

	Mahatma Gandhi University Kottayam
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Programme						
Course Name	DIGITAL IMAGING AND EDITING					
Type of Course	DSC B					
Course Code	MG2DSCCDG100					
Course Level	100 - 199					
Course Summary	This integrated course offers a comprehensive exploration of the interconnected disciplines of photography, videography, and video editing. Students will delve into the fundamentals of capturing compelling visual stories, mastering the technical aspects of cameras, understanding composition, and harnessing the power of editing software to bring their creative visions to life.					
Semester	2	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		0	3	1	0	75
Pre-requisites, if any	Nil					

COURSE OUTCOMES (CO) MGU-UGP (HONOURS)

CO No.	Expected Course Outcome	Learning Domains *	PO No
	Upon completion of this course, students will be able to;		
1	Students will demonstrate expertise in photography, videography, and video editing software principles.	K, U	PO 1, PO 2 PO 10
2	Students will creatively use analysis to excel in narrative composition in photography and videography.	A, An	PO 1, PO 2 PO 10
3	Students will utilize skills for advanced post-production, including photo retouching and video editing.	A, An	PO 1, PO 2 PO 10
4	Learners will build a diverse portfolio showcasing adaptability in photography genres and video production.	E, C, S	PO 1, PO 2 PO 10

5	The course equips learners to create professional-quality photography, videography, and video editing content.	E, C, S, Ap	PO 1, PO 2 PO 10
*Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Content for Classroom Transactions (Units)

Module	Units	Course description	Hrs	CO No.
Introduction to composition				
1	1.1	Basics of visual composition, Elements and Principles of picture composition, Photography as a communication tool	2	1
	1.2	Pixel, Resolution. Balance and Structure, Framing subjects	2	1
	1.3	composing movement, rule of space, Rule of odd, Rule of Third, Golden Triangle, Leading Lines	3	1 & 2
	1.4	Perspective and depth of field	3	1 & 2
Introduction to Digital Imaging				
2	2.1	Different types of cameras and its usage. camera sensor size	2	1 & 2
	2.2	Aperture, Shutter speed, Manipulation of shutter speeds, focal length, f-stop, Depth of field and depth of focus, White Balance, Exposure setting, ISO setting, Exposure Compensation, understanding histograms and exposure metering, Understanding subject	7	1
	2.3	Digital Camera settings, Mode dial (Manual mode, Aperture priority, Shutter Priority)	7	1
	2.4	Lenses, Block lens and Zoom lens, Angles	3	1 & 2
	2.5	Importance of metadata, Introduction to colour grading software interface and basic navigation	3	1 & 2
Introduction to Videography				
3	3.1	Origin of Cinema - Early attempts to capture/perceive motion - Lumiere brothers, Eadweard Muybridge	3	1
	3.2	Basics of exposure - White Balance - Video camera operation - Basic features of a Video camera, Histogram, Zebra Pattern, LUT	5	2

	3.3	Image sizes LS, MS, Close Up, High Angle shot - Eye level shot - Low angle shot, OS, 180 Degree rule	6	2
	3.4	Frame Rate, Operations and movements, Zoom, Pan, and Tilt	7	2
Introduction to Video Editing				
4	4.1	Persistence of vision, Fragmentation of action, Film formats, Shot, Scene, Sequence. Linear Editing, Nonlinear Editing, Selecting Good shots- stages of editing	8	3 & 4
	4.2	Introducing a Non-Linear Editing Software-layer or Node based - Project setting- Introducing interface, Importance of scratch disk, different windows, Timeline, Tools, Keyboard shortcuts	8	2 & 3 & 4
	4.3	Working with effects, basic colour correction, Audio level adjustments, Titling, exporting to different Video formats, Use of external encoding engine	6	3 & 5
5	Teacher Specific Content			

Teaching and Learning Approach	Classroom Procedure (Mode of transaction) Hands-on Practice (Photography and Videography): Assign practical exercises or projects that allow students to apply the concepts discussed. Encourage constructive feedback focusing on both technical aspects and creative choices. Assign homework or additional projects to reinforce learning and allow students to practice outside of class. Begin with a brief lecture or demonstration on a specific aspect of photography or videography, such as composition rules, exposure settings, or storytelling techniques. Online learning resources and tools will be utilized to supplement in-class learning.
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Assessment Types	MODE OF ASSESSMENT
	Continuous Comprehensive Assessment (CCA) - 30 Marks
	CCA Components
	Assignments x 3
	Examination

