

ACADEMIC COUNCIL - 29/12/2023
Executive Council - 21/12/2021



SWAMI VIVEKANAND
SUBHARTI
UNIVERSITY
UGC Approved Meerut



THREE + ONE YEAR UNDERGRADUATE PROGRAMS AS PER

NEP-2020

B.Sc. Animation

Bachelor of Science in Animation, Ordinance No. V 51(B)
Faculty of Fine Arts

SWAMI VIVEKANAND SUBHARTI UNIVERSITY

Meerut

Effective from Session 2024-25



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Sri Sree Vishwanath Subbanna University
Department of Animation, Faculty of Fine Arts

B.Sc. Animation

Subjects to be taken & Evaluation

Program Objectives (POs)

- Preserve and promote local art, culture, folk lore, and traditions through animation while creating regional employment opportunities.
- Align animation education with NEP 2020 and support India's growing media, gaming, and animation industries with inclusive formations.
- Prepare students for global careers in animation, VFX, and gaming by meeting international benchmarks and fostering intercultural collaboration.
- Integrate sustainable and ethical production practices in animation pipelines to address social, cultural, and environmental responsibilities.
- Contribute to the UN SDGs by using animation for climate awareness, gender equality, health campaigns, educational innovation, and global citizenship.

Program Outcomes (POs)

1. Apply scientific principles and digital tools to create animations that communicate ideas effectively and sustainably.
2. Analyze real-world problems and design animation solutions that promote awareness of environmental and social issues.
3. Demonstrate ethical practices in collaborative animation projects respecting cultural diversity and inclusion.
4. Apply software-based animation tools and techniques to create engaging, interactive, and educational animation experiences.
5. Develop animations that reflect regional and national narratives while fostering global understanding and equality.
6. Integrate sustainability principles in production workflows to reduce environmental impact.
7. Critically evaluate emerging technologies and their societal impact in animation and media industries.
8. Communicate complex scientific, social, or cultural concepts effectively through visual storytelling for diverse audiences.



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2026-27

Year-wise Structure UG Programs: B.SC. ANIMATION
Subject Scheme

SEMESTER-I

Sl No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1.	Fundamental of Animation	MJC-1	BSCANI-101	6-0-0	6	100
2.	Print Media & Graphics	MIC-1	BSCANI-111	0-0-8	4	100
3.	Digital Art	MDC-1	BSCANI-112	0-0-6	3	100
4.	AEC-1(English Communication Skill)	AEC-1	AEC-1	1-1-0	2	100
5.	Creative Communication with AI	SEC-1	BSCANI-113	0-0-6	3	100
6	2D Design	VAC-1	BSCANIVAC-1	0-0-6	3	100
7	IKS (Qualifying Exam)	VAC-2	26VACIKSC2	2-0-0	-	External 50
Total Credits-21						

SEMESTER-II

Sl No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1	Computer Graphics	MJC-2	BSCANI-201	6-0-0	6	100
2	2D Animation	MIC-2	BSCANI-211	0-0-8	4	100
3	Digital Illustration	MDC-2	BSCANI-212	0-0-6	3	100
4	AEC -2 (Environment Science)	AEC-2	AEC-2	2-0-0	2	100
5	Storyboard Development	SEC-2	BSCANI-113	0-0-6	3	100
6	3D Design	VAC-3	BSCANIVAC-2	0-0-6	3	100
7.	Rashtra Bodh (Qualifying Exam)	VAC-4	VAC-RB	2-0-0	-	External 50
Total Credits-21						



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SEMESTER-I			
Programme /Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-101		Course Title: Fundamental of Animation	
Course outcomes: The student at the completion of the course will be able to: 1. Understand the fundamental principles and concepts of animation. 2. Apply the principles of timing, spacing, and motion to create believable and appealing animations. 3. Apply the principles of storytelling and narrative structure to animation. 4. Critically analyze and provide constructive feedback on animated content.			
Credits: 6		Major	
Max. Marks:		Min. Passing marks:	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 6-0-0			
Unit	Topics	No. of Lectures	
I	Introduction to Animation • History and evolution of animation • Different types of animation (2D, 3D, stop motion, etc.) • Careers and opportunities in the animation industry	04	
II	Animation Principles • Understanding the foundational principles of animation (e.g., squash and stretch, anticipation, follow-through) • Applying the principles of timing and spacing in animation • Analyzing and deconstructing animations to identify principles in action	06	
III	Animation Techniques and Tools • Traditional animation techniques • Computer-generated animation techniques • Basic animation workflows	12	
IV	Storytelling and Narrative in Animation • Plot structure and narrative elements • Visual storytelling techniques	06	
V	Basic Animation Production Process • Pre-production: concept development and planning • Production: asset creation, rigging, and animation • Post-production: editing, sound design, and rendering • Project management and teamwork in animation production	16	



VI	Animation Styles and Genres Theory • Experimental animation • Cartoon animation • Anime and manga • Motion graphics and visual effects	08
VII	Critique and Analysis of Animation • Elements of visual analysis in animation • Evaluating animation techniques and effectiveness • Providing constructive feedback and suggestions	06
VIII	Emerging Trends in Animation • Virtual reality (VR) and augmented reality (AR) in animation • Interactive and immersive animation experiences • Industry trends and future directions	06
Suggested Readings:		
1. The Fundamentals of Animation by Paul Wells 2. The Animator's Survival Kit by Richard Williams		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance		
Course pre requisites: The eligibility for this paper is 10+2 with any subject		
At the End of the whole syllabus any remarks/ suggestions: Students will be able to understand the fundamental of Animation and will be introduced to Graphic Design.		

Programme/Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-111		Subject/ Course Title: Print Media & Graphics	
Course outcomes:			
The student at the completion of the course will be able to:			
1. Navigate and use Corel Draw's interface effectively. 2. Create visually appealing layouts and designs for print media. 3. Understand and apply design principles, including color theory and typography. 4. Manipulate and edit vector graphics and illustrations. 5. Prepare print-ready files with the appropriate resolution and color modes.			
Credits: 4		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics	No. of Practical Hours	



I	Introduction to Corel DRAW • Installing Corel DRAW Graphics Suite • Basics of Corel DRAW • Vector Graphics and Bitmaps • Starting and Opening Drawings • Previewing Drawings • Viewing Modes • Saving and Closing Drawings • Corel DRAW Workspace • Creative Tools and Content • Touchscreen and Wheel Devices	06
II	Lines, Shapes, and Outlines • Lines, Outlines, and Brushstrokes • Shapes and Shape Objects • Symmetrical Drawing	06
III	Working with Objects, Symbols, and Layers • Introduction to Objects • Linking and Embedding Objects • Layers and Symbols • Managing and Tracking Projects	12
IV	Colour, Fills, and Transparencies • Colour • Colour Models and Depth • Choosing Colours • Creating and Editing Colour Palettes • Uniform Fills and Fountain Fills • Vector and Bitmap Pattern Fills • Texture, PostScript, and Mesh Fills • Object Transparency • Managing Colours	18
V	Exploring Special Effects • Lenses • Adding 3D Effects • Mosaics	06
VI	Working with Text • Adding and Manipulating Text • Formatting Text • Managing Fonts • Writing Tools	10



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VII	Templates and Styles • Templates and Using & Finding Templates • Managing Templates • Creating and Editing Templates • Introducing Styles and Style Sets • Creating, Applying, and Editing Styles and Style Sets • Managing Default Object Properties • Importing and Exporting Style Sheets • Colour Styles • Creating and Applying Colour Styles • Editing and Viewing Colour Styles • Exporting and Importing Colour Styles	22
VIII	Pages and Layout • Pages and Layout Tools • Page Layout and Background • Adding and Deleting Pages • Rulers • Document Grid and Pixel Grid • Tables and Adding Tables • Selecting, Moving, and Navigating Table Components • Inserting and Deleting Table Rows and Columns • Formatting Tables and Cells • Converting Tables to Text	10
X	Introduction to Bitmaps • Working with Bitmaps • Converting Vector Graphics to Bitmaps • Importing and Cropping Bitmaps • Bitmap Dimensions and Resolution • Straightening Bitmaps • Image Adjustment Lab • Adjusting Colour and Tone Curve Filter • Special Effects Categories and Bitmap Colour Modes • Introducing Trace • RAW Camera Files	12
Suggested Readings: Corel DRAW X7: The Official Guide, 11th Edition by Gary David Bouton Corel Draw Training Guide Know the Tips, Techniques and Ideas for Creating Art Prof. SatishJain.M. Geetha This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		



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Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/Attendance

Course pre requisites: The eligibility for this paper is 10+2 with any subject

Programme/Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-112		Subject/ Course Title: Digital Art	
Course outcomes:			
The student at the completion of the course will be able to:			
1. Create digital art using Adobe Photoshop. 2. Understand and apply fundamental principles of composition, color theory, and visual storytelling. 3. Use various Photoshop tools and features for digital painting, photo manipulation, and graphic design. 4. Employ advanced techniques for digital art, including layer masking, blending modes, and filters. 5. Adapt to emerging trends and technologies in the field of digital art and design.			
Credits: 3		MDC	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Practical Hours	
I	Introduction: Variations in Photoshop Applications Getting Acquainted with Photoshop • The Photoshop Environment • Palettes and the Palette Well • Creating Custom Workspaces • Opening Images • Using the File Browser • Image Magnification • Viewing Document Information • Moving the Image • Undoing Mistakes and The History Palette • Displaying Drawing Guides • Making Measurements • Adding Annotations • Setting Preferences	06	
II		18	





III	Basic Image Manipulation • Bitmap Images • Vector Images • Image Size and Resolution Settings • Scanning Images • Creating New Images • Placing Files	10
IV	Creating Web Galleries and PDF Converts • PDF Presentation • Slide Show Presentation	06
V	Editing Raw Photos in Camera • Colour options for background shades • Photo lighting and Temperature	10
VI	Color Basics • Color Modes and Models • Color Mode Conversion • Previewing Color Differences Between Operating Systems • Color Management • Foreground and Background Colors • Using the Color Picker • Selecting Colors with the Color Palette • Selecting Colors with the Eyedropper Tool and Swatches Palette	10
VII	Painting Tools • Painting Tools • The Brush Tool • Blending Modes • The Pencil Tool • The Eraser Tool • The Magic Eraser Tool • The Background Eraser Tool • Using the Art History Brush • Using the History Brush	



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VIII	Work with layers • Examine and convert layers • Add and delete layers. • Add a selection from one image to another • Organize layers with layer sets and colors. • Use a layer mask with a selection. • Work with layer masks and layer content. • Control pixels to blend colors. • Eliminate a layer mask. • Use an adjustment layer. • Create a clipping mask	16
X	Demonstrate the ability to make selections • Make a selection using shapes • Modify a marquee. • Select using color and modify a selection. • Add a vignette effect to a selection	10
Suggested Readings: 1. Adobe Photoshop Classroom in a Book (2023 Release) by Conrad Chavez 2. The Digital Darkroom: The Definitive Guide to Photo Editing by James Abbott		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
Course pre requisites: The eligibility for this paper is 10+2 with any subject		

Programme/ Class: UG Certificate in Animation	Year: First	Semester: First
Course Code: BSCANIVAC-1	Subject / Course Title: 2D Design	
Course Out Come:		
1. Student will be able to develop well-structured and engaging scripts for various media formats. 2. Student will be able to apply principles of storytelling, plot development, and character creation to design compelling narratives. 3. Student will be able to create professional storyboards that visually convey narrative elements and camera angles. 4. Student will be able to communicate ideas and narratives effectively through visual storytelling to diverse audiences.		
Credits: 3	Value Added Course	



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Max. Marks: 100	Min. Passing Marks: 33
Total No. of Lecture- Tutorials-Practical (in hours per week) 0-0-6	
Unit	Topic
Unit -I	Block Letter Design- Letter Design (2 Work)
Unit -II	Polygon Art (1 Work)
Unit - III	2D Portrait 2 Work)
Unit - IV	2D Illustration (1 Work)
Suggested Readings: 1. Free Font Index 3 – The Pepin Press 2. Calligraphy Technique- Mary Noble	
This course is Major Course as compulsory for the students	
Suggested Continuous Evaluation Methods: Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance	

SEMESTER - II		
Programme/Class: Certificate in Animation	Year: First	Semester: Second
Course Code: BSCANI-201	Course Title: Computer Graphics	
Course outcomes:		
The student at the completion of the course will be able to:		
1. Student will be able to understand and apply fundamental principles of graphic design, including balance, contrast, alignment, repetition, and hierarchy. 2. Student will be able to analyze and evaluate visual compositions for effectiveness and aesthetic appeal. 3. Student will be able to apply color theory, typography, and visual elements to create coherent and engaging designs. 4. Student will be able to interpret design trends, historical movements, and cultural influences to inform creative decisions. 5. Student will be able to communicate ideas effectively through visual media, considering audience, context, and purpose.		
Credits: 6		Vocational Course
Max. Marks: 100	Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 6-0-0		
Unit	Topics	No. of Lectures



Features

I	Introduction to Computer Graphics: Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction, Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, Video Basics, The Video Controller, Random-Scan Display Processor, LCD displays.	12
II	Two dimensional and three-dimensional transformations: 2-Dimensional transformation 2-D Translation, Rotation, Scaling, Homogeneous Coordinates, Reflection, Shear transform 3-dimensional transformation, 3-D Translation, Rotation Scaling, Reflection, Shear	08
III	Viewing in 3D: Stages in 3D viewing, Canonical View Volume (CVV), Specifying an Arbitrary 3D View, Examples of 3D Viewing, The Mathematics of Planar Geometric Projections, Combined transformation matrices for projections and viewing, Coordinate Systems and matrices, camera model and viewing pyramid. Light: Radiometry, Transport, Equation, Photometry Color: Colorimetry, Color Spaces, Chromatic Adaptation, Color Appearance Visible-Surface Determination: Techniques for efficient Visible-Surface Algorithms, Categories of algorithms, Back face removal, The z-Buffer Algorithm, Scan-line method, Painter's algorithms (depth sorting), Area subdivision method, BSP trees, Visible-Surface Ray Tracing, comparison of the methods.	08
IV	Plane Curves and Surfaces: Curve Representation, Nonparametric Curves, Parametric Curves, Parametric Representation of a Circle, Parametric Representation of an Ellipse, Parametric Representation of a Parabola, Parametric Representation of a Hyperbola, Representation of Space Curves, Cubic Splines, , Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces, Bezier Surfaces.	08
V	Color and Lighting • Color representations and color models • Point and directional lighting models • Shader programming and GPU rendering	08
VI	Interactive Graphics • Introduction to interactive graphics and user interfaces • Event handling and input devices • Implementing user interactivity in graphical applications	08
VII	Emerging Trends and Future of Computer Graphics • Exploration of emerging trends in computer graphics (e.g., virtual reality, augmented reality, real-time ray tracing) • Discussion of the future of computer graphics technology and applications	08



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Suggested Readings: Graphic Design Rules: 365 Essential Dos and Don'ts by Sean Adams, Peter Dawson, John Foster, Tony Seddon
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.
Suggested Continuous Evaluation Methods: Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance

Indian Knowledge Systems
Value Added Course (Compulsory)

Course Title	Course Code	Credit	Max Marks	External	Internal	Learning Hours
Indian Knowledge Systems	26VACIKSC2	2	50	30	20	34

Course Overview: The course on Indian Knowledge Systems (IKS) introduces students to the rich intellectual traditions of India and their continuing relevance in the modern world. It provides a multidisciplinary perspective on how knowledge was created, preserved, and applied across diverse fields such as philosophy, logic, linguistics, literature, mathematics, astronomy, medicine, architecture, agriculture, metallurgy, ecology, governance, and the arts. Through this course, students will explore the epistemological foundations of IKS, emphasizing holistic approaches, sustainability, and interconnectedness between humans, society, and nature. The curriculum blends classical texts, oral traditions, and indigenous practices with contemporary research, encouraging critical reflection and comparative understanding with modern scientific paradigms. The course also aims to highlight the practical applications of IKS in addressing present-day challenges such as environmental conservation, health and well-being, community based resource management, and social harmony. By engaging with both theoretical concepts and field-based knowledge, students will develop an appreciation of India's knowledge heritage, while cultivating skills to integrate indigenous insights with global knowledge systems for innovation and sustainable development.

Course Objectives :-

1. To introduce students to the meaning, scope, philosophical foundations, and multidisciplinary nature of Indian Knowledge Systems and their relevance in contemporary society.
2. To develop an understanding of India's contributions to mathematics, astronomy, architecture, health sciences, yoga, and traditional technologies through ancient and classical knowledge traditions.
3. To examine traditional Indian systems of education, knowledge transmission, arts, crafts, and heritage preservation, along with challenges in protecting traditional knowledge.
4. To explore the contemporary relevance of Indian Knowledge Systems in modern education, scientific inquiry, holistic health, innovation, entrepreneurship, and public policy frameworks such as the National Education Policy 2020.



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5. To encourage critical thinking and application of Indian Knowledge Systems for addressing present-day global challenges, including sustainability, wellness, cultural harmony, and achievement of the Sustainable Development Goals (SDGs).

Course Outcomes (COs) :- By the end of this course, students will be able to:

Course Outcomes (COs)

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

CO1: Explain the meaning, sources, characteristics, philosophical foundations, and historical development of Indian Knowledge Systems (IKS), including their significance in the context of the National Education Policy (NEP) 2020.

CO2: Describe India's contributions to mathematics, astronomy, architecture, Ayurveda, Yoga, governance, and traditional technologies, and appreciate their scientific and cultural relevance.

CO3: Analyze the role of Indian Knowledge Systems in promoting sustainability, environmental conservation, health and well-being, ethical values, and the achievement of Sustainable Development Goals (SDGs).

CO4: Demonstrate understanding of traditional Indian systems of education, knowledge transmission, arts, crafts, heritage preservation, and indigenous resource management practices.

CO5: Apply concepts and principles of Indian Knowledge Systems to contemporary challenges and develop innovative ideas, entrepreneurial initiatives, or interdisciplinary solutions integrating traditional wisdom with modern knowledge.

