



K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION

**SCHOOL OF ARCHITECTURE & DESIGN
(SOAD)**

**BACHELOR OF DESIGN (B.DES.)
IN GAME DESIGN & ANIMATION IN ASSOCIATION WITH
IMAGINXP**

PROGRAMME CODE: 86

2022-26

**Approved in the 29th Meeting of Academic Council Held on 09
August 2022**




Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)



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PREFACE

K.R. Mangalam University envisions all its programs in the best interest of their students. It imbibes an outcome-based curriculum for all its programs to provide a focused, student-centric syllabus with an agenda to structure the teaching-learning experiences in a more outcome based.

The outcome-based curriculum strengthens students' experiences and prepares the students for both, academia and employability, sustainability and life-long learning.

Each program reflects the promise to accomplish the learning outcomes by studying the courses. The graduate attributes encompass values related to well-being, emotional stability, critical thinking, social justice and also skills for entrepreneurship.

The redesigned curriculum focusses on the multi-disciplinary nature of the field of design with emphasis on core design subjects with skills to represent the process of design graphically. Another important part is the aspect of realizing the concept and graphical representation into a workable design. Students are exposed to research and hands on project-based education with active studio sessions. Visiting faculty and external examiners are professionals and academicians chosen from the field of design. Students develop their design with inputs from highly driven team of faculty members and working professionals.

The K.R. Mangalam University hopes that the outcome-based curriculum will help students in realizing their careers as informed, sensitive and creative architects and designers.

ACKNOWLEDGEMENT

Program: **Bachelor of Design in Game Design and Animation,**

Year/ Semester: **4 Years/ 8 Semesters**

Session: **2022-2026 (BDES-GDA)**

The development of an industry-led Curriculum for Undergraduate degree course in the Department of Design in association with ImaginXP is a result of thoughtful deliberations at various stages of dedicated and specialized experts. This model curriculum has been framed to meet the expectations of an academically challenging environment, develop problem-solving skills by students, align with current standards and to enrich the students to make them self-enablers and/or match job requirements on successful completion of their degrees.

We are greatly gratified Mr. Abhayjeet & Ms. Eshayat for her supervision contribution, guidance, and support throughout the development of this curriculum. Special thanks and gratitude to Prof. P. Prakash, Vice Chancellor, K.R. Mangalam University and Prof. Pushplata Tripathi, Pro-Vice Chancellor and Registrar, K.R. Mangalam University who have been instrumental and encouraging throughout the process of developing this curriculum. Last, but not the least, we also sincerely thank to , Mr. Pritom, Mr. Abdul who have contributed for development of this curriculum.

We acknowledge by signing below that we have received and access to a copy of syllabus of the Bachelor of Design Game Design and Animation Programme indicated above. Furthermore, we acknowledge that the contents of the BDES-GDA syllabus have been explained and/or read to us. We understand the requirements concerning textbook(s), assignments, practicum, evaluation and how the final grades will be determined with respect to achieving Course Outcomes.

Prepared by:

Curriculum Team
(IMAGINXP)

Verified by:

Prof. Hemani Singh
(Dean SOAP)

Approved by:

Vice Chancellor

Pro- Vice chancellor

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1. Introduction

The K.R. Mangalam Group has made a name for itself in the field of education. Over a period of time, the various educational entities of the group have converged into a fully functional corporate academy. Resources at KRM have been continuously upgraded to optimize opportunities for the students. Our students are groomed in a truly inter-disciplinary environment where in they develop integrative skills through interaction with students from engineering, social sciences, management and other study streams. The K.R. Mangalam story goes back to the chain of schools that offered an alternative option of world-class education, pitching itself against the established elite schools, which had enjoyed a position of monopoly till then. Having blazed a new trail in school education the focus of the group was aimed at higher education. With the mushrooming of institutions of Higher Education in the National Capital Region, the university considered it very important that students take informed decisions and pursue career objectives in an institution, where the concept of education has evolved as a natural process.

K.R. Mangalam University is established under the Haryana Private University Act 2006, received the approval of Haryana Legislature vide Amendment Act # 36 of 2013 and consent of the Hon'ble Governor of Haryana on 11th April 2013, which was published in the Gazette notification vide Leg. No.10/2013, dated 3rd May 2013.

K. R. Mangalam University Is Unique Because of Its

- I. Enduring legacy of providing education to high achievers who demonstrate leadership in diverse fields.
- II. Protective and nurturing environment for teaching, research, creativity, scholarship, social and economic justice.

2. Objectives

- a) To impart undergraduate, post graduate and doctoral education in identified areas of higher education.
- b) To undertake research program with industrial interface.
- c) To integrate its growth with the global needs and expectations of the major stake holders through teaching, research, exchange & collaborative program with foreign, Indian Universities/ Institutions and MNCs.
- d) To act as a nodal center for transfer of technology to the industry.
- e) To provide job oriented professional education to the Indian student community with particular focus on Haryana.

3. About School

School of Architecture & Design (SOAD) includes:

I. Department of Architecture

- i. Bachelor of Architecture (B. Arch): Council of Architecture (COA) approved five years Program.

II. Department of Design

- i. Bachelor of Interior Design (BID) : 4 year program,
- ii. Bachelor of Design in Game Design and Animation : 4 year program.
- iii. B.Sc. Hons. (Interior Design) : 3 year program,
- iv. Bachelor of Design (B. Des.) : 4 year program,
- v. B. A (Fashion Design) : 3 year program.

3.1. School Vision

The School aspires to become a leading Architecture and Design school by empowering the students with knowledge, confidence and skillset required to navigate their professional path as innovative, creative, socially responsible professionals contributing to nation building through ethical design practices grounded in sustainability and multidisciplinary awareness.

