

**Maulana Abul Kalam Azad University of Technology, West Bengal**  
**Syllabus of B. Sc. in Animation and Film Making (CBCS)**  
**(Effective from academic session 2021-22)**

**SEMESTER-2**

**Paper: 2D ANIMATION (TRADITIONAL & DIGITAL ANIMATION)**

Code: BAFM 201

**Course Objective:** The course is designed to provide an introduction to the fundamental aspects of graphic design using design methodologies to solve user-centric problems. Students will be able to develop an in- depth understanding of processes to help create better design workflows using graphical representations.

Course Outcome	Mapped modules
Remembering	M1, M2, M3, M4
Understanding the course	M1, M2, M3, M4
Applying the general problem	M1, M2
Analyse the problems	M4
Evaluate the problems after analysing	M3, M4
Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	History of Animation, Types of Animation, Animation Production Process	4	25		
M 2	Pre-Production Design	8	25		
M 3	Classical Animation	8	25		
M 4	Introduction to 2D Digital Animation	10	25		
		<b>30</b>	<b>100</b>		

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2D Animation (Classical & Digital Animation)

Total Credit: 4

Total hours of lectures: 30 hours

Sl.	Topic/Module	Hour
1.	<p><b>Module 1- History of Animation, Types of Animation, Animation Production Process:</b></p> <ul style="list-style-type: none"> <li>• History of animation a survey of the Heritage of Art &amp; Architecture the methodology to analyze the language of the creative process and the principles of design, as well as techniques and materials.</li> <li>• Types of animation- Clay animation, Traditional animation, 3Danimation, Puppet/ toy animation, material animation.</li> <li>• To get rewarding careers in Entertainment Media, Feature Film, Television Episodes, Gaming, Web Animation, Ad agencies, E-Learning (Education)</li> <li>• Understanding of the pipeline of Pre- Production, production&amp; post- production process</li> </ul>	4
2.	<p><b>Module 2- Pre-Production Design:</b></p> <ul style="list-style-type: none"> <li>• The production process of traditional 2D animation</li> <li>• Overview of equipment required to create 2D animation, traditional and digital.</li> <li>• Know the basics of story development, scriptwriting for animation</li> <li>• Basic and fundamental skills required to develop Character Design, Semi –Realistic Design, draw different styles of characters</li> <li>• Draw basic characters and character model sheets with expressions, key poses</li> <li>• Background Design- Environments</li> <li>• Storyboard Design – Creating Visual story using thumbnails</li> <li>• Overview of Shot breakdown, shot types, continuity, camera angles, camera movements,</li> <li>• Overview of Creating a storyboard</li> <li>• Introduction to Creating Animatic</li> </ul>	8
3.	<p><b>Module 3- Classical Animation:</b></p> <ul style="list-style-type: none"> <li>• learn principles of animation</li> <li>• Instruction on drawing techniques for animation.</li> <li>• how to draw for animation using basic light box and image capture device/software</li> <li>• Rolling Coin, Bouncing Ball</li> <li>• Pendulum, Hand-lift and Flag</li> <li>• Special effects in animation</li> </ul>	8
4.	<p><b>Module 4- Introduction to 2D Digital Animation:</b></p>	10

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	<ul style="list-style-type: none"> <li>• Introduction to Adobe Animate</li> <li>• Basic understanding of the tools, Properties Inspector, Library and Timeline in Animate CC</li> <li>• Be able to effectively use and implement the various tools and make objects inside Animate itself</li> <li>• Learning Image Based and Vector Based rigging</li> <li>• Complete grip on Motion Tween and Shape Tween animation concepts and use them in presentations and video animations</li> <li>• Paint &amp; Inking</li> </ul>	
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**Suggested Software –**

- Pencil 2D
- Adobe Animate
- Monkey Jam
- Flipbook
- Character Animate

**Suggested Reading:**

1. Animator's Survival Kit – Richard Williams
2. Cartoon Animation – Preston Blair
3. Illusion of Life- Disney Animation – Frank Thomas and Ollie Johnston
4. Timing for Animation – Harold Whitetaker, John Halas
5. Animation from Pencils to Pixels – Tony white

**Paper: 2D ANIMATION (TRADITIONAL & DIGITAL ANIMATION) Lab**

Code: BAFM)291

**Course Objective:** The course is designed to provide an introduction to the fundamental aspects of graphic design using design methodologies to solve user-centric problems. Students will be able to develop an in- depth understanding of processes to help create better design workflows using graphical representations.

<b>Course Outcome</b>	<b>Mapped modules</b>
Remembering	M1, M2, M3, M4
Understanding the course	M1, M2, M3, M4
Applying the general problem	M1, M2
Analyse the problems	M4

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Evaluate the problems after analysing	M3, M4
Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	History of Animation, Types of Animation, Animation Production Process	5	25		
M 2	Pre-Production Design	15	25		
M 3	Classical Animation	23	25		
M 4	Introduction to 2D Digital Animation	17	25		
		<b>60</b>	<b>100</b>		

2D Animation (Classical & Digital Animation) Lab  
 Total Credit: 2  
 Total hours of lectures: 40 hours

Sl.	Topic/Module	Hour
1.	<b>Module 1- History of Animation, Types of Animation, Animation Production Process:</b> <ul style="list-style-type: none"> <li>• Making a thaumatrope.</li> <li>• Experimenting with flipbook</li> <li>• Discussion on careers in Entertainment Media, Feature Film, Television Episodes, Gaming, Web Animation, Ad agencies, E-Learning (Education)</li> <li>• Understanding of the pipeline of Pre- Production, production&amp; post- production process with examples.</li> </ul>	4
2.	<b>Module 2- Pre-Production Design:</b> <ul style="list-style-type: none"> <li>• Ideation/ Concept and story development,</li> <li>• Scriptwriting of the story</li> <li>• Designing characters for the story</li> <li>• Draw basic characters and character model sheets with expressions, key poses</li> </ul>	16

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	<ul style="list-style-type: none"> <li>• Background Design- Environments</li> <li>• Storyboard Design – Creating Visual story using thumbnails</li> <li>• Creating a storyboard</li> <li>• Creating Animatic</li> </ul>	
3.	<b>Module 3- Classical Animation:</b> <ul style="list-style-type: none"> <li>• Rolling Coin, Bouncing Ball</li> <li>• Pendulum, Hand-lift and Flag</li> <li>• Special effects in animation</li> </ul>	15
4.	<b>Module 4- Introduction to 2D Digital Animation:</b> <ul style="list-style-type: none"> <li>• Drawing vector graphics inside Animate CC</li> <li>• Image Based and Vector Based rigging of characters</li> <li>• Using Motion Tween and Shape Tween animation concepts in presentations and video animations</li> <li>• Paint &amp; Inking</li> <li>• Bouncing ball, Rolling coin</li> </ul>	15

**Suggested Software –**

Pencil 2D

Adobe Animate

Monkey Jam

Flipbook

**Suggested Reading:**

1. Animator's Survival Kit – Richard Williams
2. Cartoon Animation – Preston Blair
3. Illusion of Life- Disney Animation – Frank Thomas and Ollie Johnston
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**Paper: GRAPHIC DESIGN, AUDIO & VIDEO EDITING**

Code: BAFM 202

**Course Objective:** The course is designed to provide an introduction to the fundamental aspects of graphic design using design methodologies to solve user-centric problems. Students will be able to develop an in- depth understanding of processes to help create better design workflows using graphical representations.

Course Outcome	Mapped modules
Remembering	M1, M2, M3, M4
Understanding the course	M1, M2, M3, M4
Applying the general problem	M1, M2
Analyse the problems	M4
Evaluate the problems after analysing	M3, M4
Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Introduction to Graphic Design	4	10		
M 2	Designing (Photoshop, Illustrator, Indesign)	10	40		
M 3	Fundamentals of Motion Graphics	10	25		
M 4	Fundamentals of Audio & Video Editing	6	25		
		<b>60</b>	<b>100</b>		

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Graphic Design, Audio & Video Editing

Total Credit: 6

Total hours of lectures: 30 hours

Sl.	Topic/Module	Hour
1.	<p><b>Module 1-Introduction to Graphic Design:</b></p> <ul style="list-style-type: none"> <li>• A comprehensive introduction to the essentials and principles of Design. Articulating design, the brief, sources of inspiration, design as problem solving, creative thinking, wit and humor</li> <li>• Raster &amp; Vector Graphics- RGB vs. CMYK</li> <li>• Color theory</li> <li>• Typography</li> <li>• Layers of meaning, development and experimentation, art direction, commissioning art, print, direct mail, information design, packaging, screen design, environmental design, self-promotion, portfolios, basic tools, specialist color, file formats, print finishing.</li> </ul>	4
2.	<p><b>Module 2- Designing (Photoshop, Illustrator, and InDesign):</b></p> <ul style="list-style-type: none"> <li>• Introduction to Photoshop, basics- workspace, finding and managing creative tools and content. Lines, shapes and objects. Working with layers, linking and embedding objects. Managing projects, color, fills and transparencies, filling objects. Special effects, templates and styles, pages and layout, bitmaps, printing, file formats, customizing and automating.</li> <li>• Introduction to Digital Painting.</li> <li>• Introduction to adobe illustrator, work area of illustrator, selecting and aligning, creating and editing shapes, transforming objects, drawing with pen and pencil tools, color and painting, working with type, working with layers, working with perspective drawing, blending colors and shapes, working with brushes, applying effects, applying appearance attributes and graphic styles, working with symbols, combining illustrator with other adobe applications.</li> <li>• Preparing graphics for web and print</li> <li>• Introduction to InDesign – Tools and techniques</li> <li>• Understanding Publication elements</li> <li>• Essentials in publication design</li> <li>• Study of various publication designs</li> </ul>	10
3.	<p><b>Module 3- Fundamentals of Motion Graphics:</b></p> <ul style="list-style-type: none"> <li>• Instrumental Techniques used by professional motion graphic designers.</li> <li>• Introduction to After effects - About Composition, Solid layer, Shape layer, Text animation, Hud Effects, Info graphics Motion graphics</li> <li>• Create Motion Graphics to enhance your videos using a step by step, easy-to-use method.</li> <li>• How to Import and animate Illustrator Vector Graphics.</li> <li>• Master Visual Time Effects on Videos and Motion Graphics.</li> <li>• Practice compositing techniques to achieve stunning video effects.</li> <li>• Work in 3D space with Cameras, Lights and Shadows and practice your new</li> </ul>	10

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	<p>skills with 3D Motion Graphics Projects.</p> <ul style="list-style-type: none"> <li>• Create advanced Type Animation in 2D &amp; 3D – cool stuff only in After Effects.</li> </ul>	
4.	<p><b>Module 4- Fundamentals of Audio &amp; Video Editing:</b></p> <ul style="list-style-type: none"> <li>• Introduction to Adobe Premiere – tools and essentials</li> <li>• Edit an entire video from beginning to end, and make them more dynamic with cutaway footages and photos.</li> <li>• color correct the video and fix issues with white balance and exposure, add feeling with color grading, edit green screen footage and add backgrounds</li> <li>• Apply visual effects such as stabilizing shaky video, removing grain and making it more cinematic.</li> <li>• Reduce background noise, add music tracks, capture sound effects, use a variety of effects to enhance audio and add in/out fades.</li> <li>• Editing from the Bin- Cutting down Your Sequence - Navigating the Timeline- Thinking Nonlinearly - Trimming Fundamentals - Methods of Trimming - Types of Trim Importing and Exporting Motion Video, Types of Effects -Effect Design - Rendering – Key frames</li> </ul>	6

**Suggested Softwares:**

- Adobe Photoshop
- Adobe Illustrator
- Adobe InDesign
- Adobe Premier
- Adobe After Effects
- Adobe Audition

**Suggested Reading:**

1. Adobe Photoshop CC Classroom - Andrew Faulkner
2. Adobe Illustrator CC Classroom - Andrew Faulkner
3. Adobe Premier CC Classroom - Andrew Faulkner
4. Create Motion Graphics with After Effects – Chris Meyer & Trish Meyer
5. Creative Workshop : 80 challenges to sharpen your Design Skills - David Sherwin
6. The Non-Designers Design Book - Robin Williams



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**Paper: GRAPHIC DESIGN, AUDIO & VIDEO EDITING Lab**

Code: BAFM 292

**Course Objective:** The course is designed to provide an introduction to the fundamental aspects of graphic design using design methodologies to solve user-centric problems. Students will be able to develop an in- depth understanding of processes to help create better design workflows using graphical representations.

Course Outcome	Mapped modules
Remembering	M1, M2, M3, M4
Understanding the course	M1, M2, M3, M4
Applying the general problem	M1, M2
Analyse the problems	M4
Evaluate the problems after analysing	M3, M4
Create using the evaluation process	M3, M4

Module Number	Cont ent	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Introduction to Graphic Design	5	40		
M 2	Designing (Photoshop, Illustrator, Indesign)	15			
M 3	Fundamentals of Motion Graphics	10	40		
M 4	Fundamentals of Audio & Video Editing	10			
		<b>40</b>	<b>80</b>		

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Graphic Design, Audio & Video Editing Lab

Total Credit: 2

Total hours of lectures: 40 hours

Sl.	Topic/Module	Hour
1.	<b>Module 1- Design</b> <ul style="list-style-type: none"> <li>• Making layouts . manual logo designs</li> <li>• Creating Vector Illustrations</li> </ul>	5
2.	<b>Module 2- Designing (Photoshop, Illustrator, and InDesign):</b> <u><b>DESIGN CONTENT-</b></u> Advertisement Design, Poster Design, Invitation design, Corporate Identity Logo, Designing Letterhead, Envelope, Business Card, Branding Designs, Product Packaging Design	15
3.	<b>Module 3- Fundamentals of Motion Graphics:</b> <ul style="list-style-type: none"> <li>• Create Motion Graphics Using Illustrator Vector Graphics for animation</li> <li>• Master Visual Time Effects on Videos and Motion Graphics.</li> <li>• Practice compositing techniques to achieve stunning video effects.</li> <li>• Work in 3D space with Cameras, Lights and Shadows and practice your new skills with 3D Motion Graphics Projects.</li> <li>• Create advanced Type Animation in 2D &amp; 3D</li> </ul>	10
4.	<b>Module 4- Fundamentals of Audio &amp; Video Editing:</b> <ul style="list-style-type: none"> <li>• Edit an entire video from beginning to end, and make them more dynamic with cutaway footages and photos.</li> <li>• color correct the video and fix issues with white balance and exposure, add feeling with color grading, edit green screen footage and add backgrounds</li> <li>• Apply visual effects such as stabilizing shaky video, removing grain and making it more cinematic.</li> <li>• Reduce background noise, add music tracks, capture sound effects, use a variety of effects to enhance audio and add in/out fades.</li> <li>• Editing from the Bin- Cutting down Your Sequence - Navigating the Timeline- Thinking Nonlinearly - Trimming Fundamentals - Methods of Trimming - Types of Trim Importing and Exporting Motion Video, Types of Effects -Effect Design - Rendering – Key frames</li> </ul>	10

**Suggested Softwares:**

- Adobe Photoshop
- Adobe Illustrator
- Adobe InDesign
- Adobe Premier
- Adobe After Effects
- Adobe Audition

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**Suggested Reading:**

1. Adobe Photoshop CC Classroom - Andrew Faulkner
2. Adobe Illustrator CC Classroom - Andrew Faulkner
3. Adobe Premier CC Classroom - Andrew Faulkner
4. Create Motion Graphics with After Effects – Chris Meyer & Trish Meyer
5. Creative Workshop : 80 challenges to sharpen your Design Skills - David Sherwin
6. The Non-Designers Design Book - Robin Williams

**Paper: ENGLISH COMMUNICATION**

Code: BAFM 203

**Course Objective:** The course is designed to develop the student's communicative competence in English by giving adequate exposure in the four communication skills - LSRW - listening, speaking, reading and writing and the related sub-skills, thereby, enabling the student to apply the acquired communicative proficiency in social and professional contexts.

Course Outcome	Mapped modules
Remembering	M1,
Understanding the course	M1, M2
Applying the general problem	M1, M2
Analyse the problems	M4
Evaluate the problems after analysing	M3, M4
Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Functional grammar & Vocabulary	2	10	1,2	
M 2	Reading Skills	2	20	1,2	

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M 3	Writing Skills	8	40	2,3,4,	
M 4	Listening & Speaking Skills	8	30	2,3,4	
		<b>20</b>	<b>100</b>		

English Communication  
Total Credit: 2  
Total hours of lectures: 20 hours

Sl.	Topic/Module	Hour
1.	<b>Module 1- Functional Grammar &amp; Vocabulary:</b> Tense: Formation and application; Affirmative / Negative / Interrogative formation; Modals and their usage; Conditional sentences; Direct and indirect speech; Active and passive voice; usage of common phrasal verbs, synonyms & antonyms.	2
2.	<b>Module 2- Reading Skills:</b> Comprehension passages; reading and understanding articles from technical writing. Interpreting texts: analytic texts, descriptive texts, discursive texts; SQ3R reading strategy.	2
3.	<b>Module 3- Writing Skills:</b> Writing business letters - enquiries, complaints, sales, adjustment, collection letters, replies to complaint & enquiry letters; Job applications, Résumé, Memo, Notice, Agenda, Reports – types & format, E-mail etiquette, advertisements.	8
4.	<b>Module 4- Listening &amp; Speaking :</b> Listening: Listening process, Types of listening; Barriers in effective listening, strategies of effective listening Speaking: Presentations, Extempore, Role-plays, GD, Interview	8

**Suggested Reading:**

1. Bhatnagar, M & Bhatnagar, N (2010) Communicative English for Engineers and Professionals. New Delhi: Pearson Education.
2. Raman, M & Sharma, S (2017) Technical Communication. New Delhi: OUP.
3. Kaul, Asha (2005) The Effective Presentation: Talk your way to success. New Delhi: SAGE Publication.
4. Sethi, J & Dhamija, P.V. (2001), A Course in Phonetics and Spoken English. New Delhi: PHI.
5. Murphy, Raymond (2015), English Grammar in Use. Cambridge: Cambridge University Press.
6. R.C. Sharma and K.Mohan Business Correspondence and Report Writing Tata McGraw Hill , New Delhi , 1994