Course Title	Course Code	Credit	Max Marks	External	Internal	Learning Hours
<i>Indian Knowledge Systems</i>	26VACIKSC2	2	50	30	20	30

Course Contents:



Unit-1: Introduction to Indian Knowledge Systems (IKS) :- - Meaning, Definitions, Elements, Sources and Characteristics of IKS. - National Education Policy 2020 and IKS - Common Misconception about IKS, AnubandhaChatustaya, Vocabulary of IKS, - Philosophical Foundation of IKS-CaturdaśaVidyāsthāna-s - Historical and Contemporary Relevance of IKS in changing world. - Multidisciplinary Indian Knowledge Systems (IKS) & Heritage - Innovation and entrepreneurship based on traditional knowledge	10 Hours
UNIT 2: Indian Contribution to Mathematics, Science, Health and Technology - Ancient Indian Mathematics: Sulbasutras, Aryabhata, Brahmagupta - Overview of Indian astronomy; celestial coordinate systems and calendar systems - Ancient Indian Architecture and Temple Architecture : An Overview - Overview of Traditional Medicinal Systems : Ayurveda: Charaka, Sushruta, health as balance (Tridosha) - Facets of Yoga : Looking Beyond Asanas - Arthashastra Strategic Perspectives for the 21st Century. - Role of IKS to achieve Sustainable Development Goals (SDGs)	10 Hours
UNIT 4: Indian Arts, Education and Knowledge Transmission) - Gurukul, Pathshala, Guru-ShishyaParampara and ancient university systems (Nalanda, Takshashila etc.) - Indian art and architecture: paintings, sculpture, classical dance, musics. - Role of family and society in ethical development - Concept of 'VasudhaivaKutumbakam' and 'Sarva Dharma Sambhava' - Traditional Water and Environment Management systems : An Overview Traditional Knowledge. - Traditional Indian crafts and skills: textiles, pottery, chemistry and metallurgy - Role of IKS to achieve Sustainable Development Goals (SDGs)	10 Hours

Suggested Readings & References:

- ❖ Basham, A. L. (2004). *The wonder that was India*. Picador India.
- ❖ Balagangadhara, S. N. (2012). *Reconceptualizing India studies*. Oxford University Press.



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- ❖ Balasubramanian, S. R. (2020). *Introduction to Indian knowledge system: Concepts and applications*. PHI Learning.
- ❖ Balasubramanian, R. (2022). *Indian knowledge systems*. De Gruyter.
- ❖ Bose, D. M., Sen, S. N., & Subbarayappa, B. V. (Eds.). (2008). *A concise history of science in India*. Universities Press.
- ❖ Charaka. (2012). *CharakaSamhita* (P. V. Sharma, Trans.). ChaukhambhaOrientalia.
- ❖ Chattopadhyaya, D. (1991). *History of science and technology in ancient India*. Firma KLM.
- ❖ Coomaraswamy, A. K. (2013). *The dance of Shiva: Essays on Indian art and culture*. MunshiramManoharlal Publishers.
- ❖ Danino, M. (2010). *The lost river: On the trail of the Sarasvati*. Penguin India.
- ❖ Feuerstein, G. (2001). *The yoga tradition: Its history, literature, philosophy and practice*. Hohm Press.
- ❖ Kak, S. (2000). *The astronomical code of the Rigveda*. MunshiramManoharlal Publishers.
- ❖ Kapoor, K., & Singh, A. K. (Eds.). (2017). *Indian knowledge systems: Education, philosophy, and applications*. D.K. Printworld.
- ❖ Mahabharata. (2015). *The Mahabharata* (B. Debroy, Trans.). Penguin Random House India.
- ❖ Mahadevan, B., Bhat, V. R., & Pavana, N. (2022). *Introduction to Indian knowledge system: Concepts and applications*. PHI Learning Pvt. Ltd.
- ❖ Matilal, B. K. (2014). *Perception: An essay on classical Indian theories of knowledge*. Oxford University Press.
- ❖ Ministry of Education. (2020). *National Education Policy 2020*. Government of India.
- ❖ Mishra, B. (2021). *Indian knowledge systems and heritage*. New Age International Publishers.
- ❖ Pande, G. C. (2015). *Foundations of Indian culture*. MotilalBanarsidass.
- ❖ Pāṇini. (1997). *Ashtadhyayi of Panini* (S. D. Joshi & J. A. F. Roodbergen, Trans.). MotilalBanarsidass.
- ❖ Patanjali. (2009). *The Yoga Sutras of Patanjali* (Swami Vivekananda, Trans.). AdvaitaAshrama.
- ❖ Plofker, K. (2009). *Mathematics in India*. Princeton University Press.
- ❖ Radhakrishnan, S. (2008). *Indian philosophy* (Vols. 1-2). Oxford University Press. (Original work published 1923)
- ❖ Ramayana. (2016). *Valmiki Ramayana* (B. Debroy, Trans.). Penguin Random House India.
- ❖ SarasvatiAmma, T. A. (2007). *Geometry in ancient and medieval India*. MotilalBanarsidass.
- ❖ Sushruta. (2015). *SushrutaSamhita* (K. R. S. Murthy, Trans.). ChaukhambhaOrientalia.
- ❖ UNESCO. (2017). *Culture for sustainable urban development*. UNESCO Publishing.
- ❖ Vatsyayan, K. (1997). *The square and the circle of the Indian arts*. Abhinav Publications.
- ❖ Vishnugupta (Kautilya). (2013). *Kautilya'sArthashastra* (R. Shamasastri, Trans.). Wisdom Tree

Suggested Useful Online links :-

- ❖ **Indian Knowledge Systems (IKS) Division, Ministry of Education**
<https://iksindia.org/>
- ❖ **AICTE – Indian Knowledge Systems (IKS)**
<https://www.aicte-india.org/initiatives/Indian-Knowledge-Systems-IKS>
- ❖ **National Education Policy (NEP) 2020**
https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
- ❖ **SWAYAM Online Learning Portal**



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<https://swayam.gov.in/>

❖ National Digital Library of India (NDLI)

<https://ndl.iitkgp.ac.in/>

❖ e-PG Pathshala

<https://epgp.inflibnet.ac.in/>

❖ Digital Library of India

<https://www.dli.gov.in/>

General Instructions:-

- **Mode of Classes:** Conduct online, offline classes, Academic tour, Seminar, Guest Lectures etc.
- **Instruction to Question Setter for End Semester University Examination (ESE 50 marks):**
 1. There will be Objective type test consisting of questions of 1 mark each.
 2. There will be 30 questions in the paper of IKS of 2 credits.
 3. The End Semester University Examination (ESUE) of 30 marks in will be of 1.5 Hrs.
- **Evaluation Scheme: Marks: 50 (ESE: 1.5 Hrs) = 50 Pass Marks: Th (ESE) = 20**

Assessment	Examination Authority	Mode	Max. Marks	Total
Continues Internal Assessment-1	Faculty / Department level	Assignment / Project	10	20
Continues Internal Assessment-2	Faculty / Department level	Online/offline (MCQs-20)	10	
External Assessment (End semester University examination)	University Level	Online/offline : 30 MCQs	30	30
Total				50

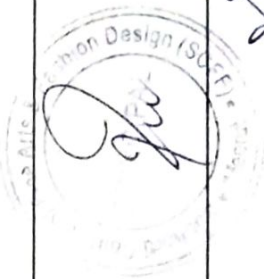
❖ **Award Grade:** As per University Ordinance.



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2026-27

Course Code: VAC-1		Course Title: Creative Communication with AI (Practical)	
Course outcomes: The Student at the completion of the course will be able to: CO1: Understand the fundamentals of Artificial Intelligence and its applications in creative industries. CO2: Use AI-powered tools for research, brainstorming, content creation, and project planning. CO3: Create professional documents, presentations, mood boards, mockups, and digital assets using AI-assisted platforms. CO4: Apply AI tools for branding, promotion, social media content, and portfolio development. CO5: Demonstrate ethical, responsible, and productive use of AI technologies in creative and professional workflows.			
Credits: 3		SEC-1	
Max. Marks: 30+70		Min. Passing marks:	
Unit	Topics	No. of Lectures	
I	Digital Technology and Artificial Intelligence Fundamentals: Introduction to Computers and Digital Technologies, Anatomy of a Computer System, Hardware and Software Concepts, Input and Output Devices, Storage Devices, CPU and Memory, Operating System and File Management, Cyber Security, Digital Ethics and Responsible Technology Use, Emerging Digital Technologies and Industry Trends, Introduction to Artificial Intelligence (AI), Generative AI: Concepts, Features and Applications, Types of AI Tools and Platforms, AI in Design, Arts, Media and Entertainment, Fundamentals of Prompt Writing, Ethical and Responsible Use of AI, Future of AI in Creative Industries	5	
II	AI for Research, Brainstorming and Creative Planning: AI-assisted Research Methods, Brainstorming and Concept Development, Trend Analysis and Idea Validation, Content Structuring and Planning, Creative Writing and Script Assistance, Project Proposal Development	10	
III	AI-Assisted Documentation and Content Creation: AI-assisted Writing and Editing, Report Writing and Documentation, Resume and Portfolio Creation, Content Writing for Blogs and social media, Digital Communication and Professional Documentation, Visual Content Generation Basics	10	
IV	AI for Design, Visualization and Presentation: AI Image Generation, Mood Boards and Concept Boards, Mockups and Product Visualization, Presentation Design, Creative Poster and Promotional Material Design, Multimedia Presentation Development	10	
V	AI for Promotion, Branding and Creative Entrepreneurship: Personal Branding, Digital Marketing Fundamentals, Social Media Content Planning, AI-based Campaign Development, Portfolio Promotion, AI Applications in Animation, Fashion Design, Interior Design, Fine Arts and Performing Arts, Emerging Trends in Creative AI	10	
Suggested Readings • Russell, Stuart & Norvig, Peter – Artificial Intelligence: A Modern Approach • Michael Miller – AI Basics for Beginners • David M. Patel – Artificial Intelligence for Creative Professionals • Shelly Cashman Series – Microsoft Office Fundamentals • Bernard Marr – Generative AI in Practice			



2026-27

Suggested Digital Platforms

- https://chatgpt.com/?utm_source=chatgpt.com
- https://gemini.google.com/?utm_source=chatgpt.com
- https://www.canva.com/?utm_source=chatgpt.com
- https://firefly.adobe.com/?utm_source=chatgpt.com
- https://www.perplexity.ai/?utm_source=chatgpt.com
- https://leonardo.ai/?utm_source=chatgpt.com

Course pre requisites: No any Pre-Requisites.

Suggested Continuous Evaluation Methods: Class Performance/Practical Exam/Submission/Viva/Attendance

Course pre requisites: No any Pre-Requisites

Programme/Class: Certificate in Animation	Year: First	Semester: Second
Course Code: BSCANI-211	Subject/ Course Title: 2D Animation	

Course outcomes:

The student at the completion of the course will be able to:

1. Utilize Adobe Animate CC effectively for 2D digital animation.
2. Apply animation principles such as timing, spacing, and anticipation to create compelling motion.
3. Create animated characters, objects, and scenes suitable for different digital platforms.
4. Understand and use essential Animate CC tools and features for animation and interactivity.

Credits: 4

Minor

Max. Marks: 100

Min. Passing marks: 33

Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8

Unit	Topics	No. of Practical Hours
I	Introduction to animation • History of animation: Types of animation • Understanding and learning the Principles of animation through the view of different animation films	06
II	Flip Book • Drawing a detail flip book with minimum 30 pages following the principles of animation	18



III	2D Software Interface - Understanding the 2d software interface - Drawing tools, pen tools and other necessary tools to create any drawing in the frames.	06
IV	Frame by frame animation - Creating frame by frame animation for a short animation (maximum 10 sec with simple drawing. - Creating simple frame by frame animation for a short animation (maximum 20 sec with color drawings and background.	12
V	Tween - Creating simple animation with shape, classic & motion tweening. - Creating simple animation with shape and classic tween together	10
VI	Ball animation - Drawing the ball with gradient color . - Creating key frames for the animation sequence - Creating stretch and squash for the ball animation - Creating timing and motion for the ball animation - Giving tween to the sequence of ball animation - Creating the shadow layer for the ball animation	14
VII	Character drawing and creating symbols - Drawing simple character with pen tool or shape tool - Preparing the character for animation: dividing each body parts into symbol - Creating symbols, types of symbols	16
VIII	Human walk cycle - Drawing the cycle sheet for a human walk cycle. - Creating the key frames for the walk cycle. - Giving the tween to the figure with normal walk cycle. - Creating four different types of walk cycle (jump, run, tip toe, crawl).	16
IX	Lip Synchronization - Knowing the alphabets and its movements - Creating the mouth shapes for each letters and movements of the lips. - Creating expression and emotion in character. - Synchronizing character mouth shape according to the dialogue.	14
X	Creating a short animation film - Drawing the detail storyboard for the animation film - Drawing the background in layers and symbols - Creating the characters in turn around - Creating the props - Creating the scenes with tween and animation - Completing the whole animation film with background music and dialogues	22



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Suggested Readings:

1. Adobe Animate CC for Dummies by Theresa Cechovich and Wiley
2. Animate to Harmony: The Independent Animator's Guide to Toon Boom by Adam Phillips

This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.

Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance

Students will be able to effectively use AI-powered tools for research, ideation, content creation, visualization, branding, promotion, portfolio development, and creative project execution across Animation, Fashion Design, Interior Design, Fine Arts, and Performing Arts disciplines.



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Programme/Class: Certificate in Animation		Year: First	Semester: Second
Course Code: BSCANI-212		Subject/ Course Title: Digital Illustration	
Course outcomes: The student at the completion of the course will be able to: 1. Demonstrate proficiency in using vector-based tools and features of Adobe Illustrator for creating digital illustrations. 2. Create original illustrations using appropriate design principles such as composition, color theory, typography, and visual hierarchy. 3. Analyze and evaluate different illustration styles and techniques to effectively communicate concepts or narratives through digital media. 4. Develop a portfolio of digital artwork that showcases technical skills, creativity, and adherence to professional standards in digital illustration.			
Credits: 3		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Practical Hours	
I	Drawing • Drawing basics • Drawing simple lines and shapes • Drawing pixel-aligned paths for web workflows • Drawing with the Pencil tool • Drawing with the Pen tool • Editing paths • Perspective drawing • Tracing artwork with Live Trace • Manually trace artwork using template layers • Symbols • Symbolism tools and symbol sets • Drawing flares	06	



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S. Narayana
S. Narayana

II	Color • About color • Selecting colors • Using and creating swatches • Working with color groups (harmonies) • Kuler panel • Adjusting colors • Painting • About painting • Painting with fills and strokes • Live Paint groups • Brushes • Transparency and blending modes • Gradients • Meshes • Patterns	14
III	Reshaping objects • Transforming objects • Scaling, shearing, and distorting objects • Reshape using envelopes • Combining objects • Cutting and dividing objects • Clipping masks • Blending objects • Reshaping objects with effects • Building new shapes using the Shape Builder	20
IV	Importing, exporting, and saving • Importing files • Importing bitmap images and Importing Adobe PDF files • Importing EPS, DCS, and AutoCAD files • Importing artwork from Photoshop • Saving artwork • Exporting artwork • Creating Adobe PDF files • Adobe PDF options	14



Principal
 Dr. Jyoti
 Dr. Jyoti
 Dr. Jyoti

V	Type - About type - Importing text - Creating text and Creating type on a path - Scaling and rotating type - Spelling and language dictionaries - Fonts and Formatting type - Line and character spacing - Special characters - Formatting paragraphs - Hyphenation and line breaks - Tabs - Character and paragraph styles - Exporting text and Formatting Asian characters - Creating composite fonts - Updating text from Illustrator 10	24
VI	Creating special effects - Appearance attributes - Working with effects - Summary of effects - Drop shadows, glows, and feathering - Creating sketches and mosaics	24
Suggested Readings: 1. Adobe Animate CC for Dummies by Theresa Cekovich and Wiley 2. Animate to Harmony: The Independent Animator's Guide to Toon Boom by Adam Phillips This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation. Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		

Programme/Class: Certificate in Animation		Year: First	Semester: Second
Course Code: BSCANI-213		Subject/ Course Title: Story Board Development	
Course outcomes: The student at the completion of the course will be able to: 1. Develop well-structured and engaging scripts for different media formats. 2. Understand the principles of storytelling, plot development, and character creation. 3. Create professional storyboards that visually convey narrative elements and camera angles. 4. Communicate ideas and narratives effectively through visual storytelling.			
Credits: 3		SEC	


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 15/01/2026

Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Practical Hours	
I	Introduction to Scriptwriting: • Introduction to Script writing • The language of cinema • Requirement for the script • Scenes & Shots	06	
II	Introduction to Story board • Introduction to Thumbnails • The frame /Aspect ratio • Types of story boards • Scene and shots • Different types of camera angle • The language of storyboards • Overview of storyboarding and its role in the production process • Basics of visual storytelling and composition • Introduction to storyboard software and tools	12	
III	Three pillars of storyboard • Events, camera, sound. Storyboard language/conventions/iconography. Stick figures, perspective boxes, camera arrows, multiple panels, transitions, dialogue, soundtrack concept & design development. • Model sheet, character expression sheet.	18	
IV	Script Structure and Formatting • Understanding the three-act structure • Mastering screenplay formatting and terminology • Analyzing well-structured scripts from various genres	12	
V	Character Development • In-depth exploration of character creation • Crafting complex and relatable characters • Developing character relationships and dynamics	24	
VI	Creating Storyboards • Step-by-step guide to creating storyboards • Translating scripts into visual sequences • Storyboarding for action, dialogue, and special effects scenes	24	



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 1. *Shivanshu Singh*
 2. *Prashant Singh*
 3. *Prashant Singh*
 4. *Prashant Singh*

Suggested Readings:

1. Storyboard Design Course by Giuseppe Cristiano ---- Barron's
2. How to write for Animation – Jeffery Scott- The Overlook Press Woodstock and New York
3. The Art of layout and storyboarding – Mark T. Byrne

This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.

Suggested Continuous Evaluation Methods:Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance

Course pre requisites: The eligibility for this paper is 10+2 with any subject

Programme/Class: Certificate in Animation	Year: First	Semester: Second
Course Code: BSCANI-213	Subject/ Course Title: Color Composition	
Course outcomes: The student at the completion of the course will be able to: 1. Students will justify their use of color and composition during 2. The students will know about ajanta fresco, jaipur fresco to technique, handling and process. 3. They know about different techniques of Mosaic. 4. Students will know about Direct and Indirect technique. 5. Development of a workable concept of what it means to dry colors.		
Credits: 3	SEC	
Max. Marks: 40+ 60	Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6		
Unit	Topics	No. of Practical Hours
I	• Colour Knowledge: - Hue; Value Chrome, Tint, Shade and Tone, Gray Scale, Chromatic value • Scale and color value scale.	24
II	• Textures: - Creative textures will be new experiment with media	24
III	• Painting -Still life from natural objects (vegetables and fruits): - To develop the proper view on proportion, balance and color composition	48
Suggested Readings: 1. The Best Color Theory Books for Foundational Knowledge BY 2. The Complete Color Harmony, Pantone Edition: Expert Color Information for Professional Results Flexibound – by LeatriceEiseman (Author)		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions:		

Programme/ Class: UG Certificate in Animation	Year: First	Semester: Second
Course Code: BSCANIVAC-2	Course Title: 3D Design	



Swami Vivekanand Subharti University
Department of Animation, Faculty of Fine Arts

B.Sc. Animation (2025 - 26)

Subject Scheme & Syllabus

Program Objectives (POs)

- Preserve and promote local art, culture, folklore, and traditions through animation while creating regional employment opportunities.
- Align animation education with NEP 2020 and support India's growing media, gaming, and animation industries with inclusive narratives.
- Prepare students for global careers in animation, VFX, and gaming by meeting international benchmarks and fostering intercultural collaboration.
- Integrate sustainable and ethical production practices in animation pipelines to address social, cultural, and environmental responsibilities.
- Contribute to the UN SDGs by using animation for climate awareness, gender equality, health campaigns, educational innovation, and global citizenship.

