।। सा विद्या या विमुक्तये ।।
स्वामी रामानंद तीर्थ मराठवाडा विद्यापीठ, नांदेड
"ज्ञानतीर्थ" परिसर, विष्णुपूरी, नांदेड - ४३१६०६ (महाराष्ट्र)
SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY NANDED
"Dnyanteerth", Vishnupuri, Nanded - 431606 Maharashtra State (INDIA)
ACADEMIC (1-BOARD OF STUDIES) SECTION
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आंतर विद्याशाखेतील सर्व संलग्नित महाविद्यालयातील पदवी स्तरावरील खालील विषयांच्या **(सी.बी.सी.एस)** पॅटर्न नुसारच्या अभ्यासक्रमास शैक्षणिक वर्ष 2021-22 पासून लागु करण्याबाबत.

प रि प त्र क

या परिपत्रकान्वये सर्व संबंधितांना कळविण्यात येते की, आंतर विद्याशाखेच्या दिनांक ०१ जून २०२१ रोजीच्या बैठकीतील शिफारशीनुसार व मा. विद्यापरिषदेच्या दिनांक १२ जून २०२१ रोजी संपन्न झालेल्या बैठकीतील विषय क्र.२९/५१—२०२१, च्या ठरावानुसार आंतर विद्याशाखेतील पदवी स्तरावरील बी.ए. तृतिय वर्षाचे **(C.B.C.S.)** पॅटर्न नुसार खालील अभ्यासक्रम शैक्षणिक वर्ष २०२१—२२ पासून लागु करण्यात येत आहेत.

1. **B.A. (III, year) Home Science** (v & vi Sem.)
2. **B.A. (III, year) Physical Education** (v & vi Sem.)
3. **B.A. (III, year) Fashion Design** (v & vi Sem.)
4. **B.A. (III, year) Music** (v & vi Sem.)
5. **B.A. (III, year) Education** (v & vi Sem.)
6. **B.A. (III, year) Computer Animation & Web Designing** (v & vi Sem.)
7. **B.A. III, (Lib& Information Science)** (v & vi Sem.)

सदरील परिपत्रक व अभ्यासक्रम प्रस्तुत विद्यापीठाच्या www.srtmun.ac.in या संकेतस्थळावर उपलब्ध आहे. तरी ही बाब सर्व संबंधितांच्या निदर्शनास आणून द्यावे, ही विनंती.

'ज्ञानतीर्थ' परिसर,
विष्णुपुरी, नांदेड — ४३१ ६०६.
जा.क्र.: शैक्षणिक—०१/परिपत्रक/पदवी/अभ्यासक्रम/
२०२१—२२/७०
दिनांक : ०६.०७.२०२१.

स्वाक्षरित/—
सहा.कुलसचिव
शैक्षणिक (१—अभ्यासमंडळ) विभाग

प्रत माहिती व पुढील कार्यवाहीस्तव :

१) मा. अधिष्ठाता, आंतर—विद्याशाखा, प्रस्तुत विद्यापीठ.
२) मा. सहयोगी अधिष्ठाता, आंतर—विद्याशाखा, प्रस्तुत विद्यापीठ.
३) मा. कुलसचिव यांचे कार्यालय, प्रस्तुत विद्यापीठ.
४) मा. संचालक, परीक्षा व मुल्यमापन मंडळ, यांचे कार्यालय, प्रस्तुत विद्यापीठ.
५) मा. प्राचार्य, संबंधित महाविद्यालये, प्रस्तुत विद्यापीठ.
६) सिस्टम एक्सपर्ट, शैक्षणिक विभाग, प्रस्तुत विद्यापीठ यांना देवून कळविण्यात येते की, सदरील परिपत्रक विद्यापीठाच्या संकेत स्थळावर प्रकाशित करावे.

स्वामी रामानंद तीर्थ
मराठवाडा विद्यापीठ,नांदेड.

SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY, NANDED

Faculty of Interdisciplinary Studies

B.A Computer Animation & Web Designing

Syllabus

B.A Third Year

Semester Pattern

(Choice Based Credit System)

[Effective from June 2021-22]

CBCS - Paper Pattern in the subject of

B.A Computer Animation & Web Designing

B.A Third Year Semester Pattern-2021-22

B.A Third Year Computer Animation & Web Designing Syllabus

Contents

Semester – V

Paper No.	Title of Paper	CA Marks	ESE Marks	Practical Marks
35	Video Editing	35	40	
36	Motion Graphics	35	40	
37	Film Layer Based Compositing	35	40	
38	Video Editing Practical			75
39	Motion Graphics Practical			75
40	Film Layer Based Compositing Practical			75
41	Basics Of Color Grading Practical			75
42	Project			75
43	SEC-I Skill Course	25	25	

Semester – VI

Paper No.	Title of Paper	CA Marks	ESE Marks	Practical Marks
44	Advanced Matchmoving	35	40	
45	Digital Compositing	35	40	
46	Film FX	35	40	
47	Advanced Matchmoving Practical	35	40	
48	Digital Compositing Practical			75
49	Film FX Practical			75
50	Project			75
51	Final Showreel			75
52	SEC-II Skill Course	25	25	

S.R.T.M. UNIVERSITY, NANDED

Choice Based Credit System (CBCS)

Course Structure (New Scheme)

Faculty of Interdisciplinary Studies

B.A Third Year Semester Pattern-2021-22

B.A Computer Animation & Web Designing

Semester – V & VI

Semester	Core Course	Paper No	Name of Paper	Lecturer / Week	Total No. of Lectures	CA	ESE	Practical	Total Marks	Credits
Semester-V	BAAW 35	35	Video Editing	6	72	35	40		75	3
	BAAW 36	36	Motion Graphics	6	72	35	40		75	3
	BAAW 37	37	Film Layer Based Compositing	6	72	35	40		75	3
	BAAW 38	38	Video Editing Practical	6	72	35	40		75	3
	BAAW 39	39	Motion Graphics Practical	6	72			75	75	3
	BAAW 40	40	Film Layer Based Compositing Practical	6	72			75	75	3
	BAAW 41	41	Basics Of Color Grading Practical	6	72			75	75	3
	BAAW 42	42	Project	6	72			75	75	3
	BAAW 43	43	SEC-I Skill Course	4	48	25	25		50	2
			Total-I	**51**	**612**	**165**	**185**	**300**	**650**	**26**
Semester-VI										
	BAAW 44	44	Advanced Matchmoving	6	72	35	40		75	3
	BAAW 45	45	Digital Compositing	6	72	35	40		75	3
	BAAW 46	46	Film FX	6	72	35	40		75	3
	BAAW 47	47	Advanced Matchmoving Practical	6	72			75	75	3
	BAAW 48	48	Digital Compositing Practical	6	72			75	75	3
	BAAW 49	49	Film FX Practical	6	72			75	75	3
	BAAW 50	50	Project	6	72			75	75	3
	BAAW 51	51	Final Show reel	6	72			75	75	3
	BAAW 52	52	SEC-II Skill Course	4	48	25	25		50	2
			Total-II	**51**	**612**	**165**	**185**	**300**	**650**	**26**
			Total-I&II	**102**	**1224**	**330**	**370**	**600**	**1300**	**52**

Note:

- Total Credit for First Year : 52
- Continue Assessment : 35 Marks
- End of Semester Examination : 40 Mark
- End of Semester Practical Examination : 75 Marks
- Each Theory is of 3 Credits
- Each Practical is of 3 Credits

B.A Computer Animation & Web Designing (BAAW)

It is an Undergraduate (UG) Programme of 3 Years (6 Semesters) duration.

Eligibility for Admission:

A candidate for being eligible for admission to the first year. Degree in B.A Computer Animation & Web Designing must have passed the Higher Secondary Examination (10+2) of Maharashtra State Board or any Examination of any Statutory University with Science, Arts, Commerce or Vocational streams.

EXAMINATION PATTERN

CA (Continue Assessment) - 35 Marks

Marks Distribution

- 20 Marks for Test (10+10=20)
- 15 Marks for home assignment

ESE - Theory Paper - 40 Marks

Marks Distribution

- Question No 1 is compulsory = 10 Marks
- Question No 2 to 6 solve any 3 = 30 marks

Practical's 75 Marks

Marks Distribution

- 40 Marks for Practical 2 Questions (20 + 20)
- 10 Marks for Oral
- 25 Marks for Practical Record Submission (CD/DVD/ONLINE)

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –V BAAW 35

VIDEO EDITING

Theory Paper

Total Credits 03 **No. of Lectures 60**

CA	ESE	Total
35	40	75

Course Objectives and Goals

In this class, we will study terminology and concepts, learning both the rules and how to break them, as we look at the aesthetics choices and the technological workflow for both picture and sound editing. We will examine the historical role of editing, from the earliest silent film through the digital revolution that has transformed moviemaking today.

