

CBCS SYLLABUS
FOR
M.Sc. ANIMATION DESIGN
(w.e.f. MO-2018 Batch)



DEPARTMENT OF ANIMATION AND MULTIMEDIA
BIRLA INSTITUTE OF TECHNOLOGY
MESRA, RANCHI-835215



Department of Animation and Multimedia

Birla Institute of Technology, Mesra, Ranchi -835215 (India)

Institute Vision

To become a Globally Recognized Academic Institution in consonance with the social, economic and ecological environment, striving continuously for excellence in education, research and technological service to the National needs.

Institute Mission

- ❑ To educate students at Graduate, post graduate and Doctoral levels to perform challenging engineering and Managerial jobs in industry.
- ❑ To provide excellent research and development facilities to take up Ph.D. programmes and research projects.
- ❑ To develop effective teaching learning skills and state of art research potential of the faculty.
- ❑ To build national capabilities in education, and research in emerging areas.

Department Vision

Pursuit of excellence in order to be recognized as a pioneer and frontrunner in the field of Animation and Multimedia studies in the country; to be in consonance with the emerging and current socio-economic reality and simultaneously be responsive to our ecological environment and remain motivated to contribute to the nation building process through excellence in research and development activities

Department Mission

- ❑ Enable Post Graduate students to achieve excellence both in skill and knowledge that is at par with industry standards & perform better in challenging situations
- ❑ To encourage cutting edge, interdisciplinary and futuristic research in response to the needs of the government, industry and society
- ❑ Finishing a master's degree can help enhancing students' creativity, which is helpful when applying messages to their creations.

- The M.Sc. in Animation Design trains animation professionals ready to work in new scenarios, providing technical skills and competitive professional tools to propose, write and realize cutting-edge projects: short films, series, cross-media projects.
- The training programme enhances personal creativity and stimulates students to seek new forms of contamination between the different visual and stylistic expressions of animation.
- To provide excellent Consulting, and Research & Development facilities for faculty and students.
- To uphold the values of Personal Integrity and Social Responsibility

Programme Educational Objective for MAD

- To provide high quality education that prepares students to assume professional roles in the field of Animation Design by imparting sound knowledge in the core, allied and specialised subjects with the help of latest technologies and imparting compulsory training in practical field.
- To prepare students to work in multi-disciplinary and challenging environment of the building industry in the managerial capacity of handling various animation design related projects with due respect to professional ethics and social obligation.
- To orient students towards various research activities related to the field as well as other emerging fields of interest, which may lead them towards further studies and take up PhD program in Animation.
- To engage in lifelong learning, additional and continual formal education, professional development, and self-study in order to provide high quality service to the animation industry and overall academic needs of the society.
- To disseminate knowledge and information by industry-academia interface and continuing interaction with alumni to meet the demand of quality education

- To impart professional education and training in the field of 2D& 3D Animation, Digital Games, Film Making, Post production, Graphic Designing, User interface designing, Web & Apps Designing and Communication education.

Program Outcomes (PO)

On successfully completing the program a post-graduate shall be able to:

- Apply Advance concepts of animation in the field of 2D& 3D Animation, Digital Games, Film Making, Post production, Graphic Designing, User interface designing, to identify and analyse complex issues pertaining to contemporary organisations.
- Initiate and participate in professional scenario with positive outcomes of learning.
- Identify suitable resources and utilise them optimally.
- Take decisions with commitment to professional ethics and responsibilities.
- Recognize the need for continuous learning and upgrade their knowledge for growth in their professional career.
- Be capable of undertaking appropriate animation related projects and deliver on deadline.

Detailed Syllabus of 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:4

Class schedule per week: 04

Class: M.Sc. Animation Design

Semester / Level: IV

Branch: Animation & Multimedia

Type: Lecture, Tutorial and Workshop

Course Objectives

This course enables the students to:

A.	Understand the History of Traditional Animation
B	Learning Step by step procedure for Traditional Animation
C.	Know about principles of animation
D.	Understand fundamentals of timing for Animation
E.	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:

1.	Grasp complete information on early attempts of animation, equipments, development, animation studios, and projects.
2.	Grasp complete animation film production
3.	Grasp and implementation of Animation Principles
4.	Understand different types of walks, runs, dialogues, expressions, acting for animation etc. through mini project work.
5.	Understand the case studies of Classic Animated features and Short Films

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. [9 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. [9 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. [9 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. [9 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. [9 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)

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 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: AM402

Course Title: Writing & Storyboarding

Pre-requisite(s): Basic knowledge of Script and visual storytelling

Credits: 4

Class schedule per week: 04

Class: M.Sc. Animation Design

Semester / Level: I

Branch: M.Sc.

