School of Media, Film & Entertainment

Bachelors of Science

(Animation & VFX)

Academic Year 2021-25

Programme Code: SDM0202

General Guidelines
and
Terminology of Various Academic Programmes
Under
School of Media, Film & Entertainment

General Guidelines:

These guidelines are framed to enable the various departments in SMFE of Sharda University to run academic programmes in a structured manner. The main aim of these guidelines is to bring about a certain degree of uniformity in the programs running in various departments of the school. This would ultimately help in improving the quality of academic structure and delivery within the school. The guidelines would help all those who teach courses under various programmes to meet the basic requirements to teach the course. The guidelines also list the various templates required for this purpose.

Definition of Terms:

The following terminology would be used for the purpose of academic delivery within SMFE. All departments have to follow these terminologies:

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Programme: An educational programme is an integrated, organized experience that culminates in the awarding of a degree. The programme will have programme educational objectives, student outcomes, a curriculum, faculty and facilities. For instance, Department of Mass Communication is offering 05 programmes, i.e., BA (Journalism & Mass Communication), B.Sc. (Animation & VFX), B.Sc. (Gaming), MA (J&MC), MA (Advertising & Public Relations), MA (Digital Media and Multimedia Communication) and PhD (J&MC).

Programme Educational Objectives (PEOs): Every programme stipulates educational objectives along with the curriculum. This is extremely essential for any running programme because a systematic process needs to be followed for stating PEOs which should also align with the mission of the school. It is based on the need analysis of the programme. It is also periodically reviewed to keep with changing trends. Objectives are focused on performances that all students are expected to demonstrate at the end of instruction. Objectives define the key elements that must be taught every time the course is delivered.

Programme Outcomes (POs): Programme outcomes of SMFE provide general information about the focus of student learning and are broadly stated. Student Learning Outcomes are statements that specify what students will know, be able to do or be able to demonstrate when they have completed or participated in a programme. PO's specify an action by the student that is observable, measurable and able to be demonstrated. These are also synonymous with student learning outcomes.

Courses: Courses in SMFE is a subject run for the purpose of conducting of any programme.

Course Code: SMFE course code provided to subjects as entered in PeopleSoft for the purpose of identification of the subject as well as for the purpose of examinations. It is a unique identifying code. It generally represented as a "XYZ123" wherein XYZ is related to the programme and 123 is the serial no based on the year. In case there is a change of 20% or more in the syllabus, a new code has to be assigned to the course through proper approvals.

Course Title: It is the expanded full form of a subject against a given course code. No short forms are permitted in the course title. E.g., in the Department of Mass Communication, the course tile, Convergent Media in 2nd Semester of MA (J&MC) programme.

Contact Hour: It is equivalent to 55min-60mins for one lecture/studio hour.

Credit: It is the weightage offered against a course. The student will obtain the credit against the course when he successfully obtains the minimum passing marks. Further description may be obtained from Examinations cell, SHARDA UNIVERSITY.

Course Objectives: Course objectives are clear and concise statements that describe what SMFE intend our students to learn by the end of the course. It describes an intended state on what we hope our students will learn.

Course Outcomes: It expresses a present and observed state (what our students will actually learn) through the course. These are synonymous with programme specific outcomes (PSOs), course outcomes and any other similar terms as desired for respective accreditation processes.

The purpose of Course Objectives and Learning Outcomes is to:

- Align objectives with course content and evaluation methods
- Clearly communicate our expectations of students
- Establish a logical sequence of learning milestones
- Provide an opportunity for students to make connections across courses and institutional goals

Unit: The syllabus is to be divided into five units 1,2,3,4 and 5 with each unit having 3 sub units- a, b and c. This is the method for recording attendance as well in v-Attendance app.

Structure:

There are three elements essential for running SMFE programme:

1. Programme Structure (Required for the programme)
2. Course syllabus required for each course in one of the following formats:
   Template A1– for Theory subjects
   Template A2 – for Practical subjects
   Template A3 – for Jury subjects/studios/projects/dissertations
3. Instructional Plan-
   Template B1 -- for Theory subjects
   Template B2 -- for Practical subjects
   Template B3 -- for Jury subjects/studios/projects/dissertations

Template D provides additional in the case of Jury subjects/studios/projects/dissertations with a list of Project with description, studio work, and dissertation topic with scope of work and precise deliverables.

Accordingly, the following are formulated for each course:

S.No	Course	Syllabus Template	Instructional Plan template	Additional
1	Theory	B1	C1	PPTs, GDs, Seminars & Lecture series
2	Practical	B2	C2	Media Labs, Computer Labs & Assignments
3	Jury subjects/Studios/ Projects/Dissertations	B3	C3	D: List of Project with description, studio work, dissertation topic with scope of work and precise deliverables (to be uploaded on LMS)

Vision of the University

To serve the society by being a global University of higher learning in pursuit of academic excellence, innovation and nurturing entrepreneurship.

Mission of the University

1. **Transformative educational experience**
2. **Enrichment by educational initiatives that encourage global outlook**
3. **Develop research, support disruptive innovations and accelerate entrepreneurship**
4. **Seeking beyond boundaries**

Core Values

- **Integrity**
- **Leadership**
- **Diversity**
- **Community**

Vision of the School

To serve the society by being an internationally recognized school of higher learning in field of media, films and entertainment by means of academic excellence, innovation, outcome based learning and nurturing entrepreneurship.

Mission of the School

- To create a stimulating, flexible and application-based learning environment for students as well as faculty.
- To provide the necessary platform to impart skills and knowledge related to journalism and mass communication.
- To create brilliant professionals by imparting a blend of theory and more practical lessons through state-of-the-art infrastructure.
- To Leverage research to form strong industry-academia linkages.

Core Values

- **Innovation**
- **Awareness**
- **Information**
- **Ethics**

Vision and Mission of the Department of Mass Communication

Vision of the Department of Mass Communication

To build a department that goes beyond regional & cultural barriers with educational model that is sustainable, replicable & scalable, and empowers students with a future that is driven by knowledge, practice, entrepreneurial skills, socially responsible principles and moral values.

To provide intensive and integrated education in the field of communication, that is at par with best global communication schools and that nurtures individual aspirations to lead, innovate and collaborate to effectively apply conceptual understandings vis-a-vis practical and complex communication phenomenon and technologies.

Mission of the Department of Mass Communication

Provide journalism, communication and media-education platform to impart skills and knowledge with strong industry-academic linkages, consultancies and strong research base.

Create global media professionals & leaders by imparting a blend of theory and practical lessons through state-of-art infrastructure.

Create stimulating, flexible and application based learning environment for students & for the faculty.

Core Values

Innovation
Awareness
Information
Ethics

Program Educational Objectives (PEO) for B.Sc. (Animation & VFX) Program

PEO 1:- Demonstrate Professional, Social and Entrepreneurial skills related to Animation & VFX and Entertainment industry.

PEO 2:- Support the Animation & VFX and Entertainment industry as competent, trained and qualified workforce.

PEO3: Prove themselves as competent, trained and qualified Artist & Designer in the Animation, Visual Effects, E-content Development Industry

PEO4: Mark a difference in the Concept Design, Visual Communication, Storytelling, Graphics, Animation, and VFX and related Industry as competent, trained and qualified Artist.

PO1: Domain Knowledge in Graphics, Animation & VFX Apply the knowledge of Storytelling, Script Writing, Storyboarding, Concept Design, Editing & Compositing, Visual effects and other disciplines of Animation & VFX.

PO2: Communication Skills: Exhibit high levels of verbal and non-verbal forms of contemporary communication skills along with Creative skill of creating new narratives.

PO3: Modern Tool Usage: Demonstrate skilled usage of modern tools and techniques to effectively communicate with the target audience.

PO4: Problem Solving Skills: Identify, formulate, research, and analyze the problems and reach logical conclusions and solutions to solve real-life problems and challenges.

PO5: Values, Ethics and Contribution to Society: Understand the importance of Values and Ethics in the field of Animation & VFX Production and the morals of serving the society and community for sustainable development.

PO6: Leadership, Management and Entrepreneurial Traits: Display Team spirit and Inculcate Leadership Traits to contribute individually as well as in a team or group of Creative professionals.

PO7: Innovation and Research Related Skills: Identify, formulate, research, and analyse the literature and problems and reach logical and innovative solutions and conclusions.

PO8:-Lifelong Learning: Develop into lifelong learner and consistently updating with current knowledge, skills and technologies.

Program Structure Template
Name of School: School of Media, Film & Entertainment
B.Sc. Animation & VFX
Batch: 2021-25
TERM: I

S. No.	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[1]: CC AECC SEC DSE
			L	T	P			
Theory								
1	BSA125	Film Appreciation and Analysis	2	0	0	2	Core	AECC
Jury								
1	ARP101	Communicative English-I	1	0	2	2	Co-Requisite	AECC
2	BSA121	Foundation Art I	1	1	0	2	Core	AECC
3	BSA122	Digital Art I	1	2	0	3	Core	CC
4	BSA123	2D Digital Animation I	1	1	2	3	Core	CC
5	BSA124	3D Lab I	1	2	2	4	Core	CC
6		Open Elective (To be Chosen by Student	0	2	0	2	Elective	AECC
7	BJN105	Script Writing Vocational (Minor)	0	2	2	3	Co-Requisite	SEC
8	COC101	Food, Nutrition & Hygiene Co-Curricular	0	2	0	2	Co-Requisite	AECC
TOTAL CREDITS						**23**		

[1] CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses

Program Structure Template
Name of School: School of Media, Film & Entertainment
B.Sc. Animation & VFX
Batch: 2021-25
TERM: II

S. No.	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course: 1. CC 2. AECC 3. SEC 4. DSE
			L	T	P			
Theory								
1	BSA131	History of VFX	2	0	0	2	Core	AECC
Jury								
1	ARP102	Communicative English-II	1	0	2	2	Co-Requisite	AECC
2	BSA126	Storytelling	1	1	0	2	Core	CC
3	BSA127	Foundation Art II	1	1	0	2	Core	AECC
4	BSA128	Digital Art II	1	2	0	3	Core	CC
5	BSA129	2D Digital Animation II	1	0	2	2	Core	CC
6	BSA130	3D Lab II	1	1	2	3	Core	CC
7		Open Elective (To be Chosen by Student)	0	2	0	2	Elective	AECC
8	BJN109	Material Animation Vocational (Minor)	0	2	2	3	Co-Requisite	SEC
9	COC201	First Aid and Health (Co-Curricular)	0	2	0	2	Co-Requisite	AECC
TOTAL CREDITS						**23**		

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Program Structure Template
Name of School: School of Media, Film & Entertainment
B.Sc. Animation & VFX
Batch: 2021-25
TERM: III

S. No.	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[2]: 1. CC 2. AECC 3. SEC 4. DSE
			L	T	P			
1	**BSA221**	3D Animation I	1	1	2	3	Core	CC
2	**BSA222**	Photography	1	2	0	3	Core	AECC
3	**BSA223**	Pre-Production-I	1	1	0	2	Core	CC
4	**BSA224**	Character Design Concepts	1	1	0	2	Core	CC
5	**BSA225**	Compositing Techniques I	2	1	2	4	Core	CC
6	**BSA226**	Layout Design Concepts	1	0	2	2	Core	CC
7		Open Elective (To be Chosen by Student)	0	2	0	2	Elective	AECC
8	**BJN207**	Radio Jockeying & Programme Production Vocational (Minor)	0	2	2	3	Co-Requisite	SEC
9	**COC301**	Human Values & Environment Studies (Co-Curricular)	0	2	0	2	Co-Requisite	AECC
TOTAL CREDITS						**23**		

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Program Structure Template
Name of School: School of Media, Film & Entertainment
B.Sc. Animation & VFX
Batch: 2021-25
TERM: IV

S. No.	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[3]: 1. CC 2. AECC 3. SEC 4. DSE
			L	T	P			
1	**BSA227**	3D Animation II	1	1	2	3	**Core**	CC
2	**BSA228**	Pre-Production-II	1	2	0	3	**Core**	CC
3	**BSA229**	Compositing Techniques II	1	2	2	4	**Core**	CC
4	**BSA230**	Cinematography	1	0	2	2	**Core**	AECC
5	**BSA231**	Rotoscopy& Paint	1	0	2	2	**Core**	CC
6	**MCC 301**	Community Connect	0	2	0	2	Co-Requisite	AECC
7		Open Elective (To be Chosen by Student)	0	2	0	2	Elective	AECC
8	**BJN 214**	Smartphone Filmmaking -Vocational (Minor)	0	2	2	3	Co-Requisite	SEC
9	**COC401**	Physical Education & Yoga (Co-Curricular)	0	2	0	2	Co-Requisite	AECC
TOTAL CREDITS						**23**		

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Program Structure Template
Name of School: School of Media, Film & Entertainment
B.Sc. Animation & VFX
Batch: 2021-25
TERM: V

S. No.	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[4]: 1. CC 2. AECC 3. SEC 4. DSE
			L	T	P			
1	**BSA322**	Project Management	2	1	0	3	**Core**	AECC
2	**BSA323**	Match Moving	2	1	2	4	**Core**	CC
3	**BSA324**	Stereoscopic Techniques	2	2	0	4	**Core**	CC
4	**BSA325**	3D Dynamics I	2	2	2	5	**Core**	CC
5	**BSA322**	Photorealistic Lighting & Rendering - I	2	1	2	4	**Core**	CC
6	**COC501**	Analytic Ability and Digital Awareness Co-Curricular	0	2	0	2	Co-Requisite	AECC
7	**BSA326**	**Animation Project** Advanced Modeling and Texturing -Or- Advanced 3D Animation & Rigging	0	1	4	3	**Core**	DSE
TOTAL CREDITS						**25**		

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Program Structure Template
Name of School: School of Media, Film & Entertainment
B.Sc. Animation & VFX
Batch: 2021-25
TERM: VI

S. No.	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[5]: 1. CC 2. AECC 3. SEC 4. DSE
			L	T	P			
1	**BSA326**	Custom Effect Programming and Scripting	2	1	2	4	**Core**	CC
2	**BSA327**	Photorealistic Lighting & Rendering - II	2	1	2	4	**Core**	CC
3	**BSA328**	Fluid Simulation & Plugins	2	2	2	5	**Core**	CC
4	**BSA329**	Sound Design	1	2	0	3	**Core**	AECC
5	**BSA330**	3D Dynamics II	1	3	0	4	**Core**	CC
6	**COC601**	Communication Skills & Personality Development Co-Curricular	0	2	0	2	Co-Requisite	AECC
7	**BSA331**	**Visual Effects Project** Advanced CG Simulation and Effects -Or- Motion Graphics	0	1	4	3	**Core**	DSE
TOTAL CREDITS						25		

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Program Structure Template
Name of School: School of Media, Film & Entertainment
B.Sc. Animation & VFX
Batch: 2021-25
TERM: VII

S. No.	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[6]: 5. CC 6. AECC 7. SEC 8. DSE
			L	T	P			
Theory								
1	**BJN 401**	Media Research Methods & Tools	3	2	0	5	Core	CC
2	**BJN 402**	Elementary Statistics for Research	3	2	0	5	Core	CC
3	**BJN 403**	Qualitative Research - I	3	1	0	4	Core	CC
4	**BJN 404**	Quantitative Research - I	3	1	0	4	Core	CC
Jury								
5	**BJN405**	Project portfolio on constructing tools for Media & Communication	0	4	4	6	Core	DSE
6		Open Elective (To be Chosen by Student)	0	2	0	2	Co-Requisite	AECC
TOTAL CREDITS						**26**		

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[6] CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses

Program Structure Template
Name of School: School of Media, Film & Entertainment
B.Sc. Animation & VFX
Batch: 2021-25
TERM: VIII

S. No.	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[7]: 9. CC 10. AECC 11. SEC 12. DSE
			L	T	P			
Theory								
1	**BJN 406**	Ethics in Media & Communication Research	3	2	0	5	Core	CC
2	**BJN 407**	Academic Writing Techniques	3	2	0	5	Core	CC
3	**BJN 408**	Qualitative Research - II	3	1	0	4	Core	CC
4	**BJN 409**	Quantitative Research - II	3	1	0	4	Core	CC
Jury								
5	**BJN 410**	Dissertation	0	4	4	6	Core	DSE
6		Open Elective (To be Chosen by Student)	0	2	0	2	Co-Requisite	AECC
TOTAL CREDITS						26		

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Semester I

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2021-2022**
Branch: NA		**Semester: I**
1	Course Code	**ARP 101**
2	Course Title	Communicative English-I
3	Credits	2
4	Contact Hours (L-T-P)	**1-0-2**
	Course Type	**Co-Requisite** ~~/ Compulsory /Elective/Open Elective~~
5	Course Objective	To minimize the linguistic barriers that emerge in varied socio-linguistic environments through the use of English. Help students to understand different accents and standardize their existing English. Guide the students to hone the basic communication skills - listening, speaking, reading and writing while also uplifting their perception of themselves, giving them self-confidence and building positive attitude.
6	Course Outcomes	**CO1** At the end of the course a student will be able to interpret and apply correct sentence structure and punctuation as well as different parts of speech. **CO2** At the end of the course a student will be able to analyze one's self and abilities through language learning and personality development. **CO3** At the end of the course a student will be able to interpret and analyze self-strengths, evaluate weaknesses, utilize opportunities, and counter threats. **CO4** At the end of the course a student will be able to evaluate people and situations and apply the knowledge to describe the same. **CO5** At the end of the course a student will be able to examine and apply digital literacy platforms meaningfully for improving their social and professional lives **CO6** At the end of the course a student will be able to relate the significance of Social and cultural etiquettes along with leadership, management and entrepreneurial skills
7	Course Description	The course is designed to equip students, who are at a very basic level of language comprehension, to communicate and work with ease in varied workplace environment. The course begins with basic grammar structure and pronunciation patterns, leading up to apprehension of oneself through written and verbal expression as a first step towards greater employability.
8	Outline syllabus	
	Unit 1	**Sentence Structure**
	1	Subject Verb Agreement
	2	Parts of speech
	3	Writing well-formed sentences
	Unit 2	**Vocabulary Building & Punctuation**
	1	Homonyms/ homophones, Synonyms/Antonyms
	2	Punctuation/ Spellings (Prefixes-suffixes/Unjumbled Words)
	3	Conjunctions/Compound Sentences
	Unit 3	**Writing Skills**
	1	Picture Description – Student Group Activity
	2	Positive Thinking - Dead Poets Society-Full-length feature film

		- Paragraph Writing inculcating the positive attitude of a learner through the movie | SWOT Analysis – Know yourself
	3	Story Completion Exercise –Building positive attitude - The Man from Earth (Watching a Full length Feature Film)
	4	Digital Literacy | Effective Use of Social Media
	Unit 4	**Speaking Skill**
	1	Self-introduction/Greeting/Meeting people – Self branding
	2	Describing people and situations - To Sir With Love (Watching a Full length Feature Film)
	3	Dialogues/conversations (Situation based Role Plays)
	Unit 5	**Professional Skills | Career Skills**
	1	Exploring Career Opportunities
	2	Brainstorming Techniques & Models
	3	Social and Cultural Etiquettes
	4	Internal Communication
	Unit 6	**Leadership and Management Skills**
	1	Managerial Skills
	2	Entrepreneurial Skills
	Evaluations	Class Assignments/Free Speech Exercises / JAM Group Presentations/Problem Solving Scenarios/GD/Simulations (60% CA and 40% ETE)
	Text book/s*	
	Other References	• Comfort, Jeremy (et.al). Speaking Effectively. Cambridge University Press

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: I**
1	Course Code	
2	Course Title	**Foundation Art I**
3	Credits	**2**
4	Contact Hours (L-T-P)	**1-1-0**
	Course Status	**Core Compulsory**
5	Course Objective	It enables the students to learn the medium of Drawing and its importance in visualization. Allows students to learn, observe, analyze and visualize. Guides the student to strengthen the drawing skills to support later part of Animation design.
6	Course Outcomes	After the completion of this course, the student will be able to **CO1**: Identify the role of different medium and materials. **CO2**: Compare different pencil shading style. **CO3**: Teach the importance of Perspective. **CO4**: Illustrate Perspective and nature from real life. **CO5**: Create Light and shade in Art. **CO6**: Develop the Application of Anatomy in figure drawing.
7	Course Description	Students will learn basic fundamentals of drawing, materials to be used and visualization. They will understand the significance of basic drawing in Animation. At the end of the module they will acquainted with 1, 2 & 3 points Perspective, Light & Shade and figurative art.
8	**Outline syllabus:-**	
	Unit 1	**Introduction to Drawing Materials**
		Topic A:-Introduction Materials Topic B:-Papers-Different pencils. Topic C:-Color pencils-Crayons and poster colors. Topic D:-Introduction to drawing the objects, figures from the surroundings. Topic E:-To learn, observe, analyzing, and drawing the mechanical objects, utensils, objects from everyday life.
	Unit 2	**Perspective Drawing**
		Topic A:-Introduction Perspective Drawing Topic B:-To learn the importance of Perspective Topic C:-Rules of perspectives – To learn one point – two point perspectives- Learn to draw from different eye levels and different angles.
	Unit 3	**Nature Drawing**
		Topic A:-Introduction Nature Drawing Topic B:-Location drawing and learning to represent trees, plants, bushes, shrubs, insects, birds, and animals with attention to structure and morphology, proportion, volume, and behavior. Topic C:-Dramatizing what has been recorded
	Unit 4	**Lighting and Shading**