Salient Features:

This course explores the history and theory of nonfiction film and video, with an emphasis on work that falls under the rubric of "documentary." Documentary is a unique form of non-fiction moving image media that claims a special relationship to reality and truth. Through screenings, readings and class discussion

Utility of Course:

1. Creating the editor as storyteller and understanding the narrative structure of editing
2. Be able to recognize and write about various forms and conventions of documentary storytelling, including the basic grammar of documentary moving images.

Learning Objectives:

1. To be a good video editor
2. Doing freelance projects of Documentaries , short movies , wedding shoots etc.

Prerequisites:

- Knowledge Of Photoshop

Syllabus

Unit 1: The Premiere Pro interface features and functions

2) how to import and organize footage, basic editing techniques

3) Setting Up for EditingEfficient editing habits to work faster

Unit 2: Working in the Timeline, Transitions, Keyframing, Filters, Ingesting

Unit 3: Color Correction, Audio, Titling, Review and Look Forward

Unit 4: working on project , creating Documentary, Short Film

Unit 5:plug inns, outputs, renders, exports

Software: Adobe Premier

References:

The History of Film Editing, Karel Reisz, Gavin Miller

On Film Editing, Edward Dmytrk

Film Editing: Great Cuts Every Filmmaker Should Know, Gael Chandler

First Cut: Conversations with Film Editors, Gabriella Oldham

Career Options : Video Editor, Colorist,

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –V BAAW 36

Motion Graphics

Theory Paper

Total Credits 03 **No. of Lectures 60**

CA	ESE	Total
35	40	75

Course Objectives and Goals

Motion Graphics will introduce the student to the use of the computer as a creative tool in the creation of motion graphics. Students will experiment with notions of form, function & visual communication as related to the exploration of media applications. Students will compose & graphically articulate conceptual solutions to given problems & measure the effectiveness of solutions based on client/problem & or creative/strategic needs. We will focus on the general ideas of sequential storytelling, timing, editing, emphasis, thematic development, & basic interactivity.

Salient Features:

Upon completion of this course the student should be able to:

- Compose & articulate conceptual solutions, which appropriately utilize motion graphics.
- To closely explore & demonstrate the relationship between form & content for the purpose of story telling or advancing a narrative.
- To explore & demonstrate the effects of altered sequence & hierarchy on images & resulting content.
- Assess appropriate use of technology for a distinct design problem.

Utility of Course:

Motion Graphics I is a basic motion design course aimed at Motion Graphics majors. This course teaches several different approaches to animation with the goal of refined movement to tell stories and deliver messanging while maintaining a highly designed approach. Students can apply skills learned in this class to other design and animation classes.

Learning Objectives:

create motion graphics from a variety of static sources

· recognize and define common animation techniques

· apply common animation techniques to simulate realistic movement

· create a short visual story from a script

· use audio, typography and design to make a visual production

Prerequisites:

- Knowledge Of Photoshop, Illustrator

Syllabus

Unit 1:

What is motion graphics? Softwares used for Vfx, Node based and layer based compositing,

Exploring advantages of VFx, File formats, Introduction to After Effects, After Effects panels,

Starting a new project, Project settings, Importing assets, Methods of creating new composition,

Composition settings

Unit 2:

Layer Management: Selecting, Moving layers, Replace footage, Trim in and out points, Ripple
insert. Layer properties in the timeline panel, Show and hide properties in timeline, Copy/paste
properties to different layers. Basic animation using layer properties, Animation using keyframe
and Graph Editor, Keyframe assistant, Keyframe interpolation, Spatial keyframes and motion paths, Animate text with text animators. Blending modes: Using blending modes with different
layers. Adjustment layers, Solid layer, Null objects, Text layer, Guide layer, Concepts in parenting: Parent and child layer

Unit 3:

Mask: Creating masks, Mask points, Mask feather tool, Animating masks, Mask by painting. Track mattes: Luma matte, Alpha matte, Traveling matte, RGBA. Motion blur. RAM Preview: Setting resolution for preview. Uses of pre-composition and nesting. Puppet tools. Effects and Presets: Applying effects from effects and preset panel, Compound effects. What is expressions? Applying simple expressions.

Unit 4:

3D Layer: 3D space, Z dimension, 3D Rotation, Z scale, 3D motion paths, Creating camera, Camera settings. Lighting in 3D space, Lighting parameters, Manage shadow. Multiplane compositing: 3D camera movement through 2D image layers. Controlling speed of different layers to show depth. Depth composting, Z channel, RGBA Z imag

Unit 5:

Rendering: Render queue panel. Render settings, Output

module settings. Introduction to Adobe
Media Encoder
Software: Adobe After Effects

References:

1.Creating Motion Graphics with After effects: Trish and Chris Meyer, Focal Press
2.Motion Graphics with Adobe Creative Suite5 Studio Techniques: Richard Harrington and Ian
Robinson

Career Options : Motion Graphic Artist

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –V BAAW 37

Film Layer Based Compositing

Theory Paper

Total Credits 03 **No. of Lectures 60**

CA	ESE	Total
35	40	75

Course Objectives and Goals

Film Layer Based Compositing is a continuation of "Motion Graphics". This course introduces the student to advanced tools and compositing techniques.

Salient Features:

Upon completion of this course the student should be able to:

- Compose multiple layers in one comp.
- Able to work multichannel croma removing.
- Understanding the art of compositing.
- Assess appropriate use of technology for a distinct design problem.

Utility of Course:

This course aimed at compositing majors. This course teaches several different approaches to copmositing with the goal of refined movement to compose and deliver compositions. Students can apply skills learned in this class to other advanced classes.

Learning Objectives:

create imaginary compositions from a varies of raw footages

· recognize and define common compositing techniques

· apply common compositing techniques to realistic movement

Prerequisites:

- Knowledge Of Photoshop, Illustrator, Premier Pro

Syllabus

Unit 1:

Color correction and color grading: Primary and secondary color correction, Correcting and matching shots, Basic color grading, Colour balancing of elements, Vignettes

Unit 2:

Rotoscoping -Uses and advantages of rotoscoping, Creating rotos with splines, Hierarchical parent and child roto shapes, Interpolation technique, Keyframe rotos, Final inspection, Rotoscope motion blur and semi transparency

Unit 3:

Mask: Creating masks, Mask points, Mask feather tool, Animating masks, Mask by painting. Track mattes: Luma matte, Alpha matte, Traveling matte, RGBA. Motion blur. RAM Preview: Setting resolution for preview. Uses of pre-composition and nesting. Puppet tools. Effects and Presets: Applying effects from effects and preset panel, Compound effects. What is expressions? Applying simple expressions.

Unit 4:

Tracking: Motion tracking, Motion stabilization, Camera tracking in After Effects, Set extensions, Problems faced during tracking, Time-stretching, time-remapping and time warp effects.

Unit 5:

How to approach and plan a VFX shot? Other VFX applications -Morphing, Adding atmospheres, Crowd replication. What is a Vfx breakdown?

Software: Adobe After Effects

References:

1.Compositing Visual Effects: Steve Wright
2.Digital Compositing for Film and Video: Focal Press

Career Options : Video Editor**,**2d compositor, Motion Graphic Artist

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –V BAAW 38

VIDEO EDITING

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Salient Features: Setting Up for Editing Efficient editing habits to work faster, Thinking creatively. Efficient workflow, Configure factory standard systems, Optimal media management from ingest through to final output.

Utility of Course: Creating the editor as storyteller and understanding the narrative structure of editing

Learning Objectives: To be a good video editor

Prerequisites: .Knowledge Of Photoshop

Practical List

1. Photo Presentation
2. Video Mash-sup
3. Documentry
4. Short Film

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –V BAAW 39

Motion Graphics

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Salient Features:

To help you meet course objectives, the teaching methods in this class are based on professional experience and best practices in the area of motion graphics production. These methods might include: lecture, demonstration, critiques in group and one-on-one settings, group activities and student presentations.

Utility of Course:

Class Participation is a combination of participation in class critiques, questions during lectures and work time, and helpfulness towards the instructor and other students. Excessive distractions during lectures and work time are grounds for losing points from the Class Participation grade. Please limit the use of social media and other unrelated internet and communication usage.

Learning Objectives:

create motion graphics from a variety of static sources

Prerequisites:

Knowledge Of Photoshop, Illustrator

Practical List

1. Project 1
2. Project2
3. Project3
4. Project 4

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –V BAAW 40

Film Layer Based Compositing

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Salient Features:

To help you meet course objectives, the teaching methods in this class are based on professional experience and best practices in the area of compositing. These methods might include: lecture, demonstration, video shooting, group activities and student presentations.

Utility of Course:

Setting Up for compositing Efficient compositer habits to work faster, Thinking creatively. Efficient workflow, Configure factory standard systems, Optimal media management from ingest through to final output.

Learning Objectives:

Making the story board with animatic and make the live action shoot for the particular movie. Shoot time is given by the director as per the story.

Prerequisites:

Knowledge Of Photoshop, Illustrator, Premier Pro

Practical List

1. Multiple Compositing shots in 1 demoreel

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –V BAAW 41

Basics Of Color Grading

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Salient Features: Setting Up for color Efficient editing habits to work faster, Thinking creatively. Efficient workflow, Configure factory standard systems, Optimal media management from ingest through to final output.

Utility of Course: Creating the colorist as color grade artist and understanding the narrative structure of color grading

Learning Objectives: To be a good colorist

Prerequisites: .Knowledge Of After Effects and Photoshop

Practical List

Each student color corrects a final short project in the classroom for their final exam

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –V BAAW 42

Project

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Learning Objective:

- Will gain the knowledge of handling a complete Video Editing, Motion Graphics and Film Layer Based Compositing

Utility:

- To understand and explore complete Video Editing, Motion Graphics and Film Layer Based Compositing

Pre-requisites: Basic Computer Knowledge

Practical List:

- All work of Video Editing, Motion Graphics and Film Layer Based Compositing

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester – V BAAW 43

Skill Enhancement I (PR)

Practical Paper

Total Credits 02 **No. of Lectures 48**

CA	ESE	Total
25	25	50

Course Description

Branding

The course develops theoretical & concept based competences, identifies and describes the construction of brand value.

Includes brand concepts in a global context, basic brand concepts, the core elements of the brand, the construction of brand value, the importance of brand identity, brand evaluation and brand audit.

Learning Objectives

To facilitate, propose and comprehend best branding practices, methods, cases, in direct application to Peruvian and International markets.

The achievement of critical analysis, problem solving and decision making capabilities is key to the course. Participants should analyse and develop alternatives to solution based situations. They will achieve competences to develop brand strategies, analyze brand architectures, brand portfolios and assess different branding cases in multiple industries. The strengthen of oral presentation capabilities and business vocabulary in English is relevant to obtain course objectives

Course Programme

- Introduction to Branding and Brand Value
- Brand Equity
- Brand Identity
- Brand Strategy
- Brand Architecture
- Brand Portfolio

- Marketing Mix and Brand Building
- Private Brands
- Retail Branding

Program-Level Student Learning Outcomes

- Understand Branding best practices
- Be aware of the importance of brands and the brand building process
- Relate Marketing, Advertising and Branding concepts
- Develop and analyse brand strategies, brand architecture and portfolio strategies
- Apply current branding methods to Peruvian and international business cases
- Assess the implementation of branding knowledge
- Comprehend the impact of marketing strategies in the brand building process
- Analyze the application of different branding topics
- The usage of high level branding vocabulary
- The improvement of oral, written business english with all the above

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –VI BAAW 44

ADVANCED MATCHMOVING

Theory Paper

Total Credits 03 **No. of Lectures 60**

CA	ESE	Total
35	40	75

Course Objectives and Goals

By exploring concepts in 3D camera match move of live action scenes, as well as rigid object tracking, students experience tracking 3D shots by hand and by applying the use of camera tracking softwares. Students analyze data and create seamless camera connections between live action shots and 3D computer generated objects.

Salient Features:

Matchmoving is a practical skill that can help digital artists get a foot in the studio door. Now you can learn the professional techniques required with this subject

Utility of Course:

Matchmoving is a practical skill that can help digital artists get a foot in the studio door. Now you can learn the professional techniques required with this subject

Learning Objectives:

- Discover 2D tracking and how to make every track count
- Work step by step through each stage of 3D calibration
- Understand how real cameras work
- Explore the matchmover's role on a live-action set
- Do the matchamation—match your CG character or object to a live-action plate
- Track the motion of an object seen in the footage
- Apply matchmove data for painting, compositing, and lighting
- Examine how 3D movies affect matchmoving

Prerequisites:

- Knowledge Of Maya, Max ,

Syllabus

Unit 1:

History of tracking: Where did Matchmoving come from, who invented it, where was it first used? What is matchmoving based upon? -Rotoscoping and Photogrammetry. What is Matchmoving, How does it work?Camera tracking softwares, Two methods of defining the camera motion: Manual and Automatic

Unit 2:

2D tracking process, Track placements, Plate issues

Unit 3:

Working method of film cameras, Importance of gathering data to recreate elements of the live footage in 3D, Good calibration process, Calibrating cameras, Evaluating the solution for a camera tracking, Calibrations and camera moves, Setting up a coordinate system supervised tracking, Importance of lighting in shooting

Unit 4:

Automatic tracking, Fitting the camera and set, Adding test objects, Getting right information from sets, Creating 3D coordinate frame, Export camera parameters and motion path to 3D softwares. Import point cloud (track points) and camera data to
3D softwares, Use point cloud as a reference point for placing 3D objects, Combining digital plates with live action plates

.**Unit 5:**

Project work based on the syllabus and parameters of the course under the guidance of supervising faculty.

Software: 3D Equalizer/ PF Track/ Boujou/ Matchmover/ syntheyes

References:

1.Match moving: The Invisible Art of Camera Tracking: Tim Dobbert
2.The Art and Science of Digital Compositing:Ron Brinkmaan
3.The Filmmaker's Hand Book:Steven Ascher and Edward Pincus

Career Options : Matchmove Artist , Tracking Artist

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –VI BAAW 45

DIGITAL COMPOSITING WITH CGI

Theory Paper

Total Credits 03 **No. of Lectures 60**

CA	ESE	Total
35	40	75

Course Objectives and Goals

Whenever someone makes a CGI element, someone else has to composite it. In this section we will look at three general areas where CGI elements are composited. First up is straightforward CGI compositing where a CGI object has been created and needs to be composited into the scene.

Salient Features:

Digital compositing is an essential part of visual effects, which are everywhere in the entertainment industry today in feature films, television commercials, and even many TV shows. And it's growing. Even a non-effects fi lm will have visual effects. It might be a love story or a comedy, but there will always be something that needs to be added or removed from the picture to tell the story.

Utility of Course:

Learning advanced techniques for CGI and visual effects development; including CGIelements, camera match moving, multi-pass rendering and digital compositing.

Learning Objectives:

Develop fluent industry-based software and production skills relating directly to effective production of time-based multimedia. Identify and develop an advanced visual and conceptual knowledge in the area of digital post-production. Explore and experiment with a broad range of approaches to digital compositing

Prerequisites:

- Knowledge Of Maya, Max ,

Syllabus

Unit 1:

Camera and lighting techniques necessary to complete each shot effectively: Structure of digital images: The Pixel, greyscale and colour images, Four channel images, LDR and HDRI images, Image resolution, Pixel & image aspect ratio, Digitizing image, Bit depth, Compression, File formats, DPI, What is a plate in Vfx? Who is a plate supervisor? Basics of Match moving –2D tracking process –Automatic tracking

Unit 2:

Compositing CGI: Foreground image, Background image, Matte, Alpha channel (Premultiplied and non-premultiplied alpha compositing), Gray pixels in matte, Compositing the layers, Blending and colour correcting the layers/nodes

Unit 3:

Multi-pass rendering workflow to support advanced post and compositing: Multipass: Specular pass, Diffuse pass, Occlusion pass, Shadow pass, Reflection pass, Composite different passes, Creative control of passes using image blend modes and colour correction techniques.