Program Outcomes (POs)

1. Apply scientific principles and digital tools to create animations that communicate ideas responsibly and sustainably.
2. Analyze real-world problems and design animation solutions that promote awareness of environmental and social issues.
3. Demonstrate ethical practices in collaborative animation projects respecting cultural diversity and inclusion.
4. Apply software-based animation tools and techniques to create engaging, interactive, and educational animation experiences.
5. Develop animations that reflect regional and national narratives while fostering global understanding and empathy.
6. Integrate sustainability principles in production workflows to reduce environmental impact.
7. Critically evaluate emerging technologies and their societal impact in animation and media industries.
8. Communicate complex scientific, social, or cultural concepts effectively through visual storytelling for diverse audiences.



Year-wise Structure UG Programs: B.SC. ANIMATION
Subject Scheme

SEMESTER-I

Sl No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1.	Fundamental of Animation	MJC-1	BSCANI-101	6-0-0	6	100
2.	Print Media & Graphics	MIC-1	BSCANI-111	0-0-8	4	100
3.	Digital Art	MDC-1	BSCANI-112	0-0-6	3	100
4.	AEC-1(English Communication Skill)	AEC-1	AEC-1	1-1-0	2	100
5.	Storyboard Development	SEC-1	BSCANI-113	0-0-6	3	100
6.	2D Design	VAC-1	BSCANIVAC-1	0-0-6	3	100
						Total Credits-21

SEMESTER-II

Sl No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1	Computer Graphics	MJC-2	BSCANI-201	6-0-0	6	100
2	2D Animation	MIC-2	BSCANI-211	0-0-8	4	100
3	Digital Illustration	MDC-2	BSCANI-212	0-0-6	3	100
4	AEC -2 (Environment Science)	AEC-2	AEC-2	2-0-0	2	100
5	Color Composition	SEC-2	BSCANI-213	0-0-6	3	100
6	3D Design	VAC-2	BSCANIVAC-2	0-0-6	3	100
7.	Rashtra Bodh (Qualifying Exam)	VAC-3	VAC-RB	2-0-0	.	External 50
						Total Credits-21


 Rashtriya Sanshodhan Mandal
 Varanasi
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SEMESTER-I			
Programme /Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-101		Course Title: Fundamental of Animation	
Course outcomes: The student at the completion of the course will be able to: 1. Understand the fundamental principles and concepts of animation. 2. Apply the principles of timing, spacing, and motion to create believable and appealing animations. 3. Apply the principles of storytelling and narrative structure to animation. 4. Critically analyze and provide constructive feedback on animated content.			
Credits: 6		Major	
Max. Marks:		Min. Passing marks:	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 6-0-0			
Unit	Topics	No. of Lectures	
I	Introduction to Animation • History and evolution of animation • Different types of animation (2D, 3D, stop motion, etc.) • Careers and opportunities in the animation industry	04	
II	Animation Principles • Understanding the foundational principles of animation (e.g., squash and stretch, anticipation, follow-through) • Applying the principles of timing and spacing in animation • Analyzing and deconstructing animations to identify principles in action	06	
III	Animation Techniques and Tools • Traditional animation techniques • Computer-generated animation techniques • Basic animation workflows	12	
IV	Storytelling and Narrative in Animation • Plot structure and narrative elements • Visual storytelling techniques	06	
V	Basic Animation Production Process • Pre-production: concept development and planning • Production: asset creation, rigging, and animation • Post-production: editing, sound design, and rendering • Project management and teamwork in animation production	16	



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VI	Animation Styles and Genres Theory • Experimental animation • Cartoon animation • Anime and manga • Motion graphics and visual effects	08
VII	Critique and Analysis of Animation • Elements of visual analysis in animation • Evaluating animation techniques and effectiveness • Providing constructive feedback and suggestions	06
VIII	Emerging Trends in Animation • Virtual reality (VR) and augmented reality (AR) in animation • Interactive and immersive animation experiences • Industry trends and future directions	06
Suggested Readings: 1. The Fundamentals of Animation by Paul Wells 2. The Animator's Survival Kit by Richard Williams		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance		
Course pre requisites: The eligibility for this paper is 10+2 with any subject		
At the End of the whole syllabus any remarks/ suggestions: Students will be able to understand the fundamental of Animation and will be introduced to Graphic Design.		

Programme/Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-111		Subject/ Course Title: Print Media & Graphics	
Course outcomes: The student at the completion of the course will be able to: 1. Navigate and use Corel Draw's interface effectively. 2. Create visually appealing layouts and designs for print media. 3. Understand and apply design principles, including color theory and typography. 4. Manipulate and edit vector graphics and illustrations. 5. Prepare print-ready files with the appropriate resolution and color modes.			
Credits: 4		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics	No. of Practical Hours	



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I	Introduction to Corel DRAW • Installing Corel DRAW Graphics Suite • Basics of Corel DRAW • Vector Graphics and Bitmaps • Starting and Opening Drawings • Previewing Drawings • Viewing Modes • Saving and Closing Drawings • Corel DRAW Workspace • Creative Tools and Content • Touchscreen and Wheel Devices	06	
II	Lines, Shapes, and Outlines • Lines, Outlines, and Brushstrokes • Shapes and Shape Objects • Symmetrical Drawing	06	
III	Working with Objects, Symbols, and Layers • Introduction to Objects • Linking and Embedding Objects • Layers and Symbols • Managing and Tracking Projects	12	
IV	Colour, Fills, and Transparencies • Colour • Colour Models and Depth • Choosing Colours • Creating and Editing Colour Palettes • Uniform Fills and Fountain Fills • Vector and Bitmap Pattern Fills • Texture, PostScript, and Mesh Fills • Object Transparency • Managing Colours	18	
V	Exploring Special Effects • Lenses • Adding 3D Effects • Mosaics	06	
VI	Working with Text • Adding and Manipulating Text • Formatting Text • Managing Fonts • Writing Tools		



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VII	Templates and Styles • Templates and Using & Finding Templates • Managing Templates • Creating and Editing Templates • Introducing Styles and Style Sets • Creating, Applying, and Editing Styles and Style Sets • Managing Default Object Properties • Importing and Exporting Style Sheets • Colour Styles • Creating and Applying Colour Styles • Editing and Viewing Colour Styles • Exporting and Importing Colour Styles	22
VIII	Pages and Layout • Pages and Layout Tools • Page Layout and Background • Adding and Deleting Pages • Rulers • Document Grid and Pixel Grid • Tables and Adding Tables • Selecting, Moving, and Navigating Table Components • Inserting and Deleting Table Rows and Columns • Formatting Tables and Cells • Converting Tables to Text	10
X	Introduction to Bitmaps • Working with Bitmaps • Converting Vector Graphics to Bitmaps • Importing and Cropping Bitmaps • Bitmap Dimensions and Resolution • Straightening Bitmaps • Image Adjustment Lab • Adjusting Colour and Tone Curve Filter • Special Effects Categories and Bitmap Colour Modes • Introducing Trace • RAW Camera Files	12

Suggested Readings:

Corel DRAW X7: The Official Guide, 11th Edition by Gary David Bouton

Corel Draw Training Guide Know the Tips, Techniques and Ideas for Creating Art Prof. Satishlain.M. Geetha

This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.
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Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/Attendance

Course pre requisites: The eligibility for this paper is 10+2 with any subject

Programme/Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-112		Subject/ Course Title: Digital Art	
Course outcomes:			
The student at the completion of the course will be able to:			
1. Create digital art using Adobe Photoshop.			
2. Understand and apply fundamental principles of composition, color theory, and visual storytelling.			
3. Use various Photoshop tools and features for digital painting, photo manipulation, and graphic design.			
4. Employ advanced techniques for digital art, including layer masking, blending modes, and filters.			
5. Adapt to emerging trends and technologies in the field of digital art and design.			
Credits: 3		MDC	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Practical Hours	
I	Introduction: Variations in Photoshop Applications	06	
	Getting Acquainted with Photoshop • The Photoshop Environment • Palettes and the Palette Well • Creating Custom Workspaces • Opening Images • Using the File Browser • Image Magnification • Viewing Document Information • Moving the Image • Undoing Mistakes and The History Palette • Displaying Drawing Guides • Making Measurements • Adding Annotations • Setting Preferences	18	
II			



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 Middle right: A signature that appears to be 'Rajesh' or similar.
 Bottom right: A signature that appears to be 'Rajesh' or similar.

VIII	Work with layers - Examine and convert layers - Add and delete layers. - Add a selection from one image to another - Organize layers with layer sets and colors. - Use a layer mask with a selection. - Work with layer masks and layer content. - Control pixels to blend colors. - Eliminate a layer mask. - Use an adjustment layer. - Create a clipping mask	16
X	Demonstrate the ability to make selections - Make a selection using shapes - Modify a marquee. - Select using color and modify a selection. - Add a vignette effect to a selection	10
Suggested Readings: - Adobe Photoshop Classroom in a Book (2023 Release) by Conrad Chavez - The Digital Darkroom: The Definitive Guide to Photo Editing by James Abbott		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
Course pre requisites: The eligibility for this paper is 10+2 with any subject		

Programme/Class: Certificate in Animation	Year: First	Semester: First
Course Code: BSCANI-113	Subject/ Course Title: Story Board Development	
Course outcomes: The student at the completion of the course will be able to: 1. Develop well-structured and engaging scripts for different media formats. 2. Understand the principles of storytelling, plot development, and character creation. 3. Create professional storyboards that visually convey narrative elements and camera angles. 4. Communicate ideas and narratives effectively through visual storytelling.		
Credits: 3	SEC	
Max. Marks: 100	Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6		



Unit	Topics	No. of Practical Hours
I	Introduction to Scriptwriting: • Introduction to Script writing • The language of cinema • Requirement for the script • Scenes & Shots	06
II	Introduction to Story board • Introduction to Thumbnails • The frame /Aspect ratio • Types of story boards • Scene and shots • Different types of camera angle • The language of storyboards • Overview of storyboarding and its role in the production process • Basics of visual storytelling and composition • Introduction to storyboard software and tools	12
III	Three pillars of storyboard • Events, camera, sound. Storyboard language/conventions/iconography. Stick figures, perspective boxes, camera arrows, multiple panels, transitions, dialogue, soundtrack concept & design development. • Model sheet, character expression sheet.	18
IV	Script Structure and Formatting • Understanding the three-act structure • Mastering screenplay formatting and terminology • Analyzing well-structured scripts from various genres	12
V	Character Development • In-depth exploration of character creation • Crafting complex and relatable characters • Developing character relationships and dynamics	24
VI	Creating Storyboards • Step-by-step guide to creating storyboards • Translating scripts into visual sequences • Storyboarding for action, dialogue, and special effects scenes	24
Suggested Readings: 1. Storyboard Design Course by Giuseppe Cristiano ---- Barron's 2. How to write for Animation – Jeffery Scott- The Overlook Press Woodstock and New York 3. The Art of layout and storyboarding – Mark T. Byrne		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		



Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance
Course pre requisites: The eligibility for this paper is 10+2 with any subject

Programme/ Class: UG Certificate in Animation	Year: First	Semester: First
Course Code: BSCANIVAC-1	Subject / Course Title: 2D Design	
Course Out Come:		
1. Student will be able to develop well-structured and engaging scripts for various media formats.		
2. Student will be able to apply principles of storytelling, plot development, and character creation to design compelling narratives.		
3. Student will be able to create professional storyboards that visually convey narrative elements and camera angles.		
4. Student will be able to communicate ideas and narratives effectively through visual storytelling to diverse audiences.		
Credits: 3	Value Added Course	
Max. Marks: 100	Min. Passing Marks: 33	
Total No. of Lecture- Tutorials-Practical (in hours per week) 0-0-6		
Unit	Topic	No. of Practical Hours
Unit -I	Block Letter Design- Letter Design (2 Work)	30
Unit -II	Polygon Art (1 Work)	12
Unit - III	2D Portrait 2 Work)	30
Unit - IV	2D Illustration (1 Work)	24
Suggested Readings:		
1. Free Font Index 3 – The Pepin Press		
2. Calligraphy Technique- Mary Noble		
This course is Major Course as compulsory for the students		
Suggested Continuous Evaluation Methods: Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance		

SEMESTER - II		
Programme/Class: Certificate in Animation	Year: First	Semester: Second



Course Code: BSCANI-201		Course Title: Computer Graphics	
Course outcomes:			
The student at the completion of the course will be able to:			
1. Student will be able to understand and apply fundamental principles of graphic design, including balance, contrast, alignment, repetition, and hierarchy.			
2. Student will be able to analyze and evaluate visual compositions for effectiveness and aesthetic appeal.			
3. Student will be able to apply color theory, typography, and visual elements to create coherent and engaging designs.			
4. Student will be able to interpret design trends, historical movements, and cultural influences to inform creative decisions.			
5. Student will be able to communicate ideas effectively through visual media, considering audience, context, and purpose.			
Credits: 6		Vocational Course	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 6-0-0			
Unit	Topics		No. of Lectures
I	Introduction to Computer Graphics: Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction, Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, Video Basics, The Video Controller, Random-Scan Display Processor, LCD displays.		12
II	Two dimensional and three-dimensional transformations: 2-Dimensional transformation 2-D Translation, Rotation, Scaling, Homogeneous Coordinates, Reflection, Shear transform 3-dimensional transformation, 3-D Translation, Rotation Scaling, Reflection, Shear		08
III	Viewing in 3D: Stages in 3D viewing, Canonical View Volume (CVV), Specifying an Arbitrary 3D View. Examples of 3D Viewing, The Mathematics of Planar Geometric Projections, Combined transformation matrices for projections and viewing, Coordinate Systems and matrices, camera model and viewing pyramid. Light: Radiometry, Transport, Equation, Photometry Color: Colorimetry, Color Spaces, Chromatic Adaptation, Color Appearance		08



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 Ashish
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IV	Visible-Surface Determination: Techniques for efficient Visible-Surface Algorithms, Categories of algorithms, Back face removal, The z-Buffer Algorithm, Scan-line method, Painter's algorithms (depth sorting), Area subdivision method, BSP trees, Visible-Surface Ray Tracing, comparison of the methods. Plane Curves and Surfaces: Curve Representation, Nonparametric Curves, Parametric Curves, Parametric Representation of a Circle, Parametric Representation of an Ellipse, Parametric Representation of a Parabola, Parametric Representation of a Hyperbola, Representation of Space Curves, Cubic Splines, Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces, Bezier Surfaces.	08
V	Color and Lighting • Color representations and color models • Point and directional lighting models • Shader programming and GPU rendering	08
VI	Interactive Graphics • Introduction to interactive graphics and user interfaces • Event handling and input devices • Implementing user interactivity in graphical applications	08
VII	Emerging Trends and Future of Computer Graphics • Exploration of emerging trends in computer graphics (e.g., virtual reality, augmented reality, real-time ray tracing) • Discussion of the future of computer graphics technology and applications	08
Suggested Readings: Graphic Design Rules: 365 Essential Dos and Don'ts by Sean Adams, Peter Dawson, John Foster, Tony Seddon		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance		



Programme/Class: Certificate in Animation		Year: First	Semester: Second
Course Code: BSCANI-211		Subject/ Course Title: 2D Animation	
Course outcomes:			
The student at the completion of the course will be able to:			
1. Utilize Adobe Animate CC effectively for 2D digital animation.			
2. Apply animation principles such as timing, spacing, and anticipation to create compelling motion.			
3. Create animated characters, objects, and scenes suitable for different digital platforms.			
4. Understand and use essential Animate CC tools and features for animation and interactivity.			
Credits: 4		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics		No. of Practical Hours
I	Introduction to animation • History of animation: Types of animation • Understanding and learning the Principles of animation through the view of different animation films		06
II	Flip Book • Drawing a detail flip book with minimum 30 pages following the principles of animation		18
III	2D Software Interface • Understanding the 2d software interface • Drawing tools, pen tools and other necessary tools to create any drawing in the frames.		06
IV	Frame by frame animation • Creating frame by frame animation for a short animation (maximum 10 sec with simple drawing. • Creating simple frame by frame animation for a short animation (maximum 20 sec with color drawings and background.		12
V	Tween • Creating simple animation with shape, classic & motion tweening. • Creating simple animation with shape and classic tween together		10



Programme/Class: Certificate in Animation		Year: First	Semester: Second
Course Code: BSCANI-212		Subject/ Course Title: Digital Illustration	
Course outcomes: The student at the completion of the course will be able to:			
1. Demonstrate proficiency in using vector-based tools and features of Adobe Illustrator for creating digital illustrations. 2. Create original illustrations using appropriate design principles such as composition, color theory, typography, and visual hierarchy. 3. Analyze and evaluate different illustration styles and techniques to effectively communicate concepts or narratives through digital media. 4. Develop a portfolio of digital artwork that showcases technical skills, creativity, and adherence to professional standards in digital illustration.			
Credits: 3		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Practical Hours	
I	Drawing • Drawing basics • Drawing simple lines and shapes • Drawing pixel-aligned paths for web workflows • Drawing with the Pencil tool • Drawing with the Pen tool • Editing paths • Perspective drawing • Tracing artwork with Live Trace • Manually trace artwork using template layers • Symbols • Symbolism tools and symbol sets • Drawing flares	06	



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 Name: _____

VI	Ball animation • Drawing the ball with gradient color . • Creating key frames for the animation sequence • Creating stretch and squash for the ball animation • Creating timing and motion for the ball animation • Giving tween to the sequence of ball animation • Creating the shadow layer for the ball animation	14
VII	Character drawing and creating symbols • Drawing simple character with pen tool or shape tool • Preparing the character for animation: dividing each body parts into symbol • Creating symbols, types of symbols	16
VIII	Human walk cycle • Drawing the cycle sheet for a human walk cycle. • Creating the key frames for the walk cycle. • Giving the tween to the figure with normal walk cycle. • Creating four different types of walk cycle (jump, run, tip toe, crawl).	16
IX	Lip Synchronization • Knowing the alphabets and its movements • Creating the mouth shapes for each letters and movements of the lips. • Creating expression and emotion in character. • Synchronizing character mouth shape according to the dialogue.	14
X	Creating a short animation film • Drawing the detail storyboard for the animation film • Drawing the background in layers and symbols • Creating the characters in turn around • Creating the props • Creating the scenes with tween and animation • Completing the whole animation film with background music and dialogues	22
Suggested Readings: 1. Adobe Animate CC for Dummies by Theresa Cekovich and Wiley 2. Animate to Harmony: The Independent Animator's Guide to Toon Boom by Adam Phillips		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		



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II	Color • About color • Selecting colors • Using and creating swatches • Working with color groups (harmonies) • Kuler panel • Adjusting colors • Painting • About painting • Painting with fills and strokes • Live Paint groups • Brushes • Transparency and blending modes • Gradients • Meshes • Patterns	14
III	Reshaping objects • Transforming objects • Scaling, shearing, and distorting objects • Reshape using envelopes • Combining objects • Cutting and dividing objects • Clipping masks • Blending objects • Reshaping objects with effects • Building new shapes using the Shape Builder	20
IV	Importing, exporting, and saving • Importing files • Importing bitmap images and Importing Adobe PDF files • Importing EPS, DCS, and AutoCAD files • Importing artwork from Photoshop • Saving artwork • Exporting artwork • Creating Adobe PDF files • Adobe PDF options	14



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V	Type - About type - Importing text - Creating text and Creating type on a path - Scaling and rotating type - Spelling and language dictionaries - Fonts and Formatting type - Line and character spacing - Special characters - Formatting paragraphs - Hyphenation and line breaks - Tabs - Character and paragraph styles - Exporting text and Formatting Asian characters - Creating composite fonts - Updating text from Illustrator 10	24
VI	Creating special effects - Appearance attributes - Working with effects - Summary of effects - Drop shadows, glows, and feathering - Creating sketches and mosaics	24
Suggested Readings:		
1. Adobe Animate CC for Dummies by Theresa Cekovich and Wiley		
2. Animate to Harmony: The Independent Animator's Guide to Toon Boom by Adam Phillips		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		

Programme/Class: Certificate in Animation	Year: First	Semester: Second
Course Code: BSCANI-213	Subject/ Course Title: Color Composition	
Course outcomes: The student at the completion of the course will be able to: 1. Students will justify their use of color and composition during 2. The students will know about ajanta fresco, jaipur fresco to technique, handling and process. 3. They know about different techniques of Mosaic. 4. Students will know about Direct and Indirect technique. 5. Development of a workable concept of what it means to dry colors.		