		Topic A:-Introduction of Unit Topic B:-To introduce to the concept of light in visualization. Topic C:-To study objects in Lighting and learn to draw them with proper shading Topic D:-To study photographs of well-known photographers to understand Topic E:-Learning Lab: • Drawing inorganic and Organic objects from life. • Drawing figures/ sketching figures from live [Outdoor and Indoor study]. • Drawing plants, trees, flowers, fruits [Outdoor and Indoor study]. • Drawing perspective; one point and two point perspective views of furniture, interior and exteriors of buildings. [Outdoor and Indoor study]. • Lighting and shading of objects and furniture [Class room]. • To create a project on visual elements [line/shape/form/texture] [Class room]		
	Unit 5	**Figure Drawing**		
		Topic A:-Introduction to Figure Drawing Topic B:-Learning Stick Figures Topic C:-Practice with Lines and Stick Figures Topic D:-Drawing Figures in Blocks Topic E:-Drawings from different eye-levels. Topic F:-Basic Anatomical Study Topic G:-Drawings of Human Figures from Different Backgrounds Topic H:-Drawing Props and Costumes		
	Mode of examination	Jury		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	• Perspective Drawing Handbook, JosephD'Amelio • Fun with the Pencil,Loomis		
	Other References	• Dynamic Figure Drawing, BurneHogarth • Complete Book of Drawing Technique, Peter Stanyer		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: I**
1	**Course Code**	**BSA122**
2	**Course Title**	**Digital Art I**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**1-2-0**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	The purpose of this subject is to provide the students with training methodologies and specific industry skills that will assist them in developing creative ideas into digital art with emphasis on image manipulation, matte painting and image creation and editing. The students will receive information that will enable them to: Understand the design principles used in the creation of digital art. Familiarize with the terminologies and concepts for creating and manipulating digital images.
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**:- Explain the electromagnetic spectrum, analog and digital color. **CO2**:- Understand the digital tools, hardware for digital painting. **CO3**:- Use raster graphics tools. **CO4**:- Illustrate the techniques of vector graphics. **CO5**:- Modify digital collages and photo editing techniques in art work. **CO6**:- Develop Photo bashing Techniques.
8	**Course Description**	Students Will Learn The Core Basic Of Digital Image Editing & Manipulation, Creating Digital Art work & Textures for future use in 3d Look development. They will also learn Design Principles and how to create info-graphics.
9	**Outline syllabus**	
	Unit 1	**Theories of Perception**
	1	Introduction of Unit
	2	Electromagnetic Spectrum
	3	Analog and Digital Colors
	4	Symbolism Additive and Subtractive Colors
	5	Mixing Colors.
	6	Colors for Painting.
	Unit 2	**Digital Tools, Hardware for Digital Painting**
	1	Introduction of Unit
	2	Image Format and Color Representations
	3	Image and File Formats
	4	File Compressions.
	5	Properties of Bitmap Image.
	6	Resolutions for Print and Display, Digital color Representation.
	Unit 3	**Introduction to Raster Graphics Tools**
	1	Introduction of Unit

	2	Layers
	3	Adjustment Tools
	4	Painting
	5	Creating raster artworks.
	6	Image Manipulation.
	7	Color Manipulation.
	8	Layer Blending, Masking, Export Parameters.
	Unit 4	**Introduction to Vector Graphics Tools**
	1	Introduction of Unit
	2	Creating Vector Arts
	3	Paths and Shapes
	4	Vector brushes and colors
	5	Layers, Transparency, Grouping, Blending Modes, Managing Artwork, Single and Multipage Illustrations.
	Unit 5	**Applications**
	1	Digital Painting
	2	Images Restoration
	3	Images manipulation and collages
	4	Vector Art – Graphics and Illustrations
	5	Print and Web graphics
	Evaluations	
	Text book/s*	• Blum, M. Rosen. How to Build Better Vocabulary. London: Bloomsbury Publication
	Other References	• Adobe Photoshop Cs6 Bible: The Comprehensive, Tutorial Resource, Lisa DanaeDayley, Brad DayleyAdobe Photoshop CC Classroom in a Book with Access Code, ADOBE CREATIVE TEAM Principles of Form and Design by Wucius Wong

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: I**
1	Course Code	**BSA123**
2	Course Title	**2D Digital Animation - I**
3	Credits	**3**
4	Contact Hours (L-T-P)	**1-1-2**
	Course Status	**Core Compulsory**
5	Course Objective	Understand the basics of creating 2D digital animation. Creating Key frame and Tweening animation. Understand the workflow to create layered 2D digital animation Creating Background design and animation.
6	Course Outcomes	After the completion of this course, the student will be able to **CO1**:- Identify various tools, settings and interfaces **CO2**:- Describe the methods of tween animation. **CO3**:- Understand the principles of background animation in scene. **CO4**:- Apply scene management. **CO5**:- Analyze 2D Animation workflow. **CO6**:- Develop key frame animation.
7	Course Description	Students will learn the different techniques and rules of 2D Digital Animation. Students will learn key frame full and limited animation. This course enables a student to create his or her Animated Movies, Web Graphics etc.
8	**Outline syllabus:-**	
	Unit 1	**Tools and Interface**
		Unit 1 Topic A Workflow Introduction and Settings Unit 1 Topic B Drawing and Shape Manipulation Animation Unit 1 Topic C Working with Strokes and Fills.
	Unit 2	**Tween Animation**
		Unit2 Topic A Motion and Shape Tween Unit2 Topic B Path animation using Guide Layer. Unit2 Topic C Masking and Effects using Gradients.
	Unit 3	**Staging and Timing**
		Unit 3 Topic A Static Background Scenes Unit 3 Topic B Animated Background Scenes Unit 3 Topic C Scene Management and Editing Scenes.
	Unit 4	**Exporting Movie**
		Unit 4 Topic A
		Unit 4 Topic B Compressions Unit 4 Topic C Settings
	Unit 5	**Applications**
		Unit 5TopicA Key Frame Animation - Principles of Animation Unit 5TopicB Key frame Animation – Simple Character Animation Unit 5TopicC Creating Scenes for Animation
	Mode of	Jury

	examination			
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	• Adobe Flash Professional CS6 Classroom in a Book 1st Edition from Adobe CreativeTeam		
	Other References	• How to Cheat in Adobe Flash CS5: The Art of Design and Animation Publications from Chris Georgenes		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: I**
1	Course Code	**BSA124**
2	Course Title	**3D Lab I**
3	Credits	4
4	Contact Hours (L-T-P)	**1-2-2**
	Course Status	**Core Compulsory**
5	Course Objective	To provide a detailed introduction to Autodesk Maya Software and helps the student understand the concepts of object in 3D space, Object creation (modelling and texturing), its observation, timing, and motion in the real art of animation and helps in creating strong and believable animation. The students will also understand the importance and application of Basic Rigging and Skinning. This course also emphasizes artistic and aesthetic creativity, intending to push the boundaries of the imagination and to familiarize students with acting, developing different kind of personality of characters and to explore character rigging for animation. The Course ensures that the students will be familiarized with the Maya interface and tools.
6	Course Outcomes	After completing the course, the student will be able to- **CO1**: Explain Polygons, NURBS and Sub-division modeling tools & techniques. **CO2**: Summarize working with unwrapping model UVs. **CO3**: Use texturing techniques to realistically shade objects. **CO4**: Illustrate Rigging of props, using deformer, and basic understanding of joints and control types. **CO5**: Write the Significance of Skinning and its techniques for various objects (prop, character, vehicles etc.). **CO6**: Create an Animation by applying its techniques, Graph editors, Spreadsheet.
7	Course Description	This subject will provide a detailed introduction to Autodesk Maya Software, Different techniques to create 3D model, about UV process and how does it help in texturing, the importance and application of Basic Rigging and helps the student understand the concepts of observation, timing, and motion in the real art of animation and helps in creating strong and believable animation pieces. This subject will provide the basic understanding of 3D dynamics and particle effects.
8	Outline syllabus	
	Unit 1	**Interface and Concept of 3D Modeling.**
		Topic A- Difference between 2D and 3D. Topic B – Understanding 3D space Topic C - Discover the user interface of Maya software and various elements.
	Unit 2	**Introduction to Modeling Tools**
		Topic A -Tools and technique in modeling Topic B -Different types of geometry Topic C- Nature of different meshes, advantage and disadvantage of different geometry.

	Unit 3	**Concepts of UV un-wrapping**		
		Topic A Concepts of UV Topic B Creation of UV Topic C- texture for different objects		
	Unit 4	**Working with UV tools and Techniques**		
		Topic A Understanding of UV Editor and techniques in it Topic B UV unwrapping techniques for Objects Topic C Creation of textures for Objects		
	Unit 5	**Animation** Topic A Applying principles of animation in 3D Topic B Using of Graph Editor and Dope sheet and techniques in it Topic C Expressions, Constraints and parenting in animation, object character interactions. Topic D Character Interaction and story telling Topic E Walk cycles, Personality and Appeal, Acting and staging.		
	Unit 6	***Rigging***		
		Topic A Introduction to Deformers, Nonlinear Deformers Topic B Types of deformers, Editing, Painting, membership and its significance Topic C Rigging Basics- Joints, Skin, IK and FK, Model and UV requirement		
	Unit 7	**Skinning**		
		Topic A Introduction to Smooth Binding and its concepts Topic B Introduction to Rigid Binding and its concepts Topic C Editing skin weights, pruning, normalizing. Topic D Creation and editing of joints for props and simple character		
	Mode of examination	Jury/Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	• Story: Substance, Structure, Style and the Principlesof Screenwriting RobertMcKee		
	Other References	• The Way of theStorytellerby RuthSawyer • Facial Expressions: A Visual Reference for Artists Mark Simon • The Animation Book: A Complete Guide toAnimated • Filmmaking--From Flip-Books to Sound Cartoons to 3-D • Animation, Three Rivers Press • Making Comics: Storytelling Secrets of Comics Scott McCloud		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: 1**
1	**Course Code**	**BSA125**
2	**Course Title**	**Film Appreciation and Analysis**
3	**Credits**	**2**
4	**Contact Hours (L-T-P)**	**2-0-0**
5	**Course Type**	**Core Compulsory (Theory)**
6	**Course Objective**	The subject imparts the basic understanding of the process involved in analyzing films through the language and grammar. It also provides the history of cinema and its various genres and documents their evolution.
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Recognize films based on content and provide feedback and critique. **CO2**:- Define to appreciate films based on film making and process. **CO3**:- Summarize the Different film Genres. **CO4**: Discover the art of cinematography **CO5**:- Illustrate Editing and the techniques involved in film making. **CO6**-Evaluate Contemporary Film Making.
8	**Course Description**	Students will learn Evolution of Cinema, Film Grammar & Language, Elements of Film Making and apply these into Animation Film Making.
9	**Outline syllabus**	
	Unit 1	**History of Cinema**
	1	History of Cinema and Genre Studies.
	2	A brief history of early evolution of cinema.
	3	Era of silent films.
	4	Introduction to different approaches in story telling as seen from Live Action.
	5	Documentary and Animation.
	Unit 2	**Film Genres**
	1	Film Genres –Definition –
	2	Introduction to various film genres
	3	Film Noir.
	Unit 3	**Story structure**
	1	Story structure: Story / script / Story boarding.
	2	Developing Story ideas, designing the Plot, Plot development and Plot devises.
	3	Story narration.
	4	Character development in the story.
	Unit 4	**Film Grammar & Language**
	1	Film Grammar & language – Mise-En Scene,
	2	Elements of Mise en scene:
	3	Representation of space.
	4	Set designing –colour design and symbolism in sets.

	5	Lighting – costume designing.		
	6	Acting and types of acting.		
	Unit 5	**Case Studies**		
	1	Case studies/Film viewing and analysis.		
	2	Analysis of Animated Movies		
	3	Analysis of Live Action Movies		
	Evaluations	**CA**	**MTE**	**ETE**
		30%	**20%**	**50%**
	Text book/s*	• Blum, M. Rosen. How to Build Better Vocabulary. London: Bloomsbury Publication		
		• The Analysis of Film by Raymond Bellour and Constance Penley (Editor). • How to Read a Film: Movies, Media, and Beyond by James Monaco. • Film Art: An Introduction – Paperback (Nov. 25, 2009) by David Bordwell and Kristin Thompson. • Film Form: Essays in Film Theory – Paperback (Mar. 19, 1969) by Sergei Eisenstein and Jay Leyda.		

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2021-2022**
Branch: NA		**Semester: I**
1	**Course Code**	**BJN105**
2	**Course Title**	**Script Writing – (Vocational)**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**0-2-2**
5	**Course Type**	Compulsory~~/Elective/Open Elective~~
6	**Course Objective**	To Describe the dramatic structure of a story, explain formats in script, the act structure, characterization and the scene creation.
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Define the dramatic structure of a story **CO2**: List out different formats in script **CO3**: Explain a story with three act structure **CO4**: Outline the importance of characterization in script **CO5**: Create a scene with a sequence **CO6**: Elaborate visual storytelling
8	**Course Description**	The course is designed to inculcate the basic understanding of script writing. Students will learn the workflow for Story Development, Elements of script writing, and 3-Acts Structure & Development of the Characters.
9	**Outline syllabus**	
	Unit 1	**The Principles of Dramatic Wring**
	1	Introduction to Screenwriting
	2	The Basics: Character, Story, Structure
	3	The Premise: Story Spine
	Unit 2	**Finding the Story**
	1	How to Format a Script
	2	How to Write a Short Outline
	Unit 3	**Three Act Structure: Putting It All Together**
	1	"The Godfather": Beginnings, Middles, and Ends
	2	Treatment: 5 Key Moments
	Unit 4	**Exploring Character**
	1	Dramatizing Character
	2	Proper Script Formatting
	Unit 5	**Scene:**
	1	Scene defined.
	2	Length of scene. Tenets of a good scenes—importance, desire/conflict, structure, compression
	3	Sequences, Making a step outline
	4	Visual Storytelling
	Evaluations	**CA-60%** **MTE-0%** **ETE-40%**

	Text book/s*	• The Art and Science of Digital Compositing, Second Edition:
	Other References	• Techniques for Visual Effects, Animation and Motion Graphics (The Morgan Kaufmann Series in Computer Graphics) - Ron Brinkmann (Author)

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2021-2022**
Branch: NA		**Semester: I**
1	Course Code	**BJN 106**
2	Course Title	**Food, Nutrition and Hygiene (Co- Curricular)**
3	Credits	2
4	Contact Hours (L-T-P)	**0-2-0**
	Course Type	Compulsory ~~/Elective/Open Elective~~
5	Course Objective	To Spread food, nutrition & hygiene awareness among students
6	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: To learn the basic concept of the Food and Nutrition **CO2**: To study the nutritive requirement during special conditions like pregnancy and lactation **CO3**: To learn meal planning **CO4**: To learn 100 days Nutrition Concept **CO5**: To study common health issues in the society **CO6**: To learn the special requirement of food during common illness
7	Course Description	The course is designed to inculcate the understanding of food, nutrition & hygiene among the students for a healthy body.
8	Outline syllabus	
	Unit 1	Concept of Food and Nutrition (a) Definition of Food, Nutrients, Nutrition, Health, balanced Diet (b) Types of Nutrition- Optimum Nutrition, under Nutrition, Over Nutrition (c) Meal planning- Concept and factors affecting Meal Planning (d) Food groups and functions of food
	Unit 2	Nutrients: Macro and Micro RDA, Sources, Functions, Deficiency and excess of (a) Carbohydrate (b) Fats (c) Protein (d) Minerals Major: Calcium, Phosphorus, Sodium, Potassium Trace: Iron, Iodine, Fluorine, Zinc (e) Vitamins Water soluble vitamins: Vitamin B, C Fat soluble vitamins: Vitamin A, D, E, K (f) Water (g) Dietary Fibre
	Unit 3	1000 days Nutrition (a) Concept, Requirement, Factors affecting growth of child (b) Prenatal Nutrition (0 - 280 days): Additional Nutrients' Requirement and risk factors during pregnancy (c) Breast / Formula Feeding (Birth – 6 months of age) Complementary and Early Diet (6 months – 2 years of age)

	Unit 4	Community Health Concept (a) Causes of common diseases prevalent in the society and Nutrition requirement in the following: Diabetes Hypertension (High Blood Pressure) Obesity Constipation Diarrhea Typhoid (b) National and International Program and Policies for improving Dietary Nutrition (c) Immunity Boosting Food

Semester II

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2021-2022**
Branch: NA		**Semester: II**
1	Course Code	**ARP 102**
2	Course Title	Communicative English-II
3	Credits	2
4	Contact Hours (L-T-P)	**1-0-2**
	Course Type	~~Compulsory /~~**Co-Requisite**~~/Pre-Prerequisite/Elective/Open Elective~~
5	Course Objective	To Develop LSRW skills through audio-visual language acquirement, creative writing, advanced speech et al and MTI Reduction with the aid of certain tools like texts, movies, long and short essays.
6	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: At the end of the course, a student will be able to create a larger goal and vision statement for goal setting. **CO2**: At the end of the course, a student will be able to adapt a positive attitude towards life. **CO3**: At the end of the course, a student will be able to apply advanced writing skills in English like full length essays, Precis, Executive Summary etc. **CO4**: At the end of the course, a student will be able to utilize the science of speech and correct pronunciation through the accent-neutralization program followed by reading sessions. **CO5**: At the end of the course, a student will be able to apply Innovative Leadership and Design Thinking skills and practices along with Ethics and Integrity **CO6**: At the end of the program, a student will be able to demonstrate Love, Compassion, Non-Violence, Truth, Righteousness, Peace, Service and Renunciation (Sacrifice).
7	Course Description	The course takes the learnings from the previous semester to an advanced level of language learning and self-comprehension through the introduction of audio-visual aids as language enablers. It also leads learners to an advanced level of writing, reading, listening and speaking abilities, while also reducing the usage of L1 to minimal in order to increase the employability chances.
8	Outline syllabus	
	Unit 1	**Acquiring Vision, Goals and Strategies through Audio-visual Language Texts**
	1	Pursuit of Happiness / Goal Setting & Value Proposition in life
	2	12 Angry Men / Ethics & Principles
	3	The King's Speech / Mission statement in life | strategies & Action Plans in Life
	Unit 2	**Creative Writing**
	1	Story Reconstruction - Positive Thinking
	2	Theme based Story Writing - Positive attitude
	3	Learning Diary Learning Log – Self-introspection
	Unit 3	**Writing Skills 1**

	1	Precis
	2	Paraphrasing
	3	Essays (Simple essays)
	Unit 4	**MTI Reduction/Neutral Accent through Classroom Sessions & Practice**
	1	Vowel, Consonant, sound correction, speech sounds, Monothongs, Dipthongs and Tripthongs
	2	Vowel Sound drills, Consonant Sound drills, Affricates and Fricative Sounds
	3	Speech Sounds | Speech Music| Tone | Volume| Diction |Syntax |Intonation | Syllable Stress |
	Unit 5	**Gauging MTI Reduction Effectiveness through Free Speech**
	1	Jam sessions
	2	Extempore
	3	Situation-based Role Play
	Unit 6	**Leadership and Management Skills**
	1	Innovative Leadership and Design Thinking
	2	Ethics and Integrity
	Unit 7	**Universal Human Values**
		Love & Compassion, Non-Violence & Truth
		Righteousness, Peace
		Service, Renunciation (Sacrifice)
	Unit 8	**Introduction to Quantitative aptitude & Logical Reasoning**
		Analytical Reasoning & Puzzle Solving
		Number Systems and its Application in Solving Problems
	Evaluations	Class Assignments/Free Speech Exercises / JAM Group Presentations/Problem Solving Scenarios/GD/Simulations (60% CA and 40% ETE
	Text book/s*	• Wren, P.C.&Martin H. High English Grammar and Composition, S.Chand& Company Ltd, New Delhi. • Blum, M. Rosen. How to Build Better Vocabulary. London: Bloomsbury Publication • Comfort, Jeremy(et.al). Speaking Effectively. Cambridge University Press • The Luncheon by W.Somerset Maugham - http://mistera.co.nf/files/sm_luncheon.pdf

