

Kurukshetra University, Kurukshetra

(Established by the State Legislature Act-XII of 1956)

("A++" Grade, NAAC Accredited)



Scheme of Examination for Post Graduate Programme

M.Sc. Graphic Animation and Multimedia

as per NEP 2020

Curriculum and Credit Framework for Postgraduate Programme

With Multiple Entry-Exit, Internship and CBCS-LOCF

With effect from the session 2024-25 (in phased manner)

Institute of Mass Communication and Media Technology
FACULTY OF COMMERCE AND MANAGEMENT

KURUKSHETRA UNIVERSITY, KURUKSHETRA-136119
HARYANA, INDIA

Programme Learning Outcomes (PLOs) for PG Programmes as per NEP-2020

PLOs	M.Sc. Graphic Animation and Multimedia
	After the completion of Master degree in Graphic Animation and Multimedia the student will be able to:
PLO-1: Knowledge and Understanding	Demonstrate the fundamental and advanced knowledge of the subject and understanding of recent developments and issues, including methods and techniques, related to Graphic animation and Multimedia.
PLO-2: General Skills	Acquire the general skills required for performing and accomplishing the tasks as expected to be done by as Skilled professional in the fields of Graphic animation and Multimedia.
PLO-3: Technical/Professional Skills	Demonstrate the learning of advanced cognitive technical/professional skills required for completing the specialized tasks related to the Profession and for conducting and analyzing the relevant research tasks in different domains of Graphic animation and Multimedia.
PLO-4: Communication Skills	Effectively communicate the attained skills of Graphic animation and Multimedia in well-structured and productive manner to the society At large.
PLO-5: Application of Knowledge and Skills	Apply the acquired knowledge and skills to the problems in the subject area, and to identify and analyze the issues where the attained knowledge and skills can be applied by carrying out research investigations to formulate evidence-based solutions to complex and unpredictable problems associated with the field of Graphic animation and Multimedia or otherwise.
PLO-6: Critical thinking and Research Aptitude	Attain the capability of critical thinking in intra/inter-disciplinary areas of Graphic animation and Multimedia enabling to formulate, synthesize, and articulate issues for designing of research proposals, testing hypotheses, and drawing inferences based on the analysis.
PLO-7: Constitutional, Humanistic, Moral Values and Ethics	Know constitutional, humanistic, moral and ethical values, and intellectual property rights to become a scholar/professional within grained values in expanding knowledge for the society, and to avoid unethical practices such as fabrication, falsification or misrepresentation of data or committing plagiarism.
PLO-8: Capabilities/qualities and mindset	To exercise personal responsibility for the outputs of own work as well as of group/team and for managing complex and challenging work(s) that requires new/strategic approaches.
PLO-9: Employability and job-ready skills	Attain the knowledge and skills required for increasing employment potential, adapting to the future work and responding to the rapidly changing demands of the employers/industry/society with time.

Kurukshetra University, Kurukshetra
Scheme of Examination for Postgraduate Programme
M.Sc. Graphic Animation and Multimedia
As per NEP2020 Curriculum and Credit Framework for
Postgraduate Programme (CBCS LOCF) with effect from the
session 2024-25 (in phased manner)
Framework-1
Scheme-P

Semester	Course Type	Course Code	Nomenclature of course	Theory(T) / Practical (P)	Credits		Contact hours per week L: Lecture P: Practical T: Tutorial				Internal Assessment Marks	End Term Examination Marks	Total Marks	Examination hours
						Total	L	T	P	Total				
1	CC-1	M24-GAM-101	Story, Script & Storyboarding	T	4	22	4	0	0	4	30	70	100	3
	CC-2	M24-GAM-102	Graphic Design	T	4		4	0	0	4	30	70	100	3
	CC-3	M24-GAM-103	Multimedia Technologies	T	4		4	0	0	4	30	70	100	3
	PC-1	M24-GAM-104	Visual Art and Creativity	P	4		0	0	8	8	30	70	100	4
	PC-2	M24-GAM-105	Digital Design Lab	P	4		0	0	8	8	30	70	100	4
	SEMINAR	M24-GAM-106	Seminar	S	2		0	0	0	2	0	50	50	1
2	CC-4	M24-GAM-201	Animation Techniques	T	4	22	4	0	0	4	30	70	100	3
	CC-5	M24-GAM-202	Multimedia Programming	T	4		4	0	0	4	30	70	100	3
	CC-6	M24-GAM-203	User Interface & User Experience (UI/UX)	T	4		4	0	0	4	30	70	100	3
	PC-3	M24-GAM-204	Production Lab	P	4		0	0	8	8	30	70	100	4
	PC-4	M24-GAM-205	3D Modeling & Texturing	P	4		0	0	8	8	30	70	100	4

	CHM	M24-CHM-201	Constitutional Human and Moral Values, And IPR	T	2		2	0	0	2	15	35	50	3
	Internship	M24-INT-200	An internship course of 4 Credits of 4-6 weeks duration during summer vacation after IInd semester is to be completed by every student. Internship can be either for enhancing the employability or for developing the research aptitude.								50	50	100	
3	CC-7	M24-GAM-301	Gaming Concepts	T	4	22	4	0	0	4	30	70	100	3
	CC-8	M24-GAM-302	3D Rigging & Lighting	T	4		4	0	0	4	30	70	100	3
	DEC-1 (Choose any one)	M24-GAM-303	Film Appreciation	T	4		4	0	0	4	30	70	100	3
		M24-GAM-304	Artificial Intelligence (AI)	T	4		4	0	0	4	30	70	100	3
		M24-GAM-305	Advertisement Design	T	4		4	0	0	4	30	70	100	3
		M24-GAM-306	MOOC course from Swayam Portal or other approved Portals	T	4		4	0	0	4	30	70	100	3
	PC-5	M24-GAM-307	UI & UX Lab	P	4		0	0	8	8	30	70	100	4
	PC-6	M24-GAM-308	Motion Design	P	4		0	0	8	8	30	70	100	4
	OEC	M24-OEC-327	Image Retouching & Photo Editing	T	2		2	0	0	2	15	35	50	3
4	CC-9	M24-GAM-401	Research Methodology	T	4	22	4	0	0	4	30	70	100	3
	CC-10	M24-GAM-402	3D Animation & Rendering	T	4		4	0	0	4	30	70	100	3
	DEC-2 (Choose any one)	M24-GAM-403	Print and Publishing	T	4		4	0	0	4	30	70	100	3

	M24-GAM-404	Information security	T	4		4	0	0	4	30	70	100	3
	M24-GAM-405	Audio Video Production	T	4		4	0	0	4	30	70	100	3
	M24-GAM-406	MOOC course from Swayam Portal or other approved portals											
PC-7	M24-GAM-407	3D Design and Game Engine	P	4		0	0	8	8	30	70	100	4
PC-8	M24-GAM-408	VFX Production Lab	P	4		0	0	8	8	30	70	100	4
EEC	M24-GAM-409	Digital Marketing Entrepreneurship	T	2		2	0	0	2	15	35	50	3

OR DISSERTATION/ PROJECT WORK

NOTE: IF A CANDIDATE OPTS FOR DISSERTATION/ PROJECT WORK @12 CREDITS IN 4TH SEMESTER, HE/SHE WILL STUDY CC-9, DEC-2 AND EEC COURSES ALONGWITH DISSERTATION/ PROJECT WORK

CC-9	M24-GAM-401	Research Methodology	T	4		4	0	0	4	30	70	100	3
DEC-2 (Choose any one)	M24-GAM-403	Print and Publishing	T	4		4	0	0	4	30	70	100	3
	M24-GAM-404	Information security	T	4		4	0	0	4	30	70	100	3
	M24-GAM-405	Audio Video Production	T	4		4	0	0	4	30	70	100	3
	M24-GAM-406	MOOC course from Swayam Portal or other approved Portals											
EEC	M24-GAM-408	Digital Marketing Entrepreneurship	T	2		2	0	0	2	15	35	50	3
Dissertation/ Project Work	M24-GAM-409	Dissertation/ Project Work	D	12		0	0	0	12	0	300	300	

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Syllabus for Post Graduate Programme

M.Sc. Graphic Animation and Multimedia

as per NEP 2020

Curriculum and Credit Framework for Postgraduate Programme

With Multiple Entry-Exit, Internship and CBCS-LOCF

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Session: 2024-25**PartA - Introduction**

Name of Programme	M.Sc. Graphic Animation and Multimedia		
Semester	First		
Name of the Course	Story, Script & Storyboarding		
Course Code	M24-GAM-101		
CourseType	CC-1		
Level of the course	400-499		
Pre-requisite for the course (ifany)			
CourseLearningOutcomes (CLO) After completing this course, the learner will be able to:	CLO 1: learn the idea creation for writing a story. CLO 2: Understand the grammar fundamentals for writing content CLO 3: understand the language, dialect and script CLO 4: convert the written content into the multimedia formats		
Credits	Theory	Practical	Total
	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Time	3 hours		

Part B-Contents of the Course

Instructions for Paper- Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking course learning outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will consist at least 4 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Story Elements of story, Resources and ideas from life, Story Genres, Characters and the story, character driven stories, Event driven stories. Story structures and styles (Linear, Non-Linear, Circular and Episodic) Narrative, non-narrative, abstract, absurd with reference to stories for animated film Basic writing for Animation, Story Structure, Plot, Dramatic structure, Conflict, Setting mood, Rising action, Falling Action, Dénouement, Resolution	
II	Script Anatomy of a Script, Script Elements and Scene Heading, Action, Characters, Dialogue, Parenthetical, Extension, Transition, Shots, Page Breaking, Finer Points, Dual Dialogue, and Adlibs, Abbreviations and Montages, A Series of Shots and Short Lines/Poetry/Lyrics, transitions, continuity etc. Titles or Opening Credits, and Superimpose or Title, Title Page, Production Drafts, Top Continued and Bottom Continued, Locking Script Pages and Locking Scenes, Header, Do's and Don'ts.	

	Script Formats, Radio scripts, TV scripts, Animation film scripts.	
III	Storyboarding Introduction to Storyboard, Importance of StoryBoard, difference between storyboard and Graphic Comic, Difference between Story, Script and Storyboard. Advantages of Storyboard in Animation and Anatomy of a Storyboard.	
IV	Shots Introduction to various shots, Camera angles and Camera Movements used in Storyboard panels. continuity and Timing, Building a sequence of shots. Use of Perspective, Composition, Light & Shadow in Storyboarding. Script to Storyboard Designing a storyboard based on a short script, Use of Thumbnails and Quick story sketches, Creating visual narrative using Animatics	
Total Contact Hours		60
Suggested Evaluation Methods		
Internal Assessment: 30		End Term Examination: 70
➤ Theory	30	➤ Theory: 70
• Class Participation:	5	Written Examination
• Seminar/presentation/assignment/quiz/class test etc.:	10	
• Mid-Term Exam:	15	
Part C-Learning Resources		
Recommended Books/e-resources/LMS:		
<ul style="list-style-type: none"> - Animation history and production by aparna vats; new delhi publishers; First edition 2017 - Story: Substance, Structure, Style and the Principles of Screenwriting by Robert McKee - The Way of the Storyteller by Ruth Sawyer - Comic Book Design: The Essential Guide to Creating Great Comics and Graphic Novels Gary Spencer Millidge - Facial Expressions: A Visual Reference for Artists, Mark Simon, Publisher: Watson-Guptill, - The Animation Book: A Complete Guide to Animated Filmmaking--From Flip-Books to Sound Cartoons to 3- D Animation, Three Rivers Press - The Illusion of Life: Disney Animation, Ollie Johnston and Frank Thomas, Publisher: Disney Editions; - Making Comics: Storytelling Secrets of Comics, M... by Scott McCloud - The Art of story board by John Hart - 'How to Write for Animation' by Jeffrey Scott's book - Animation Art: From Pencil to Pixel, the world of Cartoon Anime and CGI- Jerry Beck - The Animation Bible: A Practical Guide to the Art of Animating from Flipbooks to Flash [Paperback], Maureen Furnis 		

Session: 2024-25			
Part A – Introduction			
Name of Programme	M.Sc. Graphic Animation and Multimedia		
Semester	First		
Name of the Course	Graphic Design		
Course Code	M24-GAM-102		
Course Type	CC-2		
Level of the course	400-499		
Pre-requisite for the course (if any)			
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	CLO 1: Understand the basic principles of graphic design.		
	CLO 2: Learn the major tools of graphic designing.		
	CLO 3: know about the color theory and color scheme		
	CLO 4: Understand different kind of layouts in graphic designing.		
Credits	Theory	Practical	Total
	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Time	3 hours		
Part B- Contents of the Course			
Instructions for Paper- Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking course learning outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will consist at least 4 parts covering entire syllabus. The examinee will be required to attempt 5 questions; selecting one question from each unit and the compulsory question. All questions will carry equal marks.			
Unit	Topics		Contact Hours
I	Introduction to graphics, tools of graphics, uses & types of graphics Meaning and definition of graphics design Elements and principles of graphic design Graphics Overview: Raster graphics, Vector graphics		15
II	Understanding the role of graphic design in advertising Design Theory: Gestalt Principal, Visual Perception Elements of Art: Point, Line, Form, Shape, Space, Color, Texture, Value Principles of Art: Balance, Rhythm, Harmony, Contrast, Proportion, • Dominance, Unity		15
III	Logo Design: Principal, element and types Poster Design: Types, Elements Brochure Design: Types Infographics: concept and uses Colour Theory: Colour wheel, colour scheme		15
IV	Authoring and process of publishing Publishing types, newspaper and magazine publishing Research papers and publications Packaging and its types, Functions of Packaging		15
Total Contact Hours			60
Suggested Evaluation Methods			
Internal Assessment: 30		End Term Examination: 70	
➤ Theory	30	➤ Theory:	70
• Class Participation:	5	Written Examination	
• Seminar/presentation/assignment/quiz/class test etc.:	10		

Part C- Learning Resources**Recommended Books/e-resources/LMS:**

- Golombisky, K., & Hagen, R. (2017). White space is not your enemy: A beginner's guide to communicating visually through graphic, web & multimedia design. CRC Press.
- Harrington, R. (2012). Understanding Adobe Photoshop CS6: The essential techniques for imaging professionals. Peachpit Press.
- Gulbins, J. (2013). Mastering Photoshop layers: A photographer's guide. Rocky Nook.

Session: 2024-25**Part A - Introduction**

Name of Programme	M.Sc. Graphic Animation and Multimedia		
Semester	First		
Name of the Course	Multimedia Technologies		
Course Code	M24-GAM-103		
Course Type	CC-3		
Level of the course	400-499		
Pre-requisite for the course (if any)			
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	CLO 1: Understand the file organization of different multimedia elements.		
	CLO2:Learn the knowledge of various multimedia equipment's and kiosks.		
	CLO 3: Create the linking inputs of interconnected multimedia systems.		
	CLO 4: Learn to secure the created multimedia content.		
Credits	Theory	Practical	Total
	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Time	3 hours		

Part B-Contents of the Course

Instructions for Paper- Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking course learning outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will consist at least 4 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Multimedia Elements, Multimedia Applications, Multimedia System Architecture, Multimedia Databases; Types of Compression, Binary Image Compression Schemes, Color, gray scale, still-video image compression, video Image compression, audio compression; Data and File format standards- RTF, TIFF, RIFF, MIDI, JPEG, AVI, JPEG	15
II	Key Technology Issues, Pen Input, Video and Image Display Systems, Print Output Technologies, Image Scanners, Digital Voice and Audio, Video Images and Animation, Full Motion Video; Magnetic Media Technology, Optical Media, WORM optical drives , Cache Management for storage systems.	15
III	Types of Multimedia systems, Virtual Reality Design, Components of Multimedia system, Distributed Application Design Issues, Multimedia Authoring and User Interface, Hypermedia Messaging, Distributed Multimedia Systems	15
IV	Secured Multimedia, Digital Rights Management Systems, Technical Trends, Multimedia encryption, Digital Watermarking, Security Attacks; Multimedia Authentication, Pattern, Speaker and Behavior Recognition,	15
Total Contact Hours		60

Suggested Evaluation Methods			
Internal Assessment: 30		End Term Examination: 70	
➤ Theory	30	➤ Theory:	70
• Class Participation:	5	Written Examination	
• Seminar/presentation/assignment/quiz/class test etc.:	10		
• Mid-Term Exam:	15		
Part C-Learning Resources			
Recommended Books/e-resources/LMS:			
<ul style="list-style-type: none"> • Weixel, Fulton, Barksdale.Morse, “Multimedia Basics”, Easwar Press 2004. • Andleigh PK and Thakrar K, “Multimedia Systems”, Addison Wesley Longman, 1999. • Fred Halsall, “Multimedia Communications”, Addison Wesley, 2000. • Ralf Steinmetz, KlaraNahrstedt, “Multimedia, computing, communications and applications”, Prentice Hall, 1995. • Tay Vaughan, “Multimedia making It work”, TMH 5th Edition 2001. 			

Session: 2024-25**Part A - Introduction**

Name of the Programme	M.Sc. Graphic Animation and Multimedia		
Semester	First		
Name of the Course	Visual Art and Creativity		
Course Code	M24-GAM-104		
Course Type	PC-1		
Level of the course	400-499		
Pre-requisite for the course (if any)			
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	CLO 1: Understanding the elements and principles of art, including color, composition, form, balance, harmony, texture and space.		
	CLO 2: Develop skills in observing artworks that demonstrate technical skill and artistic expression.		
	CLO 3: Experiment with various techniques of drawing and painting		
	CLO 4: Understand and apply design process from concept to completion.		
Credits	Theory	Practical	Total
	0	4	4
Teaching Hours per week	0	8	8
Internal Assessment Marks	0	30	30
End Term Exam Marks	0	70	70
Max. Marks	0	100	100
Examination Time	4 hours		

Part B-Contents of the Course

Practical's		Contact Hours
	1. Dimensions of creativity in visual art	120
	2. Practice of Basic drawing	
	3. Contour drawing, Gesture drawing	
	4. Basic Shapes of Art	
	5. Shading Techniques	
	6. Working with the elements of art (line, shape, form, color, texture, space)	
	7. Working with on the principles of art	
	8. Two Exercises on Still life drawing.	
	9. Typography Practice	
	10. Creating Perspective and Proportion.	
	11. Discussion on Anatomy and Create four exercises	
	12. Create Three Caricatures	
	13. Working with painting materials (watercolours, acrylics, oils)	
	14. Discussion on Colour theory and mixture	
	15. Painting exercises (landscape, portrait, abstract).	
	16. Warli Art and Gond Art drawing	
	17. Creating Mandala Art on Canvas	
	18. Dot painting Techniques Practice	
	19. Stone Art Practice	
	20. Glass Painting or Mirror Image Art Practice	

Suggested Evaluation Methods

Internal Assessment: 30		End Term Examination: 70	
➤ Practicum	30	➤ Practicum	70
• Class Participation:	5	Lab record, Viva-Voce, write-up and execution of the practical	
• Seminar/Demonstration/Viva-voce/Lab records etc.:	10		
• Mid-Term Exam:	15		

Part C-Learning Resources**Recommended Books/e-resources/LMS:**

- Indian painting by Lokesh Chandra Sharma
- Indian cartoon Art by Veena Bansal
- Aesthetic of art, Krishna's publisher, Author Nupur Sharma
- Graphic design by Narender Singh Yadav

Session: 2024-25

Part A - Introduction

Name of the Programme	M.Sc. Graphic Animation and Multimedia		
Semester	First		
Name of the Course	Digital Design Lab		
Course Code	M24-GAM-105		
Course Type	PC-2		
Level of the course	400-499		
Pre-requisite for the course (if any)			
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	CLO: 1. Understand the difference between different graphics and image file formats.		
	CLO: 2. Understand Vector Graphic tools.		
	CLO: 3. Know About Design Process.		
	CLO: 4. Learn the Techniques to Create Digital Graphics		
Credits	Theory	Practical	Total
	0	4	4
Teaching Hours per week	0	8	8
Internal Assessment Marks	0	30	30
End Term Exam Marks	0	70	70
Max. Marks	0	100	100
Examination Time	4 hours		

Part B-Contents of the Course

Practical's		Contact Hours
	1. Create five Logos	120
	2. Draw two Posters	
	3. Make a Web Banner	
	4. Make two Hoardings	
	5. Create Emailers	
	6. Make four Flyers	
	7. Make two Magazine covers	
	8. Make Two Newspaper Advertisement	
	9. Infographics Discussion	
	10. Make a Trifold brochure	
	11. Make a French fold brochure	
	12. Create a Gatefold brochure	
	13. Make Bi fold brochure	
	14. Create a Accordion brochure	
	15. Create Five PowerPoint presentations	
	16. Make a Webpage	
	17. Typography Practice	
	18. Packaging Drawing Practice	
	19. Make a Vehicle wrap design	
	20. Make a Mock up design	

Suggested Evaluation Methods

Internal Assessment: 30		End Term Examination: 70	
➤ Practicum	30	➤ Practicum	70
• Class Participation:	5	Lab record, Viva-Voce, write-up and execution of the practical	
• Seminar/Demonstration/Viva-voce/Lab records etc.:	10		
• Mid-Term Exam:	15		

Part C-Learning Resources

- Recommended Books/e-resources/LMS:**
- Corel Draw Training Guide, Author: Satish Jain, M. Geetha Basics of Illustration

- Corel draw 2020 User Guide
- A Textbook of Vector Calculus by Shanti Narayan (Author), P.K. Mittal (Author)
- Guide to Graphics Design by Scott W. Santoro, Library of Congress Cataloging-in-Publication Data, ISBN 978-0-13-230070-4 (pbk.)
- Graphic Designer's Essential Reference, Visual Elements, Techniques, and Layout Strategies for Graphic Designers by Timothy Samara, ROCKPORT PUBLISHER

Session: 2024-25

Name of the Programme	M.Sc. Graphic Animation and Multimedia
Semester	First
Name of the Course	Seminar
Course Code	M24-GAM-106
Course Type: (CC/DEC/PC/Seminar/CHM/OEC/EEC)	Seminar
Level of the course	400-499
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	CLO1: Demonstrate a technical knowledge of their selected seminar topic. CLO2: Effective presentation and improve soft skills.
Credits	Seminar
	2
Teaching Hours per week	2
Max. Marks	50
Internal Assessment Marks	0
End Term Exam Marks	50
Examination Time	1 hour
Instructions for Examiner: Evaluation of the seminar will be done by the internal examiner(s) on the parameters as decided by staff council of the department. There will be no external examination/viva-voce examination.	

SEMESTER-II

Session: 2024-25**Part A - Introduction**

Name of Programme	M.Sc. Graphic Animation and Multimedia		
Semester	Second		
Name of the Course	Animation Techniques		
Course Code	M24-GAM-201		
Course Type	CC-4		
Level of the course	400-499		
Pre-requisite for the course (if any)			
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	<p>CLO 1: Understand about the origin and development of animation.</p> <p>CLO 2: Know about the different Styles of Animation around the word.</p> <p>CLO 3: Learn Different Principals of Animation</p> <p>CLO 4: Understanding of Animation industry and its scope in different areas.</p>		
Credits	Theory	Practical	Total
	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Time	3 hours		

Part B-Contents of the Course

Instructions for Paper- Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking course learning outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will consist at least 4 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	<p>Ancient Origin of animation</p> <p>Development of Animation: 19th Century, Early 20th Century, Golden Age of Animation</p> <p>Techniques of Animation: Cel Animation / Frame by Frame, Traditional Animation, Stop Motion Animation, Computer Animation – 2D, 3D, Particles Animation and VFX.</p> <p>Animation Styles: Anime, Manga-Inspired Animation, Weston's, Filipino Animation</p>	15
II	<p>12 Principals of Animation</p> <p>Compare: Straight ahead action and pose-to-pose</p> <p>Pipeline of Animation: Pre-Production, Production and Post-Production</p> <p>Compare production process of 2D and 3D Animation</p>	15
III	<p>Persistence of Vision: Illusion and Motion of Illusion</p> <p>LightBox, FlipBook, Frame with types, X-Sheet</p> <p>Frame Rate (FPS): 8fps, 10fps, 12fps, 24fps, 30fps, 60fps, 120fps</p> <p>Stop Motion Animation: Cut-Out Animation, Sand Animation, Shadow Animation, Clay Animation</p>	15
IV	Scope of Animation in Advertising, E-Learning, Games	15

Pioneers of Indian Animation: Uday Shankar, Ram Mohan, Rajendra Kumar, Rajiv Chilaka Cartoon Channels and about their Animation Styles: Cartoon Network, Nickelodeon, Disney, Pogo, Hungama. Animation Studio and their role in growth of animation: Warner Bros, Disney, Hanna-Barbera, Pixar, Dreamworks, Aardman		
Total Contact Hours		60
Suggested Evaluation Methods		
Internal Assessment: 30		End Term Examination: 70
➤ Theory	30	➤ Theory: 70
• Class Participation:	5	Written Examination
• Seminar/presentation/assignment/quiz/class test etc.:	10	
• Mid-Term Exam:	15	
Part C-Learning Resources		
Recommended Books/e-resources/LMS:		
<ul style="list-style-type: none"> • Lasseter, J. (2001). Principles of Traditional Animation. Pixar Animation Studios. • Thomas, F., & Johnston, O. (1995). The Illusion of Life: Disney Animation. Disney Editions. • Kerlow, I. V. (2009). The Art of 3D Computer Animation and Effects. John Wiley & Sons. • Williams, R. (2012). The Animator's Survival Kit. Faber & Faber. • Hooks, E. (2017). Acting for Animators: A Complete Guide to Performance Animation. Routledge. • Birn, J. (2016). Digital Lighting and Rendering. New Riders. • Whitaker, H., & Halas, J. (2009). 		

Session: 2024-25**Part A - Introduction**

Name of Programme	M.Sc. Graphic Animation and Multimedia		
Semester	Second		
Name of the Course	Multimedia Programming		
Course Code	M24-GAM-202		
Course Type	CC-5		
Level of the course	400-499		
Pre-requisite for the course (if any)			
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	CLO 1: Understand the basic Data Types and Statements CLO 2: Learn the Basic Programming using tags. CLO 3: Study the Networking Approaches. CLO 4: Learn the database system.		
Credits	Theory	Practical	Total
	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Time	3 hours		

Part B- Contents of the Course

Instructions for Paper- Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking course learning outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will consist at least 4 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Fundamental of Computer Programming, Programming Environment, Basic Syntax, Data Types, Variables, Keywords, Basic Operators, Decision Making, Control Statements, Numbers, Characters, Arrays, Strings Functions	15
II	Web Essentials, HTML, CSS Basic Structure of a Web Page Basic Tags: Links, Images, Fonts, Colour and Character entities Images, Forms, Lists, Tables Block and Text level Elements	15
III	Web Development: Introduction to web applications, Client-Side Vs Server-Side Scripting Web Servers: Local Servers and Remote Servers, Internet Information Server (IIS), Personal Web Server (PWS) Static website vs Dynamic website development, Introduction to PHP Framework, Basic PHP syntax, Data types in PHP, Variables, Constants, operators and Expressions, Control statements, Arrays, String, Functions	15
IV	SQL and Database Management Introduction to Sql: Creating Databases and Tables Sql Queries: Inserting, Deleting, Updating Data, Joins Sorting and Filtering Data Querying Sql Database in PHP	15

Total Contact Hours		60
Suggested Evaluation Methods		
Internal Assessment: 30		End Term Examination: 70
➤ Theory	30	➤ Theory: 70
• Class Participation:	5	Written Examination
• Seminar/presentation/assignment/quiz/class test etc.:	10	
• Mid-Term Exam:	15	
Part C-Learning Resources		
Recommended Books/e-resources/LMS:		
<ul style="list-style-type: none"> • Mercer, Kent, Nowicki, Squier and Choi, “Beginning PHP5”, John Wiley & Sons, Inc., 2004. • Jeffrey C. Jackson, “Web Technologies: A Computer Science Perspective”, Pearson Education, 2006. • Chris Bates, “Web Programming – Building Intranet applications”, Wiley Publications, 3rd Edition, 2009. • <i>Deitel, Deitel& Nieto, “Internet and World Wide Web - How to Program”, References:</i> • HTML & CSS: THE COMPLETE REFERENCE by <u>Thomas Powell</u> • HTML & CSS Easy learn in 7 Days by <u>Albert Irudaya Raj J</u> • Let Us C: Authentic guide to C programming language - 19th by <u>Yashavant Kanetkar</u> (Author) • Programming in ANSI C 9th Edition by Balagurusamy McGraw Hill by <u>E Balagurusamy</u> 		

Session: 2024-25**Part A - Introduction**

Name of Programme	M.Sc. Graphic Animation and Multimedia		
Semester	Second		
Name of the Course	User Interface & User Experience (UI /UX)		
Course Code	M24-GAM-203		
Course Type	CC-6		
Level of the course	400-499		
Pre-requisite for the course (if any)			
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	CLO 1: Generating design ideas based on well-defined goals and scenarios CLO 2: Developing impactful user interfaces using design systems CLO 3: Employing Wire framing, prototyping, and testing tools for design evaluation CLO 4: Applying user-centered design principles to enhance User Experiences		
Credits	Theory	Practical	Total
	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Time	3 hours		

Part B-Contents of the Course

Instructions for Paper- Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking course learning outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will consist at least 4 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Concept of User Interface Design (UI) Scope of Interface Design Process of UI Design: Empathize, Define, Ideate, Deliver, Test / Components Elements of UI Design: Input Controls, Navigation Components, Informational Components, Containers. Principles of UI Design Clarity, Consistency, Accessibility, Feedback, Familiarity, Design Standards, Structure and Hierarchy, Simplicity, Control, Empathy Types of UI Design	15
II	Concept of UX Design Process of UX Design: Product Definition, Product Research, Analysis, Design, Validation (Testing)	15

	<p>8 Stages: Project Definition and Scope, Understanding the problem, UX Research, Ideation (Sketching and low fidelity prototyping), High fidelity mockups and prototype, Usability Testing, Design handoff, Quality Assurance or UX Audit.</p> <p>Elements of User Experience</p> <p>Functional Layout & Interaction design</p> <p>UX Principles: Doherty Threshold, Occam's Razor, Pareto Principle, Postel's Law, Tesler's Law</p>	
III	<p>Gestalt Principles</p> <p>Concept of Microcopy</p> <p>Concept of Wireframing: low fidelity and high fidelity</p> <p>Difference Between UI and UX</p>	15
IV	<p>Concept of Grids</p> <p>User Persona and Scenario</p> <p>Concept Of Prototypes</p> <p>Market Competitive Analysis</p> <p>Research Methodology</p>	15
Total Contact Hours		60
Suggested Evaluation Methods		
Internal Assessment: 30		End Term Examination: 70
➤ Theory	30	➤ Theory: 70
• Class Participation:	5	Written Examination
• Seminar/presentation/assignment/quiz/class test etc.:	10	
• Mid-Term Exam:	15	
Part C-Learning Resources		
Recommended Books/e-resources/LMS:		
<ul style="list-style-type: none"> • A Project Guide to UX Design: For user experience designers in the field or in the making (2nd. ed.). Russ Unger and Carolyn Chandler. New Riders Publishing, USA, 2012. • The Elements of User Experience: User-Centered Design for the Web and Beyond, Second Edition Jesse James Garrett, Pearson Education. 2011. • The Essential Guide to User Interface Design: An Introduction to GUI Design Principles and Techniques, Third Edition by Wilbert O. Galitz, Wiley Publishing, Inc. • Adobe XD in CC, Classroom in a Book, The official training workbook from Adobe By Brian Wood, ADOBE PRESS • The UX Book Process and Guidelines for Ensuring a Quality User Experience, Rex Hartson and Pardha S. Pyla, Elsevier, 2012 		

Session: 2024-25

Part A - Introduction

Name of the Programme	M.Sc. Graphic Animation and Multimedia		
Semester	Second		
Name of the Course	Production Lab		
Course Code	M24-GAM-204		
Course Type	PC-3		
Level of the course	400-499		
Pre-requisite for the course (if any)			
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	CLO: 1. Understand the concepts of web designing.		
	CLO: 2 Know the process of Web designing.		
	CLO: 3. Able to apply principals of animation by using tradition animation.		
	CLO: 4. Learn the concept of stop motion animation.		
Credits	Theory	Practical	Total
	0	4	4
Teaching Hours per week	0	8	8
Internal Assessment Marks	0	30	30
End Term Exam Marks	0	70	70
Max. Marks	0	100	100
Examination Time	4 hours		

Part B-Contents of the Course

Practical's		Contact Hours
<p>1. Basic HTML Page Create a simple HTML page with a <header>, <main>, and <footer>. Add a heading, a paragraph, and a list. Form Creation Design a basic form with different input types (text, email, password, checkbox, radio buttons, and a submit button).</p>		120
<p>2 Image Gallery Create an image gallery using HTML <figure>, <figcaption>, and tags. Use <a> tags to link images to their larger versions. Navigation Bar Add links to different sections of the page.</p>		
<p>3 Table Layout Create a table with <table>, <tr>, <th>, and <td> tags. Responsive Design with Media Queries Create a responsive webpage that adjusts its layout based on the screen size using media queries.</p>		
<p>4. Styling Text Style text using CSS properties like font-family, font-size, font-weight, color, line-height, and text-align. Box Model Practice: Create a box with a border, padding, and margin to understand the CSS box model.</p>		
<p>5. Flexbox Layout Build a layout using Flexbox to create a responsive navigation bar or a grid of items. Responsive Images: Use CSS to make images responsive, ensuring they scale properly on different devices.</p>		
<p>6. Arithmetic Operations Create a program that performs basic arithmetic operations: addition, subtraction, multiplication, and division. Control statements Practice: Create a program that finds out the percentage of a students using control statement.</p>		

	7. Prime Number Checker Write a program to check if a given number is prime. Array Manipulation Implement functions to perform operations on arrays: finding the maximum and minimum values, calculating the average, and sorting the array in ascending order.	
	8. Welcome message Script Write a PHP script that prints "welcome message!" to the web page. Basic Form Handling: Create an HTML form that collects user information (name, email) and process the form data using PHP. Display the submitted information on a new page.	
	9. Simple Calculator Develop a PHP script that performs basic arithmetic operations (addition, subtraction, multiplication, and division) based on user input from a form. String Manipulation: Write a PHP script that takes a string input and performs various manipulations: convert to uppercase, lowercase, reverse the string, and find the length of the string.	
	10. Functions practice Call by value Call by reference Recursion	
	11. Timing and Spacing Bases exercise by using flipbook	
	12. Straight a Head action and Pose to Pose to action by using tradition animation techniques	
	13. Anticipation and Secondary action Experiment frame by frame	
	14. Squash and Stretch and Exaggeration in object and character	
	15. Staging Experiment by using different composition techniques	
	16. Control Speed by using Stop motion animation technique	
	17. Cut out animation experiment	
	18. Experimental with different medium by using stop motion animation techniques	
	19. Create GIF Files by Using Computer Based Animation	
	20. Understand the concept of Tweening and Onion Skin	

Suggested Evaluation Methods

Internal Assessment: 30		End Term Examination: 70	
➤ Practicum	30	➤ Practicum	70
• Class Participation:	5	Lab record, Viva-Voce, write-up and execution of the practical	
• Seminar/Demonstration/Viva-voce/Lab records etc.:	10		
• Mid-Term Exam:	15		

Part C-Learning Resources

Recommended Books/e-resources/LMS:

- Mercer, Kent, Nowicki, Squier and Choi, "Beginning PHP5", John Wiley & Sons, Inc., 2004.
- Jeffrey C. Jackson, "Web Technologies: A Computer Science Perspective", Pearson Education, 2006.
- Chris Bates, "Web Programming – Building Intranet applications", Wiley Publications, 3rd Edition, 2009.
- Deitel, Deitel & Nieto, "Internet and World Wide Web - How to Program", References:
- HTML & CSS: THE COMPLETE REFERENCE by [Thomas Powell](#)
- HTML & CSS Easy learn in 7 Days by [Albert Irudaya Raj J](#)
- Let Us C: Authentic guide to C programming language - 19th by [Yashavant Kanetkar](#) (Author)
- [Programming in ANSI C || 9th Edition || by Balagurusamy || McGraw Hill](#) by [E Balagurusamy](#)

Session: 2024-25**Part A - Introduction**

Name of the Programme	M.Sc. Graphic Animation and Multimedia		
Semester	Second		
Name of the Course	3D Modeling & Texturing		
Course Code	M24-GAM-205		
Course Type	PC-4		
Level of the course	400-499		
Pre-requisite for the course (if any)			
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	CLO: 1. Know about 3D Modeling concept		
	CLO: 2. Know about the different techniques of 3D Modeling		
	CLO: 3. Understand Texture & Shading		
	CLO: 4. Develop knowledge of UVW Unwrapping		
Credits	Theory	Practical	Total
	0	4	4
Teaching Hours per week	0	8	8
Internal Assessment Marks	0	30	30
End Term Exam Marks	0	70	70
Max. Marks	0	100	100
Examination Time	4 hours		

Part B-Contents of the Course

Practical's		Contact Hours
1. Working on Interface, Tools and Panels		120
2. Creating Project and Reference Setup		
3. Polygon Modeling Technique Practice		
4. Working with Elements of polygon modeling: Vertex, Edges, Faces		
5. Working with Modifiers: Twist, Bend, Path Deform, Smooth, Mesh Smooth, Boolean and Symmetry		
6. Working with Editing Tools: Attach, Detach Bevel, Chamfer, Extrude, Bridge, Insert Vertex, Weld, Target Weld, Connect		
7. Nurbs Modeling Technique Practice		
8. Working on EP and CV curve tools		
9. Create Environment and Scenes Modeling		
10. Create a Lower Body Modeling of Character		
11. Create a Upper Body Modeling of Character		
12. Create Face and Head Modeling		
13. Working on Objects and Gaming Assets Modeling		
14. Practice on UV Projections: Planar Maps, Cylindrical Maps, Spherical Maps, Automatic Mapping		
15. Working on Hyper-shade Editor		
16. Work using UV Editor and UV Toolkit		
17. Create 2d Texture in Adobe Photoshop		
18. Environment and Scenes Texturing Practice		
19. Low Poly Game Assets Texturing Practice		
20. Character Skin Texturing Practice		

Suggested Evaluation Methods

Internal Assessment: 30		End Term Examination: 70	
➤ Practicum	30	➤ Practicum	70
• Class Participation:	5	Lab record, Viva-Voce, write-up and execution of the practical	
• Seminar/Demonstration/Viva-voce/Lab records etc.:	10		
• Mid-Term Exam:	15		

Part C-Learning Resources**Recommended Books/e-resources/LMS:**

- Autodesk Maya 2019 Workbook Author: Sham Tickoo
- Advanced Maya Texturing and Lighting Paperback – Illustrated, 29 May 2015 by Lee Lanier .
- Mastering Autodesk Maya 2016: Autodesk Official Press BY Palamar T.
- Chris Legaspi, Anatomy for 3D Artists: The Essential Guide for CG Professionals, 3dtotal Publishing, 2015, ISBN: 978-1909414242
- Lee Lanier, Advanced Maya Texturing and Lighting, Sybex, 2015, ISBN: 978-1118983522

Session: 2024-25**Part A - Introduction**

Name of the Programme	Common to all PG Programmes		
Semester	Second		
Name of the Course	Constitutional, Human and Moral Values, and IPR		
Course Code	M24-CHM-201		
Course Type	CHM		
Level of the course	400-499		
Pre-requisite for the course (if any)	-		
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	<p>CLO-1: Learn the different Constitutional Values, Fundamental rights and duties enshrined in the India Constitution.</p> <p>CLO-2: Understand humanism, human virtues and values, and idea of international peace.</p> <p>CLO-3: Grasp the basic concepts of Moral Values and Professional Conduct which are required to become a part of the civil society and for developing professionalism.</p> <p>CLO-4: Understand concepts of Intellectual Property Rights, Copyright, Patent, Trademark etc., and about threats of Plagiarism.</p>		
Credits	Theory	Practical	Total
	2	0	2
Teaching Hours per week	2	0	2
Internal Assessment Marks	15	0	15
End Term Exam Marks	35	0	35
Max. Marks	50	0	50
Examination Time	3 hours		

Part B- Contents of the Course

Instructions for Paper- Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking course learning outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will consist at least 4 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Constitutional Values: Historical Perspective of Indian Constitution; Basic Values enshrined in the Preamble of the Indian Constitution; Concept of Constitutional Morality; Patriotic Values and Ingredients Nation Building; Fundamental Rights and Duties; Directive Principles of the State Policy.	8
II	Humanistic Values: Humanism, Human Virtues and Civic Sense; Social Responsibilities of Human Beings; Ethical ways to deal with human aspirations; Harmony with society and nature; Idea of International Peace and Brotherhood (Vasudhaiv Kutumbkam).	7
III	Moral Values and Professional Conduct Understanding Morality and Moral Values; Moral Education and	8

	Character Building; Ethics of Relations: Personal, Social and Professional; Introduction to Gender Sensitization; Affirmative approach towards Weaker Sections (SCs, STs, OBCs, EWS& DAs); Ethical Conduct in Higher Education Institutions; Professional Ethics.	
IV	Intellectual Property Rights: Meaning, Origins and Nature of Intellectual Property Rights (IPRs); Different Kinds of IPRs – Copyright, Patent, Trademark, Trade Secret/Dress, Design, Traditional Knowledge; Infringement and Offences of IPRs – Remedies and Penalties; Basics of Plagiarism policy of UGC.	7
	Note: Scope of the syllabus shall be restricted to generic and introductory level of mentioned topics.	
Total Contact Hours		30
Suggested Evaluation Methods		
Internal Assessment: 15		End Term Examination: 35
➤ Theory	15	➤ Theory 35
• Class Participation:	4	Written Examination
• Seminar/presentation/assignment/quiz/class test etc.:	4	
• Mid-Term Exam:	7	
Part C-Learning Resources		
Recommended Books/e-resources/LMS:		
Ahuja, V K. (2017). <i>Law relating to Intellectual Property Rights</i> , India, IN: Lexis Nexis.		
Bajpai, B. L., <i>Indian Ethos and Modern Management</i> , New Royal Book Co., Lucknow, 2004.		
Basu, D.D., <i>Introduction to the Constitution of India</i> (Students Edition) Prentice Hall of India Pvt. Ltd., New Delhi, 20th ed., 2008.		
Dhar, P.L. & R.R. Gaur, <i>Science and Humanism</i> , Commonwealth Publishers, New Delhi, 1990.		
George, Sussan, <i>How the Other Half Dies</i> , Penguin Press, 1976.		
Govindarajan, M., S. Natarajan, V.S. Sendilkumar (eds.), <i>Engineering Ethics (Including Human Values)</i> , Prentice Hall of India Private Ltd, New Delhi, 2004.		
Harries, Charles E., Michael S. Pritchard & Michael J. Robins, <i>Engineering Ethics</i> , Thompson Asia, New Delhi, 2003.		
Illich, Ivan, <i>Energy & Equity</i> , Trinity Press, Worcester, 1974.		
Meadows, Donella H., Dennis L. Meadows, Jorgen Randers & William W. Behrens, <i>Limits to Growth: Club of Rome's Report</i> , Universe Books, 1972.		
Myneni, S.R, <i>Law of Intellectual Property</i> , Asian Law House.		
Narayanan, P, <i>IPRs</i> .		
Neeraj, P., &Khusdeep, D. (2014). <i>Intellectual Property Rights</i> , India, IN: PHI learning Private Limited.		
Nithyananda, K V. (2019). <i>Intellectual Property Rights: Protection and Management</i> . India, IN: Cengage Learning India Private Limited.		
Palekar, Subhas, <i>How to practice Natural Farming</i> , Pracheen (Vaidik) KrishiTantraShodh, Amravati, 2000.		
Phaneesh, K.R., <i>Constitution of India and Professional Ethics</i> , New Delhi.		
Pylee, M.V., <i>An Introduction to Constitution of India</i> , Vikas Publishing, New Delhi, 2002.		
Raman, B.S., <i>Constitution of India</i> , New Delhi, 2002.		
Reddy, B., <i>Intellectual Property Rights and the Law</i> , Gogia Law Agency.		
Reddy, N.H., SantoshAjmera, <i>Ethics, Integrity and Aptitude</i> , McGraw Hill, New Delhi.		
Sharma, Brij Kishore, <i>Introduction to the Constitution of India</i> , New Delhi,		
Schumacher, E.F., <i>Small is Beautiful: A Study of Economics as if People Mattered</i> , Blond & Briggs, Britain, 1973.		
Singles, Shubham et. al., <i>Constitution of India and Professional Ethics</i> , Cengage Learning India Pvt. Ltd., Latest Edition, New Delhi, 2018.		

Tripathy, A.N., *Human Values*, New Age International Publishers, New Delhi, 2003.

Wadehra, B.L., Law relating to Intellectual Property, Universal Law Publishing Co.

Relevant Websites, Movies and Documentaries:

Value Education Websites, <http://uhv.ac.in>, <http://www.uptu.ac.in>.

Story of Stuff, <http://www.storyofstuff.com>

Cell for IPR Promotion and Management: <http://cipam.gov.in/>.

World Intellectual Property Organization: <https://www.wipo.int/about-ip/en/>

Office of the Controller General of Patents, Designs & Trademarks: <http://www.ipindia.nic.in/>

Al Gore, *An Inconvenient Truth*, Paramount Classics, USA.

Charlie Chaplin, *Modern Times*, United Artists, USA.

Modern Technology – The Untold Story, IIT, Delhi.

A. Gandhi, *Right Here Right Now*, Cyclewala Productions.