3.2. School Mission

- a) To establish a foundation for lifelong learning
- b) To apply current educational theories that see learning as a process wherein the learner constructs or builds new concepts, focusing on learner-centric education vs. teacher-centric education.
- c) To transform the role of teacher to that of facilitator, guide and mentor and not a transmitter of information
- d) Enhance employability and entrepreneurship through interdisciplinary curriculum and progressive pedagogy with latest technology to produce graduates capable of critically synthesizing architecture, engineering systems, social sciences and entrepreneurial skills.
- e) Developing active leadership skills as project leaders with understanding of various disciplines and collaboration with all stakeholders.
- f) To encourage diverse learning styles, acknowledging Kolb's Experiential Learning Theory, which suggests that learning is cyclical and moving through this continuum over time every learner discovers the learning style best suitable to the person.
- g) To enable students to learn to find meanings and connections by critical contemplation of available resources, strengthening the innate skills of reflection, evaluation, re-iteration and research.
- h) To empower learning by doing. The Design studio is considered both a course and a place of study at the heart of an academic environment fostering design thinking that is simultaneously analytical and creative.
- i) Develop ethical professional qualities among the students with understanding of environmental realities and context related design.

4. Department of Design

Department of Design offers undergraduate, Bachelor of Design in Game Design and Animation in association with ImaginXP, Bachelor of Interior Design (BID), B.Sc. Hons. (Interior Design), Bachelor of Design (B. Des.) and B. A (Fashion Design)

4.1 Graduate Attributes

- GA1: Ethical Professionals
GA2: Collaborative with multidisciplinary knowledge.
GA3: Sensitive, Adaptable, Creative and Innovative
GA4: Communication; Interpersonal and graphic.
GA5: Solution oriented approach

Programme Educational Objectives (PEO)

PEO 1: To prepare competent designers who are sensitive to the needs of the society and environment and can respond to these through their creative design.

PEO 2: To instil in designers a commitment to professional ethics and values, and to prepare them to be responsible and ethical professionals.

PEO 3: To equip designers with the knowledge and skills needed to create a positive and inclusive working environment, and to effectively manage and deal with their teams and clients.

PEO 4: To instil analytical, critical and logical thinking in designers to enable them to take rational decisions.

PEO 5: To prepare designers to become effective collaborators and communicators who can work with other professionals to collaborate on all aspects of design.

PEO 6: To prepare designers to use latest software and technology effectively in drawing and presentation work, and to be able to integrate technology into their design and practices.

4.2 Program Outcomes

PROGRAMME OUTCOMES (POs) of School of Architecture and Design: Students of all **undergraduate, Game Design and Animation** program at the time of graduation will have-

- PO1. Design and Integration:** Work collaboratively toward design resolution which integrates an understanding of the requirements, contextual and environmental connections, construction systems and services with responsible approach to environmental, historical and cultural conservation.
- PO2. Drawing Work:** Produce professional quality graphic presentations and technical drawings/documents.
- PO3. Critical Analysis:** Demonstrate critical thinking through a self-reflective process of conceptualization and design thinking that is open to consideration of alternative perspectives by analyzing, evaluating, and synthesizing ideas and information.
- PO4. Employability and Interdisciplinary Approach:** Students can work effectively in a multi-disciplinary team in the building and design industry.
- PO5. Conduct:** Work in a manner that is consistent with the accepted professional standards and ethical responsibilities. Conduct independent and directed research to gather information related to the problems in design and allied fields.
- PO6. Communication and Teamwork:** Apply visual and verbal communication skills at various stages of the design and delivery process. Also work as an integral member in collaboration with multi-disciplinary design and execution teams in the building and design industry.
- PO7. Life-long learning:** Thrive in a rigorous intellectual climate which promotes inquiry through observation and research and to show curiosity to learn about new developments in design.

- **The Program:**

5 Bachelor of Design in Game Design and Animation (BDES-GDA)

To create a game or an animation, one requires to apply design elements, design aesthetics as well as programming principles to provide users with an overwhelming entertainment experience. To create

animated videos and animation-based games, designers need to visualize characters, creatures as well as backdrops in order to have an engaging game in place. It facilitates creative media, digital and non-digital tools to represent thoughts, characters, interesting plotlines and messages to various audiences. Through a collaborative, highly practical and industry-driven approach, Game Design and Animation will provide robust career opportunities for students not only to develop their aesthetic and technical competence, but to express creativity and conceptualize projects that integrate technology, arts and media to address local and international markets while creating a source of education, entertainment and employment.

5.1 Eligibility Criteria: Only candidates who have the following credentials shall be eligible for admission to BDES-GDA program.

A person who has finished 10+2 in any stream and is willing to proceed their career in a creative field. He/she should have a desire to bring in positive change in people's lives by creating engaging entertainment content with skillful use of advanced design tools and one's vision and imagination. He/she must possess excellent communication, observation and interpersonal skills in order to learn and deliver the best in animation & game development.

A person who is imaginative, has knowledge in game genres and latest trends in animation and has ability to visualize from abstract ideas must attend this program. This course is an excellent choice of career pavement for those who are passionate to learn advanced tools to create extraordinary characters and game system to provide the best entertainment experience.

5.2 Career Options:

- Game Artist - 2D and 3D Video Artist, Environment Artist, Asset Artist, Technical Artist, Character Artist
- Freelance designer - working for multiple companies as a freelancer
- Chief Creative Designer – Chief Designer, Head of Creative Operations, Head of Design
- Animator – Creator of Visual Effects of Various Forms of Media and Entertainment, Design Lead, Art Production Manager, Senior Design Manager, Creative Lead
- