



Anekant Education Society's  
**Tuljaram Chaturchand College**  
of Arts, Science and Commerce, Baramati  
(*Empowered Autonomous*)

**Four Year B.Sc. Degree Program in Media Graphics & Animation**

**(Faculty of Science & Technology)**

**CBCS Syllabus**

**F.Y.B.Sc. (Media Graphics & Animation) Semester – I**

**For Department of Media Graphics & Animation**

**Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati**

**Choice Based Credit System Syllabus**

**As Per NEP 2.0 (2024 Pattern)**

**To be implemented from Academic Year 2026 – 2027**

Anekant Education Society's

**Tuljaram Chaturchand College**

## of Arts, Science & Commerce, Baramati.

Tuljaram Chaturchand College of Arts, Science & Commerce, Baramati is an autonomous & dynamic institute and has successfully implemented the National Education Policy 2.0 2024 pattern since the academic year 2024-25. We are updating our academic policies as per local needs keeping in view the global perspectives. Accordingly, we have updated our program outcomes as per the graduate attributes defined in New Education Policy. In general, program outcomes are categorized into two categories as disciplinary & interdisciplinary outcomes and generic outcomes.

### Program Outcomes for B.Sc. (Media Graphics & Animation)

#### **PO 1: Comprehensive Knowledge and Understanding**

Graduates will acquire a solid foundation in visual arts, design principles, color theory, and the history of animation, gaining a multidisciplinary perspective on storytelling, cinematography, and digital aesthetics.

#### **PO 2: Practical, Professional, and Procedural Knowledge**

Graduates will demonstrate hands-on proficiency in industry-standard software for 2D/3D modeling, rigging, texturing, and post-production, applying professional workflows and technical regulations to creative media pipelines.

#### **PO 3: Media Asset Management and Retrieval**

Graduates will develop the ability to organize, store, and retrieve digital assets efficiently using version control and pipeline management tools, ensuring streamlined production across complex animation projects.

#### **PO 4: Creative Problem-Solving and Visual Reasoning**

Graduates will apply artistic reasoning and technical troubleshooting to solve production challenges, using critical thinking to interpret scripts and translate concepts into compelling visual narratives.

#### **PO 5: Specialized and Technical Competencies**

Graduates will acquire domain-specific expertise in areas such as UI/UX design, VFX, character animation, or game design, adapting to the diverse requirements of the entertainment, advertising, and education industries.

#### **PO 6: Research and Innovation in Visual Media**

Graduates will cultivate observational and inquiry-based skills to research trends, styles, and audience behavior, fostering creativity to develop unique intellectual properties and innovative storytelling techniques.

#### **PO 7: Communication and Collaboration Skills**

Graduates will effectively present storyboards, pitch decks, and visual concepts through oral and visual communication, collaborating in multicultural production teams and demonstrating leadership in studio environments.

#### **PO 8: Digital and Technological Proficiency**

Graduates will be adept at using emerging technologies such as Virtual Reality (VR), Augmented Reality (AR), and real-time rendering engines, while continuously upgrading their digital skill sets.

#### **PO 9: Lifelong Learning and Adaptability**

Graduates will engage in self-directed learning to stay current with rapidly evolving software updates, hardware advancements, and shifting industry trends in the global media landscape.

**PO 10: Ethics, Values, and Social Responsibility**

Graduates will embrace ethical creative practices, respecting intellectual property rights and copyright laws, while considering the societal impact of media content on diverse populations.

**PO 11: Autonomy, Responsibility, and Accountability**

Graduates will independently manage production timelines and portfolios, taking full accountability for the quality, originality, and professional delivery of their creative work.

**PO 12: Community Engagement and Social Impact**

Graduates will apply their animation and graphic skills to social awareness campaigns, community-based storytelling, and projects that contribute to cultural preservation and public education.

**PO 13: Creativity and Entrepreneurial Mindset**

Graduates will be encouraged to think innovatively to identify market gaps, exploring entrepreneurial ventures such as freelance studios, indie game development, or digital content creation.

**Programme Specific Outcomes (PSOs) for B.Sc. (Media Graphics & Animation )**

**POS 1:** Acquire a comprehensive understanding of the historical, theoretical, and technical foundations of art, animation, and digital media design.

**POS 2:** Develop core competencies in traditional drawing, digital illustration, and photography to produce professional-grade aesthetic content.

**POS 3:** Apply systematic user research and logical design workflows to solve complex challenges in UI/UX and interactive media.

**POS 4:** Construct compelling visual narratives by integrating scriptwriting, cinematic timing, and acting principles across various platforms.

**POS 5:** Master industry-standard software for graphics, video production, and the emerging application of AI content creation tools.

**POS 6:** Execute the end-to-end production process from initial conceptualization and storyboarding to final post-production and rendering.

**POS 7:** Analyze and evaluate diverse art styles, user behaviors, and cinematic techniques to make informed creative decisions.

**POS 8:** Demonstrate an understanding of intellectual property rights and professional ethics required within the global creative industry.

**POS 9:** Cultivate a self-directed approach to learning for rapid adaptation to evolving technologies and trends in the animation landscape.

**Anekant Education Society's**  
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**Board of Studies (BOS) in Department of  
Media and Graphics and Animation**

From 2026-27 to 2028-29

Sr.No.	Name of Attendees	Designation
1.	<b>Mr. Rahul Prabhakar Chaudhari</b> Head & Assistant Professor Department of Media and Communication Studies, T. C. College, Baramati.	Chairperson
2.	<b>Mr. Bidve Prashant Parshuram</b> Assistant Professor, Department of Media and Communication Studies, T. C. College, Baramati	Member
3.	<b>Ms. Pawar Pooja Mohan</b> Assistant Professor, Department of Media and Communication Studies, T. C. College, Baramati	Member
4.	<b>Mr. Harshal Sathe</b> Assistant Professor, Department of Media Graphics and Animation , T. C. College, Baramati	Member
5.	<b>Mr. Mahesh Phule</b> Assistant Professor, Department of Retail Management, T. C. College, Baramati	Member
6.	<b>Mr. Ajay Popalghat</b> Assistant Professor, Dr. D.Y. Patil School of Design, Pune	Subject Expert from Outside the Parent University
7.	<b>Mr Kamran Siddiqui</b> Assistant Professor, Dr. D.Y. Patil School of Design, Pune	Subject Expert from Outside the Parent University
8.	<b>Mr. Dhammaratna Gaikwad</b> Graphics Designer and Animator, Pune Johnson Cotrol Pvt.Ltd., Pune	Representative from industry/corporate sector/allied areas
9.	<b>Mr. Omkar Pawar</b> Video Editor, Pune	Member of the College Alumni
10.	<b>Mr. Swarup Gaikwad</b>	PG Student

**Credit Distribution Structure for Three/Four Year Honours/Honours with Research Degree Programme With Multiple Entry and Exit options as per National Education Policy (2024 Pattern as per NEP-2020)**

Level/Difficulty	Sem	Subject MGA-1	Subject MGA-2	Subject MGA-3	GE/OE	SEC	IKS	AEC	VEC	CC	Total			
4.5/100	I	2(T)+2(P)	2(T)+2(P)	2(T)+2(P)	2(T)	2 (T/P)	2(T) (Generic)	2(T)	2(T)	--	22			
	II	2(T)+2(P)	2(T)+2(P)	2(T)+2(P)	2(P)	2 (T/P)	--	2(T)	2(T)	2(T)	22			
<b>Exit option:</b> Award of UG Certificate in Major with 44 credits and an additional 4 credits core NSQF course/Internship OR Continue with Major and Minor <b>Continue option:</b> Student will select one subject among the (subject 1, subject 2 and subject 3) as major and other as minor and third subject will be dropped.														
Level/Difficulty	Sem	Credits Related to Major				Minor	--	GE/OE	SEC	IKS	AEC	VE C	CC	Total
		Major Core	Major Elective	VSC	FP/OJT/CEP/EP/FP									
5.0/200	III	4(T)+2(P)	--	2 (T/P)	2(FP)	2(T)+2(P)	--	2(T)	--	2(T)	--	2(T)	22	
	IV	4(T)+2(P)	--	2 (T/P)	2(CEP)	2(T)+2(P)	--	2(P)	2 (T/P)	--	2(T)	--	2(T)	22
<b>Exit option:</b> Award of UG Diploma in Major and Minor with 88 credits and an additional 4credits core NSQF course/Internship OR Continue with Major and Minor														
5.5/300	V	8(T)+4(P)	2(T)+2(P)		4 (OJT)	2(T)	--	--	--	--	--	--	22	
	VI	8(T)+4(P)	2(T)+2(P)	4 (T/P)	2(FP/CEP)	--	--	--	--	--	--	--	22	
<b>Total 3Years</b>		<b>44</b>	<b>8</b>	<b>8</b>	<b>10</b>	<b>18</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>6</b>	<b>132</b>
<b>Exit option:</b> Award of UG Degree in Major with 132 credits OR Continue with Major and Minor														
6.0/400	VII	6(T)+4(P)	2(T)+2 (T/P)	--	4(RP)	4(RM)(T)	--	--	--	--	--	--	22	
	VIII	6(T)+4(P)	2(T)+2 (T/P)	--	8(RP)	--	--	--	--	--	--	--	22	
<b>Total 4Years</b>		<b>64</b>	<b>16</b>	<b>8</b>	<b>22</b>	<b>22</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>6</b>	<b>176</b>
<b>Four Year UG Honours with Research Degree in Major and Minor with 176 credits</b>														
6.0/400	VII	10(T)+4(P)	2(T)+2 (T/P)	--	--	4(RM) (T)	--	--	--	--	--	--	22	
	VIII	10(T)+4(P)	2(T)+2 (T/P)	--	4 (OJT)	--	--	--	--	--	--	--	22	
<b>Total 4Years</b>		<b>72</b>	<b>16</b>	<b>8</b>	<b>14</b>	<b>22</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>6</b>	<b>176</b>
<b>Four Year UG Honours Degree in Major and Minor with 176 credits</b>														
<b>T = Theory P = Practical DSC = Discipline Specific Course OE = Open Elective SEC = Skill Enhancement Course</b> <b>IKS = Indian Knowledge System AEC = Ability Enhancement Course VEC = Value Education Course CC = Co-curricular Course</b> <b>VSC= Vocational Skill Course OJT= On Job Training CEP= Community Engagement Project FP= Field Project RP= Research Project</b>														

## Course and Credit Structure for F.Y.B.Sc. Media Graphics & Animation (2024 Pattern)

Sem	Course Type	Course Code	Course Title	Theory / Practical	Credits
I	MGA-I (General)	MGA-101-GEN	History of Art & Animation	Theory	02
		MGA-102-GEN	Practical Based on History of Art & Animation	Practical	02
	MGA-II (General)	MGA-103-GEN	Fundamentals of Vector Graphics	Theory	02
		MGA-104-GEN	Practical Based on Fundamentals of Vector Graphics	Practical	02
	MGA-III (General)	MGA-105-GEN	Fundamentals of UI/UX	Theory	02
		MGA-106-GEN	Practical Based on Basics of Fundamentals of UI/UX	Practical	02
	Open Elective (OE)	MGA-107-OE	Fundamentals of Generative AI	Theory	02
	Skill Enhancement Course (SEC)	MGA-108-SEC	Drawing for Animation-I	Practical	02
	Ability Enhancement Course (AEC)	ENG-104-AEC	Functional English-I	Theory	02
	Value Education Course (VEC)	ENV-105-VEC	Environmental Science	Theory	02
	Generic Indian Knowledge System (GIKS)	GEN-106-IKS	Generic Indian Knowledge System	Theory	02
<b>Total Credits Sem-I</b>					<b>22</b>
II	DSC-I (General)	MGA-151-GEN	Fundamentals of Video Production	Theory	02
		MGA-152-GEN	Practical Based on Fundamentals of Video Production	Practical	02
	DSC-II (General)	MGA-153-GEN	Fundamentals of Raster Graphics	Theory	02

		MGA-154-GEN	Practical Based on Fundamentals of Raster Graphics	Practical	02
DSC-III (General)		MGA-155-GEN	Fundamentals of Script Writing	Theory	02
		MGA-156-GEN	Practical Based on Fundamentals of Script Writing	Practical	02
Open Elective (OE)		MGA-157-OE	AI-Driven Content Creation and Prompt Engineering	Practical	02
Skill Enhancement Course (SEC)		MGA-158-SEC	Drawing for Animation-II	Practical	02
Ability Enhancement Course (AEC)		ENG-154-AEC	Functional English-II	Theory	02
Value Education Course (VEC)		COS-155-VEC	Media Ethics and Intellectual Property Rights	Theory	02
Co-curricular Course (CC)		YOG/PES/CUL/NSS/NCC-156-CC	To be selected from CC Basket	Theory	02
<b>Total Credits Sem-II</b>					<b>22</b>
<b>Grand Total Sem I + Sem II</b>					<b>44</b>

Sem	Course Type	Course Code	Course Title	Theory / Practical	Credits
I	Open Elective (OE)	JMC-107-OE	Aesthetics of photography	Theory	02
II	Open Elective (OE)	JMC-157-OE	Mobile Photography Practical	Practical	02

**CBCS Syllabus as per NEP 2020 for First Year B.Sc. (Media Graphics & Animation)**

<b>Name of the Programme</b>	<b>: B.Sc.(Media Graphics &amp; Animation)</b>
<b>Programme Code</b>	<b>: MGA</b>
<b>Class</b>	<b>: First Year B.Sc.(Media Graphics &amp; Animation)</b>
<b>Semester</b>	<b>: I</b>
<b>Course Type</b>	<b>: Major (Theory)</b>
<b>Course Code</b>	<b>: MGA-101-GEN</b>
<b>Course Title</b>	<b>: History of Art &amp; Animation</b>
<b>No. of Credits</b>	<b>: 02</b>
<b>No. of Teaching Hours</b>	<b>: 30</b>

**Course Objectives:**

1. To understand the chronological progression of art from prehistoric cave paintings to contemporary digital masterpieces.
2. To analyze the technological evolution of the animation industry from early mechanical optical toys to modern CGI.
3. To examine the creative philosophies and stylistic contributions of pioneering animators and iconic global studios.
4. To foster a critical appreciation of how historical art techniques continue to influence current 2D animation and media production.
5. To analyze the impact of socio-political and cultural movements on the visual styles and thematic evolution of global animation.
6. To identify and compare the distinct visual languages of Eastern and Western animation traditions, specifically focusing on the rise of Anime and the evolution of Indian animation.
7. To evaluate the transition from physical art mediums to digital workflows, understanding how historical craftsmanship informs modern digital aesthetics and production pipelines.

**Course Outcomes:**

**By the end of the course, students will be able to:**

- CO1:** Trace the development of visual arts across different historical eras from prehistoric to modern times.
- CO2:** Identify key inventions and optical toys that led to the birth of the cinema and animation industry.
- CO3:** Analyze the stylistic contributions of pioneering animators during the Golden Age of Animation.
- CO4:** Distinguish between the aesthetic approaches of major global studios like Disney, Ghibli, and Pixar.
- CO5:** Explain the technical transition from traditional hand-drawn cel animation to digital CGI.
- CO6:** Discuss the evolution and cultural significance of Indian animation and the global Anime industry.
- CO7:** Apply historical aesthetic principles and art styles to modern visual storytelling projects.

**Topics and Learning Points**

- Unit 1: Foundations of Visual Arts (8L)**
- 1.1. **Introduction to Visual Culture:** Exploring the definition of art and the significance of visual literacy in modern media.
  - 1.2. **Prehistoric Narrative Art:** Analysis of cave paintings and the earliest forms of visual storytelling and symbolism.
  - 1.3. **Principles of Ancient Aesthetics:** Studying the artistic contributions of Egyptian, Greek, and Roman civilizations to form and structure.
  - 1.4. **The Renaissance and Realism:** The shift toward three-dimensional representation, linear perspective, and anatomical accuracy.
  - 1.5. **Light and Shadow (Chiaroscuro):** Understanding how classical masters used contrast to create depth, a precursor to digital lighting.
  - 1.6. **Major Art Movements:** A survey of Impressionism, Expressionism, and Surrealism and their influence on stylized animation
- Unit 2: Evolutionary Perspectives in Art (8L)**
- 2.1. **From Traditional to Digital:** Tracing the transition of mediums from physical canvas and sculpture to digital pixels.
  - 2.2. **Development of Perspective:** How the understanding of depth evolved from flat 2D icons to immersive 3D environments.
  - 2.3. **The Industrial Revolution and Art:** The impact of photography and mass production on visual representation and speed of creation.
  - 2.4. **Cultural Shifts in Visual Style:** How global art movements influenced the "look and feel" of different animation eras.
  - 2.5. **Abstract vs. Representative Art:** The journey from realistic copying of nature to emotional and symbolic abstraction.
  - 2.6. **Technological Milestones:** Exploring how tools (from oil paints to digital tablets) changed the artist's creative process.
- Unit 3: Aesthetic Foundations in Animation (7L)**
- 3.1. **Visual Language in Storytelling:** How art principles like line, shape, and color are used to communicate character traits and moods.
  - 3.2. **Composition and Staging:** Applying classical layout rules (Rule of Thirds, Golden Ratio) to animation frame design.
  - 3.3. **Color Theory for Animators:** Understanding psychological color palettes to drive narrative and emotional resonance.
  - 3.4. **Anatomy and Movement:** The importance of life drawing and skeletal understanding in creating believable character performances.
  - 3.5. **Production Design & World Building:** Creating cohesive environments through historical and architectural art references.
  - 3.6. **Iconography and Visual Symbolism:** Using art history motifs to create recognizable and iconic character designs.
- Unit 4: Chronology of the Animation Industry**
- 4.1. **The Era of Optical Toys:** Exploring pre-cinema inventions like the Zoetrope, Thaumatrope, and Praxinoscope.
  - 4.2. **The Birth of Character Animation:** Milestones from Winsor McCay's "Gertie the Dinosaur" to the first synchronized sound cartoons.
  - 4.3. **The Golden Age of Animation:** The rise of major studios (Disney, Warner Bros, MGM) and the development of the multi-plane camera.
  - 4.4. **Traditional Cel Animation Pipeline:** The history and workflow of hand-drawn animation on transparent acetate sheets.
  - 4.5. **The Rise of Stop Motion and Special Effects:** From early armatures in "King Kong" to modern-day claymation and puppet rigging.

- 4.6. **The CGI Revolution:** The evolution of Computer Generated Imagery, the history of Pixar, and the modern 3D pipeline.

### References:

1. H.W. Janson, *History of Art*, Pearson, 2010.
2. E.H. Gombrich, *The Story of Art*, Phaidon Press, 1995.
3. Richard Williams, *The Animator's Survival Kit*, 4th Edition, Faber & Faber, 2012.

### Programme Outcomes and Course Outcomes Mapping:

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	1	-	-	-	2	-	-	1	-
CO2	3	1	-	2	-	2	2	-	1	-
CO3	3	1	-	3	-	2	2	1	2	-
CO4	3	2	-	2	-	1	3	-	2	-
CO5	3	-	-	1	3	3	2	-	2	-
CO6	3	1	-	2	-	-	3	1	2	1
CO7	2	3	2	3	2	3	2	1	3	-

**Weightage:** 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

### Justification of CO-PO Mapping:

- **PO1 (Comprehensive Knowledge):** This has the strongest relation as the course establishes the foundational chronological and theoretical framework of art eras (CO1–CO6).
- **PO2 (Practical Knowledge):** Focused on translating historical craftsmanship into professional digital aesthetics and modern workflows (CO7).
- **PO4 (Creative Problem-Solving):** Students apply artistic reasoning to their storytelling by analyzing historical narrative techniques (CO3, CO7).
- **PO6 (Research and Innovation):** Requires students to research global trends and cultural movements (CO6, CO7).
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<b>Name of the Programme</b>	<b>: B.Sc.(Media Graphics &amp; Animation)</b>
<b>Programme Code</b>	<b>: MGA</b>
<b>Class</b>	<b>: First Year B.Sc.(Media Graphics &amp; Animation)</b>
<b>Semester</b>	<b>: I</b>
<b>Course Type</b>	<b>: Major (Practical)</b>
<b>Course Code</b>	<b>: MGA-102-GEN</b>
<b>Course Title</b>	<b>: Practical Based on History of Art &amp; Animation</b>
<b>No. of Credits</b>	<b>: 02</b>
<b>No. of Teaching Hours</b>	<b>: 60</b>

**Course Objectives:**

1. To provide hands-on experience in recreating classical art styles and techniques from various historical eras.
2. To demonstrate the mechanical principles of motion through the construction and use of pre-cinema optical toys.
3. To develop the ability to analyze and replicate the character acting and timing styles of the Golden Age of animation.
4. To bridge the gap between traditional aesthetic principles and modern digital design workflows.
5. To create visual narratives that reflect the influence of socio-political movements by applying historical art styles to communicate modern social themes.
6. To implement diverse cultural aesthetics in character and environment design by researching and comparing Eastern (e.g., Japanese Ukiyo-e) and Western animation traditions.
7. To execute professional-grade asset transformations by practicing the transition of hand-drawn concepts into optimized digital assets, mimicking the industry's shift from traditional to digital pipelines.

**Course Outcomes:**

**By the end of the course, students will be able to:**

**CO1:** Replicate classical art styles and primitive narrative techniques, such as cave art and ancient symbolism, to communicate modern stories through traditional or digital mediums.

**CO2:** Construct functional models of optical toys like the Thaumatrope and Zoetrope to demonstrate the "Persistence of Vision."

**CO3:** Create stylized character designs based on specific modern art movements such as Surrealism and Expressionism.

**CO4:** Replicate the "squash and stretch" and timing techniques pioneered by studios **during** the Golden Age of animation.

**CO5:** Design background layouts and environments that utilize historical lighting techniques like Chiaroscuro.

**CO6:** Develop a visual study or "tribute" project that blends Indian animation aesthetics with global storytelling styles.

**CO7:** Synthesize historical art principles into an original portfolio piece that demonstrates professional-grade visual artistry.

**Topics and Learning Points**

Sr. No	Title of practical	Hours
1	Create a series of "Cave Art" style illustrations using digital or traditional textures to tell a modern story using <u>only primitive symbols and silhouettes</u> .	4
2	Physical construction of a double-sided <b>Thaumatrope</b> and a multi-frame <b>Zoetrope</b> strip to demonstrate the biological principle of motion.	4
3	Research a major art movement (e.g., Surrealism or Cubism) and present a PowerPoint analysis on how its visual language influenced a specific modern animated film (e.g., <i>Spider-Verse</i> or <i>Destino</i> )	4
4	Recreate a still-life scene applying the <b>Chiaroscuro</b> technique (High-contrast	4

	lighting) to demonstrate volume and drama, essential for modern digital cinematography.	
5	Practical exercise on the <b>12 Principles of Animation</b> —specifically "Squash and Stretch" and "Anticipation"—by recreating a 24-frame loop in the style of 1930s rubber-hose animation.	4
6	A life-drawing assignment focusing on skeletal structure and muscular proportions, followed by a comparison study of how these proportions are "broken" for stylized character design.	4
7	Design two environment layouts for the same story—one following the aesthetic of <b>Japanese Woodblock Prints (Ukiyo-e)</b> and the other following <b>Indian Miniature Paintings</b> .	4
8	A practical project where students take a hand-drawn sketch and render it in three different styles: Traditional Cel-shaded, 3D CGI-look (using gradients), and Paper-cut Stop-motion style.	4
9	<b>Illuminated Manuscript Character Intro:</b> Design a character's initial letter (Drop Cap) in the style of <b>Medieval Illuminated Manuscripts</b> , integrating the character's personality into the ornate gold-leaf and floral patterns of the 12th century.	4
10	<b>The "Great Depression" rubber-hose transformation:</b> Take a modern, high-tech character (like a robot or superhero) and redesign them using the <b>1920s Fleischer Studios/Early Disney style</b> . Focus on pie-cut eyes, white gloves, and "noodle" limbs.	4
11	<b>Baroque Dynamics &amp; Action Posing:</b> Draw an action sequence (a jump or a punch) following the <b>Diagonal Composition</b> and intense emotionality of Baroque artists like Caravaggio to understand how to guide a viewer's eye through a frame.	4
12	<b>German Expressionism Set Design:</b> Construct a 3D or 2D environment using the distorted perspectives, sharp angles, and jagged shadows characteristic of <b>The Cabinet of Dr. Caligari</b> . This demonstrates how "uncomfortable" architecture influences the mood of a scene.	4
13	<b>Pop Art &amp; Halftone Shading:</b> Create a 2D animation frame or poster using <b>Andy Warhol or Roy Lichtenstein's Pop Art style</b> , specifically practicing the use of "Ben-Day dots" (Halftones) for shading instead of smooth gradients.	4
14	<b>Art Nouveau Flourish &amp; Line Work:</b> Design a character poster based on <b>Alphonse Mucha's Art Nouveau style</b> , focusing on "whiplash" curves, organic floral framing, and high-quality "clean" line art—essential for modern 2D character cleanup.	4
15	<b>Bauhaus Minimalism &amp; Shape Language:</b> Redesign a well-known complex character using only the <b>Bauhaus primary shapes</b> (circle, square, triangle) and primary colors (red, blue, yellow) to test the strength and readability of the character's silhouette.	4

### References book:

1. **The Story of Art** – E.H. Gombrich
2. **The Illusion of Life: Disney Animation** – Frank Thomas & Ollie Johnston
3. **Animation: A World History (Volumes I, II, and III)** – Giannalberto Bendazzi
4. **The Animator's Survival Kit** – Richard Williams
5. **Janson's History of Art** – Penelope J.E. Davies, et al.
6. **Art in Motion: Animation Aesthetics** – Maureen Furniss
7. **Enchanted Drawings: The History of Animation** – Charles Solomon
8. **Anime: A History** – Jonathan Clements
9. **The World History of Animation** – Stephen Cavalier
10. **Timing for Animation** – Harold Whitaker & John Halas
11. **Creativity, Inc.** – Ed Catmull
12. **History of Indian Animation** – Prosenjit Ganguly

## Programme Outcomes and Course Outcomes Mapping:

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	3	-	3	2	1	-	-	2	-
CO2	1	3	2	3	3	2	-	-	1	-
CO3	2	3	-	3	3	1	2	-	2	-
CO4	2	3	-	2	3	3	-	-	3	-
CO5	1	2	-	3	-	2	2	-	1	3
CO6	2	2	-	3	2	3	2	-	2	2
CO7	1	3	2	2	3	3	1	-	3	1

**Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation**

### Justification of CO-PO Mapping:

- **PO 2 (Practical & Procedural Knowledge):** This has the strongest alignment (mostly Level 3) because the course is entirely "performance-based." Students move beyond theory to physically construct optical toys, replicate historical art styles, and execute digital workflows, which builds the procedural muscle memory required for the industry (CO1, CO2, CO3, CO7).
- **PO 4 (Creative Problem-Solving):** Highly correlated (Level 3) because students must figure out how to translate abstract historical concepts into tangible visual media. Whether it is building a working Zoetrope or designing a character that fits a specific 1940s "Golden Age" aesthetic, it requires creative reasoning (CO1, CO2, CO3, CO6).
- **PO 5 (Specialized Competencies):** The mapping is strong here because the assignments focus on technical accuracy—from understanding the mechanics of early animation tools to the specific digital transformation techniques used in modern CGI (CO2, CO3, CO4, CO7).
- **PO 6 (Research and Innovation):** This mapping highlights the requirement for visual research. To successfully design across different eras (e.g., comparing Eastern and Western visual languages), students must research and then innovate based on those historical findings (CO4, CO6, CO7).
- **PO 10 (Ethics & Social Responsibility):** The mapping acknowledges that practical design work is not done in a vacuum. By recreating diverse cultural aesthetics, students learn to respect and accurately represent global heritage, which is a key social responsibility in media (CO5, CO6).
- **PO 1 (Comprehensive Knowledge):** While this is a practical course, it maintains a moderate link to PO1 as students must still draw upon their foundational knowledge of art history to guide their hands-on projects (CO1, CO3, CO6).

**CBCS Syllabus as per NEP 2020 for First Year B.Sc. (Media Graphics & Animation)**

<b>Name of the Programme</b>	<b>: B.Sc.(Media Graphics &amp; Animation)</b>
<b>Programme Code</b>	<b>: MGA</b>
<b>Class</b>	<b>: First Year B.Sc.(Media Graphics &amp; Animation)</b>
<b>Semester</b>	<b>: I</b>
<b>Course Type</b>	<b>: Major (Theory)</b>
<b>Course Code</b>	<b>: MGA-103-GEN</b>
<b>Course Title</b>	<b>: Fundamentals of Vector Graphics</b>
<b>No. of Credits</b>	<b>: 02</b>
<b>No. of Teaching Hours</b>	<b>: 30</b>

**Course Objectives:**

1. To introduce the fundamental concepts of vector-based design and its mathematical distinction from raster graphics.
2. To provide comprehensive hands-on training in industry-standard tools (Adobe Illustrator) for creating scalable assets.
3. To develop proficiency in constructing complex geometries using primitive shapes and path manipulation.
4. To teach the principles of color theory, typography, and layout specifically tailored for digital media and animation.
5. To establish best practices for file organization and asset management required for professional production workflows.
6. To master the art of "Vector Optimization" by learning to create complex visual assets with the minimum number of anchor points, ensuring high-performance rendering for web and mobile platforms.
7. To integrate vector assets into a cross-platform pipeline by developing the technical skill to prepare, layer, and "Release to Layers" graphics for seamless rigging in 2D animation and motion graphics software.

**Course Outcomes:**

**By the end of the course, students will be able to:**

**CO 1: Construct & Categorize Asset Hierarchies** Analyze the fundamental differences between vector and raster logic and implement a professional layer hierarchy and naming convention for assets intended for 2D animation pipelines.

**CO 2: Execute High-Precision Organic Drawing** Master the Pen and Curvature tools to create complex organic forms and character silhouettes from hand-drawn sketches, demonstrating mastery over Bézier paths and anchor point manipulation.

**CO 3: Synthesize Visual Aesthetics & Typography** Apply advanced color systems (gradients, global swatches), modular typography, and non-destructive appearance effects to create visually compelling and scalable graphic communications.

**CO 4: Engineer Modular Production Workflows** Develop modular symbol-based systems and utilize automated export pipelines to deliver optimized, ready-to-rig assets for professional animation, web, and print platforms.

**CO 5: Optimize Vector Assets for Performance Rendering** Students will be able to implement "Vector Sculpting" techniques to create complex visual assets with the minimum number of anchor points, ensuring high-performance rendering for web, mobile, and real-time game interfaces.

**CO 6: Design Animation-Ready Vector Hierarchies** Students will be able to prepare, structure, and "Release to Layers" complex vector graphics into organized, named hierarchies that allow for seamless rigging and technical handoff to 2D animation and motion graphics software.

**CO 7: Engineer Modular Asset Systems & Symbols** Students will be able to develop modular, symbol-based design systems and automated export pipelines to deliver scalable and consistent graphic assets across multiple digital and print platforms.

## Topics and Learning Points

1. **Unit 1: Digital Foundations & Geometric Construction** (8L)
  - 1.1. **Vector vs. Raster Logic:** Understanding the mathematical difference between paths and pixels; the critical role of scalability in the animation pipeline.
  - 1.2. **Workspace Management:** Customizing artboards, setting up an "Animation Workspace," and mastering RGB color modes for digital screens.
  - 1.3. **Boolean Operations & Geometry:** Creating complex forms using primitive shape tools (Rectangles, Ellipses, Stars); additive and subtractive geometry using the Shape Builder and Pathfinder tools.
  - 1.4. **Organization & Hierarchy:** Managing layer stacking orders, sub-layers, and naming conventions specifically for seamless integration with motion software like After Effects
  
2. **Unit 2: Precision Drawing & Organic Form** (8L)
  - 2.1. **Mastery of the Pen Tool:** Advanced techniques for Bézier curves, anchor point placement, and drawing precise organic and inorganic forms.
  - 2.2. **Fluid Vector Sketching:** Using the **Curvature** and **Pencil** tools for hand-drawn aesthetics and character sketching.
  - 2.3. **Path Manipulation:** Editing silhouettes with Direct Selection and Anchor Point tools.
  - 2.4. **Vectorizing Physical Art:** Converting hand-drawn sketches into clean, scalable vector art using **Image Trace** and implementing **Clipping/Opacity Masks** for realistic lighting effects.
  
3. **Unit 3: Advanced Aesthetics: Color, Type, & Texture** (7L)
  - 3.1. **Dynamic Color Treatments:** Utilizing global swatches, spot colors, and **Freeform Gradients** to add 3D depth to 2D assets.
  - 3.2. **Efficiency Tools:** Applying **Live Paint** for rapid character turnarounds and managing complex line art.
  - 3.3. **Typography for Motion:** Creating point/area type and "Type on a Path" for motion graphic titles; converting fonts to editable shapes for custom letterform manipulation.
  - 3.4. **Brushes & Appearance:** Using calligraphic and pattern brushes for textured outlines; managing multiple strokes and non-destructive effects (Pucker & Bloat, Drop Shadows)

- 4. Unit 4: Asset Systems & Production Pipeline (7L)**
- 4.1. **Modular Design Systems:** Creating Symbols for reusable character assets (eyes, hands) and developing dynamic symbols to speed up production.
  - 4.2. **Environment Design:** Designing seamless repeating patterns for animated backgrounds.
  - 4.3. **Export Workflows:** Utilizing the Asset Export Panel for web, print, and high-resolution video.
  - 4.4. **Animation Readiness:** Executing "Release to Layers (Sequence)" techniques to ensure every limb is ready for rigging in 2D animation software; final portfolio preparation.

### References:

1. **Adobe Illustrator Classroom in a Book** – Adobe Creative Team (Adobe Press)
2. **Vector Basic Training: A Systematic Creative Process for Precision Vector Artwork** – Von Glitschka
3. **Illustrator Foundations: The Art of Vector Graphics** – Rafiq Elmansy
4. **The Adobe Illustrator WOW! Book** – Sharon Steuer
5. **Real World Adobe Illustrator** – Mordy Golding

### Programme Outcomes and Course Outcomes Mapping:

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	1	-	2	2	-	-	-	1	-
CO2	1	3	-	3	3	-	-	-	2	-
CO3	2	3	-	3	2	1	-	-	1	-
CO4	3	2	-	3	2	-	2	-	2	-
CO5	1	3	2	2	3	2	2	-	3	-
CO6	2	3	-	2	3	3	-	-	2	-
CO7	1	3	2	2	3	2	3	-	3	1

Weight: 1 - Partially related    2 - Moderately Related    3 - Strongly related

### Justification of CO-PO Mapping:

- **PO 2 (Practical & Procedural Knowledge):** Strongest alignment here as students spend the entire course in hands-on production—creating logos, icons, and character turnarounds using professional toolsets (CO2, CO3, CO4, CO5).
- **PO 3 (Media Asset Management):** Highly relevant to CO4 and CO7, as students must learn to organize, name, and layer their files specifically for hand-off to animation and motion graphics pipelines.
- **PO 5 (Specialized Technical Competencies):** Focuses on "Vector Sculpting" and building rig-ready character assets, providing the specialized technical skills needed for the character design industry (CO1, CO6, CO7).

- **PO 7 (Communication and Collaboration):** Through the creation of brand identities and visual assets (CO2, CO7), students learn to communicate complex ideas through simplified, effective visual language.
- **PO 8 (Digital Proficiency):** Students must demonstrate mastery over the latest digital tools (like Adobe Illustrator) to produce industry-compliant assets (CO4, CO6).

## CBCS Syllabus as per NEP 2020 for First Year B.Sc. (Media Graphics & Animation)

<b>Name of the Programme</b>	<b>: B.Sc.(Media Graphics &amp; Animation)</b>
<b>Programme Code</b>	<b>: MGA</b>
<b>Class</b>	<b>: First Year B.Sc.(Media Graphics &amp; Animation)</b>
<b>Semester</b>	<b>: I</b>
<b>Course Type</b>	<b>: Major (Practical)</b>
<b>Course Code</b>	<b>: MGA-104-GEN</b>
<b>Course Title</b>	<b>: Practical Based on Fundamentals of Vector Graphics</b>
<b>No. of Credits</b>	<b>: 02</b>
<b>No. of Teaching Hours</b>	<b>: 60</b>

### Course Objectives:

1. To develop advanced motor skills in using the Pen Tool and Bézier curves for precise vector construction.
2. To apply geometric logic and boolean operations (Pathfinder/Shape Builder) to create complex icons and characters.
3. To master professional layout standards for print (stationery) and digital (social media) platforms.
4. To implement systematic layer management and naming conventions for integration with motion graphics software.
5. To translate conceptual sketches into scalable, industry-standard digital assets.
6. To implement high-performance "Vector Sculpting" techniques by creating complex illustrations that use the minimum possible number of anchor points, ensuring rapid rendering and small file sizes for web and mobile game interfaces.
7. To develop "Animation-Ready" master files by systematically structuring vector characters into independent, named layers and groups (using "Release to Layers") to ensure a seamless technical handoff to 2D rigging and motion graphics software.

### Course Outcomes:

**By the end of the course, students will be able to:**

**CO1:** Execute precise line work and organic shapes using the Pen tool with minimal anchor points for optimal performance.

**CO2:** Build a comprehensive Brand Identity kit, including logos, business cards, and corporate stationery, following print production standards.

**CO3:** Produce high-fidelity vector illustrations using mesh tools, freeform gradients, and blending modes to simulate 3D depth.

**CO4:** Design and organize multi-view character turnarounds specifically structured for 2D animation

rigging.

**CO5:** Create seamless repeating patterns and isometric icons for use in web and game UI environments.

**CO6:** Batch export assets in multiple formats (SVG, PNG, PDF) using the Asset Export panel for different production pipelines.

**CO7:** Assemble a digital portfolio of vector-based projects that demonstrate both creative flair and technical proficiency.

### Topics and Learning Points

Sr. No	Title of Practical	Hours
1	<b>Primitive Character Design:</b> Create a simple mascot character using only basic geometric shapes (Rectangles, Circles, Polygons) and the <b>Pathfinder</b> tool.	4
2	<b>The Silhouette Challenge:</b> Using the <b>Pen Tool</b> , trace 5 complex organic objects (leaves, animals, or human poses) to create perfect black-and-white silhouettes.	4
3	<b>Professional Logo Design:</b> Design a minimalist logo for a fictional tech company using the <b>Golden Ratio</b> (circles) and the <b>Shape Builder</b> tool.	4
4	<b>Corporate Stationery – Business Card:</b> Design a double-sided visiting card that applies proper margins, bleed settings, and professional typography.	4
5	<b>Letterhead &amp; Envelope Design:</b> Create a matching corporate letterhead and envelope that maintains brand consistency with the logo and business card.	4
6	<b>Isometric Icon Set:</b> Use the <b>3D Extrude</b> or <b>SSR method</b> (Scale, Shear, Rotate) to create a set of three 3D-looking icons for a mobile app.	4
7	<b>Custom Typography:</b> Take a standard sans-serif font, convert it to outlines, and manipulate the anchor points to create a unique "Wordmark" logo.	4
8	<b>Product Illustration:</b> Recreate a high-fidelity vector version of a real-world object (e.g., a wristwatch or a smartphone) using <b>Freeform Gradients</b> for realistic shading.	4
9	<b>Vintage Travel Poster:</b> Design a poster using Global Swatches and the Grain Texture effect to mimic the screen-printed look of 1950s travel art.	4
10	<b>Pattern Design for Textiles:</b> Create a seamless repeating pattern using the Pattern Make tool for use in apparel or background wallpaper.	4
11	<b>Infographic Design:</b> Use the Graph Tool to represent data visually, incorporating custom vector icons and a clear visual hierarchy.	4
12	<b>Mascot Turnaround:</b> Draw a character from three views (Front, Side, 3/4th) and organize them into layers labeled specifically for Adobe After Effects rigging.	4
13	<b>Vector Portrait (Low Poly):</b> Create a stylized portrait of a famous personality by triangulating facial features and using the Eyedropper tool for color blocking.	4
14	<b>Social Media Ad Kit:</b> Create a set of three banners (Square, Story, and Cover) for a brand, focusing on Alignment, Transparency Masks, and Clipping Masks.	4
15	<b>Brand Style Guide (Mini-Project):</b> Compile the logo, color palette, typography, and iconography into a single multi-page PDF document using Artboards.	4

### References books:

1. **Adobe Illustrator Classroom in a Book** – Adobe Creative Team (Adobe Press)
2. **Vector Basic Training: A Systematic Creative Process for Precision Vector Artwork** – Von Glitschka
3. **Illustrator Foundations: The Art of Vector Graphics** – Rafiq Elmansy
4. **The Adobe Illustrator WOW! Book** – Sharon Steuer
5. **Real World Adobe Illustrator** – Mordy Golding

### Programme Outcomes and Course Outcomes Mapping:

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	-	3	3	1	-	-	2	-
CO2	1	3	2	2	2	2	3	-	2	1
CO3	-	3	-	3	3	2	-	-	2	-
CO4	2	3	3	2	3	1	2	1	1	-
CO5	1	3	-	3	3	2	1	-	1	-
CO6	2	3	-	2	3	3	-	2	3	-
CO7	1	3	3	2	3	2	3	1	3	-

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

#### Justification of CO-PO Mapping:

- **PO 2 (Practical, Professional & Procedural Knowledge):** This is the strongest alignment (consistently Level 3) because the course is purely application-based. Assignments such as logo creation, iconography, and character turnarounds force students to master professional toolsets and procedural industry workflows (CO2, CO3, CO4, CO5, CO7).
- **PO 3 (Media Asset Management & Retrieval):** This mapping is critical for CO4 and CO7. Since students are preparing character assets and branding packages, they must learn systematic file naming, layering conventions, and version control to ensure assets are "retrievable" and usable in a production pipeline.
- **PO 5 (Specialized & Technical Competencies):** The course provides specialized skills in "Vector Sculpting" and building technical character sheets for 2D animation. Mastering Bézier curves and path optimization provides the technical precision required for high-end UI/UX and animation rigging (CO1, CO3, CO5, CO6, CO7).
- **PO 4 (Creative Problem-Solving & Visual Reasoning):** Every vector task is a visual puzzle. Students must determine how to represent complex organic forms using the fewest points possible (CO1, CO3, CO5) and how to maintain visual balance in minimalist logo designs.
- **PO 7 (Communication & Collaboration):** Through the creation of brand identities and visual assets, students learn how to communicate abstract ideas (like a brand's "vibe") through clear, effective visual language and icons (CO2, CO7).
- **PO 8 (Digital & Technological Proficiency):** Students are required to use the latest industry software (Adobe Illustrator) and understand the technical differences between various export formats (SVG, EPS, PDF) and their behavior in different digital environments (CO4, CO6).
- **PO 9 (Lifelong Learning & Adaptability):** By mastering the "logic" of vector math rather than just software buttons, students are prepared to adapt to any future vector-based tool or emerging technology like real-time Lottie animations (CO6, CO7).

### CBCS Syllabus as per NEP 2020 for First Year B.Sc. (Media Graphics &

**Animation)**

<b>Name of the Programme</b>	<b>: B.Sc.(Media Graphics &amp; Animation)</b>
<b>Programme Code</b>	<b>: MGA</b>
<b>Class</b>	<b>: First Year B.Sc.(Media Graphics &amp; Animation)</b>
<b>Semester</b>	<b>: I</b>
<b>Course Type</b>	<b>: Major (Theory)</b>
<b>Course Code</b>	<b>: MGA-105-GEN</b>
<b>Course Title</b>	<b>: Fundamentals of UI/UX</b>
<b>No. of Credits</b>	<b>: 02</b>
<b>No. of Teaching Hours</b>	<b>: 30</b>

**Course Objectives:**

1. To introduce the core principles of User Experience (UX) and User Interface (UI) design for digital products.
2. To provide an understanding of user psychology, cognitive load, and human-computer interaction (HCI).
3. To develop proficiency in industry-standard prototyping tools (such as Figma or Adobe XD).
4. To teach the systematic process of user research, wireframing, and usability testing.
5. To enable students to create accessible, inclusive, and responsive designs for various screen sizes.
6. To master the "Atomic Design" methodology by teaching students how to build scalable and consistent UI libraries through the creation of reusable atoms, molecules, and organisms within a digital design system.
7. To integrate "Inclusive Design" and Accessibility standards by educating students on WCAG 2.1 guidelines to ensure digital products are usable by people with diverse abilities, including those with visual or motor impairments.

**Course Outcomes:**

**By the end of the course, students will be able to:**

**CO1 (Strategy & Research):** Apply UX research methods, including empathy mapping and persona creation, to identify user needs and define the product strategy.

**CO2 (Architecture & Logic):** Construct logical information architectures and user flows to define the structural navigation of a digital application.

**CO3 (Mastery of UI Design):** Create high-fidelity user interfaces in Figma using advanced design systems, typography, and color theory optimized for interactive media.

**CO4 (Interactivity & Professional Delivery):** Develop interactive prototypes, conduct usability testing, and prepare professional developer handoff documentation and case studies.

**CO5 (Design Systems & Scalability):** Build a comprehensive, documented design system in Figma utilizing **Auto-Layout, Components, and Variants** to ensure design consistency and efficient team collaboration.

**CO6 (Accessibility & Ethical Design):** Perform accessibility audits on interactive prototypes, ensuring compliant color contrast ratios and screen-reader-friendly navigation structures.

**CO7 (Micro-Interactions & Motion Logic):** Implement advanced motion logic and micro-interactions using "Smart Animate" to provide intuitive user feedback and enhance the overall emotional experience of the interface.

### Topics and Learning Points

- Unit 1: Unit 1: UX Strategy, Research, & Empathy (8L)**
- 1.1. **The UX Foundations:** Defining the UX Ecosystem (UX vs. UI), the role of a Product Designer, and the Design Thinking Framework (Empathize, Define, Ideate, Prototype, Test).
  - 1.2. **Human-Computer Interaction (HCI):** Core psychological laws including Fitts's Law, Hick's Law, and managing cognitive load.
  - 1.3. **User Research Methodologies:** Discovering needs through interviews, surveys, and competitive audits.
  - 1.4. **Defining Archetypes:** Constructing data-driven User Personas, Empathy Maps, and "How Might We" (HMW) problem statements.
- Unit 2: Logic, Architecture, & Low-Fidelity Design (8L)**
- 2.1. **Information Architecture (IA):** Task analysis, sitemap construction, and defining content hierarchy.
  - 2.2. **Interaction Logic:** Designing User Flow Diagrams to map decision paths and navigation logic.
  - 2.3. **Ideation & Wireframing:** Rapid sketching (Crazy 8s), paper prototyping, and creating digital grayscale Low-Fidelity Wireframes in Figma.
  - 2.4. **Navigation Systems:** Implementing standard patterns like tab bars, hamburger menus, and gesture-based navigation.
- Unit 3: Mastering Figma & High-Fidelity UI Design (7L)**
- 3.1. **The Figma Design System:** Mastering Frames (Artboards), Auto-Layout, and creating reusable Components with Variants and Properties.
  - 3.2. **Visual Aesthetics for Screens:** Advanced Color Theory (60-30-10 rule), accessibility contrast ratios, and Typography hierarchy for digital readability.
  - 3.3. **UI Elements:** Integrating vector iconography (SVG) and high-quality imagery to enhance interface clarity.
  - 3.4. **Workflow Optimization:** Utilizing professional plugins for icons, dummy data, and automated accessibility checkers.
- Unit 4: Interactivity, Testing, & Professional Delivery (7L)**
- 4.1. **Prototyping & Motion:** Creating micro-interactions (hover states, toggles) and seamless transitions using Figma's "Smart Animate".
  - 4.2. **Usability Validation:** Conducting moderated/unmoderated testing, identifying user pain points via behavior observation, and iterative design refinement.
  - 4.3. **Inclusive Design:** Ensuring Accessibility (WCAG 2.1) for screen readers and color-blind users.
  - 4.4. **Developer Handoff & Portfolio:** Mastering Figma's Dev Mode (CSS/Asset handoff) and synthesizing the process into a professional Case Study for Behance or a portfolio site

### References books:

1. **Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability** – Steve Krug
2. **Laws of UX: Using Psychology to Design Better Products** – Jon Yablonski
3. **Refactoring UI** – Adam Wathan & Steve Schoger

4. **Lean UX: Designing Great Products with Agile Teams** – Jeff Gothelf & Josh Seiden
5. **100 Things Every Designer Needs to Know About People** – Susan Weinschenk
6. **About Face: The Essentials of Interaction Design** – Alan Cooper, et al.
7. **User Story Mapping: Discover the Whole Story, Build the Right Product** – Jeff Patton
8. **Hooked: How to Build Habit-Forming Products** – Nir Eyal
9. **Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days** – Jake Knapp
10. **The Design of Everyday Things** – Don Norman

### Programme Outcomes and Course Outcomes Mapping:

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	1	2	2	3	-	-	2	-
CO2	2	3	-	3	3	1	-	-	2	1
CO3	2	3	-	3	2	1	-	-	1	-
CO4	2	2	-	3	2	-	2	-	2	-
CO5	1	3	2	2	3	2	2	-	3	-
CO6	2	3	-	2	3	3	-	-	2	-
CO7	1	3	2	2	3	2	3	-	3	1

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

#### Justification of CO-PO Mapping:

**PO6 (Research and Innovation):** Strongly supported by CO1, which focuses on UX research methods, empathy mapping, and persona creation to define product strategy.

**PO2 (Practical Knowledge):** UI/UX is inherently procedural, requiring students to master professional methodologies like research and wireframing (CO2, CO3, CO5).

**PO4 (Creative Problem-Solving):** Design thinking is central, as students solve user pain points through visual reasoning and navigation (CO2, CO3, CO4).

**PO10 (Ethics & Social Responsibility):** Linked to accessibility (A11y) and inclusive design standards (CO6, CO7).

### CBCS Syllabus as per NEP 2020 for First Year B.Sc. (Media Graphics & Animation)

**Name of the Programme** : B.Sc.(Media Graphics & Animation)

**Programme Code** : MGA

**Class** : First Year B.Sc.(Media Graphics & Animation)

**Semester** : I

<b>Course Type</b>	<b>: Major (Practical)</b>
<b>Course Code</b>	<b>: MGA-106-GEN</b>
<b>Course Title</b>	<b>: Practical Based on Basics of Fundamentals of UI/UX</b>
<b>No. of Credits</b>	<b>: 02</b>
<b>No. of Teaching Hours</b>	<b>: 60</b>

### Course Objectives:

1. To provide hands-on experience in conducting user research and synthesizing data into actionable design artifacts.
2. To master the industry-standard tool Figma for creating responsive and scalable UI components.
3. To practice the transition from low-fidelity sketching to high-fidelity interactive prototyping.
4. To develop the ability to conduct and document usability testing on real-world interactive designs.
5. To build a professional UX case study that demonstrates a logical problem-solving approach.
6. To master the "Atomic Design" methodology by teaching students how to build scalable and consistent UI libraries through the creation of reusable atoms, molecules, and organisms within a digital design system.
7. To integrate "Inclusive Design" and Accessibility standards by educating students on WCAG 2.1 guidelines to ensure digital products are usable by people with diverse abilities, including those with visual or motor impairments.

### Course Outcomes:

By the end of the course, students will be able to:

**CO1: Demonstrate the ability to conduct primary user research and synthesize findings into visual empathy maps and personas.**

**CO2: Construct architectural sitemaps and complex user flow diagrams to map the logic of digital products.**

**CO3: Produce low-fidelity wireframes and rapid paper prototypes to iterate on layout and functionality.**

**CO4: Build comprehensive design systems in Figma including typography scales, color palettes, and accessible UI components.**

**CO5: Develop high-fidelity interactive prototypes utilizing advanced Figma features like Auto-Layout and Variants.**

**CO6: Apply motion logic and micro-interactions using "Smart Animate" to enhance user engagement and feedback.**

**CO7: Perform usability testing on functional prototypes and document the iterative design process in a professional portfolio case study.**

### Topics and Learning Points

Sr. No.	Title of Practical	Hours

1	<b>User Research &amp; Persona Building:</b> Conduct stakeholder interviews for a "Food Delivery App" to identify pain points; synthesize findings into 2 distinct User Personas and a comprehensive Empathy Map..	4
2	<b>Low-Fidelity Wireframing (Paper to Digital):</b> Execute "Crazy 8s" rapid sketching for a "Fitness Tracker" mobile app; recreate these as grayscale Low-Fidelity wireframes in Figma to establish screen real estate and layout.	4
3	<b>Responsive Landing Page Construction:</b> Design a high-fidelity "Hero Section" for a web landing page; implement Figma <b>Auto-Layout</b> to ensure the design scales seamlessly between Desktop, Tablet, and Mobile viewports.	4
4	<b>Interactive E-Commerce Flow:</b> Develop a functional "Add to Cart" and "Checkout" sequence; utilize Figma <b>Prototyping</b> tools to manage overlays, fixed headers, and back-navigation.	4
5	<b>Iconography &amp; Visual Language:</b> Design a custom set of 12 vector icons (Home, Search, Profile, etc.) using geometric constraints to ensure consistent stroke weight, corner radius, and optical balance.	4
6	<b>Design System: Color &amp; Typography:</b> Build a "Visual Style Guide" defining primary and semantic color palettes with WCAG 2.1 accessibility passes; establish a typographic scale for Headings, Body, and Captions.	4
7	<b>Atomic Design: Components &amp; Variants:</b> Create a library of reusable UI components (Buttons, Input Fields, Checkboxes); utilize Figma Variants and Boolean Properties to manage different button states (Default, Hover, Disabled).	4
8	<b>Information Architecture &amp; Sitemaps:</b> Map the structural hierarchy of a complex multi-page "University Portal"; construct a detailed Sitemap and User Flow Diagram to visualize the user's decision-making path.	4
9	<b>Micro-Interactions &amp; Smart Animate:</b> Design 3 high-impact micro-interactions using Figma Smart Animate: a smooth "Hamburger Menu" transition, a "Pull-to-Refresh" animation, and a multi-state "Like" button.	4
10	<b>App Onboarding Experience:</b> Create a 4-screen "First-Time User" onboarding sequence for a Travel App; focus on storytelling and visual cues to guide the user through the app's core features.	4
11	<b>Dark Mode Design Transformation:</b> Apply "Color Inversion" logic to an existing light-themed Dashboard; adjust elevation shadows and saturation levels to maintain readability and visual hierarchy in Dark Mode.	4
12	<b>Moderated Usability Testing:</b> Perform a "Think Aloud" usability test on a peer's prototype; document user friction points and propose 3 specific design iterations supported by observed user behavior.	4
13	<b>Data Visualization &amp; Dashboards:</b> Design a "Business Analytics Dashboard" featuring complex data tables, line graphs, and pie charts; prioritize Information Density without compromising visual clarity.	4
14	<b>Accessibility (A11y) Audit:</b> Redesign a non-accessible web form to comply with screen-reader requirements; implement high-contrast focus states and descriptive "Alt-Text" for all interactive elements.	4
15	<b>UX Case Study Synthesis:</b> Compile all project phases (Research, Wireframes, Testing, Final UI) into a professional Case Study formatted for a digital portfolio (Behance/Dribbble), emphasizing the "Problem-Solution" narrative.	4

### References books:

1. **The Design of Everyday Things** – Don Norman
2. **Don't Make Me Think (Revisited)** – Steve Krug
3. **Laws of UX: Using Psychology to Design Better Products** – Jon Yablonski
4. **Refactoring UI** – Adam Wathan & Steve Schoger
5. **Lean UX: Designing Great Products with Agile Teams** – Jeff Gothelf & Josh Seiden
6. **About Face: The Essentials of Interaction Design** – Alan Cooper, Robert Reimann, & David Cronin
7. **100 Things Every Designer Needs to Know About People** – Susan Weinschenk
8. **User Story Mapping: Discover the Whole Story, Build the Right Product** – Jeff Patton

9. **Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days** – Jake Knapp  
 10. **Figma for UX Design** – Marc Andrew

### Programme Outcomes and Course Outcomes Mapping:

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1	3	2	3	3	2	2	3	2	-
CO2	-	3	3	2	3	2	3	3	2	1
CO3	-	3	2	3	3	2	2	3	2	-
CO4	2	3	3	2	3	1	2	1	1	-
CO5	1	3	-	3	3	2	1	-	1	-
CO6	2	3	-	2	3	3	-	2	3	-
CO7	1	3	3	2	3	2	3	1	3	-

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

### Justification of Mapping (MGA-106-GEN)

**PO2 (Practical Knowledge):** Focuses on the "Design Sprint" workflow where students produce personas, sitemaps, and high-fidelity prototypes (CO1–CO7).

**PO3 (Media Asset Management):** Relevant for managing complex design systems, component libraries, and versioning in tools like Figma (CO4, CO7).

**PO5 (Specialized Technical Competencies):** Covers specialized skills in interactive prototyping and auto-layout, which are the industry benchmarks for modern UI designers (CO1, CO3, CO5).

**PO7 (Communication & Collaboration):** Students learn to communicate design decisions to stakeholders and prepare developer handoff documentation (CO2, CO7)

### CBCS Syllabus as per NEP 2020 for First Year B.Sc. (Media Graphics & Animation)

<b>Name of the Programme</b>	<b>: B.Sc.(Media Graphics &amp; Animation)</b>
<b>Programme Code</b>	<b>: MGA</b>
<b>Class</b>	<b>: First Year B.Sc.(Media Graphics &amp; Animation)</b>
<b>Semester</b>	<b>: I</b>
<b>Course Type</b>	<b>: Open Elective (Theory)</b>
<b>Course Code</b>	<b>: MGA-107-OE</b>
<b>Course Title</b>	<b>: Fundamentals of Generative AI</b>
<b>No. of Credits</b>	<b>: 02</b>
<b>No. of Teaching Hours</b>	<b>: 30</b>

### Course Objectives:

- To understand the core evolution of AI:** Trace the journey from traditional Artificial Intelligence and Machine Learning to the emergence of modern Generative AI models.
- To decode the technical architecture:** Provide students with a clear, non-technical

understanding of how the Transformer architecture, tokens, and neural networks work together to create content.

3. **To distinguish between Multimodal Models:** Familiarize students with the different types of Gen-AI, including Large Language Models (LLMs) for text and Diffusion Models for image and video generation.
4. **To analyze industry transformation:** Explore how Generative AI is reshaping the professional landscape of Media, Animation, and Graphic Design.
5. **To identify limitations and risks:** Educate students on technical constraints like hallucinations and data bias to ensure a realistic understanding of AI capabilities.
6. **To establish an ethical and legal framework:** Critically examine the moral implications of Deepfakes, the importance of digital watermarking, and the evolving laws surrounding AI copyright and Intellectual Property (IP).
7. **To foster a collaborative mindset:** Encourage a perspective where AI is viewed as a "Co-pilot" or "Creative Partner" rather than a replacement for human creativity.

### Course Outcomes:

**By the end of the course, students will be able to:**

**CO1: Identify and Define** the core differences between Artificial Intelligence, Machine Learning, and Generative AI within the modern digital landscape.

**CO2: Explain** the underlying mechanics of Transformer models, including the concepts of tokens, context windows, and the training process.

**CO3: Analyze** the technical limitations of Large Language Models (LLMs), specifically addressing the phenomena of AI hallucinations and the necessity of data grounding.

**CO4: Compare and Contrast** multimodal AI technologies, including text-to-image (Diffusion models), text-to-video, and voice synthesis.

**CO5: Evaluate** the impact of Generative AI on the creative production pipeline in animation, media, and graphic design.

**CO6: Critically Assess** the ethical implications of AI, focusing on deepfakes, algorithmic bias, and digital identity.

**CO7: Discuss** the legal complexities regarding Intellectual Property (IP) and copyright ownership of AI-generated content.

### sTopics and Learning Points

- Unit 1: Introduction to the AI Landscape (8L)**
- 1.1. Defining Intelligence: Distinction between Narrow AI, General AI (AGI), and Super AI.
  - 1.2. Discriminative vs. Generative AI: Understanding how AI "labels" data vs. how it "creates" new data.
  - 1.3. Brief History: From early chatbots (ELIZA) to the breakthrough of Transformers and GPT models.
  - 1.4. The Ecosystem: Introduction to key players (OpenAI, Google DeepMind, Anthropic) and their primary models (GPT-4, Gemini, Claude).
- Unit 2: How Generative AI "Thinks" (Core Mechanics) (8L)**
- 2.1. The Transformer Architecture: A non-technical overview of "Attention" mechanisms (how AI focuses on specific words).

- 2.2. Tokens and Context Windows: Understanding how AI breaks down language and how much "memory" it has in a single chat.
- 2.3. Training and Fine-Tuning: The journey from raw data to a polished assistant (Pre-training vs. RLHF - Reinforcement Learning from Human Feedback).
- 2.4. Hallucinations: Why AI makes things up and the importance of "Grounding" (connecting AI to real-world facts).

**Unit 3: Multimodal AI and Media Transformation (7L)**

- 3.1. Text-to-Everything: Overview of Large Language Models (LLMs) for writing and coding.
- 3.2. Diffusion Models: How AI generates images (Midjourney, DALL-E, Stable Diffusion) by "denoising" random pixels.
- 3.3. Generative Video and Audio: Introduction to text-to-video (Sora, Veo) and AI voice synthesis (ElevenLabs).
- 3.4. Impact on Creative Industries: How AI is changing the production pipeline in Animation, Graphics, and Journalism.

**Unit 4: Ethics, Law, and the Future of Work (7L)**

- 4.1. The Ethics of "Deepfakes": Misinformation, digital identity, and the importance of watermarking.
- 4.2. Intellectual Property (IP): The debate over AI-generated art—who owns the copyright?
- 4.3. Bias and Fairness: Understanding how training data can inherit human prejudices.
- 4.4. The Human-AI Partnership: Moving from "AI will replace me" to "The person using AI will replace the person who isn't."

### References:

*The Coming Wave* by Mustafa Suleyman.

Google's "Generative AI Learning Path" (Cloud Training).

MIT Technology Review - AI Section.

### Programme Outcomes and Course Outcomes Mapping:

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	-	2	2	1	-	3	2	1
CO2	2	3	2	3	3	2	1	3	2	-
CO3	2	3	1	3	3	2	1	3	2	-
CO4	2	3	2	3	3	3	1	3	2	1
CO5	1	2	-	2	2	3	2	3	3	3
CO6	1	2	2	3	3	3	2	3	3	2
CO7	2	1	-	-	1	2	1	2	2	3

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

### Mapping Justification

- **PO8 (Digital Proficiency):** The strongest alignment, as the course centers on mastering the latest frontier of AI technology, including LLMs and Diffusion models (CO1–CO6).
- **PO10 (Ethics & Social Responsibility):** Critically mapped to CO6 and CO7, addressing ethical implications like deepfakes and the legal complexities of IP and copyright ownership.
- **PO5 (Specialized Competencies):** Covers specialized skills in prompt engineering and AI-assisted workflows

now essential in the industry (CO2, CO3, CO4, CO6).

## CBCS Syllabus as per NEP 2020 for First Year B.Sc. (Media Graphics & Animation)

<b>Name of the Programme</b>	<b>: B.Sc.(Media Graphics &amp; Animation)</b>
<b>Programme Code</b>	<b>: MGA</b>
<b>Class</b>	<b>: First Year B.Sc.(Media Graphics &amp; Animation)</b>
<b>Semester</b>	<b>: I</b>
<b>Course Type</b>	<b>: Skill Enhancement Course (Practical)</b>
<b>Course Code</b>	<b>: MGA-108-SEC</b>
<b>Course Title</b>	<b>: Drawing for Animation-I</b>
<b>No. of Credits</b>	<b>: 02</b>
<b>No. of Teaching Hours</b>	<b>: 60</b>

### Course Objectives:

1. To develop fundamental drawing skills through the study of lines, shapes, and forms.
2. To master the principles of linear perspective for creating believable environments.
3. To understand the importance of light, shadow, and texture in 3D rendering.
4. To introduce students to gesture drawing and the study of human proportions.
5. To build observational skills through still life and environment sketching.
6. To master "Force and Line of Action" by teaching students how to move beyond static anatomy to create dynamic, fluid sketches that emphasize the primary energy and directional flow of an animated pose.
7. To develop "Mannequinization" techniques for character rotation, enabling students to simplify complex human forms into 3D volumes that can be accurately drawn from any camera angle—a critical skill for consistent character turnarounds.

### Course Outcomes:

**By the end of the course, students will be able to:**

**CO1:** Execute controlled line work and identify basic geometric volumes in complex objects.

**CO2:** Apply 1-point, 2-point, and 3-point perspective rules to draw accurate architectural and organic forms.

**CO3:** Render objects with realistic light and shade using various hatching and tonal techniques.

**CO4:** Perform rapid gesture drawings that capture the "action" and weight of a human pose.

**CO5:** Analyze and draw the human figure using the "Eight-Head" proportion system and simplified mannequinization.

**CO6:** Create detailed still-life compositions with a focus on proportion, scale, and material texture.

**CO7:** Assemble a portfolio of physical and digital sketches demonstrating foundational drawing mastery.

Topics and Learning Points		
Sr. No	Title of Practical	Hours
1	Create a "Stroke Matrix" by filling an A3 sheet with controlled circles, ellipses, and straight lines using both tripod and overhand grips to demonstrate pencil control and muscle memory.	4
2	Perform a "Primitive Breakdown" by selecting three complex household objects and sketching them as a collection of 3D primitive shapes (cubes, cylinders, and spheres) to show volume construction.	4
3	Draw a detailed architectural interior (such as a bedroom or a classroom) using <b>One-Point Perspective</b> , ensuring all receding lines converge accurately at the single vanishing point on the horizon line.	4
4	Create two sketches of a skyscraper or a tall box: one from a <b>Bird's Eye View</b> and one from a <b>Worm's Eye View</b> using <b>Three-Point Perspective</b> to demonstrate extreme foreshortening.	4
5	Set up a three-object still life and draw it using only <b>Negative Space</b> (shading the areas around the objects) to define the silhouettes and verify the accuracy of the proportions.	4
6	Render a sphere, a cube, and a cylinder under a single strong light source, clearly labeling and depicting the <b>5-Value Scale</b> (highlight, mid-tone, core shadow, reflected light, and cast shadow).	4
7	Create a "Material Grid" by rendering four different textures—weathered wood, polished chrome, transparent glass, and draped velvet—using specific shading techniques to define edges without outlines.	4
8	Complete a series of twenty <b>30-second Gesture Drawings</b> of a human figure in motion, focusing exclusively on capturing the <b>Line of Action</b> and the center of gravity.	4
9	Construct a <b>Mannequinized Figure</b> in a dynamic pose (e.g., jumping or sitting) using the <b>8-head proportion system</b> and representing the torso and limbs as simplified boxes and cylinders.	4
10	Produce a set of five <b>Thumbnail Sketches</b> of an outdoor landscape, then select the best composition to develop into a detailed final field sketch emphasizing depth and focal points.	4
11	<b>Line of Action &amp; Force Sketches:</b> Practice "Gesture Drawing" sessions (30-second and 2-minute poses) focusing on a single curved line that defines the core energy and flow of a character's movement.	4
12	<b>Silhouette &amp; Readability Study:</b> Design 5 distinct character poses (e.g., Joy, Fear, Strength) and fill them with solid black to test if the action is "readable" by its outline alone, without internal detail.	4
13	<b>Volume Construction using Mannequinization:</b> Reconstruct complex human or animal forms using basic 3D primitives (spheres, cylinders, and boxes) to demonstrate an understanding of weight and perspective in a 2D drawing.	4
14	<b>Facial Expression &amp; Phonic Mouth Shapes:</b> Create an expression sheet for a single character (Happy, Angry, Sad, Surprised) and a basic mouth-chart for lip-syncing (A, E, O, M, F/V shapes).	4

15	<b>Animal Anatomy &amp; Locomotion:</b> Sketch a quadruped (e.g., a dog or horse) focusing on the "hinge" mechanics of the legs and the flow of the spine during a walk or run cycle.	4
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## References:

1. **How to Draw** – Scott Robertson
2. **Successful Drawing** – Andrew Loomis
3. **Perspective Made Easy** – Ernest R. Norling
4. **Force: Dynamic Life Drawing for Animators** – Mike Mattesi
5. **Drawing on the Right Side of the Brain** – Betty Edwards

## Programme Outcomes and Course Outcomes Mapping:

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13
CO1	3	2	-	3	3	1	-	-	2	-	1	-	1
CO2	2	3	-	2	2	2	3	-	2	-	2	-	2
CO3	1	3	-	3	3	2	-	-	2	-	2	-	2
CO4	2	3	2	2	3	1	2	-	1	-	2	-	1
CO5	1	3	-	3	3	2	1	-	1	-	2	-	2
CO6	2	3	-	2	3	3	-	-	3	-	2	-	2
CO7	1	3	3	2	2	1	3	1	3	-	3	-	3

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

## Mapping Justification

- **PO 1 (Comprehensive Knowledge) & PO 2 (Practical, Professional, and Procedural Knowledge):** These are the primary focus of the course, as students move from theoretical anatomy to the practical construction of human and animal forms (mapped to **CO1, CO2, and CO3**).
- **PO 3 (Media Asset Management) & PO 9 (Lifelong Learning):** These are strongly supported by **CO7**, where students learn to curate, organize, and assemble their physical and digital sketches into a cohesive professional portfolio for career growth.
- **PO 4 (Creative Problem-Solving and Visual Reasoning):** This is addressed through **CO5 and CO6**, where students must use visual reasoning to simplify complex forms into basic shapes and research various artistic styles to create unique character designs.
- **PO 5 (Specialized and Technical Competencies):** The course develops high-level technical skills in line work, volume, and perspective, which are essential for professional animation pipelines (mapped to **CO4 and CO5**).
- **PO 7 (Communication and Collaboration):** This is mapped to **CO4 and CO7**, as creating clear model sheets and a structured portfolio is the primary way an artist communicates their vision to a production team or a client.
- **PO 11 (Autonomy, Responsibility, and Accountability) & PO 13 (Creativity and Entrepreneurial Mindset):** These are directly linked to **CO7**. The independent task of building a professional-grade portfolio demonstrates a student's accountability for their own work and prepares them for the entrepreneurial nature of the animation industry.