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Credits: 3		SEC
Max. Marks: 40+60		Min. Passing marks: 33
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6		
Unit	Topics	No. of Practical Hours
I	- Colour Knowledge: - Hue; Value Chrome, Tint, Shade and Tone, Gray Scale, Chromatic value - Scale and color value scale.	24
II	Textures: - Creative textures will be new experiment with media	24
III	Painting -Still life from natural objects (vegetables and fruits): - To develop the proper view on proportion, balance and color composition	48
Suggested Readings:		
1. The Best Color Theory Books for Foundational Knowledge BY		
2. The Complete Color Harmony, Pantone Edition: Expert Color Information for Professional Results Flexibound - by LeatriceEiseman (Author)		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions:		

Programme/ Class: UG Certificate in Animation		Year: First	Semester: Second
Course Code: BSCANIVAC-2		Course Title: 3D Design	
Course Out Come: The student at the completion of the course will be able to:			
1. Understand about Fundamentals of 3D Design (Sculpture) like the elements of sculptural design (Mass & Space) and their relation to create 3D forms.			
2. Practically know about clay and its preparation and process of creating forms through clay modeling.			
3. Practically know about relief sculpture (process, techniques, importance and uses).			
4. Practically know about pottery and create pots through clay (Red clay preparation, Coil and slab methods).			
5. Practically understand about to create pots on wheel (Clay preparation, center the clay on wheel, basic pots make and brief description about terracotta).			
Credits: 3		Value Added Course	
Max. Marks: 100		Min. Passing Marks: 33	
Total No. of Lecture- Tutorials-Practical (in hours per week- 4 hours) L-T-P: 0-0-6			
Unit	Topic	No. of Practical Hours	
Unit - I	Basic Fundamentals of 3D Design • Introduction of 3D Design or sculpture. (forms, composition and importance)	05	
Unit - II	3D Forms & Materials • Basic 3D forms process according to materials and its techniques.	05	
Unit -III	Clay Modelling • Clay preparation. learn about creative forms like basic clay modeling	28	



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Unit - IV	Relief in clay • Create relief in clay using tools and learn embossing and depth in clay.	12
Unit - V	Pottery • Clay preparation for terracotta pottery, coil and slab method pottery, create tea cup/flower pot.	28
Unit - VI	Pottery Wheel • Clay preparation for work on pottery wheel, clay centering on wheel and create simple Diyas.	16
Suggested Readings:		
1. Sculpting Techniques Bible - Claire Brown, Chartwell Books. Inc - 2006		
2. Pottery- the essential manual- Doug Wensle, The Crowood Press- 2002		
This course is Major Course as compulsory for the students		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		

Practical Exam

Practical Exam

Practical Exam

Practical Exam



Syllabus of Rashtra Bodh

SECTION-1: PRESENT DAY INDIA:

Overview of India's current society, cultural, economic, and social landscape. Recent advancements, social challenges, and the role of citizens in modern India.

1. **Respect for Elders and Authorities:** Emphasizing respect for parents, teachers, gurus, and saints.
2. **Daily Values and Behavior:** Good conduct in daily life, such as politeness, work ethic, and adherence to social rules.
3. **Healthy Living:** Focus on exercise, yoga, meditation, clean eating, fruit intake and the dangers of intoxication.
4. **Civic Responsibility:** Following traffic rules, caring for the environment, plantation of trees, responsible use of technology (like mobile phones), and awareness about pollution and global warming.
5. **Religious and Philosophical Heritage:** Understanding Sanatan Dharma, Indian philosophies, and religious tolerance for inner balance of life.
6. **National Symbols and Identity:** Knowledge of national anthems, the flag, constitution, judiciary system, insignia, and the country's history, including independence.
7. **Community and National Service:** Honoring soldiers and their families and learning about significant national events and days.
8. **Unity in Diversity:** Recognition and respect for the diversity of states, union territories, and cultural uniqueness across India.
9. **Parent and Family Involvement:** Issues such as drug monitoring addressed for parents.

SECTION 1A: KNOW YOUR NATION:

1. **Religious and Philosophical Heritage:** Understanding concepts like Sanatan and Sanatan Dharma, and gaining insight into Indian philosophies and traditions.
2. **National Symbols and Identity:** Learning about India's national anthems (Vande Mataram, Jana Gana Mana, Azad Hind Anthem), the Indian flag, constitution, judiciary, and government insignia.
3. **Patriotism and National Service:** Honouring soldiers and their families, understanding the struggle for independence, the significance of Independence Day, and the importance of unity and national integration.



4. **Unity in Diversity:** Acknowledging the diversity of Indian states, capitals, union territories, and appreciating the broad spectrum of cultures within India.
5. **Parental and Community Involvement:** Addressing parental responsibilities, such as drug monitoring, and social guidance.

SECTION 1B: National Character:

1. **National Anthem – Vande Mataram:** History and background of "Vande Mataram", composed by Bankim Chandra Chattopadhyay. Its role and significance during India's freedom movement as a source of inspiration and unity. Understanding the lyrics, meaning, and why it is regarded as the National Song of India.
2. **National Anthem – Jana-Gana-Mana:** Details the history and significance of "Jana Gana Mana", composed by Rabindranath Tagore. Guidelines for respectful conduct during the anthem, and the values it represents.
3. **Azad Hind Anthem:** Introduction to the anthem used by the Indian National Army led by Subhas Chandra Bose. Its historical significance as a patriotic rallying call during the struggle for independence.
4. **Jai Hind:** The origin and meaning of the slogan "Jai Hind" (Victory to India). How it became a popular national greeting and symbol of patriotism during the freedom movement. Significance of greeting by this slogan in our university.
5. **Honoring Soldiers and Their Families:** Importance of acknowledging, respecting, and supporting Indian soldiers and their families. Contributions and sacrifices made for the security and sovereignty of the nation. Specially information about Subharti Shaheed Upwan.
- **History of Bharat:** An overview of key historical periods, including ancient dynasties, medieval invasions, colonial rule, and the journey to independence.
6. **Indian National Flag:** - Understanding the symbolism, history, and significance of the tricolor flag, along with the protocols for their respect and usage. History, symbolism, and evolution of the Indian National Flag. Meanings of the three colors and the Ashoka Chakra. Flag code and dignity guidelines
7. **Meaning of 17 National Symbols in Historical Perspectives:** In-depth analysis of national symbols such as the Ashoka Chakra, National Emblem, and others, exploring their historical origins, cultural significance, and role in uniting the nation.

SECTION 2: FREEDOM MOVEMENT & NATIONAL HEROES

This part will delve into the sacrifices and contributions of individuals and movements that shaped modern India:

- a) **How Did we Got Independence?**
1. Chronological account of India's struggle for independence.



- d. Wellness is a Holistic Loom:** Understanding wellness as a comprehensive concept that integrates physical, mental, and spiritual health, with practical approaches to achieving balance.
- e. Gender Quality and Women Empowerment is our Strength:** Detailed focus on initiatives and ideologies that promote gender equality, empower women, and recognize their contributions as vital to societal progress.
- f. Environmental practices to achieve zero carbon foot print:** Exploration of sustainable practices, green initiatives, and environmental consciousness aimed at reducing the University's ecological impact and inspiring students to adopt eco-friendly lifestyles.

SECTION 4: INDIAN CONTRIBUTION TO THE GLOBAL CAUSE

This unit focuses on India's historical and contemporary contributions to global knowledge, culture, and governance, showcasing the country's role as a beacon of wisdom and innovation.

- a) Education and Science A deep dive into India's ancient intellectual heritage and its impact on global learning.**
- b) Ancient Indian Scientists & Mathematicians and Their Contribution:** Detailed study of luminaries such as Aryabhata (concept of zero), Varahamihira (astronomy), Bhaskaracharya (mathematics), Boudhayana (geometry), Brahmagupta (algebra), Kanad (atomic theory), and Nagarjun (chemistry), highlighting their groundbreaking discoveries and enduring relevance.
- c.) Medical Science and Wellness**

1. **Ancient Indian Medical Science & Physicians:** Comprehensive analysis of medical pioneers like Dhanvantri (father of Ayurveda), Charaka (author of Charaka Samhita), Muni Agnivesa (early medical texts), Sushrut (father of surgery), Jeevak (physician to Buddha), Vagbhata (Ashtanga Hridaya), and Palakapya (veterinary science), focusing on their methodologies and contributions to holistic healing.
2. **Meditation and Yoga in Ancient India:** Detailed study of the origins, philosophies, and practices of meditation and yoga, their spiritual and physical benefits, and their global adoption as tools for mental peace and health.
3. **Religions & Philosophies of India:** Comprehensive overview of major Indian religions (Hinduism, Buddhism, Jainism, Sikhism) and philosophical schools (Vedanta, Nyaya, etc.), emphasizing their teachings on ethics, coexistence, and spirituality.
4. **Best Indian Practices to Prepare Ecosystem:** Exploration of ancient and traditional Indian practices for environmental conservation, sustainable agriculture, and community-based resource management.



SECTION 5: CONSTITUTION AND SOCIETY

This segment covers the framework of Indian democracy and societal structures, linking historical values to modern governance:

1. Making of Indian Constitution: Detailed study of the drafting process, key figures like Dr. B.R. Ambedkar, and the historical context that shaped the world's longest written constitution.
2. Fundamental Duties of a Citizen of India: In-depth explanation of the 11 duties enshrined in the Constitution, emphasizing their role in fostering responsible citizenship.
3. Fundamental Rights of a Citizen in India: Comprehensive overview of the six fundamental rights guaranteed to citizens, their legal implications, and their importance in protecting individual freedoms.
4. Directive Principles, Federal Structure: Exploration of the Directive Principles of State Policy as guidelines for governance, and an analysis of India's federal system balancing central and state powers.
5. Independence of Judiciary and the Parliamentary System: Detailed discussion on the separation of powers, the role of an independent judiciary in upholding justice, and the functioning of India's parliamentary democracy.
6. Indian Family System, The Concept, Practices, and Current Relevance: Examination of the traditional joint family system, its values of unity and support, evolving dynamics in modern times, and its continued significance in Indian society.
7. Celebration of National Days: Understanding the historical and cultural importance of days like Independence Day, Republic Day, and Gandhi Jayanti, along with their role in reinforcing national unity and pride.



Reference books for Teaching

1. RASHTRIYA ANUBHUTI (hindi & English version)
2. SUBHARTIEK PARICHAY (hindi & English version)

Year-wise Structure UG Programs

B.Sc. Animation- Syllabus

SEMESTER-I

SI No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1.	Fundamental of Animation	MJC-1	BSCANI-101	4-0-0	4	100
2.	Print Media & Graphics	MIC-1	BSCANI-111	0-0-8	4	100
3.	Digital Art	MDC-1	BSCANI-112	0-0-8	4	100
4.	Ability Enhancement Course - (English Communication Skill)	AEC-1	AEC-1	2-1-0	2	100
5.	Storyboard Development	SEC-1	BSCANI-113	0-0-6	3	100
6.	2D Design	VAC-1	BSCANIVAC-1	0-0-6	3	100
						TotalCredits-20

SEMESTER-II

SI No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1	Computer Graphics	MJC-2	BSCANI-201	4-0-0	4	100
2	2D Animation	MIC-2	BSCANI-211	0-0-8	4	100
3	Digital Illustration	MDC-2	BSCANI-212	0-0-8	4	100
4	Ability Enhancement Course-2 (Environment Science)	AEC-2	AEC-2	2-1-0	2	100
5	Color Composition	SEC-2	BSCANI-213	0-0-6	3	100
6	3D Design	VAC-2	BSCANIVAC-2	0-0-6	3	100
						TotalCredits-20

Note: Exit option to students with U.G. Certificate: After completing I, II Semester earning full credits students will be awarded U.G. Certificate only if he or she take some Vocational Course of 4 Credits (during summer vacation). This course will not be included in SGPA and CGPA Calculations.



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SEMESTER-III

SI No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1.	Film Studies	MJC-3	BSCANI-301	0-0-10	4	100
2.	Digital Audio & Video Editing	MJC-4	BSCANI-311	0-0-8	4	100
3.	Visual Effects	MIC-3	BSCANI-312	0-0-6	4	100
4.	Auto Cad	MDC-3	BSCANI-313	0-0-6	3	100
5.	Ability Enhancement Course-3 (Course on Disaster Risk Management)	AEC-3	AEC-3	2-1-0	2	100
6.	Photography	SEC-3	BSCANI-314	0-0-6	3	100
						TotalCredits-20

SEMESTER-IV

SI No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1.	3D Production - I	MJC-5	BSCANI-401	5-0-0	5	100
2.	3D Modeling - I	MJC-6	BSCANI-411	0-0-12	6	100
3.	3D Texturing, Lighting & Rendering -I	MJC-7	BSCANI-412	0-0-10	5	100
4.	Character Anatomy	MIC-3	BSCANI-413	0-0-6	3	100
5.	Ability Enhancement Course-4(Course on NCC/NSS/NGO'S/SCOUT GUIDES/SPORTS)	AEC-4	AEC-4	2-1-0	2	100
						TotalCredits-21

Note: Exist option to students with U.G. Diploma: After completing, 11,11& IV Semester earning full credits, if a student want to exit the or she will be awarded U.G. Diploma only if he or she takes one Vocational Course of 4 credits (during summer vocation). This course will not be included in SGPA and CGPA Calculations.



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SEMESTER-V

SI No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1.	3D Modeling - II	MJC-8	BSCANI-511	0-0-10	5	100
2.	3D Texturing, Lighting & Rendering -II	MJC-9	BSCANI-512	0-0-10	5	100
3.	3D Character Setup	MIC-5	BSCANI-513	0-0-6	3	100
4.	Basic 3D Animation	MIC-6	BSCANI-514	0-0-6	3	100
5.	Internship	INT-I	BSCANI-515	2-1-0	4	100
						TotalCredits-20

SEMESTER-VI

SI No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1	Advanced Animation & 3D Particles	MJC-10	BSCANI-611	0-0-8	4	100
2.	3D Dynamics & Simulation	MJC-11	BSCANI-612	0-0-10	5	100
3.	Specialization - I (Graphics/ 2D Animation/ 3D Animation/ VFX)	MJC-12	BSCANI-613	0-0-10	5	100
4.	Documentary	MIC-7	BSCANI-614	0-0-6	3	100
5.	Portfolio Development	MIC-8	BSCANI-615	0-0-6	3	100
						TotalCredits-20



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Note: Exist option: A student may be awarded 3 year U.G. Degree in the Major Minor discipline, provided he/she earns all credits of I, II, III, IV, V & VI Semester.

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SEMESTER-VII

Sl No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1.	History of Animation	MJC-13	BSCANI-701	5-1-0	5	100
2.	Basics of Research Methodology	MJC-14	BSCANI-702	5-1-0	5	100
3.	Specialization - II (Graphics/ 2D Animation/ 3D Animation/ VFX)	MJC-15	BSCANI-711	0-0-12	6	100
4.	Project Report	MIC-9	BSCANI-712	0-0-8	4	100
Total Credits-20						

SEMESTER-VIII

Sl No.	Name of the Course	Type of Course	Course Code	L-T-P	Credits	Marks
1.	Academic Writing Techniques	MJC-16	BSCANI-801	4-1-0	4	100
2.	Showreel	MIC-10	BSCANI-811	0-0-8	4	100
3.	Research Project/ Dissertation	RP-I	BSCANI-812	0-0-24	12	100
Total Credits-20						




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Semester-1

Certificate of Animation

Programme/Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-101		Course Title: Fundamental of Animation	
Course outcomes:			
The Student at the completion of the course will be able to:			
1. Understand the fundamental principles and concepts of animation.			
2. Apply the principles of timing, spacing, and motion to create believable and appealing animations.			
3. Apply the principles of storytelling and narrative structure to animation.			
4. Critically analyze and provide constructive feedback on animated content.			
Credits: 4		Major	
Max. Marks:		Min. Passing marks:	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 4-0-0			
Unit	Topics	No. of Lectures	
I	Introduction to Animation - History and evolution of animation - Different types of animation (2D, 3D, stop motion, etc.) - Careers and opportunities in the animation industry	04	
II	Animation Principles - Understanding the foundational principles of animation (e.g., squash and stretch, anticipation, follow-through) - Applying the principles of timing and spacing in animation - Analyzing and deconstructing animations to identify principles in action	04	
III	Animation Techniques and Tools - Traditional animation techniques - Computer-generated animation techniques - Basic animation workflows	04	



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IV	Storytelling and Narrative in Animation - Plot structure and narrative elements - Visual storytelling techniques	02
V	Basic Animation Production Process - Pre-production: concept development and planning - Production: asset creation, rigging, and animation - Post-production: editing, sound design, and rendering - Project management and teamwork in animation production	05
VI	Animation Styles and Genres Theory - Experimental animation - Cartoon animation - Anime and manga - Motion graphics and visual effects	05
VII	Critique and Analysis of Animation - Elements of visual analysis in animation - Evaluating animation techniques and effectiveness - Providing constructive feedback and suggestions	02
VIII	Emerging Trends in Animation - Virtual reality (VR) and augmented reality (AR) in animation - Interactive and immersive animation experiences - Industry trends and future directions	04
Suggested Readings: 1. The Fundamentals of Animation by Paul Wells 2. The Animator's Survival Kit by Richard Williams		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance		
Course pre requisites: The eligibility for this paper is 10+2 with any subject		
At the End of the whole syllabus any remarks/suggestions: Students will be able to understand the fundamental of Animation and will be introduced to Graphic Designing.		



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 College of Fine Arts & Fashion Design
 (Signature)

Programme/Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-111		Subject/ Course Title: Print Media & Graphics	
Course outcomes: The Student at the completion of the course will be able to: 1. Navigate and use Corel Draw's interface effectively. 2. Create visually appealing layouts and designs for print media. 3. Understand and apply design principles, including color theory and typography. 4. Manipulate and edit vector graphics and illustrations. 5. Prepare print-ready files with the appropriate resolution and color modes. 6. Troubleshoot and resolve common design issues.			
Credits: 4		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics	No. of Classes	
I	Introduction to Corel DRAW • Installing Corel DRAW Graphics Suite • Basics of Corel DRAW • Vector Graphics and Bitmaps • Starting and Opening Drawings • Previewing Drawings • Viewing Modes • Saving and Closing Drawings • Corel DRAW Workspace • Creative Tools and Content • Touchscreen and Wheel Devices	06	
II	Lines, Shapes, and Outlines • Lines, Outlines, and Brushstrokes • Shapes and Shape Objects • Symmetrical Drawing	03	



Kalshah

Amrinder

Pradeep

III	Working with Objects, Symbols, and Layers • Introduction to Objects • Linking and Embedding Objects • Layers and Symbols • Managing and Tracking Projects	04
IV	Colour, Fills, and Transparencies • Colour • Colour Models and Depth • Choosing Colours • Creating and Editing Colour Palettes • Uniform Fills and Fountain Fills • Vector and Bitmap Pattern Fills • Texture, PostScript, and Mesh Fills • Object Transparency • Managing Colours	08
V	Exploring Special Effects • Lenses • Adding 3D Effects • Mosaics	04
VI	Working with Text • Adding and Manipulating Text • Formatting Text • Managing Fonts • Writing Tools	04
VII	Templates and Styles • Templates • Using and Finding Templates • Managing Templates • Creating and Editing Templates • Introducing Styles and Style Sets • Creating, Applying, and Editing Styles and Style Sets • Managing Default Object Properties • Importing and Exporting Style Sheets • Colour Styles • Creating and Applying Colour Styles • Editing and Viewing Colour Styles • Exporting and Importing Colour Styles	10



Approved
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VIII	Pages and Layout • Pages and Layout Tools • Page Layout and Background • Adding and Deleting Pages • Rulers • Document Grid and Pixel Grid • Tables • Adding Tables • Selecting, Moving, and Navigating Table Components • Inserting and Deleting Table Rows and Columns • Formatting Tables and Cells • Converting Tables to Text	08
X	Introduction to Bitmaps • Working with Bitmaps • Converting Vector Graphics to Bitmaps • Importing and Cropping Bitmaps • Bitmap Dimensions and Resolution • Straightening Bitmaps • Image Adjustment Lab • Adjusting Colour and Tone Tone Curve Filter • Special Effects Categories • Bitmap Colour Modes • Introducing Trace • RAW Camera Files	10
Suggested Readings: Corel DRAW X7: The Official Guide, 11th Edition by Gary David Bouton Corel Draw Training Guide Know the Tips, Techniques and Ideas for Creating Art Prof. Satish Jain, M. Geetha This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation. Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/Attendance Course pre requisites: The eligibility for this paper is 10+2 with any subject		



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Programme/Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-112		Subject/ Course Title: Digital Art	
Course outcomes: The Student at the completion of the course will be able to: 1. Create digital art using Adobe Photoshop. 2. Understand and apply fundamental principles of composition, color theory, and visual storytelling. 3. Use various Photoshop tools and features for digital painting, photo manipulation, and graphic design. 4. Demonstrate proficiency in digital illustration, character design, and concept art. 5. Employ advanced techniques for digital art, including layer masking, blending modes, and filters. 6. Adapt to emerging trends and technologies in the field of digital art and design.			
Credits: 4		MDC	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics	No. of Practical Hour	
I	Introduction: Variations in Photoshop Applications Getting Acquainted with Photoshop • The Photoshop Environment • Palettes and the Palette Well • Creating Custom Workspaces • Opening Images • Using the File Browser • Image Magnification • Viewing Document Information • Moving the Image • Undoing Mistakes and The History Palette • Displaying Drawing Guides • Making Measurements • Adding Annotations • Setting Preferences	02	
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III	Basic Image Manipulation • Bitmap Images • Vector Images • Image Size and Resolution Settings • Scanning Images • Creating New Images • Placing Files	04
IV	Creating Web Galleries and PDF Converts • PDF Presentation • Slide Show Presentation	02
V	Editing Raw Photos in Camera • Colour options for background shades • Photo lighting and Temperature	04
VI	Color Basics • Color Modes and Models • Color Mode Conversion • Previewing Color Differences Between Operating Systems • Color Management • Foreground and Background Colors • Using the Color Picker • Selecting Colors with the Color Palette • Selecting Colors with the Eyedropper Tool • Selecting Colors with the Swatches Palette	06
VII	Painting Tools • Painting Tools • The Brush Tool • Blending Modes • The Pencil Tool • The Eraser Tool • The Magic Eraser Tool • The Background Eraser Tool • Using the Art History Brush • Using the History Brush	10



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VIII	Work with layers • Examine and convert layers • Add and delete layers. • Add a selection from one image to another • Organize layers with layer sets and colors. • Use a layer mask with a selection. • Work with layer masks and layer content. • Control pixels to blend colors. • Eliminate a layer mask. • Use an adjustment layer. • Create a clipping mask	10
X	Demonstrate the ability to make selections • Make a selection using shapes • Modify a marquee. • Select using color and modify a selection. • Add a vignette effect to a selection	04
Suggested Readings: 1. Adobe Photoshop Classroom in a Book (2023 Release) by Conrad Chavez 2. The Digital Darkroom: The Definitive Guide to Photo Editing by James Abbott		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
Course pre requisites: The eligibility for this paper is 10+2 with any subject		
At the End of the whole syllabus any remarks/ suggestions:		



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Programme/Class: Certificate in Animation		Year: First	Semester: First
Course Code: AEC-1		Subject/ Course Title: English Communication Skill	
Course outcomes:			
The Student at the completion of the course will be able to:			
1. Projecting the first impression			
2. Use simple forms of polite expressions to establish basic social contact			
3. Interpret and control a narrow range of isolated words and phrases dealing with everyday topics			
4. Produce simple sentences using the correct word order and punctuation marks.			
5. Construct a short guided paragraph			
6. Learn pronunciation of the English sounds, to learn to read, write, and to know the fundamentals of English grammar and vocabulary			
7. Learn to skim an adapted text for main idea, to scan an adapted text for specific information, to interpret an adapted text for inferences			
Credits: 2		Ability Enhancement Compulsory Course	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 2-1-0			
Unit	Topics	No. of Lectures	
I	Grammar		
	• Sentence and kinds		
	• Review –Parts of Speech		
	• Tenses		
	• Determiners		
II	• Subject Verb Agreement		
	Reading and Writing		
	• Reading Comprehension		
	• Application and letter writing		
	• Resume writing		
III	• Reporting Writing-Events etc		
	Self-Introduction		
	• Introducing self		
	• Speaking about achievements		
	• Voicing future aspects		
IV	Nonverbal Communication		
	• Body Language		
	• Paralanguage skills		
	Manners and Etiquettes		
	• Personal grooming		
V	• Dress code		
	• Professional etiquettes		



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VI	Public Speaking skills • Extempore • Role Play • Group Discussion	04
Suggested Readings: 1. An introduction to Professional English and Soft Skills by B. K. Das et al., Cambridge University Press 2. Technical Communication: Principles and Practice, Second Edition by Meenakshi Raman and Sangeeta Sharma, Oxford Publications. 3. Effective Technical Communication by M Ashraf Rizvi, The McGraw-Hill companies 4. Understanding Body Language by Alan Pease 5. Communicative Grammar of English by Geoffrey Leech and Ian Svartik 6. Better English Pronunciation by J.D.O'Connor.		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Class Performance/ Practical Exam/ Presentations/ Group Discussions		
At the End of the whole syllabus any remarks/ suggestions:		
The purpose of commencing English communication skills course is to develop in students fundamental communication skills being integral to personal, social and professional interactions. One of the significant associations among human beings is the ability to share thoughts, emotions and ideas through various means of communication: both verbal and nonverbal. One of the significant associations among human beings is the ability to share thoughts, emotions and ideas through various means of communication: both verbal and non-verbal in both formal and informal environs. The present course hopes to address most of these aspects through an interactive approach of teaching learning process; focusing on various dimensions of communication skills. The course also focuses on enhancing the ability to handle casual and formed satiations in terms of personal and intellectual grooming.		



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Programme/Class: Certificate in Animation		Year: First	Semester: First
Course Code: BSCANI-113		Subject/ Course Title: Story Board Development	
Course outcomes:			
The Student at the completion of the course will be able to:			
1. Develop well-structured and engaging scripts for different media formats.			
2. Understand the principles of storytelling, plot development, and character creation.			
3. Create professional storyboards that visually convey narrative elements and camera angles.			
4. Communicate ideas and narratives effectively through visual storytelling.			
Credits: 3		SEC	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Classes	
I	Introduction to Scriptwriting: • Introduction to Script writing • The language of cinema • Requirement for the script • Scenes & Shots	04	
II	Introduction to Story board • Introduction to Thumbnails • The frame /Aspect ratio • Types of story boards • Scene and shots • Different types of camera angle • The language of storyboards • Overview of storyboarding and its role in the production process • Basics of visual storytelling and <u>composition</u> • Introduction to storyboard software and tools	08	



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III	Three pillars of storyboard* - Events, camera, sound-Storyboard language/conventions/iconography. Stick figures, perspective boxes, camera arrows, multiple panels, transitions, dialogue, soundtrack concept & design development. - Model sheet, character expression sheet.	04
IV	Script Structure and Formatting - Understanding the three-act structure - Mastering screenplay formatting and terminology - Analyzing well-structured scripts from various genres	04
V	Character Development - In-depth exploration of character creation - Crafting complex and relatable characters - Developing character relationships and dynamics	04
VI	Creating Storyboards - Step-by-step guide to creating storyboards - Translating scripts into visual sequences - Storyboarding for action, dialogue, and special effects scenes	06
Suggested Readings: - Storyboard Design Course by Giuseppe Cristiano ---- Barron's - How to write for Animation – Jeffery Scott- The Overlook Press Woodstock and New York - The Art of layout and storyboarding – Mark T. Byrne		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
Course pre requisites: The eligibility for this paper is 10+2 with any subject		
At the End of the whole syllabus any remarks/ suggestions:		



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Programme/ Class: UG Certificate in Animation	Year: First	Semester: First
Course Code: BSCANIVAC-1	Subject / Course Title: 2D Design	
Course Out Come:		
1. Block Letter Design can play a significant role in enhancing the overall presentation and readability of students' work. Using appropriate fonts, font sizes, and line spacing can make the text easier to read. 2. Creating polygon art can be a fun and creative way for students to explore geometry, design, and artistic expression. Students can deepen their understanding of geometric shapes, angles, and symmetry as they work with polygons to create their art. 3. Creating 2D portraits can be a rewarding and enriching experience for students, allowing them to explore their artistic abilities and express their creativity. Drawing a portrait requires keen observation of facial features, proportions, and expressions, which can enhance students' ability. 4. Engaging in 2D illustration projects can offer students a wide range of benefits, allowing them to explore their creativity, develop artistic skills, and express themselves visually. Engaging in 2D illustration projects can offer students a wide range of benefits, allowing them to explore their creativity, develop artistic skills, and express themselves visually.		
Credits: 3	Value Added Course	
Max. Marks: 100	Min. Passing Marks: 33	
Total No. of Lecture- Tutorials-Practical (in hours per week) 0-0-6		
Unit	Topic	No of Practical Hours (Total Hours - 84)
Unit -I	Block Letter Design- Letter Design (2 Work)	32 Hours
Unit -II	Polygon Art (1 Work)	08 Hours
Unit - III	2D Portrait 2 Work)	32 Hours
Unit - IV	2D Illustration (1 Work)	16 Hours
Suggested Readings:		
1. Free Font Index 3 – The Pepin Press 2. Calligraphy Technique- Mary Noble		
This course is Major Course as compulsory for the students		
Suggested Continuous Evaluation Methods:		
Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance		
Suggested Equivalent online Course:		
Further suggestion: None		



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SEMESTER II

Programme/Class: Certificate in Animation		Year: First	Semester: Second
Course Code: BSCANI-201		Course Title: Computer Graphics	
Course outcomes:			
The Student at the completion of the course will be able to:			
1. Understand the fundamental principles and theories of computer graphics.			
2. Explain the mathematics behind 2D and 3D transformations and rendering.			
3. Create and manipulate basic geometric shapes and objects in a graphical environment.			
4. Implement graphical user interfaces and interactive graphics applications.			
5. Adapt to emerging trends and technologies in the field of computer graphics.			
Credits: 3		Vocational Course	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 3-0-0			
Unit	Topics		No. of Lectures
I	Introduction to Computer Graphics: Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction, Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, The Video Controller, Random-Scan Display Processor, LCD displays.		02
II	Two dimensional and three dimensional transformations: 2-Dimensional transformation 2-D Translation, Rotation, Scaling, Homogeneous Coordinates, Reflection, Shear transform 3-dimensional transformation, 3-D Translation, Rotation Scaling, Reflection, Shear transform		04



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III	Viewing in 3D: Stages in 3D viewing, Canonical View Volume (CVV), Specifying an Arbitrary 3D View, Examples of 3D Viewing, The Mathematics of Planar Geometric Projections, Combined transformation matrices for projections and viewing, Coordinate Systems and matrices, camera model and viewing pyramid. Light: Radiometry, Transport, Equation, Photometry Color: Colorimetry, Color Spaces, Chromatic Adaptation, Color Appearance Visible-Surface Determination: Techniques for efficient Visible-Surface Algorithms, Categories of algorithms, Back face removal, The z-Buffer Algorithm, Scan-line method, Painter's algorithms (depth sorting), Area sub-division method, BSP trees, Visible-Surface Ray Tracing, comparison of the methods.	04
IV	Plane Curves and Surfaces: Curve Representation, Nonparametric Curves, Parametric Curves, Parametric Representation of a Circle, Parametric Representation of an Ellipse, Parametric Representation of a Parabola, Parametric Representation of a Hyperbola, Representation of Space Curves, Cubic Splines, Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces, Bezier Surfaces.	06
V	Color and Lighting • Color representations and color models • Point and directional lighting models • Shader programming and GPU rendering	02
VI	Interactive Graphics • Introduction to interactive graphics and user interfaces • Event handling and input devices • Implementing user interactivity in graphical applications	04
VII	Emerging Trends and Future of Computer Graphics • Exploration of emerging trends in computer graphics (e.g., virtual reality, augmented reality, real-time ray tracing) • Discussion of the future of computer graphics technology and applications	04
Suggested Readings: Graphic Design Rules: 365 Essential Dos and Don'ts by Sean Adams (Author), Peter Dawson (Author), John Foster (Author), Tony Seddon (Author)		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance		
At the End of the whole syllabus any remarks/ suggestions:		



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Programme/Class: Certificate in Animation		Year: First	Semester: Second
Course Code: BSCANI-211		Subject/ Course Title: 2D Animation	
Course outcomes: The Student at the completion of the course will be able to:			
1. Utilize Adobe Animate CC effectively for 2D digital animation. 2. Apply animation principles such as timing, spacing, and anticipation to create compelling motion. 3. Create animated characters, objects, and scenes suitable for different digital platforms. 4. Understand and use essential Animate CC tools and features for animation and interactivity. 5. Demonstrate proficiency in creating complex animation sequences and interactive elements. 6. Adapt to different animation styles and techniques.			
Credits: 4		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics	No. of Classes	
I	Introduction to animation • History of animation: Types of animation • Understanding and learning the Principles of animation through the view of different animation films	04	
II	Flip Book • Drawing a detail flip book with minimum 30 pages following the principles of animation	08	
III	2D Software Interface • Understanding the 2d software interface • Drawing tools, pen tools and other necessary tools to create any drawing in the frames.	04	
IV	Frame by frame animation • Creating frame by frame animation for a short animation (maximum 10 sec with simple drawing. • Creating simple frame by frame animation for a short animation (maximum 20 sec with color drawings and background.	04	
V	Tween • Creating simple animation with shape, classic & motion tweening. • Creating simple animation with shape and classic tween together	02	

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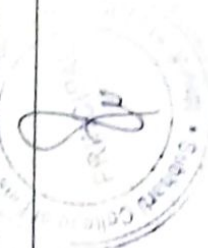


VI	Ball animation • Drawing the ball with gradient color . • Creating key frames for the animation sequence • Creating stretch and squash for the ball animation • Creating timing and motion for the ball animation • Giving tween to the sequence of ball animation • Creating the shadow layer for the ball animation	06
VII	Character drawing and creating symbols • Drawing simple character with pen tool or shape tool • Preparing the character for animation: dividing each body parts into symbol • Creating symbols, types of symbols	04
VIII	Human walk cycle • Drawing the cycle sheet for a human walk cycle. • Creating the key frames for the walk cycle. • Giving the tween to the figure with normal walk cycle. • Creating four different types of walk cycle (jump, run, tip toe, crawl).	04
IX	Lip Synchronization • Knowing the alphabets and its movements • Creating the mouth shapes for each letters and movements of the lips. • Creating expression and emotion in character. • Synchronizing character mouth shape according to the dialogue.	04
X	Creating a short animation film • Drawing the detail storyboard for the animation film • Drawing the background in layers and symbols • Creating the characters in turn around • Creating the props • Creating the scenes with tween and animation • Completing the whole animation film with background music and dialogues	06
Suggested Readings: 1. Adobe Animate CC for Dummies by Theresa Cekovich and Wiley 2. Animate to Harmony: The Independent Animator's Guide to Toon Boom by Adam Phillips		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		



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Programme/Class: Certificate in Animation		Year: First	Semester: Second
Course Code: BSCANI-213		Subject/ Course Title: Color Composition	
Course outcomes:			
The Student at the completion of the course will be able to:			
1. 1.Students will justify their use of color and composition during			
2. Students will create frescoes using proper terminology.			
3. The students will know about ajanta fresco, jaipur fresco to technique, handling and process.			
4. They know about different techniques of Mosaic.			
5. Students will know about Direct and Indirect technique.			
6. Development of a workable concept of what it means to dry colors.			
Credits: 3		SEC	
Max. Marks: 40+ 60		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Classes	
I	• Colour Knowledge:- Hue; Value Chrome, Tint, Shade and • Tone, Gray Scale, Chromatic value • Scale and color value scale.	32 Hours	
II	• Textures:- Creative textures will be new experiment with media	20 Hours	
III	• Painting -Still life from natural objects (vegetables and fruits):- To develop the proper view on proportion , balance and color composition	44 Hours	
Suggested Readings:			
1. The Best Color Theory Books for Foundational Knowledge BY			
2. The Complete Color Harmony, Pantone Edition: Expert Color Information for Professional Results Flexibound - by LeatriceEiseman (Author)			
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.			
Suggested Continuous Evaluation Methods:			
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance			
At the End of the whole syllabus any remarks/ suggestions:			



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Programme/Class: UG Certificate in Animation		Year: First	Sem: First
Course Code: BSCANIVAC-2		Course Title: 3D Design	
Course Out Come:			
1. Know about Fundamentals of 3D Design(Sculpture) like the elements of sculptural design(Mass & Space) and their relation to create 3D forms.			
2. Know about basics of 3D forms and all the core materials and their techniques to create forms.			
3. Practically know about clay and its preparation and process of creating forms through clay modeling.			
4. Practically know about relief sculpture(process, techniques, importance and uses).			
5. Practically know about pottery and create pots through clay(Red clay preparation, Coil and slab methods).			
6. Students practically know about to create pots on wheel(Clay preparation, center the clay on wheel, basic pots make and brief description about terracotta).			
Credits: 3		Value Added Course	
Max. Marks: 100		Min. Passing Marks: 33	
Total No. of Lecture- Tutorials-Practical (in hours per week- 8 hours) (96 Hours)			
Unit	Topic	No. of Practical Total- 96 Hours	
Unit - I	Basic Fundamentals of 3D Design	8 Hours	
Unit - II	• Introduction of 3D Design or sculpture, (forms, composition and importance)	8 Hours	
	3D Forms & Materials	8 Hours	
Unit -III	• Basic 3D forms process according to materials and its techniques. Clay Modelling	24 Hours	
Unit - IV	• Clay preparation, learn about creative forms like basic clay modeling Relief in clay	16 Hours	
Unit --V	• Create relief in clay using tools and learn embossing and depth in clay. Pottery	24 Hours	
	• Clay preparation for terracotta pottery, coil and slab method pottery, create tea cup/flower pot.		
Unit - VI	Pottery Wheel	16 Hours	
	• Clay preparation for work on pottery wheel, clay centering on wheel and create simple Diyas.		
Suggested Readings:			
1. Sculpting Techniques Bible -Claire Brown, Chartwell Books, Inc - 2006			
2. Pottery- the essential manual- Doug Wensle, The Crowood Press- 2002			
This course is Major Course as compulsory for the students			
Suggested Continuous Evaluation Methods:			
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance			



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SEMESTER III

Diploma in Animation

Programme/Class: Diploma in Animation		Year: Second	Semester: Third
Course Code: BSCANI-301		Course Title: Film Studies	
Course outcomes:			
The Student at the completion of the course will be able to:			
1. Examining different film genres			
2. Investigating how films reflect and shape cultural values, ideologies, and social norms, both within their original contexts and across different audiences and time periods.			
3. Understanding the development of cinema from its origins to the present day, including major movements, technological advancements, and influential filmmakers.			
4. Developing skills in analyzing various elements of film, including narrative structure, cinematography, editing, sound design, mise-en-scène, and symbolism.			
Credits: 3		Core Course	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 3-0-0			
Unit	Topics		No. of Lectures
I	Introduction to Film:		02
	• Understanding the basics of film language: shots, angles, framing, editing, sound, etc. • Key concepts like mise-en-scène, cinematography, editing, sound design, and narrative structure.		
II	Film History:		04
	• Evolution of cinema from silent films to contemporary cinema. • Major movements and periods in film history (e.g., German Expressionism, French New Wave, Hollywood Golden Age, Italian Neorealism). • Influential filmmakers and their contributions to cinema.		



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 Tahir

III	Film Theory: - Major film theories such as formalism, realism, auteur theory, feminist film theory, queer theory, and post-colonial theory. - Application of these theories in analyzing and interpreting films.	04
IV	Production Process: - Understanding the filmmaking process from pre-production to post-production. - Roles of various professionals in filmmaking (director, producer, cinematographer, editor, sound designer, etc.).	06
V	National and Global Cinema: - Study of cinema from different countries and regions. - Comparison of cinematic styles, themes, and storytelling techniques across cultures.	02
VI	Digital and New Media: - Exploration of the impact of digital technology on filmmaking and film distribution. - Emergence of new media platforms and their influence on film consumption.	04
VII	Film and Society: - Examining the role of cinema in reflecting and shaping societal norms, values, and ideologies. - Analysis of how films address social issues such as gender, race, class, and identity.	04
VIII	Suggested Readings: - Film Studies: The Basics Paperback – 11 July 2013 by Amy Villarejo (Author) - The Basics of Filmmaking: Screenwriting, Producing, Directing, Cinematography, Audio, & Editing Paperback – 28 April 2020 by Blain Brown - Digital Filmmaking: The Changing Art and Craft of Making Motion Pictures Paperback – Import, 6 April 2000 by Natalie Phillips - Film Lighting: Talks with Hollywood's Cinematographers and Gaffers [Paperback] Kris Malkiewicz Paperback – 7 February 2012 by Kris Malkiewicz - Film India Economic Edition Hardcover – 1 January 2019 by Ramesh Malhotra	
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance		
At the End of the whole syllabus any remarks/ suggestions		



Approved by
 Head of Department
 Dr. Anshu K. Singh
 Date: 14/08/2023
 T. K. Singh

Programme/Class: Diploma in Animation		Year: Second	Semester: Third
Course Code: BSCANI-311		Subject/ Course Title: Digital Audio & Video Editing	
Course outcomes:			
The Student at the completion of the course will be able to:			
-The objective of this course is to provide an introduction to Audio and Video editing using tools and techniques prevalent in the industry.			
Credits: 4		Major	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics	No. of Classes	
I	Introduction to Audio and its digital representation • Digitization • AV data from tape to computer hard disk • Understanding the playback deck, understanding signal processing of S-video, fire wire and composite video. • Editing Work Station management – disk space & speed requirement. • Broadband and streaming video technology. • Using Editing Software – editing basics and implementation of various techniques used in non-linear editing. • Mastering final edit line – audio levels, color correction, audio mixing, mixed and un-mixed versions, importing and applying compatible graphics files.	10 hrs	
II	Digital Audio recording, Editing and Reproduction • Basic art of filmmaking, using currently available digital software/hardware tools. • Overview of preproduction planning- program ideas, production models, Preproduction & Post-Production activities • Writing the script, Director's roles & procedures, Visualization & sequencing, Shooting, Aesthetics of Editing, Role of audio & effects, Mix and composite, source material into a finished fine edit product.	10 Hrs	
III	Concepts of Compositing • Projects • Composition basics • Recomposing, nesting, and pre-rendering	5 Hrs	



H. V. Patil
 Head
 Pimpri Chinchwad Education Trust
 Pimpri
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 India

IV	Animation and keyframes • Animation basics • Setting, selecting, and deleting keyframes • Editing, moving, and copying keyframes • Assorted animation tools • Keyframe interpolation • Speed • Time-stretching and time-remapping • Animating with Puppet tools • Tracking and stabilizing motion • Drawing, painting, and paths • Paint tools: Brush, Clone Stamp, and Eraser • Overview of shape layers, paths, and vector graphics • Creating shapes and masks • Managing and animating shape paths and masks • Shape attributes, paint operations, and path operations for shape layers	10 Hrs
V	Video Editing - • Media Management • Working in the audio • Effects & Transition • Animation • Titles	5 Hrs

Suggested Readings:

1. Digital Audio Editing: Correcting and Enhancing Audio in Pro Tools, Logic Pro, Cubase, and Studio One Paperback – Illustrated, 14 November 2013 by Simon Langford.
2. Digital Audio Editing Fundamentals Paperback – Import, 16 December 2015 by Wallace Jackson

This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.

Suggested Continuous Evaluation Methods:

Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance

At the End of the whole syllabus any remarks/ suggestions:



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Programme/Class: Diploma in Animation		Year: Second	Semester: Third
Course Code: BSCANI-312		Subject/ Course Title: Visual Effects	
Course outcomes:			
The Student at the completion of the course will be able to:			
1. Gain good understanding about compositing process.			
2. Identify major applications of compositing techniques used in industry.			
3. Develop a visual effects pipeline.			
4. Demonstrate an in-depth knowledge of grading and VFX principles, practice and system Capabilities.			
5. Create customized tools through software or scripting to allow for more creative Application of visual effects techniques.			
Credits: 4		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics	No. of Classes	
I	Animation and Titling - To understand interface of the layer based software and the basic key framing. - Basic motion graphic elements - Animation (every student will create their own animation using transformation tools and apply key frames for 150 frames) - Title Animation (Student will create titling using given footage by faculty) - Titling (own titling just using texts)	04	
	Color Correction, Color grading & Tint - To understand color correction options and methods. - Color Correction (using given footage by faculty). - Night Conversion (using given footage by faculty). - Night Conversion (using given footage by faculty). - Night Conversion (student will shoot his/her own footage and use it for day to night conversion)	08	
II			
III	Basic Compositing - Compositing tools and properties. - Compositing (using given object by faculty) normal with animation. - Compositing (using given object by faculty) Green Screen. - Compositing (own footage) normal with animation. - Compositing (own footage) green screen.	06	



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 Sunderbani (SCFF)

IV	Rotoscopy - Tools and techniques doing a Rotoscopy. - Rotoscopy (using given footage by faculty) - Rotoscopy (using given footage by faculty) - Doing rotoscopy in own footage 150 frames	06
V	Retouch /Paint - To understand the paint tools - Retouch (using given object by faculty) - Wire removal (using given object by faculty) - Doing retouch in own footage 150 frames.	02
VI	Tracking - To understand the tracking tools. - Tracking (using given object by faculty) - Match move (using given object by faculty) - Stabilization and camera shake (using given object by faculty) - Matchmove with own footage 250-300 frames	06
VII	3D Compositing - To understand 3d compositing techniques. - Compositing (using given object by faculty) Green Screen. - Compositing (using given object by faculty) - Compositing (own footage) normal with animation - Compositing (own footage) green screen.	08
VIII	Particle Effects - To understand the Effects and particles - Effects (using given object by faculty) normal with Animation - Particle Compositing (using given object by faculty) Green Screen. - Compositing (own footage) green screen using effects.	06
Suggested Readings: 1. Mark Christiansen, "Adobe® After Effects® CC Visual Effects and Compositing Studio Techniques" 1st Edition, Peachpit Pearson Education, 2014. 2. Jon Gress, "Visual Effects and Compositing" 1st Edition, Published by New Riders, 2015 3. Adobe After Effects Classroom in a Book-2023, by Lisa Fridsma (Author)		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		



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Programme/Class: Diploma in Animation		Y₂: Second	Semester: Third
Course Code: BSCANI-313		Subject/ Course Title: AutoCAD	
Course outcomes:			
The student at the completion of the course will be able to:			
- Identify the process of visualizing in depth and detail in AutoCAD and related software's. - Develop an understanding of AutoCAD as a vital tool that aids the designer in visualizing, detailing, costing and presenting interior design projects. - Demonstrate an understanding of the symbiosis of conceptual and technical skills required by a designer, to cope with industry changes, and the impact of new technologies. - Understand the role of AutoCAD in the ongoing evolution of the practice of Interior design.			
Credits: 3		MDC	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics		No. of Classes
1	Introduction of CADD & its importance in designing - Function keys, Shortcut keys - Different sizes of paper - CADD Application & its features - Use of drawing elementary CADD commands – Line, Polyline, Polygon, Circle, Arc, Ellipse, Text etc. - Use of modifying Elementary Commands – Erase, Move, Copy, Mirror, Offset, Scale, Stretch, Chamfer, fillet & explode. - Making layers, line type & Line weight. - Different menus of Auto-Cad, Function keys, Shortcut keys, Paper size.		0-0-25=25
2	Drafting Techniques - Practice on Drawing basics - Geometrical Drawing Practice - Making plan and projection - Drafting of building plan, Elevation, Section Views.		0-0-20=20
Suggested Readings:			
Sr. No.	Book	Author	Publication
1.	Principles Of Computer Programming	V. Rajaraman,	Prentice Hall of India
2.	Auto CAD Reference Manual		1998 Autodesk UNC
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Interior Design.			
Suggested Continuous Evaluation Methods:			
Class Performance/Practical Exam/ Submission V/va Attendance			
Course pre requisites: The eligibility for this paper is 10+2 with any subject			
At the End of the whole syllabus any remarks/ suggestions. Students will be able to illustrate advance Interior design & detail drawings with the help of AutoCAD software.			



Approved by
 Faculty
 Date: 10/01/2023
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	• Studio vs. natural light setups.		
7	Landscape Photography • Understanding environmental factors: light, weather, time of day. • Composition techniques for landscape photography. • Field trip to capture landscapes or nature scenes.		04
8	Still Life Photography • Principles of lighting, composition, and styling for still life. • How to create mood through objects and lighting. • Assignment: Capture a still life scene.		04
9	Post-Processing and Editing • Introduction to photo editing software (Adobe Lightroom, Photoshop). • Basic image correction: exposure, white balance, cropping, and straightening. • Enhancing color, contrast, and sharpness.		04
10	Creative Photography Techniques and Documentary Photography • Long exposure, motion blur, light painting. • Experimenting with abstract and conceptual photography. • Developing personal style and creative projects. • Approaching candid and spontaneous photography. • Ethics and legal issues in documentary photography. • Creating narratives through street photography.		08
Suggested Readings: 1. "Understanding Exposure" by Bryan Peterson A comprehensive guide to mastering exposure and camera settings, ideal for beginners. 2. "The Photographer's Eye: Composition and Design for Better Digital Photos" by Michael Freeman Explores how to compose visually compelling images and develop a personal style. 3. "The Digital Photography Book" by Scott Kelby A practical, step-by-step guide to improving your photography skills with clear instructions.			
Suggested Continuous Evaluation Methods: Class Performance/Practical Exam/Submission/Viva/Attendance			



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SEMESTER IV

Programme/Class: Diploma in Animation		Year: Second	Semester: Fourth
Course Code: BSCANI-401		Course Title: 3D Production - I - 3D Production for 2025-26 onwards	
Course outcomes: By the end of the course, students will be able to:			
1. Demonstrate a solid understanding of the principles and theories of 3D production.			
2. Analyze and evaluate 3D production requirements and develop effective production plans.			
3. Critically assess and improve the quality of 3D assets through iterative processes.			
4. Understand the ethical and legal considerations involved in 3D production.			
5. Communicate ideas and concepts effectively through visual and written mediums.			
6. Adapt to emerging technologies and trends in the field of 3D production.			
Credits: 5		Core Course	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 5-0-0			
Unit	Topics	No. of Lectures	
I	Introduction to 3D Production - Overview of 3D production process - Role and responsibilities of 3D production professionals - Understanding project requirements and constraints	08	
II	Pre-production - Concept development and visualization techniques - Storyboarding and pre visualization - Asset and character design - Scripting and story development	12	
III	Production - 3D modeling techniques and principles - Texturing and shading - Lighting and rendering - Rigging and animation - Cinematography and camera techniques	16	



Approved by
 Lecturer in Charge
 Robert

IV	Post-production - Compositing and visual effects - Sound design and integration - Editing and post-processing - Color grading and final output	08
V	Industry Tools and Software - Introduction to industry-standard 3D software (e.g., Maya, 3ds Max, Blender) - Familiarization with additional tools for texturing, rendering, and compositing	08
VI	Emerging Technologies and Trends - Exploration of emerging trends in 3D production (e.g., virtual reality, augmented reality) - Keeping up with industry developments and self-directed learning	08
Suggested Readings: 1. https://dreamfarmstudios.com/blog/3d-animation-pipeline/ 2. http://graphics.cs.cmu.edu/nsp/papers/Dadfar2021.pdf		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Seminar/ Presentation on any topic of the above syllabus/ Test with multiple choice questions/ Short and long answer questions/ Attendance		
At the End of the whole syllabus any remarks/ suggestions: The objective of the course is to provide students with a comprehensive understanding of the principles, techniques, and processes involved in 3D production. Students will learn about the various stages of 3D production, including pre-production, production, and post-production, and gain practical knowledge of industry-standard tools and software.		



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 P. K. Singh
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Programme/Class: Diploma in Animation		Year: Second	Semester: Fourth
Course Code: BSCANI-411		Subject/ Course Title: 3D Modeling - I	
Course outcomes: By the end of the course, students will be able to: 1. Demonstrate a solid understanding of the principles and techniques of 3D modeling. 2. Create 3D models using Autodesk 3DS Max. 3. Utilize industry-standard tools and workflows for efficient and accurate modeling. 4. Understand the principles and concepts of 3D modeling for architectural and interior/exterior design.			
Credits: 6		Major	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-12			
Unit	Topics	No. of Classes + Practical	
I	Introduction to 3DS Max and Interface • Overview of 3DS Max software and its applications • Familiarization with the user interface and navigation controls • Customizing the workspace for efficient modeling	02 + 04	
II	Basic Modeling Techniques • Creating and manipulating basic geometric primitives • Using transformation tools (move, rotate, scale) to modify objects • Understanding coordinate systems and pivot points	02 + 04	
III	Polygon Modeling • Introduction to polygonal modeling techniques • Extrusion, beveling, and chamfering • Working with edge loops and smoothing groups	04 + 08	
IV	Advanced Polygon Modeling • Subdivision surface modeling • Sculpting and detailing techniques • Using modifiers for non-destructive modeling	04 + 08	



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V	Introduction to Architectural and Interior/Exterior Modeling • Overview of architectural and interior/exterior modeling in 3D • Principles of architectural design and spatial planning • Understanding blueprints, floor plans, and elevations	04 + 08
VI	Advanced Modeling Techniques • Creating complex architectural structures (stairs, railings, etc.) • Modeling interior elements (furniture, fixtures, etc.) • Detail modeling for interior/exterior objects and features	04 + 08
VII	Interior Modeling and Detailing • Modeling interior spaces (rooms, hallways, etc.) • Placing furniture and interior fixtures • Adding basic interior details and decorations	08 + 16
VIII	Exterior Modeling and Landscape • Modeling exterior environments (buildings, landscapes, etc.) • Creating exterior architectural elements (roofs, facades, etc.) • Adding basic exterior details and natural elements	08 + 16
Suggested Readings: 1. Autodesk 3DS Max Fundamentals by ASCENT 2. 3DS Max Speed Modeling for 3D Artists by Thomas Mooney		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions: Students will learn industry-standard modeling workflows and gain practical experience in using the software to produce high-quality 3D assets. The course aims to equip students with the knowledge and technical proficiency required to create accurate and detailed 3D models of architectural spaces, interiors, and exteriors.		



Approved by
 Prof. Dr. Rakesh
 Head of Department

Programme/Class: Diploma in Animation		Year: Second	Semester: Fourth
Course Code: BSCANI-412		Subject/ Course Title: 3D Texturing, Lighting and Rendering - I	
Course outcomes: By the end of the course, students will be able to: 1. Understand the principles of 3D lighting, texturing, and rendering. 2. Create and manipulate lighting setups to achieve specific moods and aesthetics. 3. Apply appropriate texturing techniques to enhance the realism and visual appeal of 3D models. 4. Utilize material creation tools and shaders in 3DS Max effectively. 5. Configure rendering settings for optimal output quality and efficiency. 6. Set up rendering parameters and settings for high-quality output.			
Credits: 5		Major	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-10			
Unit	Topics	No. of Classes + Practical	
I	Introduction to 3D Lighting, Texturing, and Rendering • Overview of the importance and impact of lighting, texturing, and rendering in 3D projects • Understanding the principles of light and color in a 3D environment	02 + 02	
II	UV Mapping and Texturing • UV mapping and its types • Applying textures and materials to models • Texture mapping techniques (procedural, image-based)	04 + 06	



Ratul
 Anshu
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III	Material Creation and Texturing • Overview of material creation and shader networks in 3DS Max • Applying textures and procedural maps to 3D models • Creating realistic surface properties (diffuse, specular, glossiness)	04 + 08
IV	Advanced Material Techniques • Specialized materials (glass, metal, fabric, skin) • Using material maps for complex surface effects (bump, displacement, normal) • Texture mapping techniques (UVW mapping, unwrap UVW)	04 + 08
V	Introduction to Lighting, Texturing, and Rendering for Architecture • Overview of lighting, texturing, and rendering techniques in architectural visualization • Principles of light and shadow in architectural and interior/exterior scenes • Understanding the role of materials and textures in architectural visualization	04 + 08
VI	Types of Lights and Light Properties • Introduction to different types of lights (point, spot, area, etc.) • Manipulating light properties (intensity, color, attenuation, etc.) • Simulating natural lighting (sunlight, sky, etc.) • Light placement and control for architectural and interior/exterior scenes	05 + 10
VII	Shadows and Reflections • Techniques for creating and controlling shadows in 3DS Max • Shadow types (hard shadows, soft shadows, area shadows) • Managing reflections and specular highlights	03 + 06



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VIII	Global Illumination and Indirect Lighting • Introduction to global illumination techniques (radiosity, photon mapping, etc.) • Simulating indirect lighting effects (ambient occlusion, global illumination, etc.) • Enhancing realism with bounce lighting and light interaction • Using image-based lighting for realistic illumination • Environment maps and HDRI (High Dynamic Range Imaging)	02 + 04
IX	Rendering Parameters and Settings • Understanding rendering parameters and settings in Autodesk 3ds Max • Adjusting rendering resolution, image format, and aspect ratio • Rendering options for architectural visualization (still images, animations, etc.) • Optimization techniques for faster rendering times	02 + 06
X	Portfolio Development • Creating a portfolio of visually compelling 3D scenes • Presentation and documentation of lighting, texturing, and rendering work • Peer feedback and self-assessment	02 + 12
Suggested Readings: 1. 3ds Max Design Architectural Visualization: For Intermediate Users by Brian L. Smith 2. Architectural Rendering with 3ds Max and V-Ray: Photorealistic Visualization by Markus Kuhlo and Enrico Eggert		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions: The objective of this course is to provide students with practical skills in lighting, texturing, and rendering techniques using Autodesk 3ds Max. The course aims to equip students with the skills necessary to create realistic and visually compelling 3D scenes and environments. Students will learn industry-standard practices for lighting, material creation, and rendering to enhance the visual quality of their 3D projects.		



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Programme/Class: Diploma in Animation		Year: Second	Semester: Fourth
Course Code: BSCANI-413		Subject/ Course Title: Character Anatomy	
Course outcomes: By the end of the course, students will be able to: 1. Understand the fundamentals of human anatomy and its application in character design. 2. Analyze and accurately depict anatomical proportions and structures in character drawings. 3. Apply principles of composition, layout, and storytelling in comic design. 4. Demonstrate proficiency in creating dynamic and expressive character poses and gestures. 5. Apply effective use of line, form, and shading techniques in comic art. 6. Develop storytelling skills through sequential art and panel arrangement.			
Credits: 3		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Classs + Practical	
I	Introduction to Character Anatomy • Importance of character anatomy in animation and comic design • Basic principles of human anatomy for artists • Proportions and structures of the human figure • Gesture drawing and capturing dynamic poses	03 + 04	
II	Facial Anatomy and Expressions • Anatomy of the human face and its features • Facial expressions and emotion depiction in character art • Study of facial proportions and features • Capturing likeness and personality in character design	03 + 05	
III	Character Design and Development • Principles of character design and visual storytelling • Creating unique and memorable characters • Designing characters with distinct silhouettes and visual appeal • Incorporating anatomy and proportions into character design	04 + 08	



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IV	Comic Layout and Storytelling • Principles of visual storytelling and sequential art • Understanding the narrative structure of comics • Layout design and panel composition techniques • Sequential storytelling and pacing	02 + 04
V	Inking and Line Work in Comic Art • Techniques for creating clean and expressive line work • Line weight variation and emphasis in comic illustrations • Inking tools and methods (traditional and digital)	03 + 06
VI	Coloring and Shading in Comic Art • Principles of color theory and its application in comics • Digital and traditional coloring techniques • Adding depth and dimension through shading and lighting	04 + 08
VII	Sequential Narrative and Storyboarding • Introduction to storyboarding for comics and animation • Developing storytelling skills through panel arrangement • Conveying action, emotion, and time through sequential art	04 + 08
VIII	Comic Design Project • Project involving the creation of a comic strip or sequential narrative	01 + 12

Suggested Readings:

1. Fundamentals of Character Design: How to Create Engaging Characters for Illustration, Animation & Visual Development by Publishing 3dtotal
2. Beginner's Guide to Sketching: Characters, Creatures and Concepts: Characters, Creatures & Concepts by Publishing 3dtotal

This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.

Suggested Continuous Evaluation Methods:

Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance

At the End of the whole syllabus any remarks/ suggestions: Students will learn industry-standard modeling workflows and gain practical experience in using the software to produce high-quality 3D assets. The course aims to equip students with the knowledge and technical proficiency required to create accurate and detailed 3D models of architectural spaces, interiors, and exteriors.



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Programme/Class: Bachelor's in Animation		Year: Third	Semester: Fifth
Course Code: BSCANI-511		Subject/ Course Title: 3D Modeling - II	
Course outcomes: By the end of the course, students will be able to:			
1. Understand the fundamental concepts and principles of 3D modeling.			
2. Apply industry-standard techniques to create 3D models using Autodesk Maya.			
3. Demonstrate proficiency in modeling various types of objects, characters, and environments.			
4. Use appropriate tools and workflows to create clean and efficient geometry.			
5. Apply texture mapping techniques to enhance the realism of 3D models.			
6. Analyze and evaluate different modeling techniques for specific animation requirements.			
Credits: 5		Major	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-10			
Unit	Topics		No. of Lectures + Practical
I	Introduction to 3D Modeling • Overview of 3D modeling in animation • Different types of 3D models (characters, objects, environments) • Principles of 3D geometry and topology		02 + 04
II	Polygonal Modeling • Introduction to polygonal modeling • Creating and manipulating basic polygonal shapes • Edge and vertex modeling techniques • Extrusion, beveling, and other polygonal modeling tools		02 + 04
III	NURBS Modeling • Introduction to NURBS (Non-Uniform Rational B-Spline) modeling • Creating and manipulating NURBS curves and surfaces • Lofting, extruding, and revolve modeling techniques • Converting between NURBS and polygonal models		04 + 08



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IV	Subdivision Surface Modeling • Introduction to subdivision surface modeling • Creating and manipulating subdivision surfaces • Adding detail and refining models using subdivision surfaces • Advantages and limitations of subdivision surface modeling	04 + 08
V	Organic Modeling • Modeling realistic human and creature characters • Anatomy and proportion considerations in character modeling • Retopology for efficient and animation-friendly models	04 + 08
VI	Hard Surface Modeling • Modeling mechanical objects and props • Precision modeling techniques for hard surface objects • Booleans, edge loops, and chamfering for clean geometry • UV unwrapping and texture mapping for hard surface models	04 + 08
VII	Environmental Modeling • Modeling detailed environments and landscapes • Terrain generation and modeling natural elements • Creating architectural elements and structures • Optimizing geometry for real-time rendering and animation	08 + 16
VIII	3D Modeling Project • Collaborative project involving the application of 3D modeling techniques to create a detailed 3D model for animation	08 + 16
Suggested Readings: 1. Digital Modeling by William Vaughan 2. Autodesk MAYA: A Comprehensive Guide by Prof. Sham Tickoo		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions: Students will learn industry-standard modeling workflows and gain practical experience in using the software to produce high-quality 3D assets. The course aims to equip students with the knowledge and technical proficiency required to create accurate and detailed 3D models of architectural spaces, interiors, and exteriors.		



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Programme/Class: Bachelor's in Animation		Year: Third	Semester: Fifth
Course Code: BSCANI-512		Subject/ Course Title: 3D Texturing, Lighting and Rendering- II	
Course outcomes:			
By the end of the course, students will be able to:			
1. Understand the fundamental concepts and principles of lighting, texturing, and rendering in 3D animation.			
2. Apply lighting techniques to create realistic and visually appealing 3D scenes.			
3. Demonstrate proficiency in creating and applying textures to 3D models.			
4. Use shading and material properties to achieve desired visual effects.			
5. Set up and optimize rendering settings for high-quality output.			
6. Analyze and evaluate lighting and rendering techniques for different types of scenes.			
Credits: 5		Major	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-10			
Unit	Topics	No. of Classes + Practical	
I	Introduction to 3D Lighting, Texturing, and Rendering • Overview of lighting, texturing, and rendering in 3D animation • Importance of lighting and texturing in creating realistic scenes • Rendering engines and software (with a focus on Autodesk Maya)	02 + 04	
II	Lighting Techniques • Principles of light and shadow in 3D scenes • Types of lights and their properties • Global illumination techniques (e.g., ambient occlusion, global illumination) • Light placement and control for different types of scenes	02 + 04	
III	Texturing Fundamentals • Introduction to texture mapping and UV unwrapping • Texture types and properties (color, bump, displacement, etc.) • Procedural texturing techniques • Texture painting and digital painting techniques	04 + 08	



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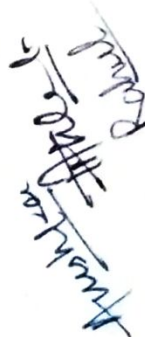
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Programme/Class: Bachelor's in Animation		Year: Third	Semester: Fifth
Course Code: BSCANI-513			
Subject/ Course Title: 3D Character Setup			
Course outcomes:			
By the end of the course, students will be able to:			
1. Understand the concepts and principles of rigging in character animation.			
2. Create and modify character rigs using industry-standard software.			
3. Apply basic animation principles to bring characters to life.			
4. Skinning process and how it is used			
Credits: 3		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Classes + Practical	
I	Introduction to Rigging - Importance of rigging in character animation - Anatomy and joint systems for character rigs - Principles of rigging for deformation and control	02 + 04	
II	Rigging Techniques - Creating and modifying skeletal rigs - Skinning and weight painting for character deformation - Rigging controls and hierarchy setup - Constraints and expressions for rig control	02 + 04	
III	Facial Rigging - Facial anatomy for rigging - Creating facial control systems - Blendshapes and facial expressions - Lip-syncing and phoneme animation	04 + 08	
IV	Rigging for Biped Characters - Rigging biped characters - Custom rigging solutions for unique character designs	05 + 10	
V	Rigging Submissions: Projects involving the creation of a rigged character	02 + 10	
Suggested Readings: 1. 3D Animation Essentials by Andy Beane 2. The Art of 3D Computer Animation and Effects by Issac Kerlow			
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.			
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance			



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Programme/Class: Bachelor's in Animation		Year: Third	Semester: Fifth
Course Code: BSCANI-514		Subject/ Course Title: Basic 3D Animation	
Course outcomes:			
By the end of the course, students will be able to:			
1. Apply basic animation principles to bring characters to life.			
2. Demonstrate proficiency in using animation software and tools.			
3. Execute basic animation techniques to create believable character performances.			
4. Analyze and evaluate animation techniques and their impact on character movement.			
Credits: 3		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Classes + Practical	
I	Basic Animation Principles • Keyframe animation techniques • Timing, spacing, and motion principles • Pose-to-pose and straight-ahead animation approaches • Arcs, anticipation, and follow-through	03 + 01	
	Character Performance Animation • Acting and emotion in character animation • Gestures, body language, and weight shifts • Bipod Walk Cycle • Secondary animation and overlapping actions • Creating believable character performances	04 + 10	
III	Animation Tools and Software • Overview of animation software (e.g., Autodesk Maya, Blender) • Animation workflows and techniques • Using animation curves and editors • Character posing and blocking techniques	04 + 10	
VI	Animation Submissions • Projects involving the creation of an animation sequence	02 + 10	
Suggested Readings: 1. 3D Animation for the Raw Beginner Using Maya by Roger King 2. Cracking Animation: The Aardman Book of 3-D Animation by Thames & Hudson 3. Animation Methods – Rigging Made Easy by David Rodriguez			
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.			
Suggested Continuous Evaluation Methods:			
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance			


 Head of Institution



Programme/Class: Bachelor in Animation		Year: Third	Semester: Sixth
Course Code: BSCANI-515		Subject/ Course Title: Internship	
Course outcomes:			
By the end of the course, students will be able to:			
1. Apply theoretical knowledge and academic concepts to practical tasks and real-world projects.			
2. Gain insight into the daily operations, workflows, and dynamics of a professional environment.			
3. Develop and refine essential skills relevant to their field of study and the internship placement.			
4. Demonstrate effective communication, teamwork, and collaboration in a professional setting.			
5. Analyze and solve real-world challenges, making informed decisions based on practical experiences.			
6. Adapt to workplace expectations, professional etiquette, and organizational culture.			
Credits: 4		INT	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-16			
Unit	Topics		No. of Hours
I	Internship 1. Exposure to Professional Environment: 2. Skill Development: 3. Collaboration and Communication: 4. Problem-Solving and Decision-Making: 5. Professional Etiquette and Work Ethic: 6. Industry Insights:		360
Suggested Continuous Evaluation Methods: Internship Certificate			
At the End of the whole syllabus any remarks/ suggestions: The objective of the Internship course is to provide students with a real-world, practical learning experience within a professional setting related to their field of study			



Thiru. R. Vignesh
 Principal
 Approved
 Lakshmi

SEMESTER VI

Programme/Class: Bachelor in Animation		Year: Third	Semester: Sixth
Course Code: BSCANI-611		Subject/ Course Title: Advanced Animation and 3D Particles	
Course outcomes:			
By the end of the course, students will be able to:			
1. Apply advanced animation techniques to create dynamic and expressive character animations.			
2. Demonstrate proficiency in using advanced animation tools and features in Autodesk Maya.			
3. Analyze and evaluate animations for believability and emotional impact.			
4. Create and control particle emission, behavior, and motion in Maya.			
5. Apply appropriate forces and fields to manipulate particle behavior.			
6. Utilize particle attributes and expressions to achieve desired effects.			
Credits: 4		Major	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics	No. of Classes + Practical	
I	Advanced Animation Principles and Techniques - Refining animation timing, spacing, and arcs - Advanced posing techniques for expressive character animation - Acting and performance principles for character animation - Integrating body mechanics and secondary motion in animation	02 + 02	
II	Advanced Character Animation - Biped run cycle - Advanced character animation - Expressive character animation - Implementing character movement	02 + 04	
III	Advanced Animation Tools and Features - Mastering advanced animation tools in Autodesk Maya - Utilizing animation layers and non-linear animation - Incorporating simulation-based animation (particles, fluids, dynamics) - Advanced animation workflows and techniques for complex scenes	02 + 04	
IV	Character Acting and Lip Sync Animation - Understanding character acting principles for animation - Lip sync animation techniques and phoneme synchronization - Expressive body language and facial expressions in character animation	02 + 06	



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V	Introduction to Particles • Overview of particle systems and their applications • Understanding the basic concepts and terminology of particles • Introduction to the Maya particle workflow and interface	02 + 02
VI	Particle Emission and Behavior • Creating and controlling particle emission sources • Controlling particle lifespan, size, and speed • Applying initial velocity and direction to particles	04 + 08
VII	Particle Motion and Dynamics • Applying forces and fields to control particle behavior • Understanding dynamics and collisions in particle simulations • Utilizing dynamic constraints for complex particle interactions	04 + 08
VIII	Particle Attributes and Expressions • Manipulating particle attributes for visual effects control • Utilizing expressions for advanced particle behaviors • Using texture maps and procedural textures to drive particle attributes	04 + 08
IX	Particle Instancing and Rendering • Creating and animating particle instances • Understanding particle rendering techniques • Utilizing shaders and textures for particle visualization	03 + 06
X	Collaborative Advanced Animation Project • Collaborative project involving the application of advanced animation techniques to create a complex and dynamic animation sequence	02 + 12
Suggested Readings: 1. The Art of Maya by Autodesk 2. Cartoon Character Animation With Maya by Keith Osborn		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions: The objective of the course is to provide students with advanced techniques and skills in character animation using Autodesk Maya. The course aims to enhance students' understanding and proficiency in creating dynamic, expressive, and lifelike character animations and with the skills necessary to create dynamic and realistic particle effects for various applications, such as visual effects, motion graphics, and game development.		



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Programme/Class: Bachelor in Animation		Year: Third	Semester: Sixth
Course Code: BSCAN1-612		Subject/ Course Title: 3D Dynamics and Simulation	
Course outcomes:			
By the end of the course, students will be able to:			
1. Apply simulation techniques to create realistic motion and behavior for dynamic objects.			
2. Demonstrate proficiency in using simulation software and tools.			
3. Create dynamic animations with realistic physics-based effects.			
4. Analyze and evaluate different types of simulations and their impact on animation quality.			
Credits: 5		Major	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-10			
Unit	Topics	No. of Classes + Practical	
I	• Introduction to 3D Dynamics and Simulation • Overview of dynamics and simulation in animation • Introduction to physics principles relevant to animation • Types of simulations used in 3D animation	03 + 06	
II	• Rigid Body Dynamics • Introduction to rigid body dynamics • Collision detection and response • Constraints and joint systems • Friction and other physical properties	04 + 04	
III	• Soft Body Dynamics • Introduction to soft body dynamics • Cloth simulation • Deformable object simulations • Hair and fur dynamics	02 + 04	



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 Anushka
 Lakshmi

IV	• Fluid Simulation • Basics of fluid dynamics • Simulating liquids and gases • Fluid particle systems and solvers • Fluid rendering and shading	04 + 08
V	• Simulation Tools and Software • Overview of simulation software and plug-ins (e.g., Autodesk Maya, BOSS) • Introduction to simulation-specific tools and workflows • Simulating dynamics using built-in software features	04 + 08
VI	• Advanced Simulation Techniques • Advanced cloth and cloth tearing simulations • Advanced particle systems and effects • Advanced fluid simulation techniques • Integration of dynamics and simulations into character animation	04 + 08
VII	• Dynamics and Simulation Projects • Collaborative project involving the application of dynamics and simulation techniques to create a dynamic animation sequence	02 + 10
Suggested Readings: 1. Maya Studio Projects: Dynamics by Todd Palamar 2. Creating Environments in Maya by Jana Germano 3. Maya Visual Effects: The Innovator's Guide by Eric Keller with Max Dayan		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions: The objective of the course is to provide students with a comprehensive understanding of the principles, techniques, and tools used in simulating realistic physical dynamics in 3D animation. The course aims to equip students with the knowledge and skills necessary to create dynamic and visually engaging animations using simulation techniques.		



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 Date: 10/11/2023
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 Name: [Handwritten Name]

Programme/Class: Bachelor's in Animation		Year: Third	Semester: Sixth
Course Code: BSCANI-613			
Subject/ Course Title: Specialization – I (Graphics/ VFX/2D Animation/ 3D)			
Course outcomes:			
By the end of the course, students will be able to:			
• Provide students with advanced knowledge and skills in their chosen specialization area. • Explore industry-standard software tools, techniques, and workflows relevant to the chosen specialization.			
Credits: 5		Major	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-10			
Unit	Topics	No. of Classes	
I	• Concepts and Techniques • Overview of advanced concepts and techniques specific to the chosen specialization area	6	
II	• Software Tools and Workflows • Deep dive into advanced features and functionalities of industry-standard software tools (e.g., Adobe After Effects, Autodesk Maya)	8	
III	• Project Development • Conceptualization and planning of a portfolio-worthy project within the chosen specialization area	4	
Suggested Readings:			
Advanced Techniques in [Graphics/VFX/2D Animation/3D Animation]			
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.			
Suggested Continuous Evaluation Methods:			
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance			
At the End of the whole syllabus any remarks/ suggestions:			
• Online tutorials and resources specific to the chosen specialization area • Industry events, workshops, and guest lectures relevant to the chosen specialization • Professional organizations and communities for networking and collaboration in the animation and graphics industries			



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Programme/Class: Bachelor's in Animation		Year: Third	Semester: Sixth
Course Code: BSCANI-614		Subject/ Course Title: Project Report	
Course outcomes: By the end of the course, students will be able to:			
• Understand the history and evolution of documentary • Develop technical proficiency in documentary • Master visual storytelling techniques • Demonstrate sensitivity to ethical issues in documentary photography • Create a cohesive documentary project			
Credits: 3		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-6			
Unit	Topics	No. of Classes	
I	Understanding the Documentary Process • The stages of a documentary project: research, planning, shooting, editing, and presentation. • Identifying a compelling story or subject • Case studies of notable documentary photo essays.	4	
II	The Tools of Documentary • Cameras, lenses, and accessories for documentary work. • Managing technical challenges in unpredictable environments: lighting, movement, and changing conditions. • Field exercises on shooting in available light.	6	
III	Composition and Storytelling • Techniques for visual storytelling: framing, perspective, and the rule of thirds. • Using a series of images to tell a story: sequencing, context, and transitions. • Hands-on practice with sequencing images to create a narrative.	8	



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 Anna University
 Chennai

IV	Humanizing Your Subject: Portraits in Documentary Photography • Techniques for capturing authentic and compelling portraits in documentary contexts. • Establishing rapport with subjects: working with people, community members, and strangers. • Case studies of powerful portrait-based photo essays.	10
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		

Programme/Class: Bachelor's in Animation		Year: Third	Semester: Sixth
Course Code: BSCANI-615		Subject/ Course Title: Portfolio Development	
Course outcomes:			
• Provide students with the opportunity to develop a professional portfolio showcasing their skills in graphics, VFX, 2D animation, and 3D animation. • Enhance students' proficiency in using industry-standard software tools and techniques. • Cultivate students' ability to conceptualize and execute creative projects that demonstrate their artistic vision and technical expertise. • Prepare students for careers in the fields of animation, visual effects, and graphic design by providing them with tangible evidence of their abilities. • Foster collaboration and peer feedback through critiques and reviews of each other's work.			
Credits:3		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 2-0-6			
Unit	Topics	No. of Lectures + Practical	
I	Introduction to Portfolio Development • Overview of the course objectives and expectations • Importance of a professional portfolio in the animation and graphics industry • Examples of successful portfolios and case studies	04	



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II	Project Planning and Concept Development - Brainstorming ideas for portfolio projects - Developing concepts and storyboards - Setting project goals and timelines	06
III	Project Planning and Concept Development - Brainstorming ideas for portfolio projects - Developing concepts and storyboards - Setting project goals and timelines	06
IV	Software Tools and Techniques - Introduction to industry-standard software tools (e.g., Adobe Creative Suite, Autodesk Maya, Blender) - Tutorials and hands-on exercises to familiarize students with software interfaces and functionalities	08
V	Graphics Design Project - Designing logos, posters, and other graphic elements - Applying principles of composition, typography, and color theory - Incorporating client feedback and revisions - VFX Project - Creating visual effects such as explosions, particle simulations, and digital compositing - Using green screen and chroma key techniques - Integrating VFX elements into live-action footage 2D Animation Project - Developing animated characters and storyboards - Principles of timing, spacing, and motion in animation - Creating character rigs and animating using key frames and interpolation 3D Animation Project - Modeling, texturing, and lighting 3D assets - Rigging and animating characters and objects - Rendering and compositing final animation sequences	08
VI	Portfolio Presentation and Critique - Assembling and organizing portfolio projects into a cohesive presentation - Practice presenting work professionally and articulating design decisions - Peer critique and feedback sessions	08



The Animator's Survival Kit by Richard Williams
Digital Lighting & Rendering by Jeremy Birn

Research in Animation

Programme/Class: Bachelor's with Research in Animation	Year: Fourth	Semester: Seventh
Course Code: BSCANL-701	Subject/ Course Title: History of Animation	
Course outcomes: By the end of the course, students will be able to: The history of animation involves exploring various aspects of animation's development, from its earliest beginnings to modern techniques and trends.		
Credits: 5	Major (Theory)	
Max. Marks: 100	Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 5-1-0		
Unit	Topics	No. of Lectures
I	• Introduction to Animation • Definition of animation • Early experiments and pre-cinema animation devices • Pioneers of animation: ÉmileCohl, Winsor McCay, and J. Stuart Black ton	4
II	• Golden Age of Animation (1920s-1940s) • Development of synchronized sound and color • Rise of animation studios: Disney, Warner Bros., Fleischer • Iconic characters and landmark films	4



Robert
H. H. H.
H. H. H.
H. H. H.

III	• Technological Advancements • Introduction of Technicolor and other innovations • Impact of World War II on animation • Emergence of television animation and limited animation techniques	6
IV	• Rise of Television Animation • Development of Saturday morning cartoons • Evolution of animation styles in television • Case studies of influential TV animation series	4
V	• Expansion of Animation Genres • Exploring genres beyond traditional animation: stop-motion, Claymation, CGI • Contributions of independent animators and studios • Impact of globalization on animation production	10
VI	• Renaissance of Animation (1980s-1990s) • Revival of animation in film: Disney Renaissance, Studio Ghibli • Introduction of computer-generated imagery (CGI) • Exploring themes and storytelling techniques	4
VII	• Animation in the Digital Age • Evolution of animation software and techniques • Online distribution platforms and independent animation communities • Future trends and challenges in animation industry	6
Suggested Readings: World History of Animation Hardcover – Illustrated by Stephen Cavalier A New History Of Animation Paperback by MAUREEN FURNESS (Author)		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		



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At the End of the whole syllabus any remarks/ suggestions:
 Textbooks, articles, and online resources on animation history
 Film screenings of key animation milestones
 Guest lectures by industry professionals or animation historians

Programme/Class: Bachelor's with Research in Animation		Year: Fourth	Semester: Seventh
Course Code: BSCANI-702		Subject/ Course Title: Basics of Research Methodology	
Course outcomes: By the end of the course, students will be able to: 1. To familiarize students with the basic principles and concepts of research methodology. 2. To equip students with the knowledge and skills necessary to critically evaluate research studies. 3. To enable students to design and conduct their research projects effectively. 4. To enhance students' ability to communicate research findings clearly and coherently. 5. To cultivate a research-oriented mindset and promote ethical conduct in research practices.			
Credits: 5		Major	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 5-1-0			
Unit	Topics	No. of Lectures	
I	• Introduction to Research • Definition and significance of research • Types of research (basic, applied, quantitative, qualitative) • Characteristics of good research	04	
II	Research Design • Formulating research questions and objectives • Variables and hypotheses • Experimental vs. non-experimental designs	06	



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 Faculty (Signature)

III	• Sampling Techniques • Probability sampling methods (simple random sampling, stratified sampling, cluster sampling) • Non-probability sampling methods (convenience sampling, purposive sampling, snowball sampling)	08
IV	• Data Collection Methods • Surveys and questionnaires • Interviews (structured, semi-structured, unstructured) • Observational methods • Secondary data sources	08
V	• Writing Research Proposals • Components of a research proposal (title, abstract, introduction, literature review, methodology, timeline, budget) • Tips for writing clear and concise research proposals	08
VI	• Research Ethics • Principles of research ethics • Informed consent and confidentiality • Avoiding plagiarism and maintaining integrity in research	08
Suggested Readings:		
Research Methodology: A Step-by-Step Guide for Beginners by Ranjit Kumar		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		



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Programme/Class: Bachelor's with Research in Animation	Year: Fourth	Semester: Seventh
Course Code: BSCANI-711		
Subject/ Course Title: Specialization – II (Graphics/ VFX/2DAnimation/ 3D)		
Course outcomes:		
1. Foster creativity, problem-solving, and critical thinking in the context of the chosen specialization.		
2. Prepare students for careers in the animation, VFX, and graphic design industries through hands-on experience and portfolio development.		
Credits: 6		
Max. Marks: 100		
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-12		
Unit	Topics	No. of Classes
I	Advanced Concepts and Techniques • Case studies and examples of projects showcasing advanced skills and creativity • Introduction to industry-standard software tools and workflows	06
II	Advanced Software Tools and Workflows • Hands-on tutorials and exercises to familiarize students with advanced workflows and techniques	04
III	Project Development • Iterative development process, including prototyping, testing, and refining project ideas • Guidance and feedback from instructors and peers throughout the project development phase	12
IV	Project Implementation • Execution of the portfolio project, applying advanced skills and techniques learned in previous weeks • Troubleshooting and problem-solving challenges that arise during project implementation • Time management and organization to ensure project deadlines are met	08



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 Rakshita, Anshika, and others.

V	Project Review and Feedback • Peer review and critique sessions to provide feedback on each other's project progress • Instructor-led feedback sessions to assess project development and offer guidance for improvement • Reflection and self-assessment on the strengths and areas for growth in the portfolio project	04
VI	Project Presentation and Portfolio Development • Finalizing and polishing the portfolio project for presentation • Creating supporting documentation, such as process documentation, project breakdowns, and artist statements • Presentation of portfolio projects to the class and invited industry professionals for feedback and critique	04
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
Programme/Class: Bachelor's with Research in Animation		Year: Fourth
Course Code: BSCANL-712		Course Title: Project Report
Course outcomes: By the end of the course, students will be able to: • Effectively gather, evaluate, and synthesize information from a variety of credible sources. • Develop innovative and feasible solutions to real-world problems. • Apply project management principles to plan, execute, and complete a comprehensive project report. • Manage time, resources, and team dynamics effectively to meet project deadlines.		
Credits: 4		Minor
Max. Marks:		Min. Passing marks:
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8		
Unit	Topics	No. of Lectures + Practical
I	Teaching Methodology • Description of teaching methods employed • Use of practical exercises, lectures, workshops, etc. • Integration of technology and software tools	4



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 Richard (Signature)
 Atchana (Signature)
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II	Curriculum Content - Detailed breakdown of topics covered in each module or unit - Description of theoretical concepts and practical skills taught - List of software tools and resources used	6
III	Assessment Methods - Overview of assessment criteria - Types of assessments (e.g., exams, projects, presentations)	8
IV	Student Projects - Description of projects assigned to students - Examples of project topics or themes - Showcase of student work or achievements	4
V	Resources - List of textbooks, online resources, and references used - Links to software tutorials or guides - Details of any additional materials required	10
VI	Project Report: Prepare Project report file related to Specialization	4
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation. Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		



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VIII Semester

Programme/Class: Bachelor's with Research in Animation		Year: Fourth	Semester: Eighth
Course Code: BSCANI-801		Subject/ Course Title: Academic Writing Techniques	
Course outcomes: By the end of the course, students will be able to:			
• Introduce students to the principles and conventions of academic writing. • Develop students' ability to critically analyze and synthesize information from scholarly sources. • Enhance students' proficiency in formulating and supporting arguments in academic essays. • Familiarize students with different types of academic writing (e.g., research papers, literature reviews, and argumentative essays).			
Credits: 4		Major	
Max. Marks:		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 4-1-0			
Unit		Topics	No. of Lectures
I	Introduction to Academic Writing • Definition and characteristics of academic writing • Importance of academic writing skills in higher education and professional contexts • Overview of the writing process		4
II	Understanding Academic Genres • Types of academic writing (e.g., research papers, literature reviews, essays) • Characteristics and conventions of different academic genres • Analyzing sample texts from various disciplines		4



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 Name: [Name]

III	Formulating Research Questions and Thesis Statements - Identifying research questions and objectives - Crafting clear and focused thesis statements - Articulating arguments and hypotheses	6
IV	Writing Literature Reviews - Purpose and scope of literature reviews - Synthesizing existing research and identifying gaps in the literature - Structuring and formatting literature review sections	4
V	Incorporating Evidence and Citation - Using quotations, paraphrases, and summaries to incorporate evidence - Understanding citation styles (e.g., APA, MLA, Chicago) - Properly citing sources and avoiding plagiarism	10
VI	Developing Argumentative Essays - Formulating persuasive arguments and counterarguments - Using evidence to support claims and refute opposing viewpoints - Strategies for building logical and convincing arguments	4
VII	Presentation and Publication - Strategies for presenting academic research orally and visually - Formatting and submitting manuscripts for publication - Navigating the peer review process	6
Suggested Readings: They Say/I Say: The Moves That Matter in Academic Writing by Gerald Graff and Cathy Birkenstein		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions: Textbooks, articles, and online resources on animation history Film screenings of key animation milestones Guest lectures by industry professionals or animation historians		



Approved by
 Mr. M. M. M.
 Mr. M. M. M.
 Mr. M. M. M.

Programme/Class: Bachelor's with Research in Animation		Year: Fourth	Semester: Eighth
Course Code: BSCANI-811		Subject/ Course Title: Show Reel (Graphics/ VFX/2D Animation / 3D)	
Course outcomes: By the end of the course, students will be able to:			
• Demonstrate a high level of proficiency in Graphics/ VFX/2D Animation / 3D • Create a polished and professional presentation that effectively captures the attention of potential employers or clients. • Develop a personal brand that is clearly reflected in the style and content of the showreel/demo reel. • Effectively manage time and resources to meet project deadlines.			
Credits: 4		Minor	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-8			
Unit	Topics	No. of Classes	
I	Introduction to Showreel Production • Overview of showreel formats and styles • Identifying personal strengths and areas for improvement • Planning and organizing showreel content	04	
II	Graphics Design • Principles of graphic design: layout, typography, color theory • Introduction to graphic design software: Adobe Photoshop, Adobe Illustrator • Creating graphic elements for showreel projects Visual Effects (VFX) • Introduction to VFX concepts and terminology • VFX software overview: Adobe After Effects, Nuke, Blender • Techniques for compositing, motion tracking, and green screen keying • Creating dynamic VFX shots for showreel projects 2D Animation • Introduction to 2D animation principles: timing, spacing, squash and stretch • Animation software overview: Adobe Animate, Toon Boom Harmony • Storyboarding and animatics creation • Producing 2D animated sequences for showreel projects 3D Animation • Introduction to 3D animation principles: modeling, rigging, animation • 3D animation software overview: Autodesk Maya, Blender • Character animation and lip-sync techniques • Creating 3D animated scenes for showreel projects	20	



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III	Showreel Project development • Refining and polishing showreel projects • Incorporating feedback and revisions • Rendering and exporting showreel content	10
IV	Showreel Presentation • Students present their showreel projects to the class • Peer feedback and critique session • Reflection on personal growth and learning outcomes	04
V	Assessment • Showreel project development and execution • Class participation and engagement • Peer feedback and critique	04
Suggested Readings: Cartoon Animation With Preston Blair, Revised Edition!by <u>Preston Blair</u> Animator's Survival Kit, The Paperback by <u>Richard E. Williams</u> This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods: Class Performance/ Practical Exam/ Assignment Submission/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions: Tutorials, online courses, and reference materials for each software tool and technique Access to required software and hardware resources Guest lectures by industry professionals in graphics, VFX, and animation		



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Programme/Class: Bachelor's with Research in Animation		Year: Fourth	Semester: Eighth
Course Code: BSCANI-812		Subject/ Course Title: Dissertation	
Course outcomes:			
By the end of the course, students will be able to:			
1. Define a clear research question or problem statement within the field of animation.			
2. Conduct comprehensive literature reviews to explore existing knowledge and research on the chosen topic.			
3. Design and execute an appropriate research methodology, utilizing qualitative, quantitative, or mixed methods approaches as applicable.			
4. Collect and analyze relevant data and information to address the research question.			
5. Demonstrate critical thinking and analysis skills in interpreting research findings.			
6. Communicate research findings effectively through a well-structured and coherent dissertation document.			
7. Present and defend the dissertation research in an oral presentation.			
8. Demonstrate independent research skills and the ability to contribute to the existing body of knowledge in the field of animation.			
Credits:12		RP	
Max. Marks: 100		Min. Passing marks: 33	
Total No. of lectures-Tutorials-Practical (in hours per week): L-T-P: -			
Unit		Topics	
		Choosing a Research Topic and Developing a Proposal	
I		• Selecting a research topic within the field of animation • Identifying a research question or problem statement • Conducting a literature review to explore existing research and knowledge • Developing a research proposal outlining the objectives, methodology, and expected outcomes of the research	04
		Research Methodology and Design	
II		• Exploring different research methodologies (qualitative, quantitative, mixed methods) • Selecting an appropriate research design for the chosen topic • Planning data collection methods (surveys, interviews, experiments, etc.) • Ethical considerations in conducting research in animation	10



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 - Middle right: *Prabhu*
 - Bottom right: *Abhishek*
 - Far right: *Prabhu*

III	Data Collection and Analysis - Collecting and organizing relevant data and information - Applying appropriate data analysis techniques (statistical analysis, thematic analysis, content analysis, etc.) - Interpreting and synthesizing research findings - Discussing the limitations and implications of the research	12
IV	Dissertation Writing and Structure - Structuring the dissertation document (introduction, literature review, methodology, results, discussion, conclusion, etc.) - Developing a coherent and well-organized argument throughout the dissertation - Writing clear and concise chapters with proper referencing and citation - Proofreading and editing techniques for academic writing	10
V	Independent Research and Writing - Conducting independent research according to the proposed methodology - Analyzing and interpreting data to address the research question - Writing and revising the dissertation document in consultation with the supervisor - Seeking guidance and feedback from the supervisor throughout the research and writing process	10
Suggested Readings: No Need		
This Major (Course Paper) is compulsory for all the students those are taking admission in the course of Animation.		
Suggested Continuous Evaluation Methods:		
Class Performance/ Dissertation/ Viva/ Attendance		
At the End of the whole syllabus any remarks/ suggestions: The objective of the dissertation course is to provide students with an opportunity to conduct independent research and analysis on a specific topic within the field of animation. The course aims to develop students' research, critical thinking, and communication skills while allowing them to explore a subject of personal interest within the discipline.		



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