	Semester End Semester Evaluation (ESE) - 70 Marks Project evaluation and viva voce <table border="1"> <thead> <tr> <th>ESE Components</th><th>Marks Distribution</th></tr> </thead> <tbody> <tr> <td>Final output in specified format</td><td>30</td></tr> <tr> <td>Record Book</td><td>20</td></tr> <tr> <td>Viva-Voce</td><td>20</td></tr> <tr> <td>Total</td><td>70</td></tr> </tbody> </table> Please refer to the appendix for more details.	ESE Components	Marks Distribution	Final output in specified format	30	Record Book	20	Viva-Voce	20	Total	70
ESE Components	Marks Distribution										
Final output in specified format	30										
Record Book	20										
Viva-Voce	20										
Total	70										

References

1. Mezza, E. (2019). *Mastering Photography: A Complete Guide from Beginner to Professional*. Thames & Hudson. ISBN 978-0500293504.
2. Adams, A. (1981). *The Negative: Exposure and Development*. Little, Brown. ISBN: 978-0821221868.
3. Peres, Michael R. *The Focal Encyclopaedia of Photography: Digital Imaging, Theory, and Applications, History, and Science*. Focal Press, 2013. ISBN: 978-0415718929
4. Langford, M. (2010). *Basic Photography*. Focal Press. ISBN 978-0240812375.
5. Smith, E. (2020). *Videography: Techniques and Practices*. McGraw-Hill Education. ISBN: 978-1260454613.
6. Brown, I. (2018). *Cinematography: Theory and Practice*. Focal Press. ISBN 978-1138667704.
7. Rosenblatt, A. (2019). *Cinematography: Theory and Practice: Image Making for Cinematographers and Directors*. Focal Press. ISBN 978-1138689508.
8. Sharkey, B. (2017). *The Art of Video Editing: A Practical Guide to Storytelling and Techniques*. Focal Press. ISBN 978-0321930835.
9. Adobe Creative Team. (2023). *Adobe Premiere Pro Classroom in a Book (2023 release)*. Adobe Press. ISBN 978-1119752524.
10. Blatner, D. (2020). *Final Cut Pro X: The Missing Manual*. O'Reilly Media. ISBN 978-1492094541.

Syllabus

	Mahatma Gandhi University Kottayam
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Programme					
Course Name	INTRODUCTION TO 2D ANIMATION				
Type of Course	DSC B				
Course Code	MG2DSCSAT100				
Course Level	100 - 199				
Course Summary	This animation course provides a comprehensive exploration of the fundamental tools, concepts, and principles in Cel Animation. Learners will gain proficiency in utilizing animation tools, including animation desks, digital tablets, and traditional drawing materials, while also mastering the application of key animation concepts such as key frames, breakdowns, and in-betweens. The course emphasizes the importance of animation reference documents like model sheets and exposure sheets, guiding learners in effective planning and organization. Through practical experimentation, learners will apply the 12 Basic Principles of animation, developing a nuanced understanding of the principles. Furthermore, the curriculum covers animation testing and compositing techniques, utilizing tools like line testers and scanners, to provide learners with a well-rounded skill set in both the creative and technical aspects of Cel Animation.				
Semester	2	Credits			Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others
		0	3	1	0
Pre-requisites, if any	An aptitude in drawing, observation skills, patience and artistic sense are essential. Apart from this, learners should have studied courses like: Fundamental Drawing Techniques, Exploring Animation etc. in the previous semester.				

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Learners will be equipped to use animation tools and various mediums to create aesthetically pleasing animations.	U, A, E, C	PO 1, PO 2, PO 10

2	Learners will learn and apply key animation concepts to produce coherent and visually engaging animations.	U, A, E, C	PO 1, PO 2, PO 10
3	Learners will proficiently utilize animation reference documents to plan and organize the animation creation process.	U, A, E, C	PO 1, PO 2, PO 10
4	Students learn animation testing, compositing techniques, and relevant software for animation production.	U, A, E, C	PO 1, PO 2, PO10
5	Students will apply 12 basic animation principles, showcasing comprehension of fundamental animation concepts.	U, A, E, C, S	PO 1, PO 2, PO10
*Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course Description	Hrs	CO No.
1	Basic Tools of Cel Animation			
	1.1	Animation Desk – (Light Box, Animation Disc, Peg-bar, Digital Tablet etc.)	4	1
	1.2	Animation Drawing Medium - (Paper, Cel, Puncher, Pencils, Colours, Brushes, Erasers etc.)	3	1
	1.3	Animation Reference Documents - (Model Sheets, Layouts, Storyboards, Field Charts, Exposure Sheets etc.)	5	3
	1.4	Animation Testing and Compositing - (Line Tester, Moviola, Planning Board, Scanners, Pencil Checking Software's, Rostrum Camera, Multiplane Camera, etc.)	4	4
2	Basic Concepts of Cel Animation			
	2.1	Concepts of: - Key Frames, Extremes – Breakdowns - In-Betweens - Clean-up - Line/Pencil Tests etc.	7	2
	2.2	Concepts of: - Timing Ladder - Numbering of Animation Drawings – Flipping and Rolling Key Drawings - Line of Action - Path of Action – Maintaining Volume	7	2

	2.3	Concepts of: - Soundtrack - Track Breakdown - Animation Methods: - Straight Ahead, Pose to Pose, Combination of Both etc.	5	2
3	Experiments with the 12 Basic Principles of Animation 1			
	3.1	Squash and Stretch, Anticipation, Staging, Straight Ahead and Pose to Pose Animation, Follow Through and Overlapping Action, Slow Out and Slow In	20	5
4	Experiments with the 12 Basic Principles of Animation 2			
	4.1	Arcs, Secondary Action, Timing, Exaggeration, Solid Drawing, Appeal.	20	5
5	Teacher Specific Content			

Teaching and Learning Approach	Classroom Procedure (Mode of transaction) Lectures Presentations and Practical sessions- Traditional classroom-style lectures to cover theoretical aspects. Demonstration classes and practical sessions to explain complex concepts.
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Assessment Types	MODE OF ASSESSMENT								
	Continuous Comprehensive Assessment (CCA) - 30 Marks								
	<table><tr><th>CCA Components</th></tr><tr><td>Principles of Animation</td></tr><tr><td>Lab assignments</td></tr><tr><td>Pencil test evaluation</td></tr></table>		CCA Components	Principles of Animation	Lab assignments	Pencil test evaluation			
	CCA Components								
	Principles of Animation								
Lab assignments									
Pencil test evaluation									
End Semester Evaluation (ESE) - 70 Marks									
Project evaluation and Viva-Voce based evaluation.									
	<table><tr><th>ESE Components</th><th>Marks Distribution</th></tr><tr><td>Evaluation of Class Room works/ Project</td><td>50</td></tr><tr><td>Viva-Voce</td><td>20</td></tr><tr><td>Total</td><td>70</td></tr></table>	ESE Components	Marks Distribution	Evaluation of Class Room works/ Project	50	Viva-Voce	20	Total	70
ESE Components	Marks Distribution								
Evaluation of Class Room works/ Project	50								
Viva-Voce	20								
Total	70								
	Please refer to the appendix for more details								

References

1. Johnston, O., & Thomas, F. (1981). *The illusion of life: Disney animation* (p. 576). New York: Disney Editions.
2. Williams, R. (2012). *The animator's survival kit: a manual of methods, principles and formulas for classical, computer, games, stop motion and internet animators*. Macmillan.
3. Blair, P. (2020). *Cartoon Animation with Preston Blair, Revised Edition: Learn techniques for drawing and animating cartoon characters*. Walter Foster Publishing.
4. Whitaker, H., & Halas, J. (2013). *Timing for animation*. Routledge.
5. White, T. (2013). *How to Make Animated Films: Tony White's Masterclass Course on the Traditional Principles of Animation*. Taylor & Francis.
6. White, T. (2012). *Animation from pencils to pixels: Classical techniques for the digital animator*. CRC Press.
7. White, T. (1986). *Animator's Workbook: Step-by-step Techniques of Drawn Animation*. Phaidon Press Ltd.