Unit 4:

Node-based or layer-
based compositing tools as necessary to assemble the shots and rendered
assets: 3D in live action -Principles of camera tracking, Set Extensions, Film live
action set, Create photorealistic 3D set in 3D software, High Dynamic Range Imagery (HDRI) for photorealistic lighting and reflection mapping, Composite live action set and 3D set adjusting lighting, Shadows, Alignment and other interactive elements

Unit 5:

Export camera parameters and motion path to 3D softwares: Color correction and post tools as necessary to uniformly polish the final project, 3D composting systems, Uses of 3D compositing, 3D compositing scene, Simple geometric shapes, Texture maps, 3D camera, Lights shaders. Import 3D objects from 3D softwares, Composite 2D elements and 3D elements in 3D composite
Software: Fusion/ Nuke

References:

1.Digital Lighting and Rendering (2nd Edition): Jeremy Birn
2.Compositing Visual Effects: Steve Wright
3Digital Compositing for Film and Video: Focal Pres

Career Options : Compositor, Roto Artist, Paint Artist

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –VI BAAW 46

Film FX

Theory Paper

Total Credits 03 **No. of Lectures 60**

CA	ESE	Total
35	40	75

Course Objectives and Goals

This course is meant to introduce the students to the possibilities of using dynamic simulation in movies and animation projects. It is meant to introduce the student to an animation using mathematical calculations to get a desired effect through simulation.

Salient Features:

Simulation software is based on the process of modeling a real phenomenon with a set of mathematical formulas. It is, essentially, a program that allows the user to observe an operation through simulation without actually performing that operation. Simulation software is used widely to design equipment so that the final product will be as close to design specs as possible without expensive in process modification.

Utility of Course:

this course shows how to use its massively powerful dynamics system to create a range of simulations. It provides an overview of the dynamics context, and moves on to a range of project-based examples that illustrate how to use an array of simulation types

Learning Objectives:

How to create professional Explosions

how to create realistic oceans.

Create full CG chocolate simulation

how to use flip fluid solver.

how to create Destruction

how to make sand and snow effects.

Prerequisites:

- Knowledge Of Maya, Max ,

Syllabus

Unit 1:

What is dynamic simulation? Discuss the application of dynamic simulation in animation movies and visual effects, Movement with forces, Different types of forcesinvolved in motion: Applied force, Frictional force, Tension force, Normal force, Air resistance force, Spring force, Gravitational force etc

Unit 2:

What is Particle system? Study of Particles: Emitters, Animating particles, Render the particles, Goals, Multiple goals, Particle instancer, nParticle, nParticle collisions, Simulating water using particles, Applying fluid behavior to particles to create ink or dust-like effect

Unit 3:

Soft and Rigid Bodies: Soft bodies, Rigid bodies, Rigid body constraints, Edit rigid body constraints, Springs, Soft and rigid bodylimitations, Edit rigid body attributes

Unit 4:

Introduction to fluid effects: Clouds, Fire, Smoke, creating an ocean etc.

Unit 5:

Using dynamics simulation in animation movies to simulate cloth, water, fire, ropes etc. Combining digital plates with live action footage: Final composite using a compositing softwares
Software: Houdini/ RealFlow/FumeFX

References:

1.Digital compositing for Film and Video: Steve Wright.

2.Special Effects: An Oral History: Pascal Pinteau.

3.Special Effects: The History and Technique: Rickit, Richard.

Career Options : FX Artist , Simulation Artist

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –VI BAAW 47

ADVANCED MATCHMOVING

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Salient Features:

Students analyze data and create seamless camera connections between live action shots and 3D computer generated objects.

Utility of Course:

Setting Up for compositing Efficient compositer habits to work faster, Thinking creatively. Efficient workflow, Configure factory standard systems, Optimal media management from ingest through to final output.

Learning Objectives:

- Discover 2D tracking and how to make every track count
- Work step by step through each stage of 3D calibration
- Understand how real cameras work
- Explore the matchmover's role on a live-action set
- Do the matchamation—match your CG character or object to a live-action plate
- Track the motion of an object seen in the footage
- Apply matchmove data for painting, compositing, and lighting
- Examine how 3D movies affect matchmoving

Prerequisites:

1. Detail Knowledge Of Maya, Max ,

Practical List

1. Auto tracking
2. Manual tracking
3. Object Tracking
4. Lineup control match
5. Matchmoving in maya/max

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –VI BAAW 48

DIGITAL COMPOSITING WITH CGI

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Salient Features:

Digital compositing is an essential part of visual effects, which are everywhere in the entertainment industry today in feature films, television commercials, and even many TV shows. And it's growing. Even a non-effects fi lm will have visual effects. It might be a love story or a comedy, but there will always be something that needs to be added or removed from the picture to tell the story.