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: II**
1	Course Code	**BSA126**
2	Course Title	**Storytelling**
3	Credits	**2**
4	Contact Hours (L-T-P)	**1-1-0**
	Course Status	**Core Compulsory**
5	Course Objective	Understand the Process of Ideation for Storytelling Ability to create Narrative and Non-Narrative Stories. Create Story Panels for effective storytelling. Creating Character Concepts
6	**Course Outcomes**	After the completion of this course, the student will be able to **CO1**:- Explain the effective technique of storytelling. **CO2**:-Compare story triangle concept. **CO3**:- Complete your story with genre and narrative point of view. **CO4**:- Connect your character in character driven stories. **CO5**:- Create multi panel Comic book for Visual narration of story. **CO6**: Design Single panel Comic of your concept.
7	**Course Description**	Students will learn the significance of a storytelling in animation film making. They will learn various approaches of story writing, character development and visual presentation of the story.
8	Outline syllabus	
	Unit 1	**Introduction to Story Telling.**
		Topic 1 Ideation and Imagination of Storytelling Topic 2 Various mediums of Storytelling [Text, Oral, Performance, Film] Topic 3 Story Genres and audience study
	Unit 2	**Story Plot and Sub –Plots**
		Topic 1- Story Structure Topic 2 Plot Devices Topic 3 Narrative Point of View
	Unit 3	**Characters**
		Topic 1 Character Driven Stories Topic 2 Different Character from the story Topic 3 Character Bible
	Unit 4	**Environment of the Story**
		Topic 1 Character and the relation to the environment. Topic 2 Constructing Different events for the story Topic 3 Environment
	Unit 5	**Visual Narration**
		Topic -1 Single panel and multiple panel Topic -2 Dialogue Writing Topic -3 Visualization of Comics

	Mode of examination	**Jury/Practical/Viva**		
	Weightage Distribution	**CA**	**MTE**	**ETE**
		60%	**0%**	**40%**
	Text book/s*	• Story: Substance, Structure, Style and the Principles of Screenwriting Robert McKee		
	Other References	• The Way of the Storyteller byRuth Sawyer • Facial Expressions: A Visual Reference for Artists Mark Simon • The Animation Book: A Complete Guide to Animated Filmmaking--From Flip-Books to Sound Cartoons to 3-D Animation, Three Rivers Press • Making Comics: Storytelling Secrets of Comics Scott McCloud		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: II**
1	**Course Code**	**BSA127**
2	**Course Title**	**Foundation Art II**
3	**Credits**	**2**
4	**Contact Hours (L-T-P)**	**1-1-0**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	Develop an ability to understand materials, behavior, and movement of objects. Understand kinetics and learn to recreate structure, force, and body language of any subject/object on a two-dimensional surface. Know how to interpret from the real world for representation, Develop methods to record the motion of objects with their inherent qualities as a series of static positions, To be able to draw from imagination based on the above learning**.**
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1:** Define Organic structures like Human & Animals **CO2:** Classify drawing approach for fine arts & animation. **CO3:** Sketch poses from real life. **CO4:-**Illustrate strong storytelling poses for animation. **CO5:** Analyze the Ration, Proportion & Human Anatomy. **CO6:-**Develop Gesture Drawing
8	**Course Description**	Students will learn core fundamentals of drawing for animation, Shapes& Forms, Line of Action & Strong Poses, Staging &Silhouette, and Gesture Drawing &Exaggeration and underneath anatomy structures. Further they will explore imaginary & conceptual Drawings for animation.
9	**Outline syllabus**	
	Unit 1	**Drawing Principles**
	1	The Evolution of drawing style in Animation
	2	Animation Aesthetics - Shape and Form, Line and Silhouette, Tension, Direction, Straight against Curve
	3	Logic in Drawing, Planes, Solidity, Depth and Volume
	Unit 2	**Observational Drawings of human forms**
	1	Introduction of Unit
	2	Stick Drawings – in various pose actions
	3	Mannequin Drawings – in a different pose and actions, Learn to draw from different angles and eye levels.
	Unit 3	**Human anatomy**
	1	Introduction Anatomy
	2	Different parts of human body and functional aspects of hands, legs etc and the proportions in relation to each other
	3	Male female and children, Gods and Super Humans, Creative forms of aliens with balanced anatomy
	Unit 4	**Gesture Drawings Static Poses**

	1	Capturing the Minimal Geometric shapes of Given Poses
	2	Studying the Line of Action for stronger poses.
	3	Adding Anatomical structure in gesture drawings.
	Unit 5	**Gesture Drawings Sequential Poses**
	1	Introduction to Sequential Drawings.
	2	Quick sketching of live motions and adding follow through.
	3	Drawing from Imagination.
	Evaluations	**Jury**
	Weightage Distribution	**CA=60%** **MTE=0%** **ETE= 40%**
	Text book/s*	• Creating animated sequences from drawings of buildings, cityscapes. by HVCarter • Figure Drawing for all its worth, Andrew Loomis • Dynamic Figure Drawing, Burne Hogarth. • Dynamic Life Drawing for Animators, Mike Mattesi.

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: II**
1	**Course Code**	**BSA128**
2	**Course Title**	**Digital Art II**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**1-2-0**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	The students will receive information that will enable them to: Understand the concept of creating textures, brushes, abstract and thematic designs. Create effective typography designs used for raster and vector illustrations and designs. Creating Matte Paintings to be used as concept arts and Parallax scenes.
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Explain Digital Art & Industry Application. **CO2**:-Understand Digital Color Theory & Design Fundamentals. **CO3**:-Use Typography. **CO4**: Illustrate special effects for Typography. **CO5**:- Develop background composition. **CO6**:- Design Matte and Texture Painting.
8	**Course Description**	Students will learn Design & Theory concept of Digital Art. They will understand the possibilities of Digital art by learning Digital Application, Tools, Drawing, Inking & Painting. This further helps them to create Digital Painting, Info graphics& Character.
9	**Outline syllabus**	
	Unit 1	**Digital Color**
	1	Digital Color mixing, Custom Brushes, Custom Palette for Painting
	2	Digital Character Painting
	3	Concept art – Environment.
	Unit 2	**Ink and Painting**
	1	Colorizing
	2	Artistic Filters
	3	Texture Painting
	4	Painting for 3D, creating passes.
	Unit 3	**Typography Fundamentals**
	1	Introduction Typography Fundamentals
	2	Fonts
	3	Designing Type
	4	Typography Design and Art
	5	Special Effects for Typography.
	Unit 4	**Background**
	1	Introduction of Unit
	2	Digital Ink and Paint
	3	Background Composition

	4	Art of Collages, Creating Digital Collages
	Unit 5	**Matte and Texture Painting**
	1	Visualizing the matte scene.
	2	Resources for Matte Painting.
	3	Techniques for Effective Matte Painting.
	4	Creating Tiled and Seamless Textures.
	5	Creating texture maps for textures.
	Evaluations	**Jury**
	Weightage Distribution	**CA=60%** **MTE=0%** **ETE= 40%**
	Text book/s*	• Adobe Photoshop Cs6 Bible: The Comprehensive, Tutorial Resource, Lisa Danae Dayley,BradDayley • Beginner's Guide to Digital Painting in Photoshop: Volume 1, Richard Tilbury, Nykolai Aleksander Digital Painting Techniques, 3dtotal. Com Ltd.

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: II**
1	**Course Code**	**BSA129**
2	**Course Title**	**2D Digital Animation - II**
3	**Credits**	**2**
4	**Contact Hours (L-T-P)**	**1-0-2**
	Course Status	**Core Compulsory**
5	**Course Objective**	Creating Symbols for animation. Creating Key frame and Staging animation. Understand rigging & Character animation Understand Layout, BG design & Pre production
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Explain symbols and animation. **CO2**: Interpret character animation including cycles. **CO3**: Apply Lip Sync animation and special effects. **CO4**:- Use digital painting techniques. **CO5**:- Illustrate color styles and techniques. **CO6**:- Develop scene management techniques.
7	**Course Description**	Students will learn the Higher animation techniques in 2D Digital Animation-II. Students will learn Fully Rigging, staging & layer management with walking & running. This course enables a student to create his or her Animated Movies.
8	**Outline syllabus**	
	Unit 1	**Flash Symbols**
		Topic 1 Symbol Construction and Animation Topic 2 Rigging Symbols Topic 3 Layout Composition cycles and Holds
	Unit 2	**Character Animation using Symbols**
		Topic 1 Walk and run cycles Topic 2 Lip Sync Animation Topic 3 Creating Special Effects for Scenes
	Unit 3	**Animate Background Layout**
		Topic 1 Digital Ink and Paint
		Topic 2 Painting Techniques Topic 3 Layering Artwork for Animation
	Unit 4	**Color Styles and Techniques**
		Topic 1 Artwork Cleanup Topic 2 Colorization techniques Topic 3 Color Combinations
	Unit 5	**Story and Gag Creation**
		Topic 1 Pre Production Topic 2 Scene Management Topic 3 Adding Sound and Exporting

	Mode of examination	**Jury**		
	Weightage Distribution	**CA**	**MTE**	**ETE**
		60%	**0%**	**40%**
	Text book/s*	• Adobe Flash Professional CS6 Classroom in a Book 1st Edition from Adobe Creative Team		
	Other References	• How to Cheat in Adobe Flash CS5: The Art of Design and • Animation Publications from Chris Georgenes		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: II**
1	**Course Code**	**BSA130**
2	**Course Title**	**3D Lab II**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**1-1-2**
	Course Status	**Core Compulsory**
5	**Course Objective**	This Course is extension of 3D Lab I and dives into artistic and aesthetic creativity, intending to push the boundaries of the imagination, Advance tools and techniques to familiarize students with acting, developing different kind of personality of the characters and to explore character rigging for animation, expressions and particle manipulation. The Course ensures that the students will be familiarized with the Maya interface and tools.
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Identify Advanced Polygons, NURBS and Sub-division modeling tools & techniques. **CO2**: Summarize working with unwrapping complex models. **CO3**: Use Character Animation techniques including motion of mechanics, Principles of animation. **CO4**: Discover Rigging of Character, complex props and Vehicles. **CO5**: Illustrate renders through strategic lighting. **CO6**: Design Effects using particles like dust, fire, crowd, water spray and many more.
7	**Course Description**	This subject will provide a detailed introduction to Autodesk Maya Software, Different techniques to create 3D model, about UV process and how does it help in texturing, the importance and application of Basic Rigging and helps the student understand the concepts of observation, timing, and motion in the real art of animation and helps in creating strong and believable animation pieces. This subject will provide the basic understanding of 3D dynamics and particle effects**.**
8	**Outline syllabus**	
	Unit 1	**Polygon, Nurbs and Sub D modeling of complex model**
		Topic A Techniques in Polygon Modeling Topic B Techniques in Nurbs Modeling Topic C Techniques in Sub division Modeling
	Unit 2	**UV Unwrapping**
		Topic A Techniques for Unwrapping a complex model. Topic B Creation of Complex materials Topic C Different surface.
	Unit 3	**Animation**
		Topic A Advanced Mechanics of Motion. Topic B Object – Character Interaction. Topic C Character – Character Interaction.
	Unit 4	**Rigging for Animation**

		Topic A Application of Tools and components of Rigging Topic B Constraints and its Application In Rigging Topic C Tools for creating Simple to Complex rigs		
	Unit 5	**Dynamics and Special Effects**		
		Topic A Introduction to Deformers, Nonlinear Deformers Topic B Types of deformers, Editing, Painting, membership and its significance Topic C Rigging Basics- Joints, Skin, IK and FK, Model and UV requirement		
	Mode of examination	**Jury**		
	Weightage Distribution	**CA** **60%**	**MTE** **0%**	**ETE** **40%**
	Text book/s*	• Story: Substance, Structure, Style and the Principles of Screenwriting Robert McKee		
	Other References	• The Way of the Storyteller byRuth Sawyer • The Animation Book: A Complete Guide to Animated Filmmaking--From Flip-Books to Sound Cartoons to 3-D Animation, Three Rivers Press • Making Comics: Storytelling Secrets of Comics Scott McCloud		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: II**
1	**Course Code**	**BSA131**
2	**Course Title**	**History of VFX**
3	**Credits**	**2**
4	**Contact Hours (L-T-P)**	**2-0-0**
	Course Status	**Core Compulsory**
5	**Course Objective**	Analyzing early films, evolution and men who lead the way. Analyzing interesting facts about the history of VFX in cinema, how it all began and evolved. Model Hollywood – how Hollywood pioneered the change & created a new breed of profession. How the development of visual effects has changed popular cinema's vision.
6	**Course Outcomes**	**After completing the course, the student will be able to-** **CO1:** Explain Outline the History and Pioneers responsible for development of VFX. **CO2:** Compare the techniques used in pre-computer generation. **CO3**: Classify the advancement and tools in computer VFX production. **CO4:** Discover the Camera techniques and Effects. **CO5:** Contrast the development of visual effects which has changed popular cinema in modern days. **CO6:** Criticize Modern Technology & VFX
7	**Course Description**	Students will learn about History of Hollywood and Indian cinema and Revolution and developments through the ages. Students will learn Different camera and visual effects and their techniques. They will get to know about legends of VFX Cinema. We look into early films, evolution and men who lead the way. Throw light on interesting facts about the history of VFX in cinema, how it all began and evolved. Model Hollywood – how Hollywood pioneered the change & created a new breed of profession. How the development of visual effects has changed popular cinema's vision.
8	Outline syllabus	
	Unit 1	**History.**
		Topic a- The Evolution of Art and Theoretical Analysis Topic b- History of Hollywood and Indian Cinema using Practical Effects. Topic c- Pioneers of VFX
	Unit 2	**Techniques**
		Topic a- Camera Techniques Topic b- Practical Effects Topic c-Forced Perspective/Prosthetics/Stunt/Body Double
	Unit 3	**VFX Development**
		Topic A- Rise of Computer Technology. Topic B -Software creation to cater to individual effects creation Topic C – Industry Standard/Workflow
	Unit 4	**VFX in 21st Century**

		Topic A- Tools Topic B-Techniques. Topic C- Milestones		
	Unit 5	**Future of VFX**		
		Topic A- Film **Topic B**- Television **Topic C**- Gaming & Others		
	Mode of examination	**Jury/Practical/Viva**		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*	• Digital Lighting & Rendering, Second Edition by Jeremy Birn • Lighting and Rendering in Maya: Lights and Shadows by Jeremy Birn		
	Other References	• ShaderX7: Advanced Rendering Techniques by Wolfgang Engel(Mar 12,2009) • Advanced Lighting and Materials with Shadersby Kelly Dempski and Emmanuel Viale(Oct 31, 2004)		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2021-22**
Branch: NA		**Semester: II**
1	Course Code	**BJN109**
2	Course Title	**Material Animation**
3	Credits	3
4	Contact Hours (L-T-P)	**0-2-2**
	Course Type	**Vocational (To be offered by University)**
5	Course Objective	To introduce various techniques and styles of Animation. To provide the students hands on experience of simple ideas for Animation using the materials available in the immediate surroundings.
6	Course Outcomes	After the completion of this course, the student will be able to **CO1**: Define the significance of Material Animation. **CO2**: Explain technique available in Material Animation. **CO3**: Analyze the process and methods of Material Animation. **CO4**: Develop and understanding of the phases of Material Animation. **CO5**: Outline Storyboard & Layout Design **CO6**: Create of Material Animation film from preferred medium.
7	Course Description	Students Will Learn The workflow for Story Development, Elements of script writing, and 3Acts Structure & Development of the Characters.
8	Outline syllabus	
	Unit 1	**Introduction to Material Animation**
		A:-Introduction to Material Animation. B:-Different Styles in material animation. C:-Popular material animation and other techniques.
	Unit 2	**Different Techniques**
		A-Different Techniques B-Exploring Different Material C-Rig & Installation.
	Unit 3	**Process and methods of Material Animation**
		A-Visualization of Material Animation. B-Production process for Method. C-Rough Test
	Unit 4	**Material Animation in Action**
		A-Story and Preproduction for Material Animation Film B-Identification and Execution of Material Animation Film C-Post Production of Material Animation Film
	Unit 5	**Material Animation in Action**
		Exercise
		Exercise

		Exercise
	Evaluations	**CA-60% MTE-0% ETE-40%**
	Text book/s*	• The Animator's Survival Kit: A Manual of Methods, Principles and Formulas for Classical, Computer, Games, Stop Motion and Internet Animators (FARRAR, STRAUS) by Richard Williams
	Other References	• The Advanced Art of Stop-Motion Animation by Ken A. Priebe • Stop Motion: Craft Skills for Model Animation, Second Edition (Focal Press Visual Effects and Animation) by Susannah Shaw

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2021-2022**
Branch: NA		**Semester: II**
1	Course Code	**BJN 110**
2	Course Title	**First Aid and Health (Co- Curricular)**
3	Credits	2
4	Contact Hours (L-T-P)	**0-2-0**
	Course Type	Compulsory ~~/Elective/Open Elective~~
5	Course Objective	Inform students about the basic first aid and health
6	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Learn the skill needed to assess the ill or injured person. **CO2**: Learn the skills to provide CPR to infants, children and adults. **CO3**: Learn the skill to identify Mental Health status and Psychological First Aid **CO4**: Learn the skills to handle emergency child birth **CO5**: Learn the Basic sex education help young people navigate thorny questions responsibly and with confidence. **CO6**: Learn the Basic sex education help youth to understand Sex is normal. It's a deep, powerful instinct at the core of our survival as a species. Sexual desire is a healthy drive. **CO7**: Help to understand natural changes of adolescence
7	Course Description	The course is designed to inculcate the basic understanding of first aid and health among the students.
8	Outline syllabus	
	Unit 1	A. Basic First Aid • Aims of first aid & First aid and the law. • Dealing with an emergency, Resuscitation (basic CPR). • Recovery position, Initial top to toe assessment. • Hand washing and Hygiene • Types and Content of a First aid Kit B First AID Technique • Dressings and Bandages. • Fast evacuation techniques (single rescuer). • Transport techniques. ***C.*** First aid related with respiratory system • Basics of Respiration. • No breathing or difficult breathing, Drowning, Choking, Strangulation and hanging, • Swelling within the throat, Suffocation by smoke or gases and Asthma. D. First aid related with Heart, Blood and Circulation • Basics of The heart and the blood circulation. • Chest discomfort, bleeding. ***D.*** First aid related with Wounds and Injuries • Type of wounds, Small cuts and abrasions • Head, Chest, Abdominal injuries • Amputation, Crush injuries, Shock

		E. First aid related with Bones, Joints Muscle related injuries • Basics of The skeleton, Joints and Muscles. • Fractures (injuries to bones). F. First aid related with Nervous system and Unconsciousness • Basics of the nervous system. • Unconsciousness, Stroke, Fits – convulsions – seizures, Epilepsy. G. First aid related with Gastrointestinal Tract • Basics of The gastrointestinal system. • Diarrhea, Food poisoning. H. First aid related with Skin, Burns • Basics of The skin. • Burn wounds, Dry burns and scalds (burns from fire, heat and steam). • Electrical and Chemical burns, Sun burns, heat exhaustion and heatstroke. • Frost bites (cold burns), Prevention of burns, Fever and Hypothermia.
	Unit 2	I. First aid related with Poisoning Poisoning by swallowing, Gases, Injection, Skin J. First aid related with Bites and Stings Animal bites, Snake bites, Insect stings and bites K. First aid related with Sense organs • Basic of Sense organ. • Foreign objects in the eye, ear, nose or skin. • Swallowed foreign objects. L. SpecIfic emergency satiation and disaster management • Emergencies at educational institutes and work • Road and traffic accidents. • Emergencies in rural areas. • Disasters and multiple casualty accidents. • Triage. M. Emergency Child birth
	Unit 3	Basic Sex Education • Overview, ground rules, and a pre-test • Basics of Urinary system and Reproductive system. • Prevention of sexually transmitted diseases. • Male puberty — physical and emotional changes • Female puberty — physical and emotional changes • Male-female similarities and differences • Sexual intercourse, pregnancy, and childbirth • Facts, attitudes, and myths about LGBTQ+ issues and identities • Birth control and abortion • Sex without love — harassment, sexual abuse, and rape
	Unit 4	Mental Health and Psychological First Aid • What is Mental Health First Aid? • Mental Health Problems in the India • The Mental Health First Aid Action Plan • Understanding Depression and Anxiety Disorders

		• Crisis First Aid for Suicidal Behavior & Depressive symptoms • What is Non-Suicidal Self-Injury? • Non-crisis First Aid for Depression and Anxiety • Crisis First Aid for Panic Attacks, Traumatic events • Understanding Disorders in Which Psychosis may Occur • Crisis First Aid for Acute Psychosis Understanding Substance Use Disorder • Crisis First Aid for Overdose, Withdrawal • Using Mental Health First Aid
		Suggested Readings: • Indian First Aid Mannual-https://www.indianredcross.org/publications/FA-manual.pdf • Red Cross First Aid/CPR/AED Instructor Manual • https://mhfa.com.au/courses/public/types/youthedition4 • Finkelhor, D. (2009). The prevention of childhood sexual abuse. Durham, NH: Crimes Against Children Research Center. • www.unh.edu/ccrc/pdf/CV192. pdf • Kantor L. & Levitz N. (2017). Parents' views on sex education in schools: How much do Democrats and Republicans agree? PLoS • ONE, 12 (7): e0180250. • Orenstein, P. (2016). Girls and sex: Navigating the complicated new landscape. New York, NY: Harper. • Schwiegershausen, E. (2015, May 28). The Cut. www.thecut.com/2015/05/most-women-are-catcalled-before-they-turn-17.html • Wiggins, G. & McTighe, J. (2008). Understanding by design. Alexandra, VA: ASCD. • https://marshallmemo.com/marshall-publications.php#8

Semester III

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: III**
1	**Course Code**	**BSA221**
2	**Course Title**	**3D Animation I**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**1-1-2**
	Course Status	**Core Compulsory**
5	**Course Objective**	Learn the tools to create 3d animation. Applying principles of animation for 3D Animation. Discover the significance of Rig and its effective use in Animation. Understand the workflow in 3D, to create animation.
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Recognize the workspace and tools to create 3D object and character animation. **CO2**: Compare 3D to traditional animation techniques. **CO3**: Apply the techniques to creating 3D Animation. **CO4**: Analyze timing and sequencing of Animation. **CO5**: Design Rigged models for Animation. **CO6**: Develop skills of working with Graphs.
7	**Course Description**	Students will learn how to use Maya software for animation. They will learn Maya Interface for animation, how to set key poses, breakdowns and In-betweens to create an animation. They will apply classical animation principles to computer animation to get quality animation as per requirement. They will learn the exploration of Graph Editor, Dope Sheet and it's editing tools**.**
8		
	Unit 1	**Unit 1 Art of Animation**
		Topic A Importance of Classical Animation Principles Topic B Evolution and development of 3D Animation Topic C Evolution of Technology in 3D Animation
	Unit 2	**Unit 2 3D Animation Workspace**
		Topic A User Interface and Navigation Topic B Creating Basic asset and animation Topic C Saving and exporting
	Unit 3	**Graph Editor**
		Topic A Key Frame manipulation Topic B Animation Curves Topic C Dope Sheets
	Unit 4	**Applying Animation Principle Stretch and Squash**
		Topic A Bouncing Ball Experiment Topic B Different Weight ball bounce experiment Topic C Material Behaviour

	Unit 5	**Applying Animation Principle Arcs and Exaggeration**		
		Topic A Collision detection and animation of bouncing ball Topic B Pendulum animation study Topic C Follow through, overlap and wave motion animation		
	Mode of examination	Jury		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	• Introducing Autodesk Maya 2016: Autodesk Official Press		
	Other References	• Maya Character Creation: Modeling and Animation Controls By Chris Maraffi		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: III**
1	**Course Code**	**BSA222**
2	**Course Title**	**Photography**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**1-2-0**
	Course Status	**Core Compulsory**
5	**Course Objective**	Impart knowledge in Photography as an artistic medium. Understand the tools and techniques of Photography Create effective storytelling through photography.
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1:-** Describe and Demonstrate the camera to capture artistic imagery. **CO2:-** Relate and Apply techniques to create a unique photography style. **CO3:-** Articulate to Analyze the photography through technical information **CO4:-** Use effective storytelling through photography. **CO5:** Categorize and Define Photography for VFX. **CO6:-** Plan the Modern Accessories for VFX Photography.
7	**Course Description**	Students Will Learn The Core Basic of Digital Photography, effects of lights and its artistic arrangement. It will helpful for them in creating VFX environment, Matte painting etc,
8	**Outline syllabus**	
	Unit 1	**History of Photography**
		Topic A Principle of Camera Obscura Topic B Photography artist study Topic C Aesthetics study of photography in documentary and creative photography.
	Unit 2	**Characteristics of Light**
		Topic A Light Spectrum and color Temperature Topic B Camera structure and their functions Topic C Camera Lenses and their types
	Unit 3	**Lighting Techniques**
		Topic A Indoor and Outdoor light study Topic B Light Kits and Reflectors Topic C Light study through Black and White Photography
	Unit 4	**Accessories used in Photography**
		Topic A Exposure and Controls Topic B Flash and Lighting Topic C Reflectors
	Unit 5	**Creative Photography**
		Topic A Macro Photography Topic B Light Painting and Freeze Frame Photography Topic C HDRI and Panoramas
	Mode of examination	Jury/Practical/Viva

	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	• Digital Photography Step by Step - Tom, Ang		
	Other References	• The Complete Digital SLR Handbook: Master Your Camera to Take Pictures Like a Pro		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: III**
1	**Course Code**	**BSA223**
2	**Course Title**	**Pre -Production I**
3	**Credits**	**2**
4	**Contact Hours (L-T-P)**	**1-1-0**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	To impart skills in writing stories / script and visualization for Animation Films and the ability to plan an animation film.
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Recognize the Pre-Production stage for Animation & VFX. **CO2**: Classify your ideas for story. **CO3**:-Complete process of Script writing. **CO4**:-Analyze visual representation of a script as Storyboard. **CO5**: Write camera plan and movement. **CO6**:-Create Sound, Music and animatic.
8	**Course Description**	Students will learn Design & Theory concept of Digital Art. They will understand the possibilities of Digital art by learning Digital Application, Tools, Drawing, and Inking & Painting. This further helps them to create Digital Painting, Info graphics & Character.
9	**Outline syllabus**	
	Unit 1	Film Format and its Ratios
	1	Medium and Formats - Film, Frame Rate, Size and Gauge,
	2	Tele Cine and Reverse Tele Cine. Television, Frame Rate, PAL, NTSC, SECAM.
	3	Aspect Ratio, Camera, Lens and Projection Systems, TV Safe.
	4	Emerging Trends and Digital Films, High Definition Imaging
	Unit 2	Scripts
	1	Anatomy of a Story & Script Elements
	2	Scene Heading , Action, Characters. Dialogue
	3	Parenthetical, Extension, Transition, Shots, Dual Dialogue,
	4	Abbreviations and Montages
	5	A Series of Shots and Short Lines/Poetry/Lyrics – transitions, continuity.
	Unit 3	Story telling Techniques
	1	Research - Period - Historic / Scientific facts, Society Costumes Props, Food etc.
	2	Illustration, Anatomy, Rendering your drawings.
	3	Techniques and styles, Inking – Graphic styles, Text – as image.
	4	Page Elements and Composition.
	5	Projecting figures in Deep space, Framing and Composition.
	6	Perspective and Camera.
	7	Concept Art and Matte Painting.
	Unit 4	Storyboarding

	1	What is Storyboard
	2	Importance of Story Board,
	3	difference between storyboard and Graphic Comic,
	4	Difference between Storyboard and Presentation Board.
	5	Advantages of Storyboard in Animation,
	6	Anatomy of a Storyboard, Thumbnail Storyboard,
	7	Preparing Storyboards using Digital software.
	8	Advanced Storyboard Techniques,
	9	Various Camera Shots and Camera Moves
	Unit 5	Sound editing and Design
	1	Sound Effects Music and Foleys
	2	Dialogue, Dialogue writing and Recording of dialogue,
	3	The spoken language Dialect and Accent.
	4	Voice acting/ modulation.
	5	Cast, Scratch Audio Track,
	6	Shooting the Storyboard,
	7	Slugging the Storyboard,
	8	Animatic.
	Evaluations	Jury
	Weightage Distribution	CA=60% MTE=0% ETE= 40%
	Text book/s*	• The Art of story board by John Hart • 'How to Write for Animation' by Jeffrey Scott's book

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: III**
1	**Course Code**	**BSA224**
2	**Course Title**	**Character Design Concepts**
3	**Credits**	**2**
4	**Contact Hours (L-T-P)**	**1-1-0**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	This is a course aims to develop an understanding, keen sense of observation and the aspects that establish one's environment and the people that live in it as being inseparable and interdependent. Understanding the symbiotic relationship in order to be able to conceptualize and visualize personalities and locations for animated films. Sensitizing students to the world we live in and develop a keen sense of observation of human behavior and their worlds. The course also lays emphasis on body language, mime, theatre and other aspects that contribute to a better understanding of the above. Body language and how we communicate – between persons and individually, between persons and the animal world, between the human and the object world, between real and the imagined – behavior. Theatre and acting – its relevance and power in animated films. Bringing to life and establishing believability
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Define the Development of Concept &Visualization. **CO2**:-Interpret Mind mapping & Mood board Design. **CO3**: Discover basic similarities in human and animal anatomy. **CO4**:-Connect your character in story with costume, prop and environment. **CO5**: Illustrate the Craft of Concept art, Character Design & Environment Design. **CO6**:-Develop Character model sheet, Expression Chart, Prop sheet etc.
8	**Course Description**	Students will learn Design & Theory concept of Concept art, Character Design & Environment Design. They will study how to get ideas from their surrounding, developing the concepts & final Design.
9	**Outline syllabus**	
	Unit 1	Character Bible
	1	Biography of character
	2	Visualizing the Character
	3	Creating Characters from life study.
	4	Story and the role of characters.
	5	Symbolism and significance of all sorts of characters
	Unit 2	Character Design
	1	Elements of Character Design
	2	Personality, attitude, role, function.
	3	Character Bible and model sheets,
	4	Stereotypes
	Unit 3	Anthropomorphic Character
	1	Design of Anthropomorphic Animals and Objects

	2 3	Anthropomorphic and alien characters Fantasy Characters
	Unit 4	Costume and Props
	1	Costume with character
	2	Costume and color
	3	Character Inspiration from costume
	4	Imaginative design.
	5	Pets and props
	6	Character styles
	7	Anime Style
	8	Aesthetics in anime characters
	Unit 5	Handouts
	1	Various Elements of Handouts
	2	Model Sheet
	3	Turnaround Sheet
	4	Proportion Chart
	5	Scale Sheet
	6	Expression and Mouth Chart
	7	Colour Reference Sheet
	8	Prop Sheet.
	9	BG & Layout
	Evaluations	Jury
	Weightage Distribution	CA=60% MTE=0% ETE= 40%
	Text book/s*	• Animation Techniques - Roger Noake, Publisher: Booksales, • Cartooning: The Ultimate Character Design Book - Christopher Hart (Author) • Creating Characters with Personality: For Film, TV, Animation, Video Games, and Graphic Novels - Tom Bancroft (Author), Glen Keane (Introduction)

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: III**
1	**Course Code**	**BSA225**
2	**Course Title**	**Compositing Techniques -I**
3	**Credits**	**4**
4	**Contact Hours (L-T-P)**	**2-1-2**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	Familiarize the tools and techniques to create standard VFX shots Learn Problem solving techniques to rectify the errors during compositing. Create content for broadcast, feature film and web animation
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1:** Describe Compositing & its throughout Development **CO2:-**Define Projection, Exposure & Visual Information. **CO3:-**Summarize Practice Digital Imaging & Manipulation. **CO4:** Teach Layer & Node System, Keying & Matting. **CO5:-** Categorize Live & Virtual Camera and 3D Compositing. **CO6:-** Design Evaluate video art, tools and techniques.
8	**Course Description**	Students will learn core concepts of 2D & 3D Digital Compositing, Historical Development, Creating Virtual Realm & Video Art.
9	**Outline syllabus**	
	Unit 1	**History of Compositing**
	1	Terminologies
	2	Physical Compositing, Multiple exposure,
	3	Background Projection, Matting,
	4	Digital Compositing,
	5	Node based and Layer Based Compositing.
	6	Visual information and the camera,
	Unit 2	**Digital Image**
	1	Digital Image Generation, Pixels, Components and Channels,
	2	Bit Depth, Floating point and High Dynamic Range Imagery,
	3	HSV Color, YUV color, Digital Image file formats, Channels, Compression.
	4	Color Manipulation, Levels, Variations, Multiply, Add,
	5	Gamma Correction, Exposure Correction, Invert, Contrast, HSV manipulations
	Unit 3	**Layers**
	1	Layer and Node based compositing.
	2	Blending layers, Matte Image, Masking, Morphing - Chroma Keying, Garbage Mattes, Edge Mattes, Luminance Keying, Chrominance Keying, Difference Matting, Plug-ins and tools for keying.
	3	Tracking and Stabilization, Tracking an element, 2D tracking, Perspective tracking, Stabilizing footage.
	4	Limitations of tracking and stabilizing tools.

	5	Tools for advanced tracking and match moving.
	6	Digital Imagery, Color Correction
	Unit 4	**Lighting and Composition**
	1	Creating elements, Lighting in compositing tool, Matching live and virtual cameras.
	2	3D Compositing, Vanishing point conversion, creating 3D compositing using 2D images,
	3	Working with camera and lighting, effects, Working with Multipass Rendering, Alpha and Luma mattes, Z depth maps, Blending passes and effects .
	4	Animation, 2D and 3D transformation, Temporal and spatial interpolation, speed graph, optimizing key frames, expressions for animation, Time Remapping
	Unit 5	**Theory and Practice of Video Art**
	1	History of Video Art, Contemporary video style, culture and emotion reference -
	2	Video synthesizer, real-time video art, tools and techniques, applications -
	3	Music visualization and media art, automation to music, applications and tools
	4	Video art as art form, Interactive film, display and projection, case studies.
	5	Learning Lab: 1. Create 2.5D Animation of an exterior and interior scene. 2. Animate a slideshow using images imported into compositing. 3. Track and composite chroma footage to a background, color correct the scene for film. 4. Animate and composite 3D rendered passes with 2D footages.
	Evaluations	**Jury**
	Weightage Distribution	**CA=60%** **MTE=0%** **ETE= 40%**
	Text book/s*	• Compositing Digital Images - T. Porter and T. Duff I Proceedings of SIGGRAPH '84, 18 (1984) I • The Art and Science of Digital Compositing - Ron Brinkman • Wright's Compositing Visual Effects: Essentials for the Aspiring Artist [Paperback]2007) - Paperback (2007) - Wright • Compositing Visual Effects – Essentials for aspiring artists - Steve Wright

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: III**
1	**Course Code**	**BSA226**
2	**Course Title**	**Layout Design Concepts**
3	**Credits**	**2**
4	**Contact Hours (L-T-P)**	**1-0-2**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	To learn the power of observation and re-telling – interpretation – exploration and experiment To learn how to represent this analysis through images – methods, styles and mediums Visualizing the geography of the environment in which the characters perform To explore the development of characters and personalities and their environments for imaginary worlds and establish relationships between the imagined characters and the worlds that they inhabit. Exploring the imaginary world – reality, imagination and visualization To learn the process and apply it in any context
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Recognize and analysis of Geographical Surrounding **CO2**: Define the Design of Environment. **CO3**:-Summarize the Visualizing an idea & Setting the stage. **CO4**:-Discover how to dramatize space & exaggerated perspectives. **CO5**: Connect the Layout a scene & Camera movement **CO6**: Develop Pre-viz in Motion.
8	**Course Description**	Students will learn Design & Theory concept of Concept art, Character Design & Environment Design. They will study how to get ideas from their surrounding, developing the concepts & final Design.
9	**Outline syllabus**	
	Unit 1	**Building environments**
	1	Study and analysis of context – geography, environments.
	2	Cultural aspects and situations.
	3	Story, - Setting the stage - Translation of script.
	4	Visualizing an idea - storyboard - set the stage for the film
	5	Creating a clear working plan – plan of action and the framework for the animator.
	6	Film language, visualization, and film sense
	Unit 2	**Visualization**
	1	Visualization dramatization of space
	2	Exaggerated perspectives & Laying out a scene
	3	Space and time, framing, camera, and other kinds of spaces and timing.
	4	Aspect Ratio, field guides. Laying out the Animation.
	5	Camera movement calculation to animation

	6	Matching speeds. Multiplane. Colour Notations Combining action of the character within the layout.
	Unit 3	**Layouts & Perspective Drawing**
	1	Liner Perspective
	2	Atmosphere Perspective
	3	Eye Levels
	4	POV
	Unit 4	**Rendering**
	1	Rendering styles and techniques
	2	Inking/Paint
	3	Elements and Composition
	4	Projecting figures in Deep space
	5	Framing and Composition
	6	Perspective and Camera
	Unit 5	**Camera movement**
	1	Camera movement and calculations
	2	Movement of the character within a shot.
	3	Tracking every frame on a dope sheet according to the storyboard.
	4	Rough visualization of shot and movements and final defined art works in 2d/3D.
	Evaluations	Jury
	Weightage Distribution	CA=60% MTE=0% ETE= 40%
	Text book/s*	• The Animator's Eye: Adding Life to Animation with Timing, Layout, Design, ColorandSound-FrancisGlebas(Sep 24, 2012) • Walt Disney Animation Studios The Archive Series #4: Layout & Background (Walt Disney Animation Archives) - Walt

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2022-23**
Branch: NA		**Semester: III**
1	Course Code	**BJN207**
2	Course Title	**Radio Jockeying and Programme Production (Vocational)**
3	Credits	**3**
4	Contact Hours (L-T-P)	**0-2-2**
	Course Type	Compulsory ~~/Elective/Open Elective~~
5	Course Objective	The objective of this course is to: Familiarize the students with different aspects of Radio Programming & Radio Production Understand how to conceptualize and deliver radio programmes. To understand the importance of Voice, punctuation & vocabulary in Radio Programming Understand the difference between outdoor and studio-based Radio production.
6	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define Radio as a medium, its working & the audio equipment involved in programming. **CO2**: Explain sound and its importance in radio programming **CO3**: Outline and develop different kinds of radio programmes **CO4**: Demonstrate the basic techniques of presenting the radio programs in an effective manner **CO5**: Develop an understanding of creativity in audio medium and learn different techniques of audio recording and editing **CO6**: Elaborate their practical knowledge & produce their own projects.
7	Course Description	This course is specially designed to deal with various elements of radio production process. Beginning with conceptualization of the radio programme, various stages of the production process keeping in view the nature of audience and the zone of broadcast will also be dealt with.
8	Outline syllabus	
	Unit 1	**Radio: An Introduction**
	A	Introduction to radio, its development as a medium of mass communication.
	B	Functions, Characteristics & limitations of Radio. Different types of Radio: Commercial Radio, Community Radio, Satellite Radio & Internet Radio
	C	Introduction to Sound, Importance of Sound in Producing Radio Programmes, Doppler Effect
	Unit 2	**Radio Format & different stages**
	A	Stages of Radio Production a. Pre-Production – (Idea, research, script) b. Production–Creative use of Sound; Listening, Recording, using archived sounds, (execution, requisite, challenges), c. Post Production
	B	Different formats of radio programmes
	C	Programme format V/s Station format: Music and Non music formats, different formats- talk, discussion, interviews, magazine show, fillers documentary, features etc.

	Unit 3	**Radio Jockeying**	
	A	Voice Modulation Pitch, Tempo, Phoenetics, the art of proper articulation and pronunciation, voice projecting.	
	B	Use of microphones & Console handling	
	C	OB recordings & Live shows.	
	Unit 4	**Radio: Writing & Editing**	
	A	Writing for Radio- Styles & Structure	
	B	Art of taking Interview for Radio	
	C	Radio Editing: Tools & Techniques	
	Unit 5	**Radio Programmes Production**	
	A	Producing Radio Interviews, Talks, Magazine Show, Phonos	
	B	Producing Public Service Announcement, Promo and Jingles	
	C	Final Project Submission and Presentation	
	Mode of examination	Jury	
	Weightage Distribution	CA	ETE
		60%	40%
	Text book/s*	• Keith, Michael C & Krause, Joseph M. (1989) — "The Radio Station".	
	Other References	• Aspinall, R. (1971) Radio Production, Paris: UNESCO. • Flemming, C. (2002) The Radio Handbook, London: Routledge. Keith, M. (1990) • Radio Production, Art & Science, London: Focal Press McLeish, R. (1988) • Techniques of Radio Production, London: Focal Press • Chatterji, P.C. (1993) — "Indian Broadcasting".	

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2022-2023**
Branch: NA		**Semester: III**
1	Course Code	**BJN 208**
2	Course Title	**Human Values and Environmental Studies (Co-Curricular)**
3	Credits	2
4	Contact Hours (L-T-P)	**0-2-0**
	Course Type	Compulsory ~~/Elective/Open Elective~~
5	Course Objective	The mission of the course on Human Values and Environmental Studies is to create morally articulate solutions to be truthful and just and to become responsible towards humanity.
6	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Building fundamental knowledge of the interplay of markets, ethics, and law, **CO2**: Look at various challenges faced by individual to counter unethical issues **CO3**: Look at core concepts for business ethics **CO4**: Look at core concepts of anti-corruption **CO5**: Look at core concepts for a morally articulate solution evolver to management issues in general, **CO6**: Issues of sustainable development for a better environment. **CO7**: To know how environmental degradation has taken place. **CO8**: Be aware of negotiations and international efforts to save environment. **CO9**: How to develop sustainably? **CO10**: Efforts taken up by UN in Sustainable Development.
7	Course Description	The course is designed to establish a continuous interest in the learners to improve their thought process with intent to develop a new generation of responsible citizens capable of addressing complex challenges faced by the society due to disruptions in human **interactions** effecting human values.
8	Outline syllabus	
	Unit 1	**Human Values –** • Introduction - Values, Characteristics, Types, Developing Value system in Indian Organisation, Values in Business Management, value based Organisation , Trans – cultural Human values in Management. • Swami Vivekananda's philosophy of Character Building, Gandhi's concept of Seven Sins, APJ Abdul Kalam view on role of parents and Teachers. • Human Values and Present Practices – Issues: Corruption and Bribe, Privacy, Policy in Web and Social Media, Cyber threats, Online Shopping etc. Remedies UK Bribery Act, Introduction to sustainable policies and practices in Indian Economy. • Principles of Ethics Secular and Spiritual Values in Management- Introduction- Secular and Spiritual values, features, Levels of value Implementation. Features of spiritual Values, Corporate Social Responsibility- Nature, Levels, Phases and Models of CSR, Corporate Governance. CSR and Modern Business Tycoons Ratan Tata, Azim Premji and Bill Gates.
	Unit 2	**Holistic Approach in Decision making-** • Decision making, the decision making process , The Bhagavad Gita: Techniques in Management , Dharma and Holistic Management.

		Discussion through Dilemmas – • Dilemmas in Marketing and Pharma Organisations, moving from Public to Private – monopoly context , Dilemma of privatisation, Dilemma on liberalization, Dilemma on social media and cyber security , Dilemma on Organic food , Dilemma on standardization ,Dilemma on Quality standards. • Case Studies
	Unit 3	**Ecosystem**: Concept, structure & functions of ecosystem: producer, consumer, decomposer, foodweb, food chain, energy flow, Ecological pyramids Conservation of Biodiversity- In-situ & Ex- situ conservation of biodiversity Role of individual in Pollution control Human Population & Environment Sustainable Development India and UN Sustainable Development Goals Concept of circular economy and entrepreneurship
	Unit 4	**Environmental Laws?** International Advancements in Environmental Conservation Role of National Green Tribunal Air Quality Index
		Suggested Readings: • A foundation course in Human Values and Professional Ethics by RR. Gaur, R. Sangal et.al • JUSTICE: What's the Right Thing to Do? Michael J. Sandel. • Human Values by A. N. Tripathi New Age International • Environmental Management by N.K. Uberoi

Semester IV

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: IV**
1	**Course Code**	**BSA227**
2	**Course Title**	**3D Animation II**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**1-1-2**
	Course Status	**Core Compulsory**
5	**Course Objective**	Learn the tools to create 3d animation. Applying principles of animation for 3D Animation. Discover the significance of Rig and its effective use in Animation. Understand the workflow in 3D, to create animation.
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Identify the techniques to creating 3D Animation. **CO2**: Compare timing and sequencing of Animation. **CO3**: Apply the tools to create 3D object and character animation. **CO4**: Use acting techniques for reference. **CO5**: Illustrate Body Mechanics. **CO6**: Create a life like animation.
7	**Course Description**	Students will learn how to use Maya software for animation. They will learn Maya character animation, how to set key poses, breakdowns and In-betweens to create an animation. They will learn about Acting Skill, Graph Editor, Dope Sheet and it's editing tools.
8		
	Unit 1	**Unit 1 Animation Principle in 3D**
		Topic 1 Posing and Blocking Topic 2 Key frame and Easing Topic 3 Facial Animation Basics
	Unit 2	**Unit 2 Graph Editor**
		Topic 1 Controlling Animation using Graph Editor Topic 2 Interpolation and Looping Topic 3 Key frame Graph Management
	Unit 3	**Unit 3 Path Animation**
		Topic 1 Visualizing the movement of camera and creating paths. Topic 2 Camera Parameters Topic 3 Manipulating Path Animation
	Unit 4	**Unit 4 Character Animation**
		Topic 1 Character Poses [Normal and Extreme] Topic 2 Breakdown Poses. Topic 3 Timing Topic 4 Polishing
	Unit 5	**Unit 5 Basic Body Mechanics and Motion**

		Topic 1 Walk cycles with personality Topic 2 Study of character weight and balance Topic 3 Character Movement study. [Dance, Climbing a wall. Etc**]**		
	Mode of examination	Jury		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	• Introducing Autodesk Maya 2016: Autodesk Official Press		
	Other References	• Maya Character Creation: Modeling and Animation Controls By Chris Maraffi		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: IV**
1	**Course Code**	**BSA228**
2	**Course Title**	**Pre-Production II**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**1-2-0**
	Course Status	**Core Compulsory**
5	**Course Objective**	To impart skills of conceptualizing and designing characters from the story and provide knowledge and information for designing the layouts in color.
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Describe the fundamentals of Character Visualization& Design. **CO2**: Classify different human facial expressions. **CO3**: Sketch Anthropomorphic character **CO4**: Categorize expression chart, Model sheet, Prop sheet etc. **CO5**: Develop Layout Design **CO6**: Create Various kind of Perspective Drawing & Camera Aspect ratio.
7	**Course Description**	This subject will provide a correct approach of drawing to be utilized in animation industry. It teaches Line of Action, Weight, Balance and exact drawing approach for animation.
8	**Outline syllabus**	
	Unit 1	**Character Design**
		Character Visualization & Character Bible Stereotypes & Developing Character for Comics Developing Character Films and TV Episode. Elements of Character Design Creating Characters from Life
	Unit 2	**Anthropomorphism**
		Definition and meaning, Use of Anthropomorphic Characters in Modern Literature, Films and Television Theo Morphs and Pathetic Fallacy
	Unit 3	**Handouts**
		Preparing handouts Importance of Handouts Various Elements of Handouts Model Sheet, Turnaround Sheet, Proportion Chart, Scale Sheet Expression and Mouth Chart Color Ref Sheet, Prop Sheet, Contemporary Designs.
	Unit 4	**Layout Design**
		Introduction to Layout & importance of layout in Animation Perspective- one point, two point, Three point Cinematic Camera Angles. Preparing/Posing Layouts, Aspect Ratio, field guides, Schematic mapping Camera Movements – tracking, zoom, panorama, Camera movement calculation to

		animation		
	Unit 5	**BG Design**		
		BG Design and painting – levels, depth, perspective - Transitioning to move from one kind of space to another in a single background. Planning and design. Color Notations, Landscapes, Cityscapes Laying out the Animation, Concept sketches, Interior/exteriors, Passage of time, Different moods, Spaces, Design of elements, Treatment.		
	Mode of examination	Jury		
	Weightage Distribution	CA 60%	MTE 0%	ETE 40%
	Text book/s*	• Cartoon Animation (The Collector's Series) [Paperback], Preston Blair • Animation Art: From Pencil to Pixel, the world of Cartoon Anime and CGI- Jerry Beck • The Animation Bible: A Practical Guide to the Art of Animating from Flipbooks to Flash [Paperback], Maureen Furniss. • Character Animation Crash Course! [Paperback] Eric Goldberg.		
	Other References	• Animation: From Concepts and Production Book by Hannes Rall		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: IV**
1	**Course Code**	**BSA229**
2	**Course Title**	**Compositing Techniques -II**
3	**Credits**	**4**
4	**Contact Hours (L-T-P)**	**1-2-2**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	Familiarize the Concepts and techniques used in compositing To familiarize in Advanced In-Depth Compositing
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Define Compositing & Channels System. **CO2**: Contrast the core fundamentals of Color Correction. **CO3**: Solve and Exercise In-depth Compositing. **CO4**: Connect the Layer & Node System **CO5**: Take apart Advanced In-Depth Compositing **CO6**: Design Camera Projection.
8	**Course Description**	Students will learn core concepts of 2D & 3D Digital Compositing, Historical Development, Creating Virtual Realm & Video Art.
9	**Outline syllabus**	
	Unit 1	**Channels**
	1	Pass Management,
	2	Bit Depth Allocation
	3	Finding The Best Depth Channels
	4	Color Channels for the Project
	Unit 2	**Color Correction**
	1	The LUT use and Specifications
	2	Finding the Black's and White's Node reusing to Maintain Color Correction
	3	Use of Plugin's in 3D Channels
	Unit 3	**Advanced In-Depth Compositing,**
	1	Concepts and Techniques to Compositing Foliage
	2	Learn to Composite Hair and Fur
	3	Creating and Merging Horizon Lines
	4	Using Vector Blur For Quicker Results
	Unit 4	**Layer, Node & Projection**
	1	Creating Macro's and Dummies,
	2	3D Layers / Nodes in Brief,
	3	3D Camera Projection and Tracking,
	4	3D Channels and Depth Creation,
	5	RGB Mattes and Rotoscopy Solutions.
	Unit 5	**Compositing Lab**
	1	Compositing a Cityscape with Live Footage.

	2	Compositing an Explosion Accident.
	3	Compositing an Live scene with Multiple CG Characters.
	4	Compositing a natural Disaster scene.
	Evaluations	Jury
	Weightage Distribution	CA=60% MTE=0% ETE= 40%
	Text book/s*	• Compositing Digital Images - T. Porter and T. Duff I Proceedings of SIGGRAPH '84, 18 (1984) I • The Art and Science of Digital Compositing - Ron Brinkmann • Wright's Compositing Visual Effects: Essentials for the Aspiring Artist [Paperback]2007) - Paperback (2007) - S.Wright • Compositing Visual Effects – Essentials for aspiring artists - Steve Wright

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: IV**
1	**Course Code**	**BSA230**
2	**Course Title**	**Cinematography**
3	**Credits**	**2**
4	**Contact Hours (L-T-P)**	**1-0-2**
	Course Status	**Core Compulsory**
5	Course Objective	Discover the concept of Art of Cinema Allows students to learn, observe, analyze and visualize editing Tools and Techniques. Analyze the Use, types, working and application of camera and its accessories. Appraise the various elements of cinematography and camera Layout.
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1:-** Explain the significance of Cinematography. **CO2:-** Cite the role of Editing and its techniques in cinematography. **CO3:-** Articulate the role of Camera and its techniques in cinematography. **CO4:-** Conclude the Concepts of camera in Cinematography. **CO5:-** Devise camera in Action: Camera Movement, Angles and Composition for Cinematography. **CO6:-** Write the significance of 3D and Live action cameras for shooting..
7	**Course Description**	This subject gives discover the role of Camera and its techniques in cinematography and introduces cinematography students to the language and craft of directing. From screenplay analysis to shot composition, students learn how Directors and Cinematographers collaborate to achieve a complete vision.
8	**Outline syllabus**	
	Unit 1	**The Art of Cinema**
		Topic 1 Discover the basic elements of Cinematography. **Topic 2** To learn, observe, analyzing, and Case study Alfred Hitchcock. **Topic 3** Discover significance of visual narration and various Visual Devices in narration.
	Unit 2	**The Art of Presentation**
		Topic 1 Concept of Editing and its Application **Topic 2** Discovering Editing Tools **Topic 3** Discovering Editing Techniques.
	Unit 3	**Introduction of Camera**
		Topic 1 Introduction of Camera, types, and its properties. **Topic 2** Human eye vs. Camera **Topic 3** Working of a Camera
	Unit 4	**Principles and Concepts of Camera**
		Topic 1 Discover the Principles of Camera **Topic 2** Significance of Concepts of Camera. **Topic 3** Perspective, Lighting and shading in Outdoor and Indoor study.
	Unit 5	**Cinematography**

		Topic 1 Principles and Concepts of Cinematography **Topic 2** Significance of Camera Shots and its types **Topic 3** Concept of Digital Cinematography		
	Unit 6	**Camera Movement**		
		Topic 1 Working of Camera Angles **Topic 2** Working of Camera motion Topic 3 Camera Accessories		
	Mode of examination	Jury		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2022-23**
Branch: NA		**Semester: IV**
1	**Course Code**	**BSA231**
2	**Course Title**	**Rotoscopy & Paint**
3	**Credits**	**2**
4	**Contact Hours (L-T-P)**	**1-0-2**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	To impart technical skills in Rotoscopy and painting and application knowledge for different requirement.
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1:** Define the Core Fundamentals of Rotoscopy. **CO2:** Describe the Shapes & Matte. **CO3:** Summarize the Tracking Techniques. **CO4:** Teach Roto Paint. **CO5:** Illustrate Hard Surface Roto With Tracking **CO6:** Modify Blur & Motion Blur
8	**Course Description**	Students will Learn& understand about Roto & paint, the one of the important part of visual effects, Keying, Matting & removing of unwanted elements from live plates.
9	**Outline syllabus**	
	Unit 1	**Rotoscopy**
	1	History of Rotoscopy & Terminologies
	2	Latest tools for Roto & Shortcuts to work faster
	3	Understanding the frame, shot length
	4	planning the matte usage, Multiple shapes & Repeating shapes,
	5	Keying animation & Motion paths
	Unit 2	**Creating Shapes**
	1	Creating splines
	2	Transitioning between shapes
	3	Working with pivot points
	4	Key frame placement and types
	5	Working with Blur & Motion blur
	6	Checking the mattes and jitter
	Unit 3	**Tracking**
	1	Tracking and scale and rotation
	2	Multiple transforms
	3	Averaging tracks
	4	Corner pinning
	5	Stabilizing footage
	Unit 4	**Rotoscopy**
	1	Rotoscopy Object I

	2	Rotoscopy Human, Isolating extremities, Joints, Hands, Overlap,
	3	Rotoscopy Human fixed shapes, faces and heads, hair
	4	Rotoscopy movement, fast and slow movement
	5	Tracking to optimize roto
	Unit 5	**Painting**
	1	Concepts and tools for painting
	2	Cleaning plates
	3	Wire and Rig Removal
	4	Pixel restoration.
	Evaluations	Jury
	Weightage Distribution	CA=60% MTE=0% ETE= 40%
	Text book/s*	• Rotoscopy a footage containing minimum character movements and no camera movement. • Track and Rotoscopy footage with camera movement and fast movement of the characters. • Remove wire, foliage's and destructions from the footage using Rotoscopy.

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2022-2023**
Branch: NA		**Semester: IV**
1	Course Code	**MCC 301**
2	Course Title	**Community Connect**
3	Credits	**2**
4	Contact Hours (L-T-P)	**0-2-0**
	Course Type	~~Compulsory~~ /**Co-Requisite**/~~Pre-Prerequisite/Elective/Open Elective~~
5	Course Objective	To let the student engage and connect directly with the community/society. In this survey-based course students will get hand-on experience of the real- world situation by directly accessing and analyzing the information collected from the people in the community under study. The course aims to sensitize the student towards society and social issues. This course will also give a proper field exposure to the student, where student will not only interact with the community but will analyze the data and try to find solutions to the larger issues affecting the community and the country at large.
6	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Apply the knowledge and skills acquired during classroom teaching. **CO2**: Contribute to the society by bringing out the issues and the necessary solutions. **CO3**: Identify the issues in the community/society **CO4**: Develop sense of belonging, sympathy and responsibility towards society. **CO5**: Evaluate the importance of community engagement in higher education. **CO6**: Create research plans for the betterment of the society.
7	Course Description	This course is design especially for the students to connect with the community and understand the problems of the people in the community and get a sense of belonging to the community.
7	**T**heme	**Major Sub-themes for research:** • Major developmental issue (Socio-Economic, gender, environmental etc.) • Media habits/ Media usage/Audience profiling • Media perceptions
8.1	Guidelines for Faculty Members	● It will be a group assignment (4 to 5 students), the student will work together as a team, they have to survey at least 250 respondent (per team), and the faculty guide will guide the students and approve the project title and help the student in preparing the questionnaire and final report (the faculty member will collect all the questionnaires of survey and final report and submit to CCC coordinator within stipulated time). ● The questionnaire should be well design and it should carry at least 20 questions (Including demographic questions). ● The topic of the research should be related to social, economical or environmental issues concerning the common man. ● The report should contain 2,500 to 3,000 words and relevant charts, tables and photographs.

		● The student should submit the report to CCC-Coordinator signed by the faculty guide in the assigned time frame. ● The students have to send the hard copy of the Report and PPT to CCC coordinator and then only they will be allowed for External Exam.
8.2	Role of CCC-Coordinator	The CCC Coordinator will supervise the whole process and assign students to faculty members.
8.3	Layout of the Report	Abstract(250 words) a. Front Page (sample design will be provided by Community Connect Coordinator/Mentor) b. Certificate of originality duly signed by the faculty supervisor c. Acknowledgement d. Content Page e. Abstract f. Introduction g. Objective of the report h. Methodology i. Results, finding, conclusion j. Recommendation/plan of action k. References l. Appendices Note: Research report should base on primary data.
8.4	Guideline for Report Writing	**Title Page: The following elements must be included:** Title of the article; Name(s) and initial(s) of author(s), preferably with first names spelled out; Affiliation(s) of author(s); Name of the faculty guide and Co-guide Abstract: Each article is to be preceded by a succinct abstract, of up to 250 words, that highlights the objectives, methods, results, and conclusions of the paper.
		Text: Manuscripts should be submitted in Word. ● Use a normal, plain font (e.g., 12-point Times Roman) for text. ● Use italics for emphasis. ● Use the automatic page numbering function to number the pages. ● Save your file in docx format (Word 2007 or higher) or doc format (older Word versions)
		Reference list: ● The list of references should only include works that are cited in the text and that have been published or accepted for publication. ● The entries in the list should be in alphabetical order. ● Journal article ● Hamburger, C.: Quasimonotonicity, regularity and duality for nonlinear systems of partial differential equations. Ann. Mat. Pura Appl. 169, 321–354 (1995) ● Article by DOI ● Sajti, C.L., Georgio, S., Khodorkovsky, V., Marine, W.: New nanohybrid materials for biophotonics. Appl. Phys. A (2007). doi:10.1007/s00339-007-4137-z ● Book

		● Geddes, K.O., Czapor, S.R., Labahn, G.: Algorithms for Computer Algebra. Kluwer, Boston (1992) ● Book chapter ● Broy, M.: Software engineering — from auxiliary to key technologies. In: Broy, M., Denert, E. (eds.) Software Pioneers, pp. 10–13. Springer, Heidelberg (2002) ● Online document ● Cartwright, J.: Big stars have weather too. IOP Publishing Physics Web. http://physicsweb.org/articles/news/11/6/16/1 (2007). Accessed 26 June 2007 ● Always use the standard abbreviation of a journal's name according to the ISSN List of Title Word Abbreviations, see ● www.issn.org/2-22661-LTWA-online.php ● For authors using End Note, Springer provides an output style that supports the formatting of in-text citations and reference list. ● End Note style (zip, 2 kB)
8.5	Format:	**The report should be Spiral/ hardbound** • The Design of the Cover page to report will be given by the Coordinator-CCC • Cover page • Acknowledgement • Content • Project report • Appendices • Font Times New Roman, Headings 16, subhead 14, body text 12. Justified text. Line spacing 1.5. Margins should be 3 cm at binding side, 2 cm top, bottom and remaining side.
8.6	**I**mportant Dates:	• Students needs to submit the hard copy of the report, duly signed and approved by the faculty supervisor by 20th April, 2020. • A trip to village will be organized by the University for the students in the 1st week of May. It will be mandatory for all the students. • The final jury examinations will be held as per the date sheet, announced by the Dy. COE of the school.
8.7	ETE	**The students will be evaluated by panel of faculty members on the basis of their presentation on date announced by the Dy. COE of the School.**
8.8	Method of Evaluation	Interpretative evaluation by Internal / external expert(s)
9	**Course Evaluation**	
9.01	**Continuous Assessment**	**60%**
	Questionnaire design	**20 Marks**
	Report Writing	**40 Marks**
9.02	**ETE(PPT presentation)**	**40%**

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2022-23**
Branch: NA		**Semester: IV**
1	Course Code	**TBG**
2	Course Title	**Smartphone Filmmaking (Vocational)**
3	Credits	**3**
4	Contact Hours (L-T-P)	**0-2-2**
	Course Type	Compulsory ~~/Elective/Open Elective~~
5	Course Objective	This course aims at enriching the minds of those students who have an interest in learning the techniques of filmmaking using a Smartphone for a various platform (Cinema, Television, Advertisement, Film Festivals, etc.) in the broader context of the Media and Entertainment industry
6	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define the basic concepts related to Smartphone techniques for filmmaking **CO2**: Explain the basic methods of audio-visual storytelling, developing idea, scriptwriting, casting and shooting (using a Smartphone) **CO3**: Apply basic methods of capturing cinematic images, audio and image (re)generation **CO4**: Analyze interactivity between sound, image and context **CO5**: Demonstrate skills of mobile film editing. **CO6**: Create a short film using Smartphone
7	Course Description	This course provides an introduction to Smartphone filmmaking and the use of audio integrated with visuals
8	Outline syllabus	
	Unit 1	**Smartphone Film Making**
	A	Introduction to the basic concepts of Smartphone filmmaking
	B	Why Smartphone filmmaking is an important and versatile option?
	C	Film analysis and appreciation
	Unit 2	**Introduction to Smartphone as a tool for Film Making**
	A	The Equipment
	B	Important Apps and Platform
	C	The Audio: □ Sound Perception and its use for different situation □ Importance of sound in films and introduction to sound recording □ Microphones and their pickup patterns □ Microphone placement and usage □ Sound perspective and practical application □ Recording of sound in noisy locations
	Unit 3	**Basic Smartphone Film Techniques**
	A	Photos: □ Composition, leading lines and the rule of thirds, Depth of field and selective focus
	B	Video: □ Significance of different camera angles

		□ Selection of viewpoint to heighten the drama □ Characteristics and impact of various dimensions of Shots, White balance □ Colour wheel and colour temperatures □ Gimbals and aesthetics of camera operation □ Time-lapse cinematography
	C	Audio: audio editing using apps
	Unit 4	**Idea to Screen**
	A	Story Idea and basics of screenwriting
	B	Characterization and shooting on location
	C	Lighting: □ Shooting indoor/outdoor (understanding the importance of light) □ Continuity of lighting, How to use ambient light? □ Supplementary lighting for a lit location with ambient light □Mixing a different kind of lights and colour temperatures
	Unit 5	**Editing Essentials**
	A	Imaginary line: 30 & 180-degree rule and placement of the camera
	B	Visualisation: Capture a scene in 5 shot
	C	Introduction to Video Editing using mobile apps like Kine Master
	Mode of examination	Jury
	Weightage Distribution	CA: 60% / ETE: 40%
	Text book/s*	• The Digital **Filmmaking** Handbook. Mark Brindle
	Other References	• Smartphone Movie Maker by Stoller Bryan • The Smartphone Filmmaking Handbook by Neil Philip Sheppard

School: SMFE		**Batch: 2021-2025**
Program: B. Sc. Animation & VFX		**Current Academic Year: 2022-2023**
Branch: NA		**Semester: IV**
1	Course Code	**BJN 215**
2	Course Title	**Physical Education and Yoga - Co-Curricular**
3	Credits	2
4	Contact Hours (L-T-P)	**0-2-0**
	Course Type	Compulsory /~~Elective/Open Elective~~
5	Course Objective	Learn fitness and wellness to become healthy.
6	Course Outcomes	After the completion of this course, the student will be able to **CO1**: Students will learn the introduction of Physical Education, Concept of fitness and wellness, **CO2**: Weight management and lifestyle of an individual. **CO3**: The student will also learn about the relation of Yoga with mental health and value Education. **CO4**: In this course student will also learn about the aspects of the Traditional games of India
7	Course Description	The course is designed to inculcate the understanding of wellness, fitness and yoga among students.
8	Outline syllabus	
	Unit 1	**Physical Education:** • Meaning, Definition, Aim and Objective. • Misconception About Physical Education. • Need, Importance and Scope of Physical Education in the Modern Society. • Physical Education Relationship with General Education. • Physical Education in India before Independence. Physical Education in India after Independence.
	Unit 2	**Concept of Fitness and Wellness:** • Meaning, Definition and Importance of Fitness and Wellness. • Components of Fitness. • Factor Affecting Fitness and Wellness. **Weight Management:** • Meaning and Definition of Obesity. • Causes of Obesity. • Management of Obesity. • Health problems due to Obesity. **Lifestyle:** • Meaning, Definition, Importance of Lifestyle. • Factor affecting Lifestyle. Role of Physical activity in the maintains of Healthy Lifestyle.
	Unit 3	**Yoga and Meditation**: • Historical aspect of yoga.

		• Definition, types scopes & importance of yoga. • Yoga relation with mental health and value education. • Yoga relation with Physical Education and sports. • Definition of Asana, differences between asana and physical exercise. • Definition and classification of pranayama. • Difference between pranayama and deep breathing. • **Practical**: Asana, Suraya-Namaskar, Bhujang Asana, Naukasana, Halasana, Vajrasan, Padmasana, Shavasana, Makrasana, Dhanurasana, Tad Asana Pranayam: Anulom, Vilom.
	Unit 4	**Traditional Games of India:** • Meaning. • Types of Traditional Games – Gilli Danda, Kanche, Stapu, Gutte etc. • Importance/ Benefits of Traditional Games. • How to Design Traditional Games. **Recreation in Physical Education:** • Meaning, Definition of Recreation. • Scope and Importance of Recreation. • General Principles of Recreation. • Types of Recreational Activities. • Aerobics and Zumba.(Fir India Movement)

Semester V

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: V**
1	**Course Code**	**BSA321**
2	**Course Title**	**Project Management**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**2-1-0**
	Course Status	**Core Compulsory**
5	**Course Objective**	To provide practical knowledge in setting up production studio. To prepare and plan for pitching of a project To manage the project of the production
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Describe production for different Medias. **CO2**: Compare pipeline for Different Production House. **CO3**: Complete Management of Project for Creative and Production team. **CO4**:-Categorize the Skill Set & Future development of Human Resource. **CO5**: Relate a studio blue print for Infrastructure and work force. **CO6**:- Write PR & Marketing Collaterals.
7	**Course Description**	The Purpose of the course is to provide practical knowledge in setting up production studio, prepare and plan for pitching of a project , manage the project of the production, Finance management, Manpower management and successful completion of the project.
8	**Outline syllabus**	
	Unit 1	**Production Overview**
		Topic 1 Working of Production House Topic 2 Production houses for Film Topic 3 Production houses for TV& Games
	Unit 2	**Pipeline**
		Topic 1 Requirement for a Production Pipeline Topic 2 Pipeline designing for various Production house Topic 3 A Typical Pipeline and Infrastructure
	Unit 3	**Project Management**
		Topic 1 Pipeline Management Topic 2 Project Management Topic 3 Infra Management
	Unit 4	**Human Resource**
		Topic 1- Identifying the Work force Topic 2- Recruitment Process Topic 3- Development of workforce
	Unit 5	**Studio Design**
		Topic 1 Infra Requirement Topic 2:-Facilities

		Topic 3-Safty & Security Topic 4:-Studio Publicity Promotion.		
	Mode of examination	Jury		
	Weightage	CA	MTE	ETE
	Distribution	60%	0%	40%
	Text book/s*	• The VES Handbook of Visual Effects: Industry Standard VFX Practices and Procedures - Jeffrey A. Okun, Publisher: Focal Press; 1 edition (July 8, 2010)		
	Other References	• The Visual Effects Producer: Understanding the Art and Business of VFX - Charles Finance, Susan Zwerman, Publisher: Focal Press; 1 edition (August 28, 2009)		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: V**
1	**Course Code**	**BSA322**
2	**Course Title**	**Match Moving**
3	**Credits**	**4**
4	**Contact Hours (L-T-P)**	**2-1-2**
	Course Status	**Core Compulsory**
5	**Course Objective**	Familiarize the tools and techniques to create Match moving and effects Learn Problem solving techniques to rectify the errors during the process Create content for broadcast, feature film and animation.
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**:- Define Match moving on footage in a package **CO2**:- Summarize various elements in scene in a 3D package **CO3**:- Use light; render the object and composite the result. **CO4**:- Teach Color Grading & Final composition **CO5**:- Take Apart Problem solving techniques to rectify the errors during the process **CO6** :- Write node for Exporting in Maya and Rendering
7	**Course Description**	Students will learn the core knowledge & techniques of Camera Tracking & match moving so that they can be able to add or merge 3d Elements into Live Action Footage.
8	**Outline syllabus**	
	Unit 1	**Introduction to Match Moving**
		Topic 1 Need for Match Moving in a scene. Topic 2 Science & Art of Matchmoving Topic 3 Understanding Camera and its types.
	Unit 2	**Tracking**
		Topic 1 Understanding Tracking Topic 2 Tracking Fundamentals for Match moving Topic 3 Tools and Techniques in Tracking
	Unit 3	**Match Moving Process**
		Topic 1 Tools in Match Moving Topic 2 Techniques in Match Moving Topic 3 Do's & Don't's Match Moving
	Unit 4	**Tracking**
		Topic 1 -Different types of Tracking Topic 2-Calibrating Camera Topic 3-Tracking and noise reduction
	Unit 5	**3D Integration**
		Topic 1 Set and Coordinate system Fitting Topic 2 Advanced tools and Techniques Topic 3:-Final Compilation.

	Mode of examination	Jury		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	• The Art and Technique of Match moving: Solutions for the • VFX Artist -Erica Hornung		
	Other References	• Compositing Visual Effects–Essentials for the Aspiring Artist - Steve Wright • The VES Handbook of Visual Effects - Okun J, Zwerman S		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: V**
1	**Course Code**	**BSA323**
2	**Course Title**	**Stereoscopic Techniques**
3	**Credits**	**4**
4	**Contact Hours (L-T-P)**	**2-2-0**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	To introduce the stereoscopic fundamentals, history, techniques, Methods and impart knowledge in application
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**:-Identify the Core Fundamentals of Stereoscopy. **CO2**:-Relate the Depth as a storytelling tool. **CO3:-**Teach Film-type Patterned Retarder. **CO4**:-Articulate 2D & 3D Stereoscopy workflow. **CO5**:-Take Apart the process of Anaglyph **CO6**:-Rewrite knowledge of 3D Viewer & other Display Methods.
8	**Course Description**	The students will learn about 2D & 3D Stereoscopy, Binocular vision, technique, software and complete workflow.
9	**Outline syllabus**	
	Unit 1	**Introduction to Stereo world**
	1	History of stereoscopy
	2	Overview of Stereo & Basic terms
	3	2D vs. 3D Film Aesthetics
	4	Composition and Staging & Depth of Field
	5	Principles of binocular vision
	6	Single & dual camera systems.
	7	Polarized, Anaglyph, Front and Rear projection.
	Unit 2	**Stereoscopy fundamentals and depth perception**
	1	Stereo Terminology
	2	Introduction to single-camera stereoscopic photography.
	3	Mplied motion & change blindness, stereo blindness, viewer vs scene vs object motion, size constancy.
	4	Depth Perception, Virtual vs. Real world, Computing Parallax.
	Unit 3	**Depth as storytelling tool**
	1	Comfort Limits (rules are made to be broken), Gimmick vs.
	2	Immersion in Film History, "Scoring" depth like a Film's Music Score
	3	3D hints, Stereopsis, Range disparity, Window violation
	Unit 4	**3D Display Technologies**
	1	Introduction, Stages of Stereo 3D Presentation, 3D Display Interfaces

	2	Active Shutter Glasses (SG), Features of SG Technology, Polarized Passive 3D Technology
	3	Film-type Patterned Retarder (FPR), Features of FPR Technology, FPR Misconceptions Q&A, FPR vs. SG Battles, NVIDIA 3D Vision
	4	AMD HD3D, Blu-ray, 3D Support and Panel Technologies
	Unit 5	**Repurposing 2D software for 3D.**
	1	3D software tools for production, Setup for Stereo Workflow, Loading the Stereo Footage.
	2	Working with Stereo Footage on the viewer, Splitting, editing and swapping the Left eye and the right eye.
	3	Color correction with the left / right eyes, Converting images to anaglyph, Tracking Stereo Live action Plates
	Unit 6	**3D Stereo workflow**
	1	Creating 3D stereo Cameras, Editing Stereo Cameras,
	2	Custom Stereo Rigs, Multi Camera Stereo Rigs
	3	Linking Stereo Camera's to a set of Objects, Multipass Stereo Rendering, Adding 3D Stereo Renders in to the Live action Plates
	Unit 7	**The Process of Stereo Conversion Process**
	1	Stereoscopic 3D Pipeline
	2	Stereo Rotoscope , Stereo Paint and Sequence Paint
	3	Match moving & Camera Tracking,
	Evaluations	
	Weightage Distribution	CA=60% MTE=0% ETE= 40%
	Text book/s*	• 3D Postproduction: Stereoscopic Workflows and Techniques - Rick Baumgartner

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: V**
1	**Course Code**	**BSA324**
2	**Course Title**	**3D Dynamics – I**
3	**Credits**	**5**
4	**Contact Hours (L-T-P)**	**2-2-2**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	Understand and formulate the dynamic simulations to be created. To create simple dynamic simulations of object collisions and destructions. To create particle simulations for simulating liquids and gas. To understand and implement scripting for creating dynamic simulations.
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Define Maya Dynamics & physics behind it. **CO2**: Compare the tools and workflow to create 3D effects. **CO3**: Extract scenes for simulation. **CO4**: Use the technique of Active & Passive Bodies & Collision. **CO5**: Relate the Creation & Behaviors of Particle systems. **CO6**: Modify Fields like Air, Gravity, Drag, Vortex, Turbulence etc.
8	**Course Description**	Students Will Learn the Core Basic of 3D effects creation in Autodesk Maya. They will explore the Physics behind effects creation, attributes & various tools.
9	**Outline syllabus**	
	Unit 1	**Introduction to Maya Dynamics**
	1	Introduction to Applied Physics and Quantam mechanics
	2	Kinetic Motion
	3	Energy Conversion
	Unit 2	**Rigid Bodies**
	1	Introduction to special effects
	2	Rigid bodies – Active and passive rigid bodies
	3	Physics based procedural animation using rigid bodies
	4	Collisions
	Unit 3	**Emitters**
	1	Particles
	2	Emitter types and Attributes
	3	Deflectors and its attributes
	4	Simulating particle effects
	Unit 4	**Fields**
	1	Goals
	2	Soft Bodies

	3	Animating soft bodies
	4	Fields and its attributes
	5	Simulation of fields
	Unit 5	**Constraints**
	1	Introduction
	2	Types & Attributes
	3	Nail & Pin,
	4	Hinge, Spring & Barrier
	Evaluations	CA 60% MTE 0% ETE 40%
	Text book/s*	• Maya® Studio Projects Dynamics by Todd Palamar (Publisher(s): Sybex ISBN: 9780470487761)
	Other References	• Learning Maya: Dynamics by John Patton, 2002

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: V**
1	**Course Code**	**BSA325**
2	**Course Title**	**Photorealistic Lighting & Rendering – I**
3	**Credits**	**4**
4	**Contact Hours (L-T-P)**	**2-1-2**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	To provide practical knowledge in Maya mental ray. To impart application and design skills for creating photorealistic lighting and Rendering
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Explain Maya Materials. **CO2**: Identify the tools and workflows to create 3D Lighting. **CO3**: Classify Shaders & their Attributes. **CO4**: Discover behaviors of 3D Lighting, its types & properties. **CO5**: Conclude effective Render times through optimization. **CO6**: Develop faking the Reality in Virtual world.
8	**Course Description**	Students Will Learn the Fundamentals of material Behaviors, Shaders, & various kinds of 3D Lighting in the software to create virtual environment.
9	**Outline syllabus**	
	Unit 1	**Fundamentals**
	1	Surface Principles and qualities
	2	Maya Shaders
	3	Hands on Creating a new custom shader.
	Unit 2	**Materials & Shaders**
	1	Materials development
	2	Working with material
	3	Shader utility nodes
	Unit 3	**Lights & Colour**
	1	Understanding Lighting, Color and Composition
	2	Light study
	3	Aesthetics and mood
	Unit 4	**Types of 3D Lighting**
	1	In-direct Lighting Techniques
	2	Role of Area Light in the photorealistic imagery
	3	Working with Light Shaders Utility nodes
	Unit 5	**3D Lighting**
	1	Photon mapping,
	2	Caustics, Sub-Surface Scatter

	3	Final Gather & Global illumination.
	Evaluations	CA 60% MTE 0% ETE 40%
	Text book/s*	• Advanced Maya® Texturing and Lighting Paperback – Import, 19 September 2006 by Lee Lanier (Author)
	Other References	• Arnold 5: First Lessons in Autodesk Maya by Donna Betancourt

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: V**
1	**Course Code**	**BSA326**
2	**Course Title**	**Animation Project** **(Option I:- Advanced 3D Animation & Rigging)**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**0-1-4**
5	**Course Type**	
6	**Course Objective**	The purpose of this subject is to provide simulated hands-on experience of Character Animation and Rigging pipeline. It will help in: Understanding the workflows involved in actual productions. Knowledge of planning and organizing projects. Learning artistic techniques to create high quality Rigs and Animations.
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1:-**Arrange the pre-plan and prepare references for Animation. **CO2:-**Explore the tools to create Complex Rig Systems for Animation. **CO3:-**Develop advanced features to Rig for enhancing Facial Animation performance. **CO4:-**Apply a reference to create refined and appealing body animation. **CO5:-**Express realistic emotion through Facial Animation performance. **CO6:-**Visualize work through cinematic techniques.
8	**Course Description**	Students will learn the core concepts of creating High Functioning Character Rigs and using them for creating appealing Animations.
9	**Outline syllabus**	
	Unit 1	**Project Preparation**
	1	Introduction of Unit
	2	Choosing Character Topic (Stylized / Realistic)
	3	Collecting References
	4	Planning
	5	Preparing Scenes and Resources
	Unit 2	**Body Rigging**
	1	Introduction of Unit
	2	Creating Joints
	3	Attaching Controls
	4	Adding Constraints
	5	Painting Weights
	6	Adding Deformers
	Unit 3	**Facial Rigging**

	1	Introduction of Unit
	2	Sculpting Poses
	3	Generating BlendShapes
	4	Attaching Controls
	5	Organizing Heirarchy
	Unit 4	**Body Animation**
	1	Introduction of Unit
	2	Blocking Out Animation
	3	Creating Key Poses from Reference
	4	Adding in-betweens
	5	Cleaning up Graph Editor
	6	Refining Animation
	Unit 5	**Facial Animation**
	1	Introduction of Unit
	2	Blocking Out Animation
	3	Creating Key Poses from Reference
	4	Adding in-betweens
	5	Cleaning up Graph Editor
	6	Refining Animation
	Unit 6	**Presentation**
	1	Introduction of Unit
	2	Setting up Camera
	3	Lighting Scene
	4	Creating PlayBlasts
	5	Post-Processing and Touch up
	Evaluations	**CA 60%** **MTE 0%** **ETE 40%**
	Text book/s*	• Learning Maya 5: Character Rigging and Animation by Alias Wave front
	Other References	• The Advanced Art of Stop-Motion Animation by Ken A. Priebe • Understanding 3-D animation using Maya by John Edgar Park

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: V**
1	**Course Code**	**BSA326**
2	**Course Title**	**Animation Project** **Option II :-Advanced Modeling and Texturing**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**0-1-4**
5	**Course Type**	
6	**Course Objective**	The purpose of this subject is to provide simulated hands-on experience of being able to create complete high quality 3D Assets for Films and Game Productions. This subject will help in: Understanding the workflows involved in actual productions. Knowledge of planning and organizing projects. Learning artistic techniques to create high quality assets.
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1:-**Recognize a pre-plan and prepare references for topic. **CO2:-**Illustrate the Visual Development & Design Elements. **CO3:-**Assign tools to create high quality models for production. **CO4:-**Design organization and optimization of Models and UVs for effective use. **CO5:-**Apply photorealistic material properties through texturing using advanced tools. **CO6:-**Use Lighting and Rendering techniques to present the project.
8	**Course Description**	Students will learn the core concepts of creating High Quality 3D Assets for Film and Game Productions. They will gain the knowledge of planning and organizing projects in a Simulated production environment.
9	**Outline syllabus**	
	Unit 1	**Project Preparation**
	1	Introduction of Unit
	2	Choosing Topic (Environment / High Quality Asset)
	3	Collecting References
	4	Planning
	5	Preparing Scenes and Resources
	Unit 2	**Modeling and Sculpting**
	1	Introduction of Unit
	2	Creating Base Model
	3	Modeling Hard Surfaces
	4	Optimizing Topology
	5	Organic Sculpting
	6	Preparing LODs

	Unit 3	**Creating UV's and Base Materials**
	1	Assigning Materials
	2	UV Projection and Cutting
	3	Unwrapping
	4	UV Layouts
	5	Utilizing UDIM Workflow
	6	Optimizing UV Spaces
	Unit 4	**Texturing and Shading**
	1	Introduction of Unit
	2	Baking LOD Details to Material
	3	Matching Material Properties
	4	Painting organic details
	5	Generating PBR Textures
	6	Plugging-in Textures to Materials
	Unit 5	**Rendering and Presentation**
	1	Introduction of Unit
	2	Setting up Camera
	3	Lighting Scene
	4	Rendering
	5	Post-Processing and Touch up
	Evaluations	
	Text book/s*	• Maya for Games: Modeling and Texturing Techniques with Maya and Mudbox
	Other References	• Character Modeling with Maya and ZBrush: Professional Polygonal Modeling Techniques Jason Patnode Maya® Professional Tips and Techniques Lee Lanier

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2023-2024**
Branch: NA		**Semester: V**
1	Course Code	**COC501**
2	Course Title	**Analytic Ability and Digital Awareness - Co-Curricular**
3	Credits	2
4	Contact Hours (L-T-P)	**0-2-0**
	Course Type	Compulsory /~~Elective/Open Elective~~
5	Course Objective	Learn analogy, syllogism etc.
6	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Familiarize with analogy, number system, set theory and its applications, number system and puzzles. **CO2**: To understand the basics of Syllogism, figure problems, critical and analytical reasoning. **CO3**: Familiarize with word processing application and worksheet. **CO4**: To understand the basics of web surfing and cyber security.
7	Course Description	The course is designed to enhance the analytics ability and digital awareness.
8	Outline syllabus	
	Unit 1	Alphabet test, Analogy, Arithmetic Reasoning, Blood relations, Coding and Decoding, Inequalities, Logical Venn diagram, Seating Arrangements, Puzzles and Missing numbers
	Unit 2	Syllogism, Pattern completion and figure series, Embeded Figure and counting of figures, Cube & Dice, Paper cutting and folding, Data sufficiency, Course of Action, Critical Reasoning, Analytical and decision making
	Unit 3	Computer Basics: Block diagram of Digital Computer, Classification of Computers, Memory System, Primary storage, Auxiliary memory, Cache memory, Computer Software (System/Application Software), MS Word Basics: The word screen, Getting to word documents, typing and Revising text, Finding and Replacing, Editing and Proofing tools, Formatting text characters, Formatting Paragraph, Document templates., Page set up, tables, Mail Merge, Macros, protecting documents, printing a document. MS-Excel Introduction, Worksheet basics, Creating worksheet, Heading information, Data & Text, Date & Time, Alphanumeric values, Saving & quitting worksheet, Opening and moving around in an existing worksheet, Toolbars and Menus, Excel shortcut and function keys, Working with single and multiple workbook, Working with formulae & cell referencing, Auto sum, coping formulae, Absolute & relative addressing, Worksheet with ranges, Formatting of worksheet, Previewing & Printing worksheet, Graphs and charts, Database, Creating and using macros, Multiple worksheets- concepts Introduction of Open Source Applications: LibreOffice, OpenOffice and Google Docs etc
	Unit 4	Web Surfing: An Overview: working of Internet, Browsing the Internet, E-Mail, Components of E-Mail, Address Book, Troubleshooting in E-Mail, Browsers: Netscape Navigator, Microsoft Internet Explorer, Google Chrome, Mozilla Firefox,

		Tor, Search Engines lik Google, DuckDuckGo etc, Visiting web sites: Downloading. Cyber Security: Introduction to Information System, Type of information system, CIA model of Information Characteristics, Introduction to Information Security, Need of Information Security, Cyber Security, phishing, spamming, fake news, general issues related to cyber security, Business need, Ethical and Professional issues of security
		Suggested Readings: • Sharma, A., "How to prepare for Data Interpretation and Logical Reasoning for the CAT" McGraw Hill Education Pvt. Ltd., New Delhi, India, 2011, Ed. 5, ISBN 978 2007 070 481 • Aggarwal, R.S., "A Modern Approach to Verbal and Non-verbal Reasoning" S. ChandPublishers New Delhi, India, 2010, ISBN 10: 8121905516 • Madan , Sushila, Introduction to Essential tools, Jain Book Agency, New Delhi/India, 2009, 5th ed.. • Goel, Anita, Computer Fundamentals, Pearson Education, India, 2012 • Michael E. Whitman and Herbert J. Mattord, "Principles of Information Security," Sixth Edition, Cengage Learning, 2017

Semester VI

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: VI**
	Course Code	**BSA326**
	Course Title	**Custom Effect Programming and Scripting**
	Credits	**4**
	Contact Hours (L-T-P)	**2-1-2**
	Course Type	**Core Compulsory**
	Course Objective	To introduce creative Concepts and technical application of Animation and Compositing and scripting
	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Recognize the Potential of MEL. **CO2**: Summarize the Fundamentals of Maya Script Writing. **CO3**: Complete Animation with the help of Scripting in Maya. **CO4**: Discover custom tools for automation. **CO5**: Illustrate the Effects Creation with the help of Scripting in Maya. **CO6**: Create interactive Animation.
	Course Description	Students Will Learn the Fundamentals of Maya Embedded Language, Customizing the Tools as per need and easing the workflow.
	Outline syllabus	
	Unit 1	**Introduction to Maya Scripting**
	1	Introduction to Maya Commands
	2	MEL Libraries and Functions
	3	Building UI and Tool Functionality in MEL
	Unit 2	**Understanding Maya API Structure**
	1	Understanding MEL
	2	Creating light glow and shade using custom Maya Tool
	3	Creating blobby surface in Maya using MEL
	Unit 3	**Introduction to Action script Programming**
	1	Structured Program and Object Oriented Program
	2	Data types, Arrays, Events and Event Handling
	3	Using Objects, Methods, Classes, Functions, Loops.
	4	Compiling and Executing scripts.
	Unit 4	**Script Based Animation**
	1	Interactive animation using scripting
	2	Creating automated animation elements
	3	Particle based animation
	4	Physics based animation.

	Unit 5	**Script Based Effects**
	1	Creating custom particle simulations
	2	Creating event based animations
	3	Creating UIs for custom effects
	4	Automating process through scripting.
	5	Real-time Effects Programming
	6	2D and 3D based effects programming
	7	Programming light
	Evaluations	CA 60% MTE 0% ETE 40%
	Text book/s*	• MEL Scripting for Maya Animators by Chris Kazmier and Mark R. Wilkins
	Other References	• MEL Scripting a Character RIG In Maya Book by Chris Maraffi

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: VI**
1	**Course Code**	**BSA327**
2	**Course Title**	**Photorealistic Lighting & Rendering - II**
3	**Credits**	**4**
4	**Contact Hours (L-T-P)**	**2-1-2**
5	**Course Type**	**Core Compulsory**
6	**Course Objective**	To introduce creative Concepts and technical application of Animation and Compositing and scripting
7	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**: Recognize working of natural light in the real world. **CO2**: Define the use of HDRI. **CO3**: Compare advanced 3D Lighting techniques. **CO4**: Use accurate color management techniques. **CO5**: Analyze the workflow & 3D Rendering. **CO6**: Develop knowledge of Maya Render Settings.
8	**Course Description**	Students Will Learn the Fundamentals of Maya Embedded Language, Customizing the Tools as per need and easing the workflow.
9	**Outline syllabus**	
	Unit 1	**HDRI**
	1	Image Based Lighting
	2	Creating HDRI Maps, and Digitizing HDRI Maps for Virtual Sets
	3	Lighting with HDRI Maps
	4	Volumetric nodes, Lenses, Shadow, XPasses.
	Unit 2	**Lighting**
	1	Artificial Lighting,
	2	Natural Lighting,
	3	Using IES light Modules.
	Unit 3	**Workflow**
	1	Production Workflow.
	2	Sequence Light Rig.
	3	Lighting Types.
	Unit 4	**Rendering Types**
	1	Maya software render
	2	setting and features
	3	Scene Management & optimization
	Unit 5	**Rendering Settings**
	4	Preparing for rendering

	5	Render settings window
	6	Vector rendering, Toon shading & Multi-pass Rendering.
	Evaluations	CA 60% MTE 0% ETE 40%
	Text book/s*	• Advanced Maya® Texturing and Lighting Paperback – Import, 19 September 2006 by Lee Lanier (Author)
	Other References	• Lighting for Cinematography: A Practical Guide to the Art and Craft of Lighting for the Moving Image • Book by David Landau

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: VI**
	Course Code	**BSA328**
	Course Title	**Fluid Simulation & Plugins**
	Credits	**5**
	Contact Hours (L-T-P)	**2-2-2**
	Course Type	**Core Compulsory**
	Course Objective	To impart knowledge and technical skills to understand the science of Fluid Dynamics and application at various stages
	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define Maya Fluids & its Concept. **CO2**: Classify various kinds of Physics Laws for Fluid Simulation. **CO3**: Use Caching workflows. **CO4**: Analyze the 3D Effects and its Tools. **CO5**: Categorize Fields & uses. **CO6**: Develop Scripting for Simulation.
	Course Description	Students will Learn The core physic concept of simulation, advanced Fluids system & enable to create 3d effects in Maya.
	Outline syllabus	
	Unit 1	**Science of Fluid Dynamics**
	1	Characteristics of fluids & Dimensions
	2	Analysis of Fluid behavior
	3	Measure of Fluid mass and weight, ideal gas law, viscosity
	Unit 2	**Fluid Pressure**
	1	Compressibility of fluids
	2	Vapor pressure & surface tension.
	3	Pressure at point, standard atmosphere.
	4	Measurement of pressure.
	Unit 3	**Fluid Principles**
	1	Buoyancy
	2	Flotation and stability
	3	Archimedes principle
	4	Stability, Bernoulli equation & fluid kinematics
	Unit 4	**Tools**
	1	Differential analysis of fluid flow
	2	Tools and software to create fluid simulation
	3	Attributes
	Unit 5	**Fluid Simulation**

	1	Introduction to Fluid simulation software,
	2	Emitters, Grid based particles, Splash particles, Mist and form particles
	3	Generation displacement maps & exporting simulation
	4	Forms of liquids & Morphing fluids
	Unit 6	**Scripting for Simulation**
	1	Initial project setup.
	2	Particle morphing, Small scale fluid simulation, Large scale fluid simulation Using the fluid simulation scripting.
	3	Batch script, Scripting reference, Working with variables, custom emitter scripting.
	Evaluations	CA 60% MTE 0% ETE 40%
	Text book/s*	• Introduction to Maya Fluid Effects DVD-ROM – Import, 9 September 2010 by W. Hollingsworth (Author)
	Other References	• Maya Visual Effects The Innovator's Guide by Eric Keller

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: VI**
1	**Course Code**	**BSA329**
2	**Course Title**	**Sound Design**
3	**Credits**	**3**
4	**Contact Hours (L-T-P)**	**1-2-0**
	Course Status	**Core Compulsory**
5	**Course Objective**	Understand the technical aspects of producing and recording sounds. Create Foleys and effects sounds using analog and digital techniques. Understand the workflow used to producing and mastering sounds. Export sound output to various Medias. Establishing an environment Helping to tell a story, Defining mood, Rhythm and style Aiding flow of action..
6	**Course Outcomes**	**After the completion of this course, the student will be able to** **CO1**- Explain the significance of Sound and its Application. **CO2**- Describe the different techniques in Sound editing. **CO3**- Summarize equipment in recording, Music Production. **CO4**- Apply the Recording of sound for different application. **CO5**- Illustrate the various techniques for Edit, Effects, mixing and managing. **CO6**- Design a sound for region specific.
7	**Course Description**	Students will learn about "Sound" the one of the important elements of animation film making. They will Understand the technical aspects of producing and recording sounds, Create Foleys and effects sounds using analog and digital techniques.
8	**Outline syllabus**	
	Unit 1	**History.**
		Unit 1 Topic A-Fundamental of sound and sound Design. Unit 1 Topic B-Art and Techniques of sound editing. Unit 1 Topic C-Sound equipment and their significance**.**
	Unit 2	**Recording Techniques**
		Unit 2 Topic A-Recording and Music Unit 2 Topic B-Fundamentals of Digital Audio Unit 2 Topic C- Production Techniques
	Unit 3	**Sound Editing Application**
		Unit 3 Topic A-Customizing workspace Unit 3 Topic B-Extracting audio clips Unit 3 Topic C-Foley sound recording
	Unit 4	**Sound Editing Techniques**
		Unit 4 Topic A-Editing properties of sound Unit 4 Topic B-Mixing and Effects for sound. Unit 4 Topic C-Managing of sound files**.**
	Unit 5	**Designing of Sound**

		Unit 5 Topic A-The psychology of sound Unit 5 Topic B-Crating Memorable Sounds Unit 5 Topic C-Region specific sounds		
	Mode of examination	Jury		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40
	Text book/s*	• Sound Design: The Expressive Power of Music, Voice and Sound Effects in Cinema by David Sonnenschein - 2002 • The Sound Effects Bible: How to Create and Record Hollywood Style Sound Effects by RicViers(Oct 1, 2008)		
	Other References	• The Animator's Eye: Adding Life to Animation with Timing, Layout, Design, Color and Sound by Francis Glebas(Sep 24, 2012) • Designing Sound by Andy Farnell(Aug 20, 2010		

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: VI**
	Course Code	**BSA330**
	Course Title	**3D Dynamics –II**
	Credits	**4**
	Contact Hours (L-T-P)	**1-3-0**
	Course Type	**Core Compulsory**
	Course Objective	Understand and formulate the dynamic simulations to be created. To create simple dynamic simulations of object collisions and destructions. To create particle simulations for simulating liquids and gas. To understand and implement scripting for creating dynamic simulations.
	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Recognize advanced Dynamic Effects & its uses. **CO2**: Illustrate Paint and Environment Effects. **CO3**: Summarize various optimization techniques. **CO4**: Discover Rendering Techniques for Simulations. **CO5**: Analyze workflow & 3D destruction in Maya. **CO6**: Design dynamic rigs for VFX.
	Course Description	Students will Learn the core physic concept of simulation, advanced Fluids system & enable to create 3d effects in Maya.
	Outline syllabus	
	Unit 1	**Visual Effect in Maya**
	1	Texture Effects, Streaking energy effects,
	2	Particle effects and collisions,
	3	Collision events and connecting camera with particles.
	Unit 2	**Rigging**
	1	Rigging for effects,
	2	Automating Rigs,
	3	Paint effects,
	4	Controlling paint effects
	Unit 3	**Destruction Effects**
	1	Natural Phenomenon
	2	Destruction of objects experiments
	3	Nature elements simulation using particles [Water, smoke, fire etc]
	Unit 4	**nCloth**
	1	Overview & Concepts
	2	Constraints
	3	Edit nCloth

	Unit 5	**Rendering**
	1	Rendering simulations,
	2	Optimizing simulations
	3	Simulation for Video and motion graphics
	Evaluations	CA 60% MTE 0% ETE 40%
	Text book/s*	• Maya® Studio Projects Dynamics by Todd Palamar (Publisher(s): Sybex ISBN: 9780470487761)
	Other References	• Learning Maya: Dynamics by John Patton, 2002

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: VI**
	Course Code	**BSA331**
	Course Title	**Visual Effects Project** **(Option 1:-Motion Graphics)**
	Credits	**3**
	Contact Hours (L-T-P)	**0-1-4**
	Course Type	
	Course Objective	The students will receive information that will enable them to: Familiarize the tools and techniques to create Motion graphics and effects Learn Problem solving techniques to rectify the errors during the process Create content for broadcast, feature film and animation.
	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**:- Identify The Scope of Motion Graphics for different media **CO2**:-Define the Workflow for Production. **CO3**:- Explain different tools and techniques in Motion Graphics **CO4**:- Apply tools to create effects in Motion Graphics **CO5**:- Evaluate the significance of motion theory in Motion Graphics. **CO6**:- Combine the Application techniques for Animation, Editing, and Effects.
	Course Description	Students Will Learn The workflow for Graphics in motion, Animation the Graphics, Adding Sound Adding.
	Outline syllabus	
	Unit 1	**IDEA DEVELOPMENT BASED ON GIVEN PRODUCT/PROJECT**
	1	Product identify
	2	Visualization of Brand Creation /Identity
	3	Layout & Pre-Viz
	4	Storyboarding
	Unit 2	**CREATION OF DIGITAL ASSESTS**
	1	Digital Creation of Logo/Brand Design
	2	Digital Creation of background Design
	3	Other Digital Assets
	Unit 3	**ADDING MOTION**
	1	Animate the Layers
	2	Apply Effects
	3	Apply 3d lights
	4	Animate Camera
	Unit 4	**ADDING SFX**
	1	Add Background sound
	2	Add Sound or the product

	3	Synchronizing
	Unit 5	**RENDER THE PROJECT**
	1	Render Settings
	2	Export file as PNG (alpha should be active)
	3	Export file as Quick Time Video
	Evaluations	CA-60% MTE-0% ETE-40%
	Text book/s*	• · Blum, M. Rosen. How to Build Better Vocabulary. London: Bloomsbury Publication
	Other References	• • The Art and Science of Digital Compositing, Second Edition: • Techniques for Visual Effects, Animation and Motion Graphics (The Morgan Kaufmann Series in Computer Graphics) - Ron Brinkmann (Author)

School: SMFE		**Batch: 2021-2025**
Program **B.Sc. (Animation & VFX)**		**Current Academic Year: 2023-24**
Branch: NA		**Semester: VI**
	Course Code	**BSA331**
	Course Title	**Visual Effects Project** **(Option II:-Advanced CG Simulation and Effects)**
	Credits	**3**
	Contact Hours **(L-T-P)**	**0-1-4**
	Course Type	
	Course Objective	The purpose of this subject is to provide simulated hands-on experience of Dynamics and Simulations for VFX pipelines. It will help in: Understanding the workflows involved in actual productions. Knowledge of planning and organizing projects. Learning artistic techniques to create high quality Simulations.
	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**:-Describe the operating tools to create Simulations. **CO2**: Memorize the Real world simulation to Replicate. **CO3**:-Classify of realistic behavior of particles and moving bodies. **CO4**:-Describe optimizing and implementation of Simulations with rendering engines. **CO5**:-Relate pipelines of caching and Rendering Simulations. **CO6**:-Create interaction between objects through Simulations.
	Course Description	Students will learn the core concepts of creating Dynamics and using them for creating appealing Simulations.
	Outline syllabus	
	Unit 1	**Software Introduction**
	1	Introduction of Unit
	2	Basics
	3	Navigation
	4	Planning
	5	Project Setup
	Unit 2	**Rigid Bodies**
	1	Introduction of Unit
	2	Static Solids
	3	Deforming Solids
	4	Caching
	5	Rendering
	Unit 3	**Fluid Simulations**
	1	Introduction of Unit

	2	Liquid Simulation
	3	Lava Simulation
	4	Caching
	5	Rendering
	Unit 4	**Pyro Simulations**
	1	Introduction of Unit
	2	Fire Simulation
	3	Smoke Simulation
	4	Caching
	5	Rendering
	Unit 5	**Grains and Particles**
	1	Introduction of Unit
	2	Sand Simulation
	3	Fireworks Simulation
	4	Caching
	5	Rendering
	Evaluations	
	Text book/s*	• Introduction to Maya Fluid Effects DVD-ROM – Import, 9 September 2010 by W. Hollingsworth (Author)
	Other References	• Maya Studio Projects: Dynamics Book by Todd Palamar

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2023-2024**
Branch: NA		**Semester: VI**
1	Course Code	**BJN 315**
2	Course Title	**Communication Skills and Personality Development - Co-Curricular**
3	Credits	2
4	Contact Hours (L-T-P)	
	Course Type	Compulsory /~~Elective/Open Elective~~
5	Course Objective	Learn personality development
6	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: To understand the concept of Personality. **CO2**: To learn what personal grooming pertains. **CO3**: To learn to make good resume and prepare effectively for interview. **CO4**: To learn to perform effectively in group discussions. **CO5**: To explore communication beyond language. **CO6**: To learn to manage oneself while communicating. **CO7**: To acquire good communication skills and develop confidence
7	Course Description	The course is designed to train students for a better personality.
8	Outline syllabus	
Unit 1	**Unit 1**	***PERSONALITY AND PERSONAL GROOMING*** Understanding Personality • Definition and Meaning of Personality • Types of Personality • Components of Personality • Determinants of Personality • Assessment of PersonalityGrooming Self • Dress for success • Make up & skin care • Hair care & styles for formal look • Art of accessorizing Oral Hygiene
	Unit 2	***INTERVIEW PREPARATION AND GROUP DISCUSSION*** • Meaning and Types of Interview [Face to Face, Telephonic, Video] • Interview procedure [Opening, Listening, Closure] • Preparation for Interview • Resume Writing • LinkedIn Etiquette • Meaning and methods of Group Discussion • Procedure of Group Discussion. • Group Discussion simulation • Group discussion common error
	Unit 3	***BODY LANGUAGE AND BEHAVIOUR***

		• Concept of human behavior • Individual and group behavior • Developing Self-Awareness • Behaviour and body language • Dimensions of body language: Proxemics • Haptics • Oculesics • Paralanguage • Kinesics Sign Language • Chromatics • Chronemics , Olfactics • Cultural differences in Body Language • Business Etiquette & Body language • Body Language in the Post Corona Era • Virtual Meeting Etiquette Social Media Etiquette
	Unit 4	***ART OF GOOD COMMUNICATION*** • Communication Process • Verbal and Non-verbal communication • 7 C's of effective communication • Barriers to communication • Paralinguistics Pitch Tone Volume Vocabulary Word stress Pause • Types of communication Assertive Aggressive Passive Aggressive • Listening Skills • Questioning Skills • Art of Small Talk , Email Writing
		Suggested Readings: • Cloninger, S.C., "Theories of Personality : Understanding Person", Pearson, New York, 2008, 5th edition. • Luthans F, "Organizational Behaviour", McGraw Hill, New York, 2005, 12th edition. • Barron, R.A. & Brian D, "Social Psychology", Prentice Hall of India, 1998, 8th edition. • Adler R.B., Rodman G. & Hutchinson C.C. , "Understanding Human Communication", OxfordUniversity Press : New York, 2011.

Semester VII

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**
Branch: NA		**Semester: VII**
1	Course Code	**BJN 401**
2	Course Title	**Media Research Methods & Tools**
3	Credits	5
4	Contact Hours (L-T-P)	3-2-0
5	Course Type	**Core Course**
6	Course Objective	To develop an understanding of core concepts of Research and design. To orient students in understanding the designing aspects of research To critically analyze the issues of modern concepts of Research design. To identify the paths and cognition of modern designs of scientific inquiry. To develop research experts.
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Relate the received knowledge & in-depth understanding of research. **CO2**: Explain the trends in media and communication research **CO3**: Outline research problems and objective **CO4**: Choose hypothesis, constructs and variables in research. **CO5**: Apply research process in media and communication research **CO6**: Develop research design.
8	Course Description	The course is designed to inculcate the deep insights of research methodology in media and communication. After completing the basic introduction of research in the previous semester of the programme, students will get in-depth knowledge of the research methodology in this course.
9	**Outline syllabus**	
	Unit 1	**Understanding Media Research**
	A	Meaning, Definition, Origin, Characteristics and Importance of Research
	B	Areas of Media & Communication Research (Source analysis, Channel analysis, Message analysis, Audience analysis).
	C	Trends in Communication Research, Status of Communication Research in India.
	Unit 2	**Research Structure - I**
	A	Overview of Research Problem and Objectives; Deduction and Induction.
	B	Steps in Research Process; Characteristics and Requirements, Operational Steps for Carrying out Research
	C	Review of Literature, Functions of Literature Review, Development of Theoretical and Conceptual Frameworks, Searching for Existing Literature
	Unit 3	**Research Structure - II**
	A	Hypothesis: Concept, Function of Hypothesis and Types, Hypothesis Formulation, Logic of Hypothesis Testing
	B	Concepts, Constructs and Variables: Independent vs Dependent variables,

		Extraneous variables, Intervening variables; discrete variables and continuous variables.		
	C	Scales and measurement; Nominal, Ordinal, Interval and Ratio; Attitude measurement, Likert, Semantic differential scales.		
	Unit 4	**Research Structure - III**		
	A	Meaning of Research Design, Purpose of Research Design, Criteria of Good Research Design, Parts and Features of Research Design,		
	B	Research Design: Concept and definition, types of research design - descriptive, exploratory, experiment, Quasi Experimental Design		
	C	Cross-Sectional and Longitudinal research design, Cohort Designs		
	Unit 5	**Research Structure - IV**		
	A	Time-Series Design, Equivalent Time-Samples Design, Non-Equivalent Control Group Design, Counterbalanced Design, Patched-up Design		
	B	Ex-Post Facto Design, Correlation Design, Criterion-Group Design		
	C	Introduction to Factorial Design and its Types, Fixed Model, Random Model, Mixed Model, Advantages and Limitations of Factorial Design		
10	Mode of examination	Theory		
11	Weightage Distribution	CA	MTE	ETE
		30	20	50
12	Text book/s*	• Mass Media Research: An Introduction by Roger D. Wimmer		
13	Other References	• Media and communication research methods by Arthur Berger • Mass Communication Research Methods by Anders Hansen		

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**
Branch: NA		**Semester: VII**
1	Course Code	**BJN 402**
2	Course Title	**Elementary Statistics for Research**
3	Credits	5
4	Contact Hours (L-T-P)	3-2-0
5	Course Type	**Core Course**
6	Course Objective	Develop an understanding of the concept of Statistics. Explain the role and methods of SPSS. To be acquainted with quantitative elements of Statistics. Explain the different functions and practical application of SPSS. Refine the need for research practitioners' development through class activities and assignments.
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define basics of Statistics in research. **CO2**: Explain practical knowledge and understanding of SPSS **CO3**: Analyze statistical data using frequency distributions and measures of central tendency **CO4**: Apply the accumulated knowledge of stats. **CO5**: Demonstrate descriptive stats through SPSS **CO6**: Discuss quantitative analysis.
8	Course Description	The course is designed to inculcate the proper understanding of statistics in research.
9	**Outline syllabus**	
	Unit 1	**Introduction**
	A	An Overview of Statistics: Meaning, Definition and Characteristics
	B	Nature, Importance and Limitations of Statistics
	C	Importance of Statistics in Media Research
	Unit 2	**Descriptive Statistics**
	A	Statistical Series: Importance and Limitations
	B	Measures of Central Tendency: Arithmetic Mean, Median, Mode
	C	Range and Mean Deviation, Quartile Deviation and Standard Deviation
	Unit 3	**Introduction to SPSS**
	A	An Overview and Major features of SPSS
	B	Nature and Concept of SPSS, Basic Features of SPSS: Menu and Options
	C	Data Entry, Data Editing and Data Deletion in SPSS
	Unit 4	**Descriptive Statistics through SPSS**
	A	Calculation of Frequency analysis
	B	Calculation of Mean, Median and Mode
	C	Graphical Representation, Transformation and Saving of Data
	Unit 5	**Quantitative Analysis**

	A	Reliability, Consistency and Normality Analysis		
	B	T-Test: Uses and Interpretation		
	C	Correlation Analysis		
10	Mode of examination	Theory		
11	Weightage Distribution	CA	MTE	ETE
		30	20	50
12	Text book/s*	• Mass Media Research: An Introduction by Roger D. Wimmer		
13	Other References	• Media and communication research methods by Arthur Berger • Mass Communication Research Methods by Anders Hansen		

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**
Branch: NA		**Semester: VII**
1	Course Code	**BJN 403**
2	Course Title	**Qualitative Research - I**
3	Credits	4
4	Contact Hours (L-T-P)	3-1-0
5	Course Type	**Core Course**
6	Course Objective	To impart in-depth knowledge of qualitative research. To provide good understanding of methods for qualitative research. To develop critical and analytical thinking on ethical issues in qualitative research.
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Tell the basics of qualitative research. **CO2**: Explain the basic application of qualitative methods in social sciences. **CO3**: Define appropriate research problems and parameters. **CO4**: Develop an understanding of different methods of qualitative research. **CO5**: Apply various methods for qualitative research. **CO6**: Evaluate and utilize the knowledge acquired
8	Course Description	This course is an introduction to qualitative research methods. The course will give an understanding of various methods of qualitative research.
9	**Outline syllabus**	
	Unit 1	**Introduction to Qualitative Research Methods**
	A	Understanding qualitative research
	B	Historical development of qualitative research
	C	Issues in Qualitative Research—Subjectivity, Reflexivity, Power, Validity and Triangulation
	Unit 2	**Applications of Qualitative Methods to Social Research**
	A	Theoretical and applied research
	B	Ethnographic and Phenomenological Approaches
	C	Combining qualitative and quantitative methods
	Unit 3	**Qualitative Research Methods - I**
	A	Introduction, Techniques and Applications of Focus Group Discussions
	B	Report writing on Conduction, Execution and Conclusions obtained by Focus Group Discussions
	C	Implementation and Evaluation Challenges of Focus Group Discussions
	Unit 4	**Qualitative Research Methods - II**
	A	Introduction, Techniques and Applications of Interview method
	B	Report writing on Conduction, Execution and Conclusions obtained by interview
	C	Implementation and Evaluation Challenges of interview
	Unit 5	**Qualitative Research Methods - II**
	A	Introduction, Techniques and Applications of observation

	B	Report writing on Conduction, Execution and Conclusions obtained by observation		
	C	Implementation and Evaluation Challenges of observation		
10	Mode of examination	Theory		
11	Weightage Distribution	CA	MTE	ETE
		30	20	50
12	Text book/s*	• Mass Media Research: An Introduction by Roger D. Wimmer • Creswell, J. W., Qualitative inquiry and research design, 2rd edition. Sage Publications. 2013.		
13	Other References	• Media and communication research methods by Arthur Berger • Mass Communication Research Methods by Anders Hansen • Berg, B. L. & Lune, H. Qualitative Research Methods for the Social Sciences, 8th edition, Boston: Pearson, Allyn & Bacon. 2012 • Seidman, I. E. Interviewing as Qualitative Research, Teachers College Press, 4rd edition. • Miles, M.B., Huberman, A.M. & Saldana, J. 2014. Qualitative data analysis: A methods sourcebook – Third edition. Thousand Oaks, CA: Sage.		

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**
Branch: NA		**Semester: VII**
1	Course Code	**BJN 404**
2	Course Title	**Quantitative Research - I**
3	Credits	4
4	Contact Hours (L-T-P)	3-1-0
5	Course Type	**Core Course**
6	Course Objective	To impart in-depth knowledge of quantitative research. To provide good understanding of methods for quantitative research. To develop critical and analytical thinking on ethical issues in quantitative research.
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define various research techniques employed in the social sciences. **CO2**: Outline opportunities and challenges faced by social scientists in their attempts to understand human behavior **CO3**: Illustrate the basic research writing, analytical, and critical thinking skills **CO4**: Apply the basic data analysis **CO5**: Analyze various regression techniques **CO6**: Compare ANOVA's Null and Alternative Hypotheses
8	Course Description	The course is designed primarily for the students to anticipate future applications of quantitative methods in media and communication research.
9	**Outline syllabus**	
	Unit 1	**Introduction to Quantitative Research Methods - I**
	A	Understanding nature of quantitative research
	B	Historical development of quantitative research
	C	Quantitative research in Media & Communication
	Unit 2	**Introduction to Qualitative Research Methods - II**
	A	Research Question and Scientific Approach to Social Science
	B	Research Design; Causality vs. Correlation
	C	Reliability and Validity.
	Unit 3	**Quantitative Research Methods**
	A	Introduction to various quantitative research methods
	B	Survey method
	C	Developing questionnaire and schedule for survey
	Unit 4	**Basic data analysis - I**
	A	Statistical significance
	B	Measurement, validity, reliability
	C	Cross-tabulation and Correlation.
	Unit 5	**Basic data analysis - I**
	A	Simple regression, Multiple regression.
	B	Hypothesis testing, ANOVA, The One-Way ANOVA's Null and Alternative

		Hypotheses		
	C	Factor Analysis		
10	Mode of examination	Theory		
11	Weightage Distribution	CA	MTE	ETE
		30	20	50
12	Text book/s*	• Mass Media Research: An Introduction by Roger D. Wimmer		
13	Other References	• Media and communication research methods by Arthur Berger • Mass Communication Research Methods by Anders Hansen		

School: SMFE		**Batch: 2021-2025**		
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**		
Branch: NA		**Semester: VII**		
1	Course Code	**BJN 405**		
2	Course Title	Project portfolio on constructing tools for Media & Communication		
3	Credits	6		
4	Contact Hours (L-T-P)	0-4-4		
5	Course Type	**Core Course**		
6	Course Objective	To develop research skills To develop various tools for different research methods.		
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define problem on basis of brief received. **CO2**: Build research tools. **CO3**: Develop a portfolio based on first-hand study and research. **CO4**: Organize the portfolio in order. **CO5**: Justify and present portfolio and their work. **CO6**: Construct a project report for the problem and the solution.		
8	Course Description	The course is aimed to enhance the practical skills of the students and will help the students to understand how to construct tools for various types of research.		
9	**Outline syllabus**			
	Unit 1-5	**Portfolio on different research tools**		
10	Mode of examination	Jury		
11	Weightage Distribution	CA	MTE	ETE
		60		40
12	Text book/s*	• Mass Media Research: An Introduction by Roger D. Wimmer		
13	Other References	• Media and communication research methods by Arthur Berger • Mass Communication Research Methods by Anders Hansen		

Semester VIII

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**
Branch: NA		**Semester: VIII**
1	Course Code	**BJN 406**
2	Course Title	**Ethics in Media & Communication Research**
3	Credits	5
4	Contact Hours (L-T-P)	3-2-0
5	Course Type	**Core Course**
6	Course Objective	Guide and mentor students in developing, completing, writing, and presenting a valid and ethical research report. Provide students with the fundamental knowledge of basics of philosophy of science and ethics, research integrity, publication ethics. Hands-on sessions are designed to identify research misconduct and predatory publications.
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define various philosophies related to research ethics. **CO2**: Demonstrate scientific ethical conduct **CO3**: Build of the publication ethics **CO4**: Examine the open access publication **CO5**: Apply the publication ethics **CO6**: Evaluate the publication misconduct
8	Course Description	The course is designed to inculcate the ethical perspective of media and communication research among students.
9	**Outline syllabus**	
	Unit 1	**Philosophy and Research**
	A	Introduction to philosophy
	B	Ethics: definition, moral philosophy
	C	Nature of moral judgement and reaction
	Unit 2	**Scientific Conduct**
	A	Ethics with respect to science and research
	B	Misconduct: Falsification, Fabrication & Plagiarism (FFP)
	C	Selective reporting and misrepresentation of data
	Unit 3	**Publication Ethics**
	A	Introduction, definition and importance of publication ethics
	B	Conflicts of interest
	C	Predatory Journals
	Unit 4	**Open Access Publication**
	A	Open access publication & initiatives
	B	Software tools to identify predatory journals
	C	Online resources to check publisher copyright & Self-archiving policies

	Unit 5	**Publication Misconducts**		
	A	Subject specific ethical issues		
	B	Case studies		
	C	Complaints and appeals		
10	Mode of examination	Theory		
11	Weightage Distribution	CA	MTE	ETE
		30	20	50
12	Text book/s*	• Bird, A. (2006). Philosophy of Science. Routledge		
13	Other References	• Indian National Science Academy (INSA), Ethics in Science Education, Research & Governance (2019)		

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**
Branch: NA		**Semester: VIII**
1	Course Code	**BJN 407**
2	Course Title	**Academic Writing Techniques**
3	Credits	5
4	Contact Hours (L-T-P)	3-2-0
5	Course Type	**Core Course**
6	Course Objective	Students to Become familiar with the process of organizing and drafting a report that poses a significant problem and offers a convincing solution; learn how to identify, track down, and use a wide variety of sources in the service of responsible research and scholarship; produce a paper using APA documentation and manuscript form polished enough to be publishable and to become familiar with other formal (APA, Chicago style) documentation and manuscript styles; examine some of the best past and current writing by scholars; review the mechanics of writing and hone editorial and proof-reading skills; develop evaluative strategies and vocabulary to best serve other writers in a workshop setting.
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define the craft of drafting a proper research report. **CO2**: Explain the technicalities of academic writing **CO3**: Apply and define appropriate research problem and parameters Outline a research report. **CO4**: Analyze, organize and conduct research in a more appropriate manner **CO5**: Evaluate interpret, , and explain information sources. **CO6**: Develop a project proposal /Thesis
8	Course Description	This course is designed to familiarize students with the basic methods and techniques of research writing. The course will focus on such issues as developing a thesis statement, writing a prospectus, finding source material (books, articles, internet resources, etc.), generating an argument, writing and revising a rough draft, and APA documentation of sources.
9	**Outline syllabus**	
	Unit 1	**Research Writing Skills - I**
	A	Planning and Preparation
	B	Language of Research
	C	Drafting, Proof-reading, Editing and Evaluation of Research papers
	Unit 2	**Analyzing Research Papers**
	A	The rhetorical patterning of a passage;
	B	The introductory and closing paragraphs of samples of research papers

	C	Linguistic aspects of sample research papers		
	Unit 3	**Report Writing – I**		
	A	Meaning and Objective of Research Report, Report the findings, Chapterisation,		
	B	Types of Research Report,		
	C	Quotation, Footnotes, Endnotes, Referencing Style: APA, MLA Chicago, Harvard		
	Unit 4	**Report Writing - II**		
	A	Research Database		
	B	Writing abstract, Introduction, literature review		
	C	Writing conclusion & Results		
	Unit 5	**Report Writing - III**		
	A	Skills of writing the Results		
	B	Discussion and skills are needed when writing the Conclusions		
	C	Plagiarism, similarity checker, Turnitin		
10	Mode of examination	Theory		
11	Weightage Distribution	CA	MTE	ETE
		30	20	50
12	Text book/s*	• Abdul Rahim, F. Thesis Writing: A Manual for Researchers. New Delhi: New Age International, 2005		
13	Other References	• Adam Sirjohn. Research Methodology: Methods & Techniques. Delhi: New Age International Ltd, 2004. • Barker, Nancy and Nancy Hulig. A Research Guide for Under Graduate Students: English and American Literature. New York : MLA of America, 2000		

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**
Branch: NA		**Semester: VIII**
1	Course Code	**BJN 408**
2	Course Title	Qualitative Research - II
3	Credits	4
4	Contact Hours (L-T-P)	3-1-0
5	Course Type	**Core Course**
6	Course Objective	To impart in-depth knowledge of qualitative research. To provide good understanding of methods for qualitative research. To develop critical and analytical thinking on ethical issues in qualitative research.
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define the in-depth concepts of qualitative research. **CO2**: Understanding various qualitative methods of social sciences in action. **CO3**: Identify different methods of qualitative research data collection. **CO4**: Develop tools for qualitative research. **CO5**: Design and present qualitative research **CO6**: Examine and utilize the knowledge acquired
8	Course Description	This course is an introduction to qualitative research methods. The course will give an understanding of analysis of various methods of qualitative research.
9	**Outline syllabus**	
	Unit 1	**Introduction to Qualitative Research Methods**
	A	Understanding qualitative research
	B	Historical development of qualitative research
	C	Issues in Qualitative Research—Subjectivity, Reflexivity, Power, Validity and Triangulation
	Unit 2	**Applications of Qualitative Methods to Social Research**
	A	Theoretical and applied research
	B	Ethnographic and Phenomenological Approaches
	C	Combining qualitative and quantitative methods
	Unit 3	**Qualitative Research Methods - I**
	A	Introduction, Techniques and Applications of Focus Group Discussions
	B	Report writing on Conduction, Execution and Conclusions obtained by Focus Group Discussions
	C	Implementation and Evaluation Challenges of Focus Group Discussions
	Unit 4	**Qualitative Research Methods - II**
	A	Introduction, Techniques and Applications of Interview method
	B	Report writing on Conduction, Execution and Conclusions obtained by interview
	C	Implementation and Evaluation Challenges of interview
	Unit 5	**Qualitative Research Methods - II**
	A	Introduction, Techniques and Applications of observation

	B	Report writing on Conduction, Execution and Conclusions obtained by observation		
	C	Implementation and Evaluation Challenges of observation		
10	Mode of examination	Theory		
11	Weightage Distribution	CA	MTE	ETE
		30	20	50
12	Text book/s*	• Mass Media Research: An Introduction by Roger D. Wimmer		
13	Other References	• Media and communication research methods by Arthur Berger • Mass Communication Research Methods by Anders Hansen		

School: SMFE		**Batch: 2021-2025**
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**
Branch: NA		**Semester: VIII**
1	Course Code	**BJN 409**
2	Course Title	Quantitative Research - II
3	Credits	4
4	Contact Hours (L-T-P)	3-1-0
5	Course Type	**Core Course**
6	Course Objective	To understand the process of content analysis method. To understand tools and techniques of content analysis method. To learn the essence of analyzing textual, audio and video contents. To provide theoretical knowledge and applied know how of Content Analysis method. To orient students in depth towards the concepts Content Analysis method.
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Define content analysis **CO2**: Explain different types of content analysis **CO3**: Develop understanding of sampling, variables and analytic techniques **CO4**: Demonstrate media content analysis **CO5**: Create code book and develop tabulation **CO6**: Build code book for a dowry based documentary film
8	Course Description	The course is designed primarily for the students to anticipate future applications of content analysis in media and communication research.
9	**Outline syllabus**	
	Unit 1	**Introduction**
	A	Meaning and Definition, Scope of content analysis
	B	Process of Content Analysis
	C	Limitations of content analysis
	Unit 2	**Types of Content Analysis**
	A	Qualitative Content Analysis
	B	Quantitative content analysis
	C	Unit of Analysis, Types, Coding
	Unit 3	**Sampling**
	A	Sampling, Types of Sampling, Sample Size
	B	Variables
	C	Analytical Techniques : Text driven , Problem driven Method driven
	Unit 4	**Media Content Analysis**
	A	Content Analysis in Print Media , audio Video
	B	Coding, Data Sheet Tabulation, Graphical presentation of data
	C	Interpretation and Report Writing
	Unit 5	**Code Book and Tabulation**

	A	Exercise of Print Content Analysis		
	B	Exercise of Audio Video Content Analysis		
	C	Exercise of Social Network Analysis		
10	Mode of examination	Theory		
11	Weightage Distribution	CA	MTE	ETE
		30	20	50
12	Text book/s*	• Mass Media Research: An Introduction by Roger D. Wimmer		
13	Other References	• Media and communication research methods by Arthur Berger • Mass Communication Research Methods by Anders Hansen		

School: SMFE		**Batch: 2021-2025**		
Program: B.Sc. Animation & VFX		**Current Academic Year: 2024-2025**		
Branch: NA		**Semester: VIII**		
1	Course Code	**BJN 410**		
2	Course Title	Dissertation		
3	Credits	6		
4	Contact Hours (L-T-P)	0-4-4		
5	Course Type	**Core Course**		
6	Course Objective	The objective of this course is to: Strengthen the academic research ability of the students. Evolve the inquisitiveness of the students towards society and various factors affecting media and society at a large. Enhance the problem solving skills of the students.		
7	Course Outcomes	**After the completion of this course, the student will be able to** **CO1**: Relate the theoretical knowledge of research. **CO2**: Demonstrate their problem-solving skills through research on the topics related to media and communication which directly impacts the society. **CO3**: Identify research problem and specific research objectives **CO4**: Outline the research process. **CO5**: Develop report on the research problem and the proposed solution **CO6**: Present their research work with proper ethics of research.		
8	Course Description	The course is designed to inculcate the research value and skills among the students.		
9	**Outline syllabus**			
	Unit 1-5	**Complete the master's thesis/dissertation under the supervision of the assigned faculty in given time**		
10	**Guidelines for the students**	Each student is required to write a dissertation on any topic related to communication and will have to seek approval of the faculty supervisor for her/his dissertation. The final dissertation report duly signed by the supervisor and head of the centre has to be submitted to the centre before the summative examination of the last semester. Students will apply similarity checker before submitting final copy of dissertation and submit self-declaration that similarity in dissertation content, excluding review of literature, is not more than 15 percent.		
11	Mode of examination	Jury		
12	Weightage Distribution	CA	MTE	ETE
		60		40