MGU-UGP (HONOURS)

Syllabus



Mahatma Gandhi University Kottayam

Programme	BA (Hons) ANIMATION AND GRAPHIC DESIGN				
Course Name	RASTER AND VECTOR GRAPHICS				
Type of Course	DSC A				
Course Code	MG2DSCAGD100				
Course Level	100-199				
Course Summary	This course delves into the fundamental principles and practical applications of raster and vector graphics, two core components of digital visual communication. Students will explore the distinctions between these formats, gaining insights into the strengths and weaknesses of each. Through hands-on assignments and theoretical discussions, participants will develop proficiency in creating and manipulating raster and vector graphics, empowering them to make informed design decisions in diverse visual communication contexts.				
Semester	3	Credits			4
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others
		0	3	1	0
Pre-requisites, if any	Requires knowledge in Elements of Graphic Design and basic computer knowledge				

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Comprehend the theoretical foundations of raster and vector graphics, including their applications and limitations.	K, U	PO 1 PO 2
2	Demonstrate the ability to create, edit, and manipulate raster and vector graphics using industry-standard software tools.	K, A	PO 1 PO 2 PO 3 PO 10
3	Evaluate when to use raster or vector graphics based on resolution, scalability, and file size.	U, A, E	PO 2 PO 5 PO 6
4	Assess raster and vector graphics for design projects based on visual impact and communication goals.	An, E	PO 1 PO 5 PO 8 PO 10
5	Produce high-quality designs using raster and vector graphics, demonstrating mastery of course techniques.	A, C, S, I, Ap	PO 3 PO 4 PO 10
*Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
1	Introduction to Digital Graphics			
	1.1	Overview of digital graphics: raster vs. vector	5	1
	1.2	Understanding pixel-based images (raster)	6	1
	1.3	Understanding paths and shapes (vector) Basic concepts of resolution and scalability	5	1
2	Raster Graphics: Creation and Manipulation			
	2.1	Raster graphics software tools and techniques	7	2
	2.2	Image editing fundamentals	8	3
	2.3	Colour modes in raster graphics Optimizing raster images for various applications	5	3
3	Vector Graphics: Creation and Manipulation			
	3.1	Vector graphics software tools and techniques	5	3
	3.2	Drawing and editing vector shapes	6	3
	3.3	Colour and gradient handling in vector graphics Exporting and optimizing vector graphics	8	3
4	Integration and Practical Applications			
	4.1	Combining raster and vector elements in design projects	7	5
	4.2	Best practices for workflow efficiency	6	5
	4.3	Industry-standard file formats and their applications Class practice- Comprehensive design incorporating both raster and vector graphics	7	5
5	Teacher Specific Content			

Teaching and Learning Approach	Classroom Procedure (Mode of transaction)	
	- Lectures, Presentations and Practical sessions. Demonstration classes and practical sessions to explain complex concepts. - Hands-on exercises and discussions - Resource Accessibility - Ensure learners have access to resources including lecture notes, reference materials, and online tutorials for further review and reinforcement. - Online Resources and Webinars - Access to digital materials, tutorials, and webinars for additional learning.	

Assessment Types	MODE OF ASSESSMENT				
	Continuous Comprehensive Assessment (CCA) - (30 Marks)				
	<table><tr><td>CCA Components</td></tr><tr><td>Assignments</td></tr><tr><td>Practical test (Midterm)</td></tr><tr><td>Model Exam (Lab)</td></tr></table>	CCA Components	Assignments	Practical test (Midterm)	Model Exam (Lab)
	CCA Components				
	Assignments				
Practical test (Midterm)					
Model Exam (Lab)					
End Semester Examination (ESE) - 70 Marks					
Computer lab exam					

ESE Components	Marks distribution
Part A Question 1	40
Part B Question 2	30
Total	70

Please refer to the appendix for more details.

References

1. Morrison, R. (2021, February 16). *Adobe Photoshop Guide 2021*
2. Slavo, J. (2016, December 15). *Photoshop*. Abiproduct Pty Limited.
3. Faulkner, A., & Chavez, C. (2017, December 22). *Adobe Photoshop CC Classroom in a Book (2018 release)*. Adobe Press.
4. Wood, B. (2023, January 6). *Adobe Illustrator Classroom in a Book (2023 Release)*. Classroom in a Book.
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6. Schneider, R. (2013, April 1). *Adobe for Fashion: Illustrator CS6*. Lulu.com.
7. Evening, M. (2020, January 1). *Adobe Photoshop for Photographers*. Routledge

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Programme					
Course Name	RASTER GRAPHICS				
Type of Course	MDC				
Course Code	MG2MDCMLM100				
Course Level	100-199				
Course Summary	This beginner-level course in raster graphics provides a comprehensive introduction to the essential concepts, tools, and techniques required for working with raster-based images. Throughout the three modules, students will gain a solid foundation in understanding, creating, and manipulating raster graphics using popular software.				
Semester	II	Credits			Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical/ Practicum	
			2	1	60
Pre-requisites, if any					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Recall and define fundamental concepts related to raster graphics, including pixels, resolution, colour modes, file formats and bit depth.	K	1
2	Summarize the differences between raster and vector graphics, demonstrating an understanding of their unique characteristics and applications.	U	2,3
3	Apply basic image editing techniques using raster graphics software, such as cropping, resizing, and rotating images.	A	2
4	Evaluate the effectiveness of retouching and restoration techniques in improving the quality of images.	E	4, 5
5	Execute practical projects, demonstrating the integration of learned concepts and techniques into real-world applications.	C	4, 5
*Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

MGU-UGP (HONOURS)

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
Introduction to Raster Graphics				
1	1.1	Definition of raster graphics, Comparison with vector graphics, Common applications of raster graphics, Pixel and Resolution: Understanding pixels and their role Resolution and its impact on image quality	5	1

	1.2	Colour Modes and Bit Depth: Explanation of RGB and CMYK colour modes Introduction to grayscale Bit depth and its influence on colour representation Image File Formats: Overview of common raster image formats (JPEG, PNG, GIF, TIFF) Advantages and disadvantages of each format Choosing the appropriate format for different scenarios	5	1
Raster Graphics Software and Tools				
2	2.1	Introduction to Raster Graphics Software: Overview of popular raster graphics software Understanding the user interface and basic features Basic Image Editing: Tools for cropping, resizing, and rotating images, Understanding layers and their significance, Introduction to basic image adjustments (brightness, contrast, saturation)	8	1,2
	2.2	Selection and Masking: Selection tools and techniques, Masking for precise editing, Layer masks and their applications Filters and Effects: Exploring filters for creative effects, Applying special effects to enhance images, Understanding the impact of filters on image quality.	6	1,2
Techniques in Raster Graphics				
3	3.1	Text and Typography: Adding and formatting text in raster graphics, Incorporating typography into designs, Creating text effects and stylized fonts Retouching and Restoration: Retouching imperfections in images, Restoring old or damaged photographs, Techniques for blemish removal and skin retouching.	8	3
	3.2	Compositing and Collage: Combining multiple images into a cohesive composition, Layer blending modes and their effects, Creating photo collages and digital art	8	3
4	4.1	Making Posters for print & Digital Media Create a design that is responsive and adaptable to various screen sizes.	10	3,5
	4.2	Creating posters, flyers, brochures, and other print materials.	10	3,5
5	TEACHER SPECIFIC MODULE			

Teaching and Learning Approach	Classroom Procedure (Mode of transaction) • Integrate hands-on learning experiences and practical exercises throughout the course. Encourage students to actively apply concepts through guided projects, allowing them to reinforce their understanding of raster graphics tools and techniques. • Guide students through the essential features and functionalities of raster graphics software, ensuring they are comfortable navigating and utilizing the tools. • Assign a hands-on project that allows participants to apply concepts learned.
Assessment Types <i>*Please refer appendix for more details</i>	MODE OF ASSESSMENT A. Continuous Comprehensive Assessment (CCA) 25 marks • Assignments & class works • Internal examinations B. Semester End examination • Practical Examination (4 hours) - 50 marks

References

1. Chan, M. (2015). *Understanding digital images: A guide to digital imaging*. Graphic Arts Publishing.
2. Cohen, J. (2019). *Digital image basics: An introduction to raster graphics*. Visual Arts Press.
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5. Garcia, L. (2019). *Pixels and colours: A primer on raster graphics*. Graphic Design Books.
6. Hall, P. (2017). *Raster imaging and digital design principles*. Visual Insights.
7. Kaur, S. (2020). *Raster art fundamentals: Techniques for digital imagery*. Digital Design Press.
8. Moore, R. (2016). *The elements of raster graphics: A visual approach*. Design Essentials.
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