Utility of Course:

Learning advanced techniques for CGI and visual effects development; including CGI elements, camera match moving, multi-pass rendering and digital compositing.

Learning Objectives:

Develop fluent industry-based software and production skills relating directly to effective production of time-based multimedia

Identify and develop an advanced visual and conceptual knowledge in the area of digital post-production

Explore and experiment with a broad range of approaches to digital compositing

Prerequisites:

2. Detail Knowledge Of Maya, Max ,

Practical List

6. Object Remove Project
7. Compositing Project 1
8. Compositing Project 2
9. Compositing Project 3
10. Compositing Project 4
11. Compositing Project 5
12. Compositing Project 6

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –VI BAAW 49

Film FX

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Salient Features:

Simulation software is based on the process of modeling a real phenomenon with a set of mathematical formulas. It is, essentially, a program that allows the user to observe an operation through simulation without actually performing that operation. Simulation software is used widely to design equipment so that the final product will be as close to design specs as possible without expensive in process modification.

Utility of Course:

this course shows how to use its massively powerful dynamics system to create a range of simulations. It provides an overview of the dynamics context, and moves on to a range of project-based examples that illustrate how to use an array of simulation types

Learning Objectives:

How to create professional Explosions

how to create realistic oceans.

Create full CG chocolate simulation

how to use flip fluid solver.

how to create Destruction

how to make sand and snow effects.

Prerequisites:

3. Detail Knowledge Of Maya, Max ,

Practical List

13. Creating Sigarate smoke
14. Tyre Burning Project
15. Ship Project
16. Animated Character Burn And Distroy
17. Building Distriction
18. Big waterfall project
19. Tsunami Project
20. Whale Fish Project

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –VI BAAW 50

Project

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Learning Objective:

- Students have to prepare a Showreel or film project in campus under the supervision of concerned Teacher

Utility:

- Submit the project report 20 days prior to theory examination of the semester. Students will have to follow the following steps while preparing the project:

Pre-requisites: Softwares which learned above

Practical List:

- All work of Advanced Matchmoving, Digital Compositing and Film FX

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –VI BAAW 51

Final Showreel

Practical Paper

Total Credits 03 **No. of Lectures 72**

Practical	Total
75	75

Learning Objective:

- Students have to prepare a Showreel or film project

Utility:

- Submit the project report 20 days prior to theory examination of the semester. Students will have to follow the following steps while preparing the project:

Pre-requisites: Softwares which learned above

Practical List:

- All work In one video

B.A Third Year Semester Pattern-2021-22

(CBCS)

B.A Computer Animation & Web Designing

Semester –VI BAAW 52

Skill Enhancement II (PR)

Practical Paper

Total Credits 02 **No. of Lectures 48**

CA	ESE	Total
25	25	50

Course Description

Portfolio Development

Preparation of a portfolio comprised of completed graphic design projects. Evaluation and demonstration of portfolio presentation methods based on the student's specific area of study. This course is designed to help the student gather all previous projects together and prepare a graphic design portfolio consisting of the projects developed in Typography, Design Communication I and II. Special Approval Required.

This course will educate you on how to create a living in the visual communication industry. A few words of wisdom—don't take the class lightly. It's your chance to make an impression with your work. Everything always takes longer than you think it will. At the beginning and end of the semester, you will be critiqued by professionals from the industry—put everything you have into the work, and it will show.

Learning Objectives

Arrange and refine projects for inclusion in a graphic design portfolio; identify industry requirements for employment; identify current events, skills, attitudes and behaviors pertinent to the industry and relevant to the professional development of the student; and create a professional portfolio

Course Programme

- modify, polish and perfect his/her portfolio pieces
- create a digital and printed portfolio
- create a self-identity system, including business card, thank you card & mailer, and resume
- demonstrate job seeking, self-promotion and interviewing skills
- plan and schedule their own work flow and time
- critique his/herself and his/her colleagues
- design and produce collateral to support a portfolio show

Program-Level Student Learning Outcomes

- Upon successful completion of the graphic design program, students will be able to:
- summarize design principles, concepts, styles and terminologies
- use industry standard tools to create design work
- apply design principles and theories to design problems through design work
- develop design work based on current industry standards and relevant trends