Type: Lecture and Tutorial

Course Objectives

This course enables the students to:

A.	Understand Visual Narration
B.	Learn about Story Structure, Script, Screenplay
C.	Learn about camera and design principles and their use in storyboarding
D.	Understand the different approaches of writing for different medium
E.	Learn about editing and continuity in films

Course Outcomes

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

1.	Knowledge of Visual Narration
2.	Know about Story Structure, Script, Screenplay
3.	Ability to write for different medium
4.	Knowledge of camera, composition and other design principles
5.	Storyboard a script/screenplay

Syllabus

Module I

[09 Lectures]

- **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

Module II

[09 Lectures]

- **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.

Module III

[09 Lectures]

- **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.

Module IV

[09 Lectures]

- **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.

Module V

[09 Lectures]

- **Elements of the Continuity Style** – Transitions, Cuts, Editing styles
- **Pacing** – Story beats, thinking for a camera, speeding up and slowing down a scene.

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)

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 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 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: AM403

Course Title: Character Design

Pre-requisite (s): Basic Knowledge of Designing

Credits: 4 L:3 T:1 P:4

Class schedule per week: 04

Class: M.Sc. Animation Design

Semester / Level: IV

Branch: Animation & Multimedia

Type: Lecture, Tutorial and Workshop

Course Objectives

This course enables the students to:

A.	Understand the Fundamentals of Character Design
B	Develop various types of characters in written form
C.	Learning the process of character creation in visual form
D.	Study characters from live action, animation movies, and real life
E.	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:

1.	Describe characteristics of well-designed and executed characters
2.	Assess and critique past and current character design trends
3.	Create accurate and aesthetically appealing character design
4.	Demonstrate progress in basic drawing skills
5.	Develop and design character project file as an assignment

Module 1

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. [9 Lectures]

Module 2: 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. [9 Lectures]

Module 3: 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. [9 Lectures]

Module 4:

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. [9 Lectures]

Module 5:

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.) [9 Lectures]

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)

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 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

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

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: 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:

Level: 1

Course Objectives

This course enables the students:

A.	To analyze and demonstrate writing and speaking processes through invention, organization, drafting, revision, editing, and presentation.
B.	To understand the importance of specifying audience and purpose and to select appropriate communication choices.
C.	To interpret and appropriately apply modes of expression, i.e., descriptive, expositive, Narrative, scientific, and self-expressive, in written, visual, and oral communication
D.	To participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
.E	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:

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

Syllabus

AM404: Communication-I

Module I (8 lectures)

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).

Module II (8 lectures)

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.

Module III (8 lectures)

Other aspects of communication:

Story Writing, Aspects of Story writing, Story telling

Group Discussions, Extempore, Principles of effective speech and presentations, Role playing.

Module IV: (8 lectures)

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.

Module V: (8 lectures)

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.

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)

POs met through Gaps in the Syllabus

Topics beyond syllabus/Advanced topics/Design

POs met through Topics beyond syllabus/Advanced topics/Design

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

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 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

Level 4: 3D Studies-I (Course Code: AM405)

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 Level: 4

Branch: M.Sc.

Type: Practical Lab

Course Objectives

This course enables the students to:

A.	Understand the importance of 3D Sculpting
B.	Understand the role of 3D Modeling & Texturing in animation production
C.	Understand step by step procedure for 3D Modeling & Texturing
D.	Understand 3D Modeling & Texturing for Digital Games, Walk Through, and 3D Film Production
E.	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:

1.	Experiment various shapes and volumes in 3D Software
2.	Create characters and props using 3D Modeling & Texturing
3.	Grasp the production pipeline for 3D Animation Production
4.	Create few characters and environments using 3D Modeling & Texturing
5.	Create a document on 3D Production and give a small presentation

Syllabus

List of Discussion & Experiments

1. Experimenting on 3D modeling Techniques
2. 3D Production pipeline
3. Editing 3d meshes and creating 3d Texts
4. Concept of mesh smooth, mirroring, duplicating, merging, edge looping, and Exporting the models from scene to scene for facilitating faster production flow
5. Technical issues related to polygon modelling
6. Working with image reference while modelling
7. Managing huge sets and models using proxy meshes.
8. 3D for architectural walk through
9. Concepts of materials and textures, Introduction to UV unwrapping &UV mapping.

10. Editing textures for organic and Inorganic object, Use and creation of Bump, displacement and render passes.
11. 3D character modelling using Autodesk Maya
12. 3D Character Sculpting using Z- Brush Software or Mudbox
13. 3D Modeling for Game

Book Reference:

- Autodesk Maya Bible

Course Evaluation:

Individual Experiment, Lab Quiz, Lab Record, End Sem Lab Examination and Viva

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 Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Tutorial / 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

Indirect Assessment

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

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, CD3, CD4, CD5
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: 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 / Level: IV
Branch: M.Sc.
Type: Lecture and Tutorial

Course Objectives

This course enables the students to:

A.	Understand the fundamentals Human and animal anatomy
B.	Learn about Gesture and acting of human body .
C.	Gain proficiency in details human body, muscles anatomy.
D.	Understanding of anatomical differences about carnivorous and herbivorous animals
E.	Understand the force, movements of different animal figure.

Course Outcomes

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

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

Syllabus

List of Discussion, Experiments and Practical Work:

1. Working on human anatomy
2. Working on animal anatomy
3. Study of two legs and three legs animals' body balance and behaviour.
4. Understanding of anatomical differences about carnivorous and Herbivorous animals (Practical Practice)
5. Study of human gesture and acting with quick sketching (1 Minute, 5 Minutes and 20 Minutes Drawing)
6. Study of human muscle and anatomy with the help of reference images and Model
7. Study of Detail human figure with Drapery and still object, Observation of light and shadow
8. Working on Human Head
9. Working on portrait study
10. Working on facial expressions & study
11. Animal anatomy study with the help of reference images
12. Outdoor study

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

Course Evaluation:

Individual Experiment, Lab Quiz, Lab Record, End Sem Lab Examination and Viva

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 Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Tutorial / 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

Indirect Assessment

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

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, CD3, CD4, CD5
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

Level 4: 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 Level:4

Branch: M.Sc.

Type: Practical Lab

Course Objectives

This course enables the students to:

A.	Understand the fundamentals of Mix-Media Animation
B	Understanding implementation of Animation Production Process
C.	Learning related hardware, software and other tools for experimental animation
D.	Introduction to Flip Book, clay modeling, cutout animation and set design
E.	Gaining experience of working in a group

Course Outcomes

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

1.	Submit an independent Flip Book, a Short experimental group film in any medium
2.	Operate relevant animation and camera equipment
3.	Understanding of character development and storytelling
4.	Gain experience in handling different raw materials like; Clay, Paper, Sand ,Colours etc.
5.	Experience in working within a timetable and schedule

Syllabus

Experiments and execution based on different types of animation techniques:

- 1: Introduction to Mix Media Animation, Types of Animation , Types of Mix Media Animation, Importance of Pre-production, Production, and Post Production Process
- 2: Idea – script – treatment, designing characters and prop, planning your shots – basic film grammar/composition of shots, the storyboard, editing – Animatics and story reels
- 3: Explore various software like Photoshop, Monkey Jam, Adobe Illustrator, After Effects Rotoscoping Animation, using live action videos, Cutout Animation
- 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

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.

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) :

POs met through Gaps in the Syllabus:

Topics beyond syllabus/Advanced topics/Design:

POs met through topics beyond syllabus/Advanced topics/Design

Course Delivery Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
CD2	Tutorial / 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

Indirect Assessment

- a. Student feedback on Faculty
- b. Student feedback on Course outcome

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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:6

Class schedule per week: 04

Class: M.Sc. Animation Design

Semester: I Level: 4

Branch: M.Sc.

Type: Practical Lab

Course Objectives

This course enables the students to:

A.	Understand Visual Narration
B.	Understand Story Structure, Script, Screenplay
C.	Learn about camera angles, camera moves, and design principles
D.	Study storyboards and animatics from various animated movies and commercials
E.	Understand editing and continuity in films

Course Outcomes

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

1.	Ability to create Visual Narratives
2.	Know about Story Structure, Script, Screenplay
3.	Ability to create storyboards
4.	Knowledge of camera, composition and other design principles
5.	Storyboard any script/screenplay & Convert into Animatics with proper sound and voice over

Syllabus

List of Discussion and Experiments

1. Study Animatics,
2. Interpreting the script /screenplay
3. Developing the Story visually, Necessary Drawing Skills
4. Thumbnailing in Storyboarding, Quick Method for Producing fast and Rough Storyboards
5. Perspective, Pans, Compositions, Lighting & Rendering, Staging, Techniques and Motifs, Scene Planning, Adding Rough sounds and voice overs & timing the shots
6. The Animatic (Mini Project & Experiments)

Reference Books:

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

Course Assessment Methods: Performance test, Mini Project, Viva-voice exam.

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 Methods

CD1	Lecture by use of boards/ LCD/ Projectors / OHP Projectors
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Indirect Assessment

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

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