership** Equity vs. Debt Capital, Sources of Equity Finance, Institutional finance, Venture Capital, Lease Finance. Sole Proprietorship, Partnership, Corporations and other forms of ownership	**7**
Module 5 **Intellectual Property Management & Institutional support for small businesses in India** Importance of innovation, patents& trademarks in small businesses, introduction to laws relating to IPR in India. Support in areas of technology, finance, inputs & infrastructure, marketing, entrepreneurship development	**7**

Text Books:

a) Hisrich& Peters, Entrepreneurship, Tata McGraw Hill
b) Norman M. Scarborough, Essentials of Entrepreneurship & Small Business Management, 6th ed., Prentice Hall
c) Roy, Rajeev, Entrepreneurship, Oxford University Press
d) Dutta , Bholanath, Entrepreneurship management ,Excel Books

Gaps in the syllabus (to meet industry / Profession requirements): N/a

POs met through Gaps in the syllabus: Yes

Topics beyond syllabus / advanced topics / design: Yes

POs met through topics beyond syllabus / advanced topics / design: Yes

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	50
Semester End Examination	50

Continuous Internal Assessment	% Distribution
3 Quizzes	30 % (3 × 10%)
Assignment (s)	10
Seminar before a committee	10

Assessment Tools			% Contribution during CO Assessment		
Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

3. Student feedback on Faculty
4. Student feedback on Course outcome

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	1	3	2	2	2	3	3	2	2	3	2	2	2	3
CO2	1	2	2	1	3	2	3	2	3	1	3	1	2	3	2
CO3	2	2	3	2	1	2	2	1	2	2	2	1	3	2	1
CO4	2	1	2	3	2	2	2	2	1	1	3	1	2	1	2
CO5	1	2	1	2	2	2	1	1	3	1	2	3	2	2	1

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3, CD4, CD5, CD8
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4,
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD3, CD66, CD7
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM514

Course Title: Project-I

Pre-requisite(s): NIL
Credits: 6
Class schedule per week:
Class: M.Sc. (Animation Design)
Semester: III
Branch: MAD
Type: Sessional

Course Objectives

This course enables the students to:

1.	To create a project in their preferred domain under the mentorship and guidance of subject teacher

Course Outcomes

After the completion of this course, students will be able to:

CO1	Each student will come up with a project which will help him / her to get a job in industry by showcasing it to prospective employers.
CO2	It will help students to hone their skills and achieve perfection

Syllabus

An individual project will be compiled by the student under the supervision of an internal supervisor. Every student will choose one topic from the syllabus as per their area of interest. Both the subject and the name of internal supervisor will be duly approved by the academic in-charge of the institute. The Portfolio will be submitted by the students at least one week prior to the final examination. This Portfolio will be reviewed by the internals examiners appointed by the Director.

References:
Any book related to visual development, animation production, multimedia production, game design and development, visual effects, 3D art & animation, film making etc.

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. NIL

POs met through Gaps in the Syllabus

Topics beyond syllabus/Advanced topics/Design

POs met through Topics beyond syllabus/Advanced topics/Design:

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

CO1	2	3	3	2	2	2	2	3	2	3	2	2	3	2	2
CO2	2	3	3	2	2	2	3	1	2	2	3	2	1	2	3

Correlation Levels 1, 2 or 3 as defined below:
1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods

CD	Course Delivery Method		Course Outcome	Course Delivery Method
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD4
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

M.Sc. Animation Design
Semester-IV

COURSE INFORMATION SHEET

Course Code: AM515
Course Title: MODERN ART AND ANIMATION
Pre-requisite(s): Basic knowledge of Art history and Animation
Credits: 4 L-3 T-1 P-0
Class schedule per week: 04
Class: MAD (Animation & Multimedia)
Semester : IV
Branch: MAD
Type:Theory

Course Objectives

This course enables the students to:

1.	Take an overview of several aspects of European and American art from roughly 1860 to 1960 including major stylistic movements and artists.
2.	Understand various art styles
3.	Explore the art of storytelling through paintings
4.	Understand the use of modern and contemporary art in Animation
5.	Experiment with styles to create effective Animation content

Course Outcomes

After the completion of this course, students will be able to:

CO1.	Understand various Art movements in history
CO2.	Experiment innovatively in Animation field
CO3.	Understand the use the key features of various art styles in animation
CO4.	Develop new taste and unique type of visual storytelling
CO5.	Create unique and professional short animation films

Syllabus

MODULES	NO. OF LECTURE HOURS
Module I : Origin of Modern Art, major stylistic movements, periods and artists. **Neoclassicism**-Ingre, Jacques Louis David, Jean August Dominique , **Romanticism**-Delacroix, Goya , **Realism** – Millet ,Corot, Courbet, Manet –Artist and their paintings.	**8**

Module II **Impressionism** – Claude Monet, Renoir, Dega. **Post- Impressionism**- Paul Cezanne, Paul Gauguin, Vincent Van Gogh , Seurat and their paintings.	**8**
Module III Fauvism, Cubism –Picasso , Dadaism, Surrealism, Expressionism, Pop Art - Artist and their paintings	**8**
Module IV **Case studies –** Animation films inspired by modern art	**8**
Module V **Case studies –** Contemporary Animation	**8**

Reference Books:

1. GARDNER'S ART THROUGH THE AGES: A GLOBAL HISTORY, VOL. 1, 14TH EDITION (PAPERBACK) - FRED S. KLEINER
2. ART HISTORY, COMBINED VOLUME (4TH EDITION)(PAPERBACK) - MARILYN STOKSTAD, MICHAEL W. COTHREN
3. HISTORY OF MODERN ART (7TH EDITION) -H. H. ARNASON, ELIZABETH C. MANSFIELD,
4. LIFE WITH PICASSO -FRANCOISE GILO
5. MODERN ART 1851 – 1929: CAPITALISM AND REPRESENTATION (OXFORD HISTORY OF ART) , [PAPERBACK] -RICHARD R. BRETTELL
6. ART & TODAY - ELEANOR HEARTNEY
7. CONTEMPORARY ART: WORLD CURRENTS , [PAPERBACK] -, TERRY SMITH
8. OVERLAY: CONTEMPORARY ART AND THE ART OF PREHISTORY- LUCY LIPPARD

Gaps in the Syllabus (to meet Industry/Profession requirements)

NIL

Topics beyond syllabus/Advanced topics/Design

NIL

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	50
Semester End Examination	50

Continuous Internal Assessment	% Distribution
3 Quizzes	30 % (3 × 10%)
Assignment (s)	10
Seminar before a committee	10

Assessment Tools			% Contribution during CO Assessment		
Assessment Components	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Continuous Internal Assessment	YES	YES	YES		
Semester End Examination	YES	YES	YES	YES	YES

Indirect Assessment

1. Student feedback on Faculty
2. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	1	1	2	3	2	2	2	3	2	3	2	2	2	3	2
CO2	1	2	2	3	1	3	1	2	1	3	1	2	3	3	2
CO3	1	2	2	2	2	2	2	2	3	3	2	2	3	2	2
CO4	1	1	2	2	2	2	2	1	2	2	2	2	2	2	3
CO5	1	2	2	2	2	3	1	2	3	2	1	2	3	2	2

Correlation Levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods				
CD	**Course Delivery Method**		**Course Outcome**	**Course Delivery Method**
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD3
CD2	Tutorial / Assignment		C02	CD1, CD3
CD3	Seminars		C03	CD1, CD3
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD4, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			

COURSE INFORMATION SHEET

Course Code: AM516

Course Title: Project-II

Pre-requisite(s): Project-I
Credits: 12
Class schedule per week:
Class: M.Sc. (Animation Design)
Semester: IV
Branch: MAD
Type: Sessional

Course Objectives
This course enables the students to:

1.	To create a project in their preferred domain under the mentorship and guidance of subject teacher

Course Outcomes
After the completion of this course, students will be able to:

CO1	Each student will come up with a project which will help him / her to get a job in industry by showcasing it to prospective employers.
CO2	It will help students to hone their skills and achieve perfection

Syllabus

An individual project will be compiled by the student under the supervision of an internal supervisor. Every student will choose one topic from the syllabus as per their area of interest. Both the subject and the name of internal supervisor will be duly approved by the academic in-charge of the institute. The Portfolio will be submitted by the students at least one week prior to the final examination. This Portfolio will be reviewed by the internals examiners appointed by the Director.

References:
Any book related to visual development, animation production, multimedia production, game design and development, visual effects, 3D art & animation, film making etc.

Gaps in the Syllabus (to meet Industry/Profession requirements)

1. NIL

POs met through Gaps in the Syllabus

Topics beyond syllabus/Advanced topics/Design

POs met through Topics beyond syllabus/Advanced topics/Design:

Course Outcome (CO) Attainment Assessment Tools and Evaluation Procedure

Direct Assessment

Assessment Tool	% Contribution during CO Assessment
Continuous Internal Assessment	60
Semester End Examination	40

Continuous Internal Assessment	% Distribution
Day to day performance & Lab files	30
Quiz (es)	10
Viva / Presentation	20

Semester End Examination	% Distribution
Examination Experiment Performance	30
Quiz	10

Indirect Assessment

3. Student feedback on Faculty
4. Student feedback on Course outcome

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Assignment
CD3	Seminars
CD4	Mini Projects / Projects
CD5	Laboratory Experiments / Teaching Aids
CD6	Industrial / Guest Lecture
CD7	Industrial Visits / in-plant training
CD8	Self-learning such as use of NPTEL materials and internets
CD9	Simulation

Mapping of Course Outcomes onto Program Outcomes

Course Outcome	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO1	2	3	3	2	2	2	2	3	2	3	2	2	3	2	2
CO2	2	3	3	2	2	2	3	1	2	2	3	2	1	2	3

Correlation Levels 1, 2 or 3 as defined below:
1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Mapping between COs and Course Delivery (CD) methods

CD	Course Delivery Method		Course Outcome	Course Delivery Method
CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors		C01	CD1, CD2, CD3, CD4
CD2	Tutorial / Assignment		C02	CD1, CD2, CD3
CD3	Seminars		C03	CD1, CD2, CD3, CD4
CD4	Mini Projects / Projects		C04	CD1, CD2, CD3, CD4, CD5
CD5	Laboratory Experiments / Teaching Aids		C05	CD1, CD2, CD5
CD6	Industrial / Guest Lecture			
CD7	Industrial Visits / in-plant training			
CD8	Self-learning such as use of NPTEL materials and internets			
CD9	Simulation			