

Detailed Syllabus for
Master of Science (Multimedia) (One Year)
(Full Time Post Graduate Programme)

Based on National Education Policy (NEP) 2020

Effective from July 2026



Department of New Media Technology
MAKHANLAL CHATURVEDI NATIONAL UNIVERSITY OF
JOURNALISM & COMMUNICATION, BHOPAL

Makhanpuram, Opposite M.P. State Shooting Academy,

Bishankhedi, Bhopal, Madhya Pradesh – 462044

M.Sc. Multimedia (One Year)

Master of Science in Multimedia – M.Sc. (MM)
Level – Postgraduate
Duration -1 years (2 Semesters)
Seats – 30
Eligibility Criteria – 1. A bachelor's degree in (Multimedia with Honours/ Honours with Research), with a minimum of 160 credits for a 1-year/2-semester M.Sc. (Multimedia) at level 6.5 on the NHEQF. 2. A student is eligible for a M.Sc (Multimedia) one year programme with either a major or minor (s) Multimedia discipline in B.Sc programme.

About the Program:

The M.Sc. Multimedia (One Year) program, aligned with NEP 2020, is designed to equip students with advanced skills in animation, UI/UX design, game development, AR/VR, digital marketing, AI in multimedia, and entrepreneurship. With a strong focus on industry-oriented learning, students gain hands-on experience with cutting-edge tools like Adobe After Effects, Blender, Maya, Unity, Tableau, and AI-driven design platforms. The multidisciplinary curriculum blends technology, creativity, and business, offering courses in motion graphics, game development, AI-powered content creation, multimedia entrepreneurship, and digital marketing strategies. Through internships, projects, and research, students engage in real-world problem-solving, ensuring they are industry-ready.

Career Opportunities

Career opportunities span across roles such as multimedia producer, game developer, motion graphics artist, UX/UI designer, AI-driven media innovator, and digital strategist, empowering graduates to excel in creative industries or launch their own multimedia startups. This flexible and skill-based program, following the Choice-Based Credit System (CBCS), integrates practical expertise, strategic thinking, and innovation, making it an ideal choice for students aiming to lead in the evolving digital media landscape.

Program Objectives:

The M.Sc. Multimedia (Final Year) program equips students with advanced skills in animation, game design, UI/UX, AR/VR, digital marketing, and AI in multimedia. It fosters creativity and technology integration, offers hands-on training with industry software, encourages innovation and research, develops business acumen, and promotes ethical media practices in digital content creation.

M.Sc Multimedia Programme (one Year) for 4 years UG (Hons./Hons with Research)

Semester	DSC	DSE	Research	Total
			Research Project /Academic Project	
Semester -I	DSC-1 Multimedia Tools for content creation (4 Credits)	DSE-1 A. Generative AI for Multimedia (4 Credits) OR B. AI for Gaming and Animation (4 Credits) DSE-2 A. AR/VR and Gaming Technology (4 Credits) OR B. AR /VR in Filmmaking and Animation (4 Credits) DSE-3 UI/UX Design for Multimedia Platforms (4 Credits) OR B Design Thinking for Digital Media (4 Credits)	Nil	20
	DSC-2 Visual Story Telling (4 Credits)			
Semester -II	DSC-3 Advanced Animation Production (4 Credits) DSC-4 Understanding Data (4 Credits)	DSE-4 A. Social Media Marketing & Monetization (4 Credits) OR B. Multimedia Entrepreneurship (4 Credits)	Research Project /Academic Project/ (8 Credits)	20

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PROGRAMME EDUCATIONAL OBJECTIVE

PEO1: Develop expertise in digital content creation, animation, data storytelling, AR/VR, UI/UX, and multimedia monetization using modern tools and technologies.

PEO2: Demonstrate advanced skills in problem-solving, critical thinking, and creative storytelling applicable across multimedia platforms.

PEO3: Contribute effectively to interdisciplinary teams and lead innovation in media production, design thinking, and digital entrepreneurship.

PEO4: Practice ethical and responsible communication while understanding legal frameworks and societal impacts of digital media.

PEO5: Engage in continuous learning, research, and innovation, adapting to emerging trends in multimedia, artificial intelligence, and immersive technologies.

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POSTGRADUATE ATTRIBUTES

1. Academic Excellence

Mastery of multimedia theory and practice through a structured curriculum and hands-on learning.

2. Technical and Digital Proficiency

Advanced skill in software and digital tools like Adobe Suite, Blender, Unity, Tableau, generative AI platforms, etc.

3. Innovation and Creativity

Ability to develop original content, strategies, and narratives using innovative storytelling approaches.

4. Problem Solving and Decision Making

Competence in analyzing user needs, designing solutions, and making informed content and platform choices.

5. Ethical Literacy and Digital Citizenship

Awareness of ethical standards in content creation, digital marketing, and platform governance.

6. Leadership and Entrepreneurship

Readiness to lead projects, manage teams, or establish startups in the multimedia domain.

7. Effective Communication

Fluency in visual, audio, and textual storytelling across digital formats and platforms.

8. Interdisciplinary Thinking

Ability to integrate design, technology, business, and user experience in multimedia contexts.

9. Social Responsibility and Cultural Awareness

Sensitivity to cultural contexts and the role of media in shaping public discourse and social impact.

10. Adaptability and Continuous Learning

Commitment to lifelong learning and agility in adopting emerging trends like AI, AR/VR, and immersive media.

PROGRAM OUTCOMES (POS)

1. Domain Expertise and Skill Proficiency

PO1: Graduates will demonstrate mastery of tools and techniques in multimedia, including content creation, animation, UI/UX, AR/VR, data storytelling, and social media marketing.

2. Creative and Critical Thinking

PO2: Apply creative thinking and critical analysis to solve multimedia communication problems through innovative and impactful content across platforms.

3. PO3: Design Thinking and Innovation

Apply design thinking principles to conceptualize, prototype, and test multimedia products and solutions, fostering user-centric innovation.

4. Technological Adaptability

PO4: Demonstrate proficiency in adapting to new and emerging technologies such as generative AI, XR, and immersive storytelling tools relevant to digital media.

5. Communication and Collaboration

PO5: Communicate effectively through multiple forms of media and collaborate within interdisciplinary teams for content creation, storytelling, and production.

6. Research and Inquiry

PO6: Conduct media research and analysis, apply data insights to enhance content strategy, and contribute to scholarly and professional discourse in multimedia.

7. Ethics and Societal Impact

PO7: Practice ethical responsibility, respect intellectual property rights, and assess the cultural and societal impact of multimedia production and monetization.

8. Entrepreneurial and Leadership Skills

PO8: Demonstrate the ability to initiate, manage, and lead multimedia ventures, understanding market dynamics, monetization strategies, and audience engagement.

9. Lifelong Learning and Digital Fluency

PO9: Engage in continuous learning to keep pace with evolving tools, platforms, and digital storytelling trends in the multimedia ecosystem.

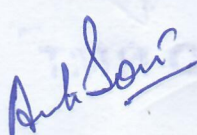
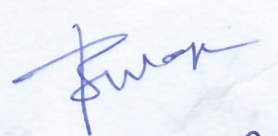
10. Sustainable and Inclusive Media Practice

PO10: Design multimedia content that is accessible, inclusive, and mindful of sustainability in digital infrastructure and content dissemination.

Mapping of Postgraduate Attributes (PGAs) and Program Outcomes (POs)

Postgraduate Attributes (PGAs)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
PGA1: Academic Excellence	3	2	2	2	2	3	1	1	2	1
PGA2: Technical and Digital Proficiency	3	2	2	3	2	2	1	2	3	1
PGA3: Innovation and Creativity	2	3	3	2	2	2	1	3	2	2
PGA4: Problem Solving and Decision Making	2	3	3	2	2	2	1	2	2	1
PGA5: Ethical Literacy and Digital Citizenship	1	1	1	1	2	2	3	2	2	3
PGA6: Leadership and Entrepreneurship	1	2	3	2	2	2	1	3	2	2
PGA7: Effective Communication	2	3	2	1	3	2	2	2	2	2
PGA8: Interdisciplinary Thinking	2	2	3	2	3	3	2	3	2	2
PGA9: Social Responsibility and Cultural Awareness	1	2	2	1	2	2	3	2	2	3
PGA10: Adaptability and Continuous Learning	2	2	2	3	2	2	2	2	3	2

3 – High correlation, 2 – Moderate correlation, 1 – Low correlation, 0 – No correlation

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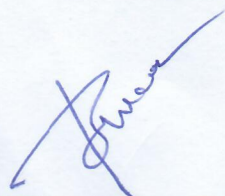

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PO-PEO Mapping

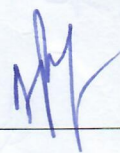
PEO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
PEO1	3	2	3	3	2	0	0	2	2	0
PEO2	2	3	0	3	0	2	0	2	3	0
PEO3	0	0	3	2	3	0	3	0	0	0
PEO4	0	0	0	0	0	0	2	3	0	0
PEO5	2	2	2	0	2	3	0	0	3	0

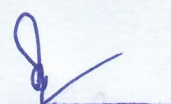
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Semester I

S.No	Course Code	Class& Paper	Course Name	Credits	Theory Marks	Internal Marks	Practical Marks	Total Marks
1	DSC1	1 M.Sc(MM)1	Multimedia Tools for content creation	4	50	20	30	100
2	DSC2	1 M.Sc(MM)2	Visual Story Telling	4	80	20	-	100
3	DSE1	1 M.Sc(MM)3A	Generative AI for Multimedia	4	50	20	30	100
		1 M.Sc(MM)3B	OR AI for Gaming and Animation		50	20	30	100
4	DSE2	1.M.Sc(MM)4A	AR/VR and gaming Technology	4	50	20	30	100
		1 M.Sc(MM)4B	OR AR / VR in Filmmaking and Animation		50	20	30	100
5	DSE3	1 M.Sc(MM)5A	UI/UX Design for Multimedia Platforms	4	50	20	30	100
		1 M.Sc(MM)5B	OR Design Thinking for Digital Media		80	20	-	100

Semester II

S.No	Course Code	Class& Paper	Course Name	Credits	Theory Marks	Internal Marks	Practical Marks	Total Marks
1	DSC3	2 M.Sc(MM)1	Advanced Animation Production	4	50	20	30	100
2	DSC4	2 M.Sc(MM)2	Understanding Data	4	50	20	30	100
3	DSE4	2 M.Sc(MM)3A	Social Media Marketing & Monetization	4	80	20	-	100
		2 M.Sc(MM)3B	OR Multimedia Entrepreneurship		80	20	-	100
4	DSC5	2M.Sc(MM)5	Research Project / Academic Project	8	-	140	160	200

1 M.Sc (MM) 1	Marks: 100			Credits: 4		
Multimedia Tools for Content Creation	Th	Pr	la	Contact hrs		
				L	T	P
	50	30	20	3	-	2

Course Objectives

1. Familiarize students with various Multimedia Tools and develop an understanding of their applications.
2. Provide students with the necessary skills for digital image editing, audio editing, and video editing.
3. Offer practical experience with key software and techniques for creating and manipulating Multimedia Content.
4. Enhance creative and technical abilities essential for a career in digital media.
5. Provide insights into the latest trends and industry standards in digital content creation.

Course Outcomes

1. Students will be able to effectively utilize various Multimedia Tools.
2. Students will be able to create and edit professional-quality digital images, audio, and video content.
3. They will be able to select and apply appropriate tools and techniques for Multimedia projects.
4. Students will be prepared to work independently and collaboratively in digital media environments.
5. They will be able to offer creative solutions to challenges encountered in the field of digital content creation.

Unit-1	Fundamentals of Content Creation	L	T	P
1.1	Introduction to Digital Content, Types and Categories of Digital Content (Lecture, Tutorial)	2	1	-
1.2	Characteristics of Effective Digital Content (Lecture, Practical)	2	1	-
1.3	Content Creation Pipeline - Video Production, Audio Production, (Lecture, Practical)	2	1	-
1.4	Content Creation Pipeline - Graphic Design, Web Content Creation (Lecture)	2	1	-
1.5	Ethical Considerations in Digital Content Creation (Lecture, Practical)	2	1	-

Unit-2	Content Writing Tools for Digital Media	L	T	P
2.1	Principles of Effective Digital Writing (Lecture, Practical)	2	1	-
2.2	Understanding the Digital Reader and Online Reading Habits (Lecture, Practical)	2	1	-
2.3	Writing for Different Digital Formats -Social Media Content, Podcast Scripts, Email Marketing, Advertisement Scripts (Lecture, Practical)	2	1	-
2.4	Tools for Content Writing - Hemingway Editor, Rytr, Grammarly, Google Docs, Microsoft Word. (Lecture, Practical)	2	1	-
2.5	AI Prompt Writing for generating - Text and Image (Lecture, Tutorial, Practical)	2	1	-

Unit-3	Production Tools and Techniques	L	T	P
3.1	Digital Audio Workstations –Basic recording setup, multi-track Recording, Editing fundamentals -Recording, levels, planning, Trimming, Layering. (Lecture, Tutorial, Practical)	2	1	2

3.2	Video Production - Different camera types (Smartphones, DSLRs, camcorders), Basic lighting setups, Different shot types, Recording tools – OBS. (Lecture, Tutorial, Practical)	2	1	2
3.3	Video Editing Tools & Technique - Non-Linear Editing (NLE), Video Editing Workflow, Final Edit, Exporting and Delivery, Advanced Concepts – Multi-Cam Setup. (Lecture, Tutorial, Practical)	2	1	2
3.4	Audio Production Tools– AudioMass, Audacity, Adobe Podcast Enhance, AI Audio Generation (Lecture, Tutorial, Practical)	2	1	2
3.5	Graphics Production Tools – Canva, Fotor, Ideogram AI, Pixlr (Lecture, Tutorial, Practical)	2	1	2

Unit-4	Editing Tools for Content Creation	L	T	P
4.1	Audio Editing –Audacity, (Lecture, Tutorial)	2	1	2
4.2	Image Editing – Photoshop, Lightroom (Lecture, Practical)	2	1	2
4.3	Video Editing – Adobe Premiere Pro (Lecture, Practical)	2	1	2
4.4	Text Editing – Grammarly, Microsoft Word. (Lecture, Practical)	2	1	2
4.5	Other Tools for Content Creation and Editing . (Lecture, Practical)	2	1	2

Unit-5	Publishing Digital Content	L	T	P
5.1	Video Publishing Platforms – YouTube, Dailymotion (Lecture)	2	1	2
5.2	Audio Publishing Platforms –Podbean, Spreaker, (Lecture, Practical)	2	1	2
5.3	Article Publishing Platforms – Medium, WordPress, Blogger (Lecture, Practical)	2	1	2
5.4	Social Media Publishing Platforms – Facebook, Instagram, X, LinkedIn (Lecture)	2	1	2
5.5	eBooks/Digital Document Publishing –Kindle ,Kobo Writing Life, Barnes & Noble Press (Lecture, Practical)	2	1	2

Practical/Projects/Assignments:

1. Write an E-Book of 20 Pages and Publish Online.
2. Create a video advertisement for Digital Platform of 30 Seconds.
3. Create, Develop and Maintain a Blog / Website.
4. Create a Podcast and Publish Online.
5. Create 5 Graphics Advertisements.

Reference Books:

1. Building a Storybrand: Clarify Your Message So Customers Will Listen -by Donald Miller (Author)
2. "Contagious: Why Things Catch On" by Jonah Berger

E-Resources:

1. <https://www.zazzlemedia.co.uk/blog/digital-content-types/#gref>
2. <https://www.slideshare.net/slideshow/content-creation-frameworkpdf/259001378>

1 M.Sc (MM) 2	Marks: 100			Credits: 4		
Visual Storytelling	Th	Pr	Ia	Contact hrs		
				L	T	P
	80	-	20	3	1	-

Course Objectives

1. To explore the fundamental principles and language of visual storytelling.
2. To develop narrative construction skills across media platforms.
3. To enhance proficiency in visual grammar, framing, sequencing, and editing.
4. To foster the ability to ideate, visually plan, and pitch visual narratives.
5. To build industry-ready storytelling portfolios and showreels.

Course Outcomes

1. Understand and apply the core principles of visual storytelling.
2. Create compelling narratives using visual grammar and sequential art.
3. Develop shot lists, visual treatments, and short films that demonstrate narrative clarity.
4. Use visual storytelling tools effectively in real-world and digital contexts.
5. Build a visual storytelling project suitable for inclusion in a professional portfolio.

Unit-1	Introduction to Visual Storytelling	L	T	P
1.1	Introduction to Visual Language – Semiotics, symbols, and visual metaphors (Lecture, Tutorial, presentation)	2	1	-
1.2	The Psychology of Seeing – Visual perception and cognitive storytelling (Lecture, Tutorial, presentation)	2	1	-
1.3	Story Structures – 3-act, Hero's Journey, nonlinear narratives (Lecture, Tutorial, presentation)	2	1	-
1.4	Mediums and Platforms – Film, animation, comics, VR, games (Lecture, Tutorial, presentation)	2	1	-
1.5	Industry Case Studies (Lecture, Tutorial, presentation)	2	1	-

Unit-2	Crafting Visuals and Character in Narrative	L	T	P
2.1	Character Design and Development – Archetypes, motives, transformation (Lecture, Tutorial, presentation)	2	1	2
2.2	World-building – Visual context, setting, mood boards (Lecture, Tutorial, presentation)	2	1	2
2.3	Cinematic Time and Space – Temporal sequencing, transitions (Lecture, Tutorial, presentation)	2	1	2
2.4	Blocking and Staging – Movement, space, and visual hierarchy (Lecture, Tutorial, presentation)	2	1	2
2.5	Continuity and Visual Logic – Montage, jump cuts, and ellipsis (Lecture, Tutorial, presentation)	2	1	2

Unit-3	Visual Design and Pre-visualization	L	T	P
3.1	Visual Grammar: Shot types, camera angles, and composition, camera movement (Lecture, Tutorial, Presentation)	2	1	2

3.2	Pacing and Rhythm – Frame progression, tension and release (Lecture, Tutorial, presentation)	2	1	2
3.3	Designing the Visual Mood: Creating Lookbooks, color palettes, and lighting plans (Lecture, Tutorial, Presentation)	2	1	2
3.4	Planning the Scene: Creating floor plans, overhead diagrams, and blocking for action (Lecture, Tutorial, Practical)	2	1	2
3.5	Visual Treatment: From script breakdown to a complete visual plan document (Lecture, Tutorial, Presentation)	2	1	-

Unit-4	Narrative Design for Multiplatform Media	L	T	P
4.1	Transmedia Storytelling – Expanding narrative across media (Lecture, Tutorial, presentation)	2	1	2
4.2	Interactive and Non-linear Narratives – Branching story paths, games (Lecture, Practical)	2	1	2
4.3	AR/VR Storytelling – Immersive environments and spatial storytelling (Lecture, Tutorial, presentation)	2	1	2
4.4	Short-form Visual Content – Reels, YouTube Shorts (Lecture, Practical)	2	1	2
4.5	Branding and Commercial Storytelling – Ad films, motion graphics (Lecture, Tutorial, presentation)	2	1	2

Unit-5	Capstone Project, Portfolio & Professional Practice	L	T	P
5.1	Ideation to Execution – Project planning, scripting, and production (Lecture, Tutorial, presentation)	2	1	2
5.2	Working in Creative Teams – Collaboration and creative roles (Lecture, Tutorial, presentation)	2	1	2
5.3	Industry Pitching – Story decks, loglines, visual treatments (Lecture, Tutorial, presentation)	2	1	2
5.4	Feedback and Iteration – Review cycles, client-style critiques (Lecture, Tutorial, presentation)	2	1	2
5.5	Final Showcase – Portfolio preparation, self-promotion strategies (Lecture, Tutorial, presentation)	2	1	2

Practical/Projects/Assignments:

1. Visual story map for a 3-scene short film with character mood boards and setting sketches.
2. Create a complete Visual Packet for a 2-page script, including a detailed shot list, a floor plan for a key scene, and a visual mood board/lookbook.
3. Design and pitch a visual storytelling campaign across two platforms (e.g., Instagram + AR) using a visual treatment deck.
4. Capstone Project: Final visual storytelling piece (short film/animation / campaign) supported by a complete pre-production and visual planning portfolio.

Reference Books:

1. Block, Bruce. The Visual Story: Creating the Visual Structure of Film, TV, and Digital Media. (Focal Press)
2. Katz, Steven D. Film Directing Shot by Shot: Visualizing from Concept to Screen. (Michael Wiese Productions)

3. Murch, Walter. In the Blink of an Eye: A Perspective on Film Editing. (Silman-James Press)
4. Mascelli, Joseph V. The Five C's of Cinematography: Motion Picture Filming Techniques. (Silman-James Press)
5. Lumet, Sidney. Making Movies. (Vintage)
6. Bordwell, David & Thompson, Kristin. Film Art: An Introduction. (McGraw-Hill)
7. Mercado, Gustavo. The Filmmaker's Eye: Learning (and Breaking) the Rules of Cinematic Composition. (Focal Press)
8. McCloud, Scott. Understanding Comics: The Invisible Art. (William Morrow)
9. Campbell, Joseph. The Hero with a Thousand Faces. (New World Library) –
10. Kenworthy, Christopher. Master Shots Vol 1, 2, & 3. (Michael Wiese Productions)

E-Resources:

1. ShotDeck (shotdeck.com)
2. StudioBinder (studiobinder.com/blog)
3. No Film School (nofilmschool.com)
4. Art of the Title (artofthetitle.com)
5. Lessons from the Screenplay (YouTube Channel)
6. Every Frame a Painting (YouTube Channel - Archived)
7. The Cinematography Database (YouTube Channel)
8. Khan Academy - Pixar in a Box (khanacademy.org):
9. Milanote (milanote.com)
10. Film-Grab (film-grab.com)

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Option I(A)

1 M.Sc (MM) 3A	Marks: 100			Credits: 4		
Generative AI for Multimedia	Th	Pr	la	Contact hrs		
				L	T	P
	50	30	20	3	-	2

Course Objectives

1. To introduce students to the core concepts of Generative AI without requiring coding knowledge.
2. To explore multimedia applications using AI tools (images, video, audio, and text).
3. To gradually introduce AI concepts in a creative and visual way.
4. To develop projects using no-code platforms and simple interfaces.

Course Outcome

1. Understand the foundational concepts, models, and evolution of Generative AI and its relevance to multimedia and creative industries.
2. Use text-based generative tools (e.g., ChatGPT, Jasper) to ideate, script, and generate creative written content for multimedia applications.
3. Apply image, audio, and video generation tools (e.g., Midjourney, DALL·E, Runway ML) to produce AI-enhanced visual and audiovisual outputs.
4. Integrate generative AI tools into multimedia design workflows such as branding, storytelling, animation, and interactive media development.

Unit-1	Foundations of Artificial Intelligence and Generative AI	L	T	P
1.1	What is AI? What is Generative AI? (Lecture, Tutorial)	2	2	-
1.2	History and Evolution of AI in Creative Fields (Lecture, Practical)	2	2	-
1.3	Basic Concepts: Machine Learning, Deep Learning (No math/coding) (Lecture, Practical)	2	2	-
1.4	AI open source, Free, Commercial Tools (Lecture)	2	2	-
1.5	AI and Multimedia Industry (Lecture, Practical)	2	2	-

Unit-2	Working with Text-based Generative AI	L	T	P
2.1	Natural Language Processing (NLP) in simple terms (Lecture, Tutorial)	2	-	2
2.2	ChatGPT and Text Generation Tools (Lecture, Practical)	2	-	2
2.3	Script Writing, Dialogue Generation, Content Summarization (Lecture, Practical)	2	-	2
2.4	Using AI for Blogs, Captions, and Storytelling (Lecture)	2	-	2
2.5	Limitations of text generation: hallucinations, bias, repetition (Lecture, Practical)	2	-	2

Unit-3	AI in Image Creation and Design	L	T	P
3.1	Introduction to Text-to-Image Models (Lecture, Tutorial)	2	-	2

3.2	Style Transfer and AI Filters (Lecture, Practical)	2	-	2
3.3	Generating Illustrations, Mood Boards, and Design Assets (Lecture, Practical)	2	-	2
3.4	Customizing art styles, aspect ratios, and composition (Lecture)	2	-	2
3.5	Ethical and Creative Ownership Considerations (Lecture, Practical)	2	-	2

Unit-4	AI for Audio and Video Creation	L	T	P
4.1	Music Generation Tools (Lecture, Tutorial)	2	-	2
4.2	Voice Cloning and AI Narration (Lecture, Practical)	2	-	2
4.3	Video Creation with AI Tools (Lecture, Practical)	2	-	2
4.4	Applications in Podcasts, Animations, and Short Films (Lecture)	2	-	2
4.5	Text-to-video platforms (Lecture, Practical)	2	-	2

Unit-5	Ethics, Future Trends	L	T	P
5.1	Copyright, Authorship (Lecture, Tutorial)	2	-	2
5.2	Plagiarism (Lecture, Practical)	2	-	2
5.3	Morality in AI-generated Content (Lecture, Practical)	2	-	2
5.4	The Future of Generative AI-transaction from general intelligence to super intelligence (Lecture)	2	-	2
5.5	Legal regulations (India and global) (Lecture, Practical)	2	-	2

Practical/Project/Assignment:

1. Use an AI tool like Canva or RunwayML to generate creative media (e.g., a poster or short animation).
2. Create a story or script using ChatGPT.
3. Use an AI summarizer to summarize a long article or script
4. Generate a series of illustrations using a text-to-image tool based on a theme (e.g., future cities).
5. Experiment with AI photo filters (e.g., Lensa AI or Prisma).
6. Use AI to generate background music or voiceover for a short video.

Reference Books:

1. Melanie Mitchell, Artificial Intelligence: A Guide for Thinking Humans, Penguin, 2020.
2. Emily Bender & Alexander Koller, Computational Linguistics: An Introduction, Cambridge University Press, excerpts.
3. Lev Manovich, AI Aesthetics, Strelka Press, 2019.
4. Parag Mankeekar, The Future of Creativity with AI, Bloomsbury India, 2023 (for regional context).
5. Kate Crawford, Atlas of AI, Yale University Press, 2021.

E-resources:

1. Elements of AI (free), Coursera fundamentals, Fast.ai
2. Codecademy, Coursera, Google/DeepLearning.AI path
3. Medium guide, Hugging Face + GradioColab, Midjourney article
4. AudioLab project, Synthesia/Murf/ElevenLabs overview from TechRadar

Option I(B)

1 M.Sc (MM) 3B	Marks: 100			Credits: 4		
AI for Gaming and Animation	Th	Pr	la	Contact hrs		
				L	T	P
	50	30	20	3	-	2

Course Objectives

1. Understand the fundamentals of artificial intelligence in the context of game design and animation.
2. Explore AI-driven techniques for procedural content generation and character behavior.
3. Learn to implement intelligent NPCs using pathfinding, decision trees, and machine learning.
4. Analyze the role of AI in automating animation processes and enhancing realism.
5. Develop AI-integrated game and animation prototypes using industry-standard tools.

Course Outcomes

1. Design intelligent behaviors for game characters using AI techniques.
2. Generate dynamic game environments through procedural AI methods.
3. Integrate AI-based tools to enhance animation workflows and realism.
4. Build interactive prototypes showcasing AI-driven gameplay elements.
5. Critically assess the impact of AI on user experience in games and animation.

Unit-1	Introduction to Artificial Intelligence in Media	L	T	P
1.1	What is AI? Introduction to AI, ML, and Deep Learning (Lecture, Tutorial, presentation)	3	1	-
1.2	Evolution of AI in Creative Industries: Gaming & Animation (Lecture, Tutorial, presentation)	3	1	-
1.3	Real-World Examples: From Pac-Man to Red Dead Redemption & Pixar's AI-assisted Films (Lecture, Tutorial, presentation)	3	1	-
1.4	The AI Creative Pipeline: Where and How AI Fits into the Process (Lecture, Tutorial, presentation)	3	1	-
1.5	Understanding Human-AI Collaboration in Creative Workflows (Lecture, Tutorial, presentation)	3	1	-

Unit-2	AI in Gaming – Design, Immersion, and Storytelling	L	T	P
2.1	AI for Game Design: Procedural Content Generation & Dynamic World Building (Lecture, Tutorial, presentation)	2	-	2
2.2	Intelligent NPCs (Non-Playable Characters): Behavior, Emotion, and Decision-Making (Lecture, Tutorial, presentation)	2	-	2
2.3	Adaptive Gameplay: AI-Driven Personalization and Difficulty Adjustment (Lecture, Tutorial, presentation)	2	-	2
2.4	AI and Storytelling: Branching Narratives and Player Choices (Lecture, Tutorial, presentation)	2	-	2
2.5	Case Studies: Games like <i>The Last of Us</i> , <i>Middle-earth: Shadow of Mordor</i> , <i>Detroit: Become Human</i> (Lecture, Tutorial, presentation)	2	-	2

Unit-3	AI in Animation – Creativity, Automation, and Style	L	T	P
3.1	No-Code Approach AI in Character Design and Motion Capture (Lecture, Tutorial, Presentation)	2	-	2
3.2	Automating Animation: Inbetweening, Lip-Syncing, and Facial Animation (Lecture, Tutorial, presentation)	2	-	2
3.3	Style Transfer and Visual Enhancements using AI Tools (e.g., Runway ML, D-ID) (Lecture, Tutorial, Presentation)	2	-	2
3.4	Voice Synthesis and AI-Generated Dialogue for Animated Content (Lecture, Tutorial, Practical)	2	-	2
3.5	Case Studies: Pixar, Netflix AI Workflows, and Indie Creators Using AI Tools (Lecture, Tutorial, Presentation)	2	-	2

Unit-4	Ethical, Legal, and Social Implications	L	T	P
4.1	Deepfakes vs Creativity: Ethics of AI-Generated Characters and Voices (Lecture, Tutorial, presentation)	2	-	2
4.2	Ownership in AI-Generated Art and Stories: Who Owns What? (Lecture, Practical)	2	-	2
4.3	Representation & Bias in AI-generated Content (e.g., race, gender, culture) (Lecture, Tutorial, presentation)	2	-	2
4.4	Impact on Employment: AI as Threat or Collaborator? (Lecture, Practical)	2	-	2
4.5	Legal Frameworks and Industry Guidelines: India & Global Context (Lecture, Tutorial, presentation)	2	-	2

Unit-5	The Future of AI in Gaming and Animation	L	T	P
5.1	Generative AI in Game Development and Animation Pre-Production (Lecture, Tutorial, presentation)	2	-	2
5.2	AI and Virtual Reality (VR) / Augmented Reality (AR) Convergence (Lecture, Tutorial, presentation)	2	-	2
5.3	Role of AI in Metaverse, Digital Humans, and Immersive Storytelling (Lecture, Tutorial, presentation)	2	-	2
5.4	Industry Tools Overview: Unreal Engine MetaHuman, NVIDIA Omniverse, Adobe Firefly (Lecture, Tutorial, presentation)	2	-	2
5.5	Preparing for AI-Driven Creative Careers: Skills, Roles & Portfolios (Lecture, Tutorial, presentation)	2	-	2

Practical/Projects/Assignments:

1. Create a pathfinding demo using A* algorithm in a 2D game environment.
2. Develop an NPC with behavior trees and decision-making logic.
3. Build a procedural level generator using AI-based logic.
4. Automate lip-sync animation using AI-driven voice recognition tools.
5. Design a simple AI vs Player combat scenario using Unity or Unreal Engine.

Reference Books:

1. "Artificial Intelligence and Games" by Georgios N. Yannakakis and Julian Togelius
2. "Programming Game AI by Example" by Mat Buckland
3. "Artificial Intelligence for Games" by Ian Millington and John Funge
4. "Unity 2022 Artificial Intelligence Cookbook" by Jorge Palacios
5. "Game AI Pro: Collected Wisdom of Game AI Professionals," edited by Steve Rabin

E-Resources:

1. Unity Learn AI for Games: <https://learn.unity.com>
2. Unreal Engine AI Documentation: <https://docs.unrealengine.com>
3. Coursera "Artificial Intelligence for Games": <https://www.coursera.org>
4. GDC Vault Game AI Conference Talks: <https://www.gdcvault.com>
5. AI and Games YouTube Channel: <https://www.youtube.com/c/AIandGames>

Option II(A)

1 M.Sc (MM) 4A	Marks: 100			Credits: 4		
AR/VR and Gaming Technology	Th	Pr	la	Contact hrs		
				L	T	P
	50	30	20	3	-	2

Course Objectives

1. Introduce the foundational principles of Augmented Reality (AR), Virtual Reality (VR), and gaming engines.
2. Explore the hardware and software ecosystems that drive immersive technologies.
3. Enable students to design and prototype interactive AR/VR experiences.
4. Examine the role of storytelling and user experience in immersive gaming environments.
5. Foster skills in integrating AR/VR into real-world applications across education, healthcare, and entertainment.

Course Outcomes

1. Demonstrate understanding of key AR/VR concepts, tools, and technologies.
2. Develop basic AR/VR prototypes using platforms like Unity or Unreal Engine.
3. Apply principles of human-computer interaction in immersive media design.
4. Evaluate the impact of immersive technologies on user engagement and behavior.
5. Create interactive gaming or simulation projects showcasing AR/VR integration.

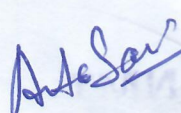
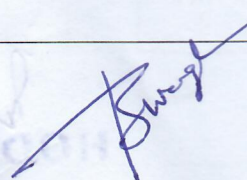
Unit-1	Fundamentals of AR, VR, and Gaming	L	T	P
1.1	Introduction to AR, VR, and Mixed Reality (MR) - Concepts, differences, and use cases. (Lecture, Tutorial, presentation)	3	1	-
1.2	Basic Principles of Immersive Technologies - Presence, immersion, interaction (Lecture, Tutorial, presentation)	3	1	-
1.3	Introduction to Gaming Technologies - What makes a game: rules, mechanics, goals, feedback. (Lecture, Tutorial, presentation)	3	1	-
1.4	Industry Applications of AR/VR/Gaming - Education, entertainment, training, marketing, healthcare. (Lecture, Tutorial, presentation)	3	1	-
1.5	Overview of Devices and Platforms - Headsets (Oculus, HTC Vive, Cardboard), mobile AR, PC/console. (Lecture, Tutorial, presentation)	3	1	-

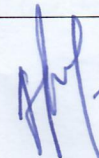
Unit-2	AR Tools and Content Creation	L	T	P
2.1	Introduction to AR without Coding - AR types: Marker-based, markerless, location-based. (Lecture, Tutorial, presentation)	2	-	2
2.2	Hands-on with AR Platforms: ZapWorks, Adobe Aero - Creating basic AR scenes with image tracking and animations. (Lecture, Tutorial, presentation)	2	-	2
2.3	Artivive and EyeJack for Interactive Art and Storytelling - Uploading artwork and enhancing it with multimedia layers. (Lecture, Tutorial, presentation)	2	-	2
2.4	WebAR Tools (Metaverse Studio, MyWebAR) - Building browser-based AR experiences with templates. (Lecture, Tutorial, presentation)	2	-	2
2.5	Mini Project: Design an AR poster or business card using any no-code AR tool. (Lecture, Tutorial, presentation)	2	-	2

Unit-3	VR Tools and Interactive 3D Environments	L	T	P
3.1	Introduction to VR Environments and Storytelling - Concepts of navigation, interaction, and environment design. (Lecture, Tutorial, Presentation)	2	-	2
3.2	Using CoSpaces Edu to Build Simple VR Worlds - Drag-and-drop 3D environments and interactions. (Lecture, Tutorial, presentation)	2	-	2
3.3	Creating 360° Tours with Thinglink or Google Tour Creator - Educational, tourism, or storytelling-based immersive scenes. (Lecture, Tutorial, Presentation)	2	-	2
3.4	Exploring Mozilla Hubs for Collaborative VR - Creating and customizing virtual meeting spaces. (Lecture, Tutorial, Practical)	2	-	2
3.5	Mini Project: Create a virtual classroom, museum, or art gallery. (Lecture, Tutorial, Presentation)	2	-	2

Unit-4	Game Design Basics Using Visual Tools	L	T	P
4.1	Introduction to Game Design Principles - Level design, player feedback, mechanics, storytelling. (Lecture, Tutorial, presentation)	2	-	2
4.2	Using Unreal Engine with Blueprints (Visual Scripting) - Navigating the interface, placing assets, and creating simple interactions. (Lecture, Practical)	2	-	2
4.3	Unity Visual Scripting (formerly Bolt) – Codingless - Basic gameplay logic using nodes and flowcharts. (Lecture, Tutorial, presentation)	2	-	2
4.4	Building a Simple Game Using Ready-Made Templates - Puzzle games, walking simulators, or basic platformers. (Lecture, Practical)	2	-	2
4.5	Mini Project: Design a basic playable level using drag-and-drop tools (Unreal/Unity). (Lecture, Tutorial, presentation)	2	-	2

Unit-5	Designing and Presenting Immersive Experiences	L	T	P
5.1	Storyboarding for AR/VR/Gaming Projects - Visual planning and experience mapping. (Lecture, Tutorial, presentation)	2	-	2
5.2	3D Asset Libraries and Audio Integration - Using free online resources for 3D models, textures, and sound. (Lecture, Tutorial, presentation)	2	-	2
5.3	User Interface (UI) and Experience (UX) Basics in Games and VR - Making interfaces accessible and intuitive. (Lecture, Tutorial, presentation)	2	-	2
5.4	Designing for Accessibility and Engagement - Inclusive design principles in immersive tech. (Lecture, Tutorial, presentation)	2	-	2
5.5	Project Presentation - Conceptualize and present an AR/VR/game idea using visual tools. (Lecture, Tutorial, presentation)	2	-	2



Practical/Projects/Assignments:

1. Build a basic AR mobile app using image tracking with Unity and Vuforia/AR Foundation.
2. Create a VR walkthrough experience of a virtual art gallery or architectural space.
3. Design an interactive 3D game level in Unity using physics-based gameplay elements.
4. Develop a multiplayer VR mini-game prototype using Photon Unity Networking (PUN).
5. Create a short immersive narrative experience blending AR and real-world interaction.

Reference Books:

1. "Learning Virtual Reality" by Tony Parisi: A hands-on guide to creating VR and AR applications.
2. "Augmented Human" by Helen Papagiannis A deep dive into how AR is reshaping daily life.
3. "Unity 2022 Game Development Cookbook" by Paris Buttfield-Addison et al. Recipes for building AR/VR games.
4. "Augmented Reality: Where We Will All Live" by Jon Peddie Industry insights and tech applications.
5. "The VR Book: Human-Centered Design for Virtual Reality" by Jason Jerald UX and design principles for VR systems.

E-Resources:

1. Unity Learn AR/VR Pathway <https://learn.unity.com>
2. Coursera "Extended Reality for Everybody" by University of London <https://www.coursera.org>
3. Unreal Engine Online Learning for XR <https://www.unrealengine.com/en-US/onlinelearning-courses>
4. Mozilla Mixed Reality Projects and Documentation <https://mixedreality.mozilla.org>
5. AR/VR GitHub Repositories & Demos <https://github.com/topics/augmented-reality>

Option II(B)

1 M.Sc (MM) 4 B	Marks: 100			Credits: 4		
AR/VR in Filmmaking and Animation	Th	Pr	la	Contact hrs		
				L	T	P
	50	30	20	3	-	2

Course Objectives

1. Understand the fundamentals of AR and VR technologies in the context of filmmaking and animation.
2. Explore immersive storytelling techniques unique to AR and VR platforms.
3. Gain hands-on experience with industry-standard AR/VR tools and software.
4. Integrate creative direction with technical workflows for immersive media production.
5. Analyze current trends, challenges, and ethical considerations in AR/VR content creation.

Course Outcomes

1. Apply AR and VR technologies to create immersive cinematic and animated experiences.
2. Design interactive narratives using spatial storytelling principles.
3. Operate AR/VR software and tools for real-time production and post-production.
4. Develop original AR/VR content blending artistic vision with technical execution.
5. Critically evaluate AR/VR projects in terms of aesthetics, usability, and audience impact.

Unit-1	Introduction to AR/VR in Filmmaking and Animation	L	T	P
1.1	What is AR, VR, and XR? Basic Concepts for Media Creators - Definitions, differences, overlaps in creative production. (Lecture, Tutorial, presentation)	3	1	-
1.2	History and Evolution of Immersive Cinema, From green screen to virtual sets and 360° video (Lecture, Tutorial, presentation)	3	1	-
1.3	Overview of AR/VR in Film and Animation Production, Applications in pre-production, production, and post. (Lecture, Tutorial, presentation)	3	1	-
1.4	Immersive Storytelling vs. Traditional Storytelling, Narrative design for immersive environments. (Lecture, Tutorial, presentation)	3	1	-
1.5	Use Cases and Case Studies, Examples from Pixar, Marvel Studios, and VR storytelling projects. (Lecture, Tutorial, presentation)	3	1	-

Unit-2	AR Tools in Film and Animation Projects	L	T	P
2.1	Introduction to No-Code AR Tools (Adobe Aero, Artivive, EyeJack), Use for Posters, marketing, character animation overlays (Lecture, Tutorial, presentation)	1	-	3
2.2	AR in Film Posters and Interactive Storybooks, Augmenting 2D visuals with motion and interactivity. (Lecture, Tutorial, presentation)	1	-	3
2.3	Scene Pre-visualization using AR (Mobile Devices), Placing characters, props, Or objects in live environments. (Lecture, Tutorial, presentation)	1	-	3
2.4	Creating AR-Enhanced Animation Reels, Using AR to bring characters or storyboards to life. (Lecture, Tutorial, presentation)	1	-	3

2.5	Mini Project: Design an AR-powered film/animation promo or concept art. (Lecture, Tutorial, presentation)	1	-	3
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Unit-3	VR Techniques for Cinematic Storytelling	L	T	P
3.1	Understanding VR Cinematography (360° Filmmaking), Spatial storytelling and viewer-directed attention. (Lecture, Tutorial, Presentation)	1	-	3
3.2	Using 360° Cameras and Google Tour Creator / Thinglink, Creating immersive, narrative-based experiences. (Lecture, Tutorial, presentation)	1	-	3
3.3	Virtual Storyboarding and Scene Blocking with CoSpaces Edu, Build animated story sequences in VR using drag-and-drop tools. (Lecture, Tutorial, Presentation)	1	-	3
3.4	VR Character Positioning and Emotional Impact, Spatial relationship between viewer and characters. (Lecture, Tutorial, Practical)	1	-	3
3.5	Mini Project: Create a VR scene or 360° film pitch for a short animation or docu-story. (Lecture, Tutorial, Presentation)	1	-	3

Unit-4	Virtual Production for Animation and Film	L	T	P
4.1	What is Virtual Production? Understanding green screen vs. real-time virtual environments (Lecture, Tutorial, presentation)	1	-	3
4.2	Introduction to Unreal Engine for Filmmaking, Navigating the interface, loading templates, using virtual cameras. (Lecture, Practical)	1	-	3
4.3	Using Quixel and Marketplace Assets in Scene Design, Photorealistic environments for animation backgrounds or live sets. (Lecture, Tutorial, presentation)	1	-	3
4.4	Virtual Camera Movements and Lighting (Basic Tools), Blocking, composition, and lighting for mood and story. (Lecture, Practical)	1	-	3
4.5	Mini Project: Design a virtual film set or animated scene using Unreal's prebuilt assets. (Lecture, Tutorial, presentation)	1	-	3

Unit-5	AR/VR in Post-Production and Audience Experience	L	T	P
5.1	AR/VR for Marketing and Audience Engagement, Interactive trailers, immersive posters, social AR filters. (Lecture, Tutorial, presentation)	1	-	3
5.2	Immersive Animation Exhibitions and Film Festivals, Case studies: Venice VR, Tribeca Immersive. (Lecture, Tutorial, presentation)	1	-	3
5.3	Editing and exporting for AR/VR, understanding formats: .glb, .usdz, 360° video basics. (Lecture, Tutorial, presentation)	1	-	3
5.4	Concept Art and Mood Boards in AR/VR Platforms, Visualization tools for production teams. (Lecture, Tutorial, presentation)	1	-	3
5.5	Project: Conceptualize and present a short AR/VR-enhanced film or animation pitch (storyboards, visuals, and demo using no-code tools). (Lecture, Tutorial, presentation)	1	-	3

Practical/Projects/Assignments:

1. Create a short VR film scene using 360-degree video and spatial audio.
2. Develop an AR storyboard prototype for an interactive animation sequence.
3. Build a virtual set using Unreal Engine or Unity for a cinematic scene.
4. Animate a character in a VR environment with basic interactivity.
5. Analyze and present a case study of a successful AR/VR-based film or animation project.

Reference Books:

1. "Virtual Reality Filmmaking: Techniques & Best Practices for VR Filmmakers" by Celine Tricart
2. "Augmented and Virtual Reality for Professionals: Understanding Tools and Applications" by Ralf Doerner, Wolfgang Broll, and Paul Grimm
3. "The Immersive Storytelling Handbook" by Renee D. Summers
4. "Understanding Virtual Reality: Interface, Application, and Design" by William R. Sherman and Alan B. Craig
5. "The Language of New Media" by Lev Manovich (for theoretical grounding in digital and immersive media)

E-Resources:

1. Unreal Engine Learning Portal – <https://www.unrealengine.com/en-US/onlinelearning-courses>
2. Unity Learn (for AR/VR development) – <https://learn.unity.com>
3. Coursera – “Extended Reality for Everybody” by University of London – <https://www.coursera.org/learn/extended-reality>
4. YouTube Channel – “Cinecom.net” (VR filmmaking tutorials) – <https://www.youtube.com/c/CinecomNet>
5. MIT OpenCourseWare – “Virtual Reality and Immersive Media Production” – <https://ocw.mit.edu>

Option III(A)

1 M.Sc (MM) 5 A	Marks: 100			Credits: 4		
UI/UX Design for Multimedia Platforms	Th	Pr	la	Contact hrs		
				L	T	P
	50	30	20	3	-	2

Course Objectives:

1. To explore platform-specific UI/UX design principles for multimedia systems.
2. To understand user-centered design thinking across interactive digital environments.
3. To gain expertise in creating engaging, responsive, and accessible user interfaces.
4. To apply prototyping, testing, and iteration techniques on multimedia platforms.
5. To prepare a professional portfolio integrating multimedia-based UI/UX solutions.

Course Outcomes

1. Create intuitive, interactive user experiences for multiple digital environments.
2. Conduct user research and usability testing for multimedia projects.
3. Design responsive UI systems tailored to web, mobile, and immersive media.
4. Integrate motion, sound, and storytelling into user interface design.
5. Utilize professional tools to prototype and present design solutions effectively.

Unit1	UX in media	L	T	P
1.1	Platform-specific considerations: mobile, desktop, smart TVs, kiosks (Lecture, Tutorial)	3	1	-
1.2	UX for storytelling, interactivity, and multimedia engagement (Lecture, Practical)	3		-
1.3	User needs analysis and persona development for multimedia users (Lecture, Practical)	3	1	-
1.4	Features and Impact: UI/UX in media apps, (Lecture)	3	1	-
1.5	OTT platforms, e-learning systems,(India and global) (Lecture, Practical)	3	1	-

Unit2	UI Interaction	L	T	P
2.1	Interaction models in multimedia: touch, gesture, voice, motion (Lecture, Tutorial)	1	1	2
2.2	AR/VR/XR interface design basics, Design thinking (Lecture, Practical)	1	1	2
2.3	Gamification and storytelling in user journeys (Lecture, Practical)	1	1	2
2.4	UX in 3D environments, simulations, and virtual spaces , (Lecture)	1	1	2
2.5	User Emotion Mapping and Responsive UI Design(India and global) (Lecture, Practical)	1	1	2

Unit3	UI Design	L	T	P
3.1	UI visual language: grids, layout, color, typography, iconography (Lecture, Tutorial)	1	1	2

3.2	Branding and UI cohesion across multimedia platforms (Lecture, Practical)	1	1	2
3.3	Creating and managing design systems (Lecture, Practical)	1	1	2
3.4	Designing responsive and adaptive interfaces (Lecture)	1	1	2
3.5	Motion design in UI (micro-interactions, transitions, feedback) (India and global) (Lecture, Practical)	1	1	2

Unit4	UI Tools	L	T	P
4.1	Introduction to UI Tools: Figma, Framer, Unity UI, AI-assisted Design , Design Systems , Portfolio & Personal Branding (Lecture, Tutorial)	1	-	3
4.2	Wireframing vs. prototyping: low-fi to hi-fi (Lecture, Practical)	1	-	3
4.3	Usability testing and heuristic evaluation (Lecture, Practical)	1	-	3
4.4	Accessibility and Inclusive Design for Multimedia Platforms (WCAG 2.2, ARIA, Universal Design Principles) (Lecture, Practical)	1	-	3
3.5	Data-informed design: heatmaps, analytics, A/B testing(India and global) (Lecture, Practical)	1	-	3

Unit5	Documentation & Collaboration	L	T	P
5.1	End-to-end UI/UX design process for a multimedia platform (Lecture, Tutorial)	1	-	3
5.2	Documentation of design decisions and user feedback (Lecture, Practical)	1	-	3
5.3	Collaboration with developers or animators (Lecture, Practical)	1	-	3
5.4	Preparing case studies and project narratives (Lecture)	1	-	3
5.5	Building an industry-ready design portfolio (India and global) (Lecture, Practical)	1	-	3

Practical/Projects/Assignments:

1. Compare UX across platforms: Analyze a streaming app like Netflix or Disney+ on mobile, desktop, and smart TV. Note layout differences, content discoverability, and navigation.
2. Use Meta Spark Studio or Adobe Aero to design a basic AR scene with interactive buttons or animation triggers.
3. Create a mini UI style guide for a fictional media app showing logo use, primary/secondary colors, and font pairings.
4. Create a simple login/signup screen using Figma or Adobe XD with visual UI elements.
5. Build a portfolio page on Notion, Behance, or a personal website showcasing at least 2 projects with process + results.

Reference Books:

1. The Design of Everyday Things – Don Norman
2. About Face: The Essentials of Interaction Design – Alan Cooper, Robert Reimann & David Cronin
3. Designing Interfaces – Jenifer Tidwell, Charles Brewer & Aynne Valencia
4. Don't Make Me Think – Steve Krug
5. The Elements of User Experience – Jesse James Garrett
6. Lean UX – Jeff Gothelf & Josh Seiden
7. Laws of UX – Jon Yablonski
8. Information Architecture for the Web and Beyond – Louis Rosenfeld, Peter Morville & Jorge Arango

E-resources:

1. Material Design Guidelines
<https://m3.material.io>
2. Apple Human Interface Guidelines
<https://developer.apple.com/design/human-interface-guidelines>
3. Nielsen Norman Group (NN/g)
<https://www.nngroup.com>
4. Figma Learn
<https://help.figma.com>
5. Interaction Design Foundation
<https://www.interaction-design.org>
6. UX Collective
<https://uxdesign.cc>
7. W3C Accessibility Guidelines (WCAG)
<https://www.w3.org/WAI>
8. Adobe XD Ideas & UX Resources
<https://xd.adobe.com/ideas>

Option III(B)

1 M.Sc. (MM) 5 B	Marks: 100			Credits: 4		
Design Thinking for Digital Media	Th	Pr	la	Contact hrs		
				L	T	P
	80	-	20	3	1	-

Course Objectives:

1. To introduce the mindset and methodology of Design Thinking.
2. To develop empathy and user-centered research skills.
3. To teach ideation techniques for creative problem-solving.
4. To guide students through prototyping and iterative testing.
5. To help students apply Design Thinking in multimedia projects and digital solutions.

Course Outcomes:

1. Understand and apply all stages of the Design Thinking process.
2. Conduct user research to identify real needs and problems.
3. Ideate effectively using brainstorming and mind-mapping techniques.
4. Create and iterate low- and high-fidelity prototypes.
5. Apply Design Thinking to multimedia product design and service innovations

Unit1	Introduction to Design Thinking	L	T	P
1.1	Origins and Evolution of Design Thinking (Lecture, Tutorial)	3	1	-
1.2	Key principles: empathy, collaboration, iteration (Lecture, Practical)	3	1	-
1.3	Mindset of a design thinker (Lecture, Practical)	3	1	-
1.4	Design Thinking vs traditional problem solving , (Lecture)	3	1	-
1.5	Case studies of design thinking in media and communication (Lecture, Practical)	3	1	-

Unit2	Empathize and Define Stages	L	T	P
2.1	User observation and interviewing techniques (Lecture, Tutorial)	3	1	-
2.2	Empathy maps and user personas (Lecture, Practical)	3	1	-
2.3	Journey mapping and storytelling (Lecture, Practical)	3	1	-
2.4	Needs finding and problem definition , (Lecture)	3	1	-
2.5	Introduction to design research tools (Lecture, Practical)	3	1	-

Unit3	Define and Ideation	L	T	P
3.1	Crafting point-of-view (POV) statements (Lecture, Tutorial)	3	1	-
3.2	Problem framing and "How Might We" questions (Lecture, Practical)	3	1	-

3.3	Ideation tools: brainstorming, SCAMPER, mind mapping (Lecture, Practical)	3	1	-
3.4	Group ideation and critique sessions (Lecture)	3	1	-
3.5	Selecting ideas for prototyping (Lecture, Practical)	3	1	-

Unit4	Prototype and Test	L	T	P
4.1	Types of prototypes: sketch, paper, digital, physical (Lecture, Tutorial)	3	1	-
4.2	Rapid prototyping tools and methods (Figma, paper, cardboard) (Lecture, Practical)	3	1	-
4.3	Conducting usability tests and gathering feedback (Lecture, Practical)	3	1	-
4.4	Iteration and refinement , (Lecture)	3	1	-
4.5	Fail-fast philosophy and learning from failure (Lecture, Practical)	3	1	-

Unit5	Applying Design Thinking in Multimedia	L	T	P
5.1	Design Thinking in UX/UI, animation, gaming, and branding (Lecture, Tutorial)	3	1	-
5.2	Collaborative innovation in teams (Lecture, Practical)	3	1	-
5.3	Integrating Design Thinking into multimedia workflows (Lecture, Practical)	3	1	-
5.4	Real-world case studies (IDEO, Google, Apple, Airbnb, etc.) , (Lecture)	3	1	-
5.5	Preparing a final Design Thinking project presentation (Lecture, Practical)	3	1	-

Practical/Projects/Assignments:

1. Empathy Activity: Interview 3 users and create empathy maps and personas.
2. User Journey Map: Document a digital experience (e.g., using a mobile app) and create a journey map.
3. Ideation Workshop: Conduct group brainstorming and develop idea clusters with mind maps.
4. Prototype Development: Build a low-fidelity prototype of a proposed multimedia product or service.
5. User Testing: Conduct feedback sessions, gather insights, and iterate the prototype.
6. Mini Design Challenge: Solve a real-world problem using the complete Design Thinking process and present it.

Reference Books:

1. The Design of Everyday Things – Don Norman
2. Change by Design – Tim Brown
3. Creative Confidence – Tom Kelley & David Kelley
4. This is Service Design Thinking – Marc Stickdorn & Jakob Schneider
5. Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days – Jake Knapp

E-resources:

1. Stanford d-school resources: <https://dschool.stanford.edu/resources>
2. IDEO U: <https://www.ideo.com>
3. Design Kit (IDEO): <https://www.designkit.org>
4. Interaction Design Foundation: <https://www.interaction-design.org>

2 M.Sc. (MM) 1	Marks: 100			Credits: 4		
Advanced Animation Production	Th	Pr	la	Contact hrs		
				L	T	P
	50	30	20	3	-	2

Course Objectives:

1. To deepen understanding of animation as a cinematic and expressive medium.
2. To expose students to production pipelines used in industry (film, games, XR).
3. To foster research and experimentation in animation aesthetics and technology.
4. To encourage the creation of industry-ready portfolios and IP-based content.

Course Outcomes

1. Analyze and apply advanced principles of animation as a cinematic and expressive art form.
2. Demonstrate proficiency in professional animation production pipelines across film, gaming, and XR platforms.
3. Investigate and experiment with emerging animation aesthetics, tools, and technologies.
4. Conceptualize and produce original animated content suitable for IP development.

Unit1	Advanced Animation, Cinematics & Direction	L	T	P
1.1	Animation direction: Visual storytelling, pacing, emotion (Lecture, Tutorial)	2	-	2
1.2	Cinematography for animation: camera movements, lensing, and virtual cameras (Lecture, Practical)	2	-	2
1.3	Scene composition and mise-en-scène in animated films (Lecture, Practical)	2	-	2
1.4	Analysis of auteur-style animation directors (e.g., Miyazaki, Nora Twomey, Gitanjali Rao) (Lecture)	2	-	2
1.5	Sound design and music in animation (Lecture)	2	-	2

Unit2	AI-Assisted Animation Techniques	L	T	P
2.1	Automated Inbetweening (Tweening) (Lecture, Tutorial)	2	-	2
2.2	AI-Driven Lip Syncing and Facial Animation (Lecture, Practical)	2	-	2
2.3	Style Transfer and Motion Imitation by AI (Lecture, Practical)	2	-	2
2.4	Pose Estimation and Motion Capture Enhancement (Lecture)	2	-	2
2.5	AI-based Smart Background and Object Animation (Lecture,)	2	-	2

Unit3	Acting and Emotion in Animation	L	T	P
3.1	Advanced rigging: facial blendshapes, dynamic bones, muscle simulation (Lecture, Tutorial)	2	-	2
3.2	Acting for animation: expressive gestures, body mechanics, subtlety (Lecture, Practical)	2	-	2

3.3	Dialogue animation and lip sync (manual vs. automated) (Lecture, Practical)	2	-	2
3.4	Non-verbal communication, gestures in animation (Lecture)	2	-	2
3.5	Emotional arcs and character performance (Lecture,)	2	-	2

Unit4	Real-Time Animation & Immersive Media	L	T	P
4.1	Real-time animation in Unity/Unreal: timeline, sequencer, animation blueprints (Lecture, Tutorial)	2	-	2
4.2	Interactive storytelling and branching narrative in animation (Lecture, Practical)	2	-	2
4.3	Virtual production techniques and LED wall integration (Lecture, Practical)	2	-	2
4.4	Animation for VR/AR/XR platforms (Lecture)	2	-	2
4.5	Performance capture and live animation using motion sensors and AI (Lecture, Practical)	2	-	2

Unit5	Production Pipeline for Animation	L	T	P
5.1	Introduction to Animation Production Pipeline (Lecture, Tutorial)	2	-	2
5.2	Pre-Production (Lecture, Practical)	2	-	2
5.3	Production (Lecture, Practical)	2	-	2
5.4	Post-Production (Lecture)	2	-	2
5.5	Pipeline Management and Tools (Lecture)	2	-	2

Practical/Projects/Assignments:

1. Create an animated sequence using layered cinematography techniques
2. Breakdown and recreate a cinematic sequence from an award-winning animation
3. Design a procedural environment animation using node systems
4. Animate a stylized human motion using AI assistance and post-process it
5. Rig a character with facial controls and lip sync to a dialogue
6. Animate a two-character interaction focusing on emotions and reaction timing
7. Create a short interactive animation in Unity using timeline
8. Develop an immersive 360° animation experience using VR tools
9. Develop a complete 1–2 minute animated short with original concept
10. Submit final showreel, script treatment, and production breakdown

Reference Books:

1. Directing the Story – Francis Glebas
2. Acting for Animators – Ed Hooks (Advanced chapters)
3. Digital Art Masters: Volume 9 – 3DTotal Publishing
4. The Visual Story – Bruce Block
5. Real-Time 3D Character Animation – Nik Lever

E-resources:

1. <https://www.newyorker.com/culture/infinite-scroll/the-limits-of-ai-generated-miyazaki> IDEO U:
<https://www.ideou.com>
2. <https://github.com/topics/lip-sync>
3. <https://blenderartists.org/t/blender-rhubarb-lipsync-trying-to-run-on-4-1/1522646>
4. <https://autodraft.in/video-tutorials>

DSC-4

2 M.Sc. (MM) 2	Marks: 100			Credits: 4		
Understanding DATA	Th	Pr	Ia	Contact hrs		
				L	T	P
	50	30	20	3	-	2

Course Objectives

1. To introduce students to the concepts, types, and sources of data.
2. To develop the ability to collect, clean, interpret, and visualize data.
3. To understand ethical, legal, and practical aspects of working with data.
4. To prepare students for data-driven decision-making in real-world scenarios.

Course Outcome

1. Explain key concepts and classifications of data, along with various data sources.
2. Demonstrate the ability to collect, clean, and preprocess raw data for analysis.
3. Interpret and visualize data using appropriate tools and techniques.
4. Analyze the ethical, legal, and social implications of data usage.

Unit1	Introduction to Data	L	T	P
1.1	What is Data? Types and Characteristics (Qualitative vs Quantitative) (Lecture, Tutorial)	3	1	-
1.2	Structured vs Unstructured Data (Lecture, Practical)	3	1	-
1.3	Data Formats (CSV, JSON, XML, Excel) (Lecture, Practical)	3	1	-
1.4	Sources of Data: Surveys, APIs, Web, Sensors, Transactions, (Lecture)	3	1	-
1.5	Role of Data in Decision-Making and Research (Lecture, Practical)	3	1	-

Unit2	Data Collection and Cleaning	L	T	P
2.1	Methods of Data Collection (Manual, Online, Tools) (Lecture, Tutorial)	2	-	2
2.2	Data Quality: Accuracy, Completeness, Consistency (Lecture, Practical)	2	-	2
2.3	Introduction to Data Cleaning: Missing Data, Duplicates, Outliers (Lecture, Practical)	2	-	2
2.4	Tools: Google Sheets, Excel, Open Refine, (Lecture)	2	-	2
2.5	Ethical Collection Practices and Data Integrity (Lecture, Practical)	2	-	2

Unit3	Understanding and Exploring Data	L	T	P
3.1	Understanding key statistical measures such as mean, median, mode, range, and variance to summarise and describe data sets. (Lecture, Tutorial)	2	-	2

3.2	Examining how data is distributed and how often values occur using frequency tables and graphs. (Lecture, Practical)	2	-	2
3.3	Exploring the relationships between variables, differentiating between correlation and causation, and understanding their implications in data analysis. (Lecture, Practical)	2	-	2
3.4	An overview of data profiling techniques to assess data quality, structure, and patterns for initial data understanding. (Lecture)	2	-	2
3.5	Creating and interpreting visual representations of data such as histograms, bar charts, and box plots using tools like Excel or Google Sheets. (Lecture, Practical))	2	-	2

Unit4	Data Visualization and Storytelling	L	T	P
4.1	Purpose and Principles of Data Visualization (Lecture, Tutorial)	2	-	2
4.2	Types of Charts and When to Use Them (Lecture, Practical)	2	-	2
4.3	Introduction to Visualization Tools: Tableau Public, Power BI, Google Charts (Lecture, Practical)	2	-	2
4.4	Telling a Story with Data , (Lecture)	2	-	2
4.5	Common Visualization Mistakes to Avoid (Lecture, Practical)	2	-	2

Unit5	Data Ethics, Privacy, and Future Trends	L	T	P
5.1	Data Ethics and Governance, Bias in Data and Algorithms (Lecture, Tutorial)	2	-	2
5.2	Privacy Laws (GDPR, Indian Data Protection Bill Overview), Open Data and Data Democratization (Lecture, Practical)	2	-	2
5.3	Introduction to AI in Data Interpretation (Lecture, Practical)	2	-	2
5.4	No-code and Low-code AI Tools for Data: ChatGPT, Google Bard, Tableau AI, Excel Copilot , (Lecture)	2	-	2
5.5	Limitations and Ethical Use of AI Tools in Data Work (Lecture,)	2	-	2

Practical/Projects/Assignments:

1. Identify and classify 10 different datasets (from online sources) by type, format, and structure.
2. Collect raw data using a Google Form survey and clean it using Excel or Google Sheets.
3. Submit both raw and cleaned versions with a cleaning report.
4. Access to real-world datasets from sources like: Kaggle, UCI Machine Learning Repository, data.gov.in, World Bank, etc
5. Perform basic descriptive statistics on a sample dataset (e.g., student grades, online survey).
6. Create visual summaries of the findings using charts.
7. Use Tableau Public or power BI to visualize a real-world dataset (from Kaggle or Government data portals).
8. Submit a short "data story" explaining the insights with visuals.

Reference Books:

1. Cathy O'Neil & Rachel Schutt, Doing Data Science, O'Reilly, 2013
2. Joel Grus, Data Science from Scratch, O'Reilly, 2019 (Chapters on cleaning & prep)

3. John W. Foreman, Data Smart: Using Data Science to Transform Information into Insight, Wiley, 2013
4. Cole Nussbaumer Knafl, Storytelling with Data: A Data Visualization Guide for Business Professionals, Wiley, 2015
5. Vasant Dhar, Data Ethics: The New Competitive Advantage, Harvard Business Review Press, 2023
6. Bernard Marr, Data Strategy: How to Profit from a World of Big Data, Analytics and the Internet of Things, Kogan Page, 2017
7. Online tutorials from tools' official sites (e.g., OpenAI, Canva, Tableau)

E-resources:

1. https://www.ebooks.com/enin/?srsltid=AfmBOor_DpgHWNAEQYrsEqhlMs_ZyBjeka1RBIqrZ5nmyqXcy0t5fi
2. https://joelgrus.com/2019/05/13/data-science-from-scratch-second-edition/?utm_source=chatgpt.com
3. <https://www.amazon.in/Data-Strategy-Analytics-Artificial-Intelligence-ebook/dp/B09B2TK4B8>

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Option I (A)

2 M.Sc. (MM) 3 A	Marks: 100			Credits: 4		
Social Media Marketing and Monetization	Th	Pr	la	Contact hrs		
				L	T	P
	80	-	20	3	1	-

Course Objectives

1. Equip students with comprehensive knowledge and practical skills for multimedia content creation and management.
2. Enable students to effectively strategize, implement, and manage digital monetization models across various platforms.
3. Develop strategic thinking for optimizing platform presence, content delivery, and audience engagement.
4. Foster an understanding of the legal, ethical, and societal implications of digital media and monetization practices.
5. Cultivate an entrepreneurial mindset for launching, growing, and sustaining digital media ventures in a dynamic environment.

Course Outcomes

1. Analyze and strategize for diverse digital platforms, developing tailored multimedia content plans for specific audiences.
2. Produce and optimize high-quality multimedia content, ensuring it is technically sound and strategically aligned for platform distribution.
3. Design and implement effective digital monetization models, selecting and applying strategies suitable for various content types and platforms.
4. Measure and improve content and platform performance using analytics, leveraging data-driven insights to enhance monetization.
5. Apply legal and ethical principles, and identify emerging trends, to lead and innovate responsibly within the digital media industry.

Unit-1	Digital Platforms and Monetization Ecosystem	L	T	P
1.1	Overview of Platforms (Websites, Social Media, Streaming Services, Mobile Apps, Gaming Platforms) (Lecture, Tutorial)	2	2	-
1.2	Introduction to Digital Monetization Models: Core concepts of digital monetization, including advertising, subscriptions, e-commerce, and direct sales (Lecture, Practical)	2	2	-
1.3	Platform Business Models and Revenue Streams (Lecture, Practical)	2	2	-
1.4	Audience Behaviour Across Platforms and Monetization Impact (Lecture)	2	2	-
1.5	Legal, Ethical, and Regulatory Frameworks for Platforms & Monetization (Lecture, Practical)	2	2	-

Unit-2	Content Strategy, Production, and Platform-Specific Optimization for Revenue	L	T	P
2.1	Content Strategy for Different Platforms (Lecture, Practical)	2	2	-
2.2	Workflows for producing video, audio, image, and textual content (Lecture, Practical)	2	2	-

2.3	Platform-Native Content Formats and Design for Monetization (Lecture, Practical)	2	2	-
2.4	Search Engine Optimization (SEO) and Platform Algorithms (Lecture, Practical)	2	2	-
2.5	Calls to Action (CTAs) and Conversion Optimization for Platforms (Lecture, Tutorial, Practical)	2	2	-

Unit-3	Platform Analytics and Performance Optimization	L	T	P
3.1	Platform Analytics and Data Aggregation – YouTube Analytics, Google Analytics, Facebook Insights (Lecture, Tutorial, Practical)	2	-	2
3.2	Key Performance Indicators (KPIs) for different platforms (Lecture, Tutorial, Practical)	2	-	2
3.3	Testing and Optimization – A/B Testing, Content Copy, Image Copy (Lecture, Tutorial, Practical)	2	-	2
3.4	Audience Segmentation and Re-targeting (Lecture, Tutorial, Practical)	2	-	2
3.5	Strategies for Platform Growth (Lecture, Tutorial, Practical)	2	-	2

Unit-4	Platform-Specific Monetization Models	L	T	P
4.1	Advertising Models (display ads, pre-roll/mid-roll video ads, native ads) (Lecture, Tutorial)	2	-	2
4.2	Subscription and Membership Models on Content Platforms (Lecture, Practical)	2	-	2
4.3	Affiliate Marketing (Lecture, Practical)	2	-	2
4.4	Sponsored Content and Brand Partnerships (Lecture, Practical)	2	-	2
4.5	Direct Sales of Digital Products and Services - Gumroad, Teachable, fiverr (Lecture, Practical)	2	-	2

Unit-5	Strategic Management, Growth, and Sustainability in Digital Media	L	T	P
5.1	Comprehensive Digital Media Strategy (Lecture)	2	-	2
5.2	Scaling Content Operations and Audience Growth (Lecture, Practical)	2	-	2
5.3	Team Building, Collaboration, and Workflow Management (Lecture, Practical)	2	-	2
5.4	Adapting to Market Shifts and Competitive Landscapes (Lecture)	2	-	2
5.5	Business Planning, Funding, and Long-Term Monetization Viability (Lecture, Practical)	2	-	2

Practical/Project/Assignments:

1. Digital Content Production & Platform Optimization Portfolio:
2. Assignment: Students will produce a small series of multimedia content (e.g., 3-5 short videos, a 2-3 episode podcast, or a series of engaging social media posts with visuals) optimized for a specific digital platform. They must demonstrate platform-specific best practices for content creation, formatting, and discoverability.
3. Focus: Applying content creation skills, understanding platform requirements, and optimizing for audience engagement.
4. Digital Monetization Strategy & Business Plan:
5. Assignment: Develop a comprehensive business plan for a new or existing digital content venture. This plan must detail the chosen multimedia platforms, specific monetization models (e.g., advertising, subscriptions, e-commerce), target audience analysis, and financial projections for generating revenue.

Reference Books:

1. Strategize: Product Strategy and Product Roadmap Practices for the Digital Age - by Roman Pichler
2. Social Media Marketing: A Strategic Approach By Melissa Barker, Donald I. Barker, Nicholas F. Bormann.
3. The Art of Social Media: Power Tips for Power Users By Guy Kawasaki and Peg Fitzpatrick
Jab, Jab, Jab, Right Hook: How to Tell Your Story in a Noisy Social World By Gary Vaynerchuk.
4. Influencer: Building Your Personal Brand in the Age of Social Media
By Brittany Hennessy
Digital Marketing For Dummies By Ryan Deiss and Russ Henneberry
YouTube Secrets: The Ultimate Guide to Growing Your Following and Making Money as a Video Influencer By Sean Cannell and Benji Travis

E-Resources:

1. Google Digital Garage – Fundamentals of Digital Marketing
<https://learndigital.withgoogle.com/digitalgarage>.
2. Meta Blueprint
<https://www.facebook.com/business/learn>
HubSpot Academy – Social Media Marketing Course
<https://academy.hubspot.com>.
3. Hootsuite Academy
<https://education.hootsuite.com>

Option I (B)

2 M.Sc. (MM) 3 B	Marks: 100			Credits: 4		
Multimedia Entrepreneurship	Th	Pr	la	Contact hrs		
				L	T	P
	80	-	20	3	1	-

Course Objectives

1. Start a Multimedia Business: Understand how to plan, validate ideas, and handle legal aspects of a new multimedia venture.
2. Build Modern Multimedia Products: Learn to design and manage projects for digital content, especially for mobile apps, Augmented Reality (AR), and Virtual Reality (VR).
3. Manage Money and Market: Find out how to get funding, manage money, and effectively market your multimedia products and services.
4. Use New Technology for Growth: Explore how Artificial Intelligence (AI), AR, and VR can help you innovate and grow your multimedia business.

Course Outcomes

1. Create Business Plans: Write clear business plans for multimedia projects, knowing the market and key rules.
2. Develop Digital Products: Design and manage projects for mobile apps and AR/VR experiences.
3. Fund and Promote: Understand how to get investments and run marketing campaigns for your business.
4. Innovate with Tech: Use new technologies to find opportunities and grow multimedia companies.

Unit-1	Foundations of Multimedia Business	L	T	P
1.1	Introduction to Multimedia Entrepreneurship: Defining Multimedia and Entrepreneurship Scope and Opportunities in the Multimedia Industry, Key Trends and Disruptions in Multimedia, including AR/VR and Mobile Content, Developing an Entrepreneurial Mindset for Multimedia Ventures, Case Studies of Successful Multimedia Startups (Lecture, Tutorial)	3	1	-
1.2	Business Idea Generation & Validation: Identifying Market Gaps and User Needs in Multimedia, Brainstorming and Concept Development for Multimedia Products/Services Market Research, Feasibility Analysis, and Target Audience Identification, Competitive Landscape Analysis in Multimedia. The Minimum Viable Product (MVP) Concept and Prototyping (Lecture, Practical)	3	1	-
1.3	Legal & Ethical Aspects: Intellectual Property Rights (IPR) in Multimedia (Copyright, Trademarks, Patents), Licensing and Royalty Agreements for Content, Data Privacy, Security, and Compliance (e.g., GDPR, CCPA, Ethical Considerations in Content Creation and Distribution, Contract Law and Business Registrations (Lecture, Practical)	3	1	-
1.4	Business Models for Multimedia Ventures: Subscription, Advertising, Freemium, and Transactional Models, E-commerce and Digital Product Sales Strategies, Platform-based and Service-oriented Business Models, Value Proposition Design and Customer Segmentation Partnerships and Ecosystem Development (Lecture)	3	1	-
1.5	Team Building and Leadership in Multimedia: Identifying Key Roles and Skills for a Multimedia Startup, Recruitment, Retention, and Motivation Strategies, Building a Collaborative and Creative Team Culture, Effective Leadership and Decision-Making in Dynamic Environments, Conflict Resolution and Team Dynamics	3	1	-

	(Lecture, Practical)			
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Unit-2	Multimedia Product Development & Management	L	T	P
2.1	Project Management for Multimedia: Agile and Waterfall Methodologies in Multimedia Projects, Project Planning, Scheduling, and Resource Allocation, Risk Management and Mitigation Strategies, Tools and Software for Multimedia Project Management Monitoring, Controlling, and Closing Multimedia Projects (Lecture, Practical)	3	1	-
2.2	User Experience (UX) and User Interface (UI) Design: Principles of User-Centred Design for Multimedia Products, Information Architecture and Navigation Design, Wireframing, Prototyping, and Usability Testing, Designing for Mobile and Immersive Experiences (AR/VR), Accessibility and Inclusive Design in Multimedia (Lecture, Practical)	3	1	-
2.3	Content Creation and Curation Strategies: Storytelling and Narrative Design for Digital Media, Production Workflows for Mobile, AR, and VR Content, Content Curation, Licensing, and Rights Management, Leveraging User-Generated Content (UGC) Content Optimization for Various Platforms and Devices (Lecture, Practical)	3	1	-
2.4	Technology Stacks for Multimedia Platforms: Overview of Frontend and Backend Technologies, Cloud Computing and Scalable Infrastructure for Multimedia, Content Delivery Networks (CDNs) and Streaming Technologies, Mobile Development Frameworks and AR/VR Platforms/SDKs, Integration of APIs and Third-Party Services (Lecture, Practical)	3	1	-
2.5	Quality Assurance and Testing: Importance of QA in Multimedia Product Development, Types of Testing (Functional, Performance, Security, Usability, Bug Reporting, Tracking, and Resolution, Automated Testing vs. Manual Testing, Post-Launch Monitoring and Iterative Improvements (Lecture, Tutorial, Practical)	3	1	-

Unit-3	Funding and Financial Management	L	T	P
3.1	Startup Funding Sources:,Bootstrapping and Self-Funding Strategies,Friends, Family, and Angel Investors,Venture Capital (VC) Funding and Stages of Investment,Crowdfunding Platforms and Strategies,Grants, Loans, and Government Programs for Startups (Lecture, Tutorial Practical)	3	1	-
3.2	Financial Planning and Budgeting:Developing a Startup Budget and Financial Projections,Cost Analysis and Expense Management,Cash Flow Management and Forecasting,Break-Even Analysis and Profitability Planning,Financial Statements (Income Statement, Balance Sheet, Cash Flow Statement)/ (Lecture, Tutorial Practical)	3	1	-
3.3	Revenue Models and Monetization Strategies:Detailed Exploration of Subscription, Advertising, and E-commerce Models,In-App Purchases and Microtransactions Affiliate Marketing and Partnerships for Revenue Generation,Data Monetization and Analytics,Pricing Strategies for Multimedia Products and Services (Lecture, Tutorial Practical)	3	1	-
3.4	Valuation and Investment Pitching:,Methods of Startup Valuation (e.g., Discounted Cash Flow, Multiples).Crafting a Compelling Pitch Deck for Investors.Public Speaking and Presentation Skills for Pitches.NegotiatingTerm Sheets and Investment Agreements.Due Diligence Process from an Investor's Perspective (Lecture, Tutorial Practical)	3	1	-

3.5	Financial Metrics and Performance Measurement: Key Performance Indicators (KPIs) for Multimedia Businesses (e.g., CAC, LTV, Churn Rate), Return on Investment (ROI) Analysis, Unit Economics and Scalability Analysis, Financial Reporting and Investor Relations, Understanding Burn Rate and Runway (Lecture, Tutorial Practical)	3	1	-
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Unit-4	Marketing & Branding for Multimedia Ventures	L	T	P
4.1	Digital Marketing Strategies: Search Engine Optimization (SEO) for Multimedia Content, Search Engine Marketing (SEM) and Pay-Per-Click (PPC) Advertising Email Marketing and Newsletter Campaigns, Content Marketing and Inbound Strategies, Affiliate Marketing and Influencer Collaborations (Lecture, Tutorial)	3	1	-
4.2	Social Media Marketing and Community Building: Developing a Social Media Strategy for Multimedia Brands, Platform-Specific Content Creation and Engagement (e.g., Instagram, Facebook, YouTube), Building and Nurturing Online Communities Social Media Analytics and Performance Tracking, Crisis Management on Social Media (Lecture, Practical)	3	1	-
4.3	Branding and Identity Development: Defining Brand Vision, Mission, and Values Creating a Unique Brand Voice and Visual Identity, Brand Positioning and Differentiation in the Market, Brand Storytelling and Narrative Development, Brand Management and Consistency Across Channels (Lecture, Practical)	3	1	-
4.4	Public Relations and Media Outreach: Developing a PR Strategy for Multimedia Startups, Crafting Press Releases and Media Kits, Building Relationships with Journalists and Media Outlets, Handling Media Inquiries and Interviews Event Marketing and Sponsorships (Lecture, Practical)	3	1	-
4.5	Analytics and Marketing Performance: Setting Marketing Goals and KPIs, Using Web Analytics Tools (e.g., Google Analytics), Tracking User Behavior and Engagement A/B Testing and Optimization of Marketing Campaigns, Reporting and Interpreting Marketing Data for Decision Making, (Lecture, Practical)	3	1	-

Unit-5	Growth, Innovation & Future Trends	L	T	P
5.1	Scaling a Multimedia Business: Strategies for User Acquisition and Retention, Expanding Product Offerings and Market Reach, Operational Scaling and Process Automation, Managing Growth Challenges and Risks (Lecture)	3	1	-
5.2	Innovation and Disruptive Technologies: Identifying Emerging Technologies Relevant to Multimedia (e.g., AI, Blockchain, Web3), Fostering a Culture of Innovation within the Organization, Research and Development (R&D) in Multimedia, Adapting to Technological Shifts and Market Disruptions (Lecture, Practical)	3	1	-
5.3	Global Markets and International Expansion: Assessing International Market Opportunities, Localization and Cultural Adaptation of Multimedia Content, Legal and Regulatory Considerations for Global Expansion, International Marketing and Distribution Strategies, Building Global Partnerships and Networks (Lecture, Practical)	3	1	-
5.4	Exit Strategies: Understanding Different Exit Options (Acquisition, IPO, Merger)	3	1	-

	Preparing a Company for Sale or Public Offering, Valuation in the Context of Exit Strategies, Navigating the M&A Process, Succession Planning and Founder Transition (Lecture)			
5.5	Emerging Trends in Multimedia: Artificial Intelligence (AI) in Content Creation and Personalization, Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR) Applications, The Metaverse and its Entrepreneurial Opportunities, Mobile-First Content Strategies and Super Apps, Personalized and Adaptive Multimedia Experiences (Lecture, Practical)	3	1	-

Practical/Projects/Assignments:

1. Create Multimedia Startup Business Plan & Pitch Deck
2. Develop Digital Marketing & Branding Strategy for a Multimedia Venture

Reference Books:

1. Creative Entrepreneurship: The Business of Selling Your Ideas – by Helga Henry & David Parrish
2. The Lean Startup – by Eric Ries
3. Media Entrepreneurship: A Strategic Approach – by Michelle Ferrier & Elizabeth Mays
4. The Content Trap: A Strategist's Guide to Digital Change – by Bharat Anand
5. Entrepreneurship in the Creative Industries: An International Perspective – by Colette Henry
6. Multimedia Foundations: Core Concepts for Digital Design – by Vic Costello
7. Creative Economy Entrepreneurs: From Start-Up to Success – by Colette Henry & Anne de Bruin
8. Show Your Work!: 10 Ways to Share Your Creativity and Get Discovered – by Austin Kleon
9. Hooked: How to Build Habit-Forming Products – by Nir Eyal
10. Start with Why: How Great Leaders Inspire Everyone to Take Action – by Simon Sinek

E-Resources:

1. Entrepreneurship in Emerging Economies – Harvard | Coursera
2. Media Entrepreneurship in the Digital Age – edX
3. Creative Entrepreneurship Specialization – Coursera | Berklee College of Music
4. Content Monetization & Strategy Courses – Udemy (Search: "media entrepreneurship," "YouTube business," etc.)
5. YouTube Creator Academy – <https://creatoracademy.youtube.com>
6. HubSpot Academy – Free Marketing & Content Strategy Courses – <https://academy.hubspot.com>
7. Canva Design School – <https://www.canva.com/learn/design-school/>

M.Sc. (Multimedia)

Research Project Guidelines

Theory	-	Practical	160	Internal	40	Credits	08
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Course Objectives

The Research Project is designed to:

- Integrate creative, technical, and research skills acquired across courses like animation, AI, UI/UX, AR/VR, data, digital marketing and digital film making.
- Encourage innovation, problem-solving, and industry relevance.
- Develop research aptitude.
- Develop academic writing skills.
- Produce a portfolio-ready project or prototype.

Guidelines for M.Sc. (Multimedia)

All the candidates of M.Sc. (Multimedia) are required to do a Research project work as part of their curriculum and submit a research project based on the work done by him/her during the research work period.

1. Introduction and Objectives

The Research Project is the capstone of the one-year M.Sc. Multimedia program. It requires students to demonstrate professional-grade mastery in creative technology, strategic thinking, and ethical media practices. Students must submit two primary components:

- **The Multimedia Product:** A functional, high-quality creative artifact.
- **The Research Thesis:** A formal academic document (max 100 pages) detailing the production process and research findings.

2. Project Credits

As per the NEP 2020 curriculum, the project is an 8-credit course.

- **Total Marks:** 200 Marks.
 - **Internal Assessment (40 Marks):** Evaluation of the synopsis, process documentation, and initial product development.
 - **External/Practical (160 Marks):** Evaluation of the final product, research thesis, and a comprehensive viva-voce.

3. The Guide

The Guide for M.Sc. (Multimedia) will be a faculty member of New Media Technology with 5 years of teaching experience.

4. Project Time / Man-Hours

- The M.Sc. (Multimedia) research project would be approximately 120-hours (in a span of 4 months) and carries a total of 8 credits (6 Pr + 2 IA)
- Research project should be based on topics relevant to the syllabus and identified situations.
- Synopsis of the research project should be submitted within the first 15 days of the research project duration.
- Presentation of the research project should be given thrice during the entire duration of the research project (synopsis, mid presentation, pre submission).
- The research thesis should be submitted 10 days before the final exam for evaluation.

5. Nature of the Project

Students may choose **any ONE of the following project types:**

A. Research-Based Project

- Theoretical + applied research
- Example:
 - Impact of AI on multimedia storytelling
 - UX analysis of OTT platforms
 - AR/VR effectiveness in education

B. Practice-Based / Creative Project

- Production + documentation
- Example:
 - Short animated film
 - AR/VR experience
 - Game prototype
 - Multimedia campaign
 - Multimedia Content Production

C. Industry-Oriented Project

- Problem-solving + prototype + business model
- Example:
 - Digital marketing monetization plan
 - Multimedia startup prototype
 - Interactive media product

6. Approved Research Project Domains & Tracks

Project topics must align with the specialized modules studied during the program:

- **Animation & Motion Graphics:** 3D character design portfolios or short animated films/ Films (3–5 minutes).
- **Immersive Media:** AR-based educational applications or VR virtual tours of heritage sites.

- **UI/UX & Design Thinking:** Professional redesign of public service platforms or mobile app prototypes.
- **Data & AI Strategy:** Data-driven interactive visualizations or AI-powered chatbots for digital engagement.

7. Research Project Work:

The research project work shall be evaluated on two different parameters.

- I. The Product
- II. Research Project Report

I. The Product

The final product developed during the research project should meet the following minimum criteria as mentioned below.

- The product developed should have a meaningful Concept/Assign implementing an idea with meaningful commentary
- Application of Production pipeline (Preproduction, Production, Postproduction)
- Clarity in Need Identification/objectives (Converting this into an idea)
- Idea - how to implement/Evidence for each idea, like text, image, sound/ minimum platform required to implement the same
- Design and Development - looking to the idea, storyboard/communication strategy, pedagogy, aesthetics/ Quality of Presentation of each piece of evidence, Format, Technical Quality, Readability, Software used/ Data management
- Validation
- Final output (Depending on Project type: Animation / Film / Video, UI/UX prototype (Figma, XD), AR/VR demo, Game prototype, AI-based media output, Data visualization dashboard, Digital campaign)

II. Research Project Report

The process shall be evaluated in the following areas:

- Process Description
- What contribution would the product make?
- Method and methodology used in research work
- Data analysis and Interpretation
- Summary report
- Viva

8. Mandatory Ethical & Technical Standards

To reflect the "Ethics and Governance" and "AI in Multimedia" modules, every project must document the following:

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- **IPR & Licensing:** A report proving that all music, images, and assets are original or legally licensed.
- **AI Disclosure:** If Generative AI tools were used, a "Prompt Log" must be included to explain the human-AI collaborative process.
- **Fact-Checking:** Projects involving information must use verification tools (e.g., Invid, Factcheck Explorer) to ensure content credibility.

9. The Production Pipeline (The Product)

The developed product will be evaluated based on the following professional stages:

- **Pre-production:** Ideation, storyboarding, mood boards, and communication strategy.
- **Production:** Technical execution using tools like Adobe After Effects, Blender, Unity, or Maya.
- **Post-production:** Editing, sound design, and final rendering quality.

Validation: Testing the product against its initial objectives to ensure it meets user needs.

Tools and Technology (Indicative)

- Design & Editing: Adobe Suite, Canva
- Animation: Blender, Maya
- Game/AR/VR: Unity, Unreal Engine
- AI Tools: ChatGPT, Runway ML, Midjourney
- UI/UX: Figma, Adobe XD
- Data Tools: Tableau, Power BI
- Web: WordPress, Webflow

10. Research Project Evaluation Guidelines

A.) To be done by the Internal Examiner: (02 credit)

The evaluation of the project will be done on the basis of the following heads:

Synopsis/Internal Assessment	- 25% of total credits
Process and its in-process documentation	- 25% of total credits
Product	- 25% of total credits
Final Project report and presentation	- 25% of total credits

B.) To be done by External Examiner: (06 credits)

The evaluation of the project will be done on the basis of the following heads:

Product	- 25% of total credits
Process	- 25% of total credits
Research Thesis	- 25% of total credits
Comprehensive Viva	- 25% of total credits

11. Synopsis

All students must submit a synopsis separately with the project report. Synopsis preferably should be of about 3-4 pages. The content should be as brief enough to explain the objective and implementation of the project that the candidate is going to take up. The write-up must adhere to the guidelines and should include the following:

- Name / Title of the research project
- Problem statement of the research project
- Objectives of the research project
- Scope and relevance
- Methodology and tools to be used in the research project
- Expected outcome
- Timeline

12. The following suggested guidelines must be followed in preparing the Final Research Project Report:

Good quality white executive bond paper, A4 size, should be used for typing and duplication. Care should be taken to avoid smudging while duplicating the copies.

Page Specification : (Written paper and source code)

- Left margin - 3.0 cms
- Right margin- 2.0 cms
- Top margin 2.54 cms
- Bottom margin 2.54 cms
- Page numbers - All text pages should be numbered at the bottom centre of the pages.

Normal Body Text: Font Size: 12, Times New Roman, Double Spacing, Justified. 6 point above and below para spacing or 14, Krutidev/Mangal, Double Spacing, Justified. 6 point above and below para spacing

Paragraph Heading Font Size: 14, Times New Roman, Underlined, Left Aligned. 12 point above & below spacing or 16, Krutidev/Mangal, Underlined, Left Aligned. 12 point above & below spacing.

Chapter Heading Font Size: 20, Times New Roman, Centre Aligned, 30 point above and below spacing or 22, Krutidev/Mangal, Centre Aligned, 30 point above and below spacing

Coding Font size: 10, Courier New or 12, Krutidev/Mangal, Normal

Submission of Project Report to the University: The student will submit his/her project report in the prescribed format. The Project Report should include:

- One copy of the synopsis//abstract.
- Two hard copies of the report.
- Soft copy of the final product on a pen drive.
- The report may be a maximum of 100 pages.

13. Format of the Research Project Report

1. Cover Page as per format (Annexure I)
2. Self Declaration (Annexure II)
3. Certificate of the Research Guide (Annexure III)
4. Acknowledgment (Annexure IV)
5. Synopsis of the Research Project
6. Main Research Project Report
 - Introduction
 - Literature Review
 - Objective & Scope of the Research Project
 - Research method/ methodology
 - Design / Development Process
 - Results & Output
 - Data Analysis and Interpretation
 - Product Validation
 - Cost and Benefit Analysis
 - Conclusion and Future Scope
 - References (APA Format)
 - Appendixes

(Annexure I)

Cover Page Format

Title of the Research Project

(Times New Roman, Italic, Font size = 24)

Submitted under partial fulfilment of the requirements
for the award of the degree of M.Sc. in Multimedia

(Bookman Old Style, 16 point, centre)

University Logo

Guided by:

(Guide Name)

Submitted by:

(Student's Name)

Roll Number:

**Makhanlal Chaturvedi National University of Journalism and
Communication, Bhopal**

(Annexure II)

Self Declaration

This is to certify that the research project report entitled “_____” is done by me is an authentic work carried out for the partial fulfilment of the requirements for the award of the degree of M.Sc. in Multimedia under the guidance of_____. The matter embodied in this research project work has not been submitted earlier for the award of any degree or diploma to the best of my knowledge and belief.

Signature of the Student

Name of the Student

Roll Number

(Annexure III)

Certificate of the Research Project Guide

This is to certify that this project entitled “_____”
submitted under partial fulfilment of the degree of Master of Science (Multimedia) to the Makhanlal
Chaturvedi National University of Journalism and Communication, Bhopal, done by
Mr./Ms. _____, Roll Number _____ is a research project work
carried out by him/her at _____ under my guidance. The matter
embodied in this research project work has not been submitted earlier for the award of any degree or
diploma to the best of my knowledge and belief.

Signature of the Student

Signature of the Guide

(Annexure IV)

Acknowledgment

In the "Acknowledgement" page, the writer recognizes his indebtedness for guidance and assistance of the project advisor and other members of the faculty. Courtesy demands that he also recognize specific contributions by other persons or institutions, such as libraries and research foundations. Acknowledgements should be expressed simply, tastefully, and tactfully.

References

- 1.
- 2.
- 3.
- 4.
- 5.

Binding & Color code of the report

1. Hard-bound report
2. Background of the cover page - blue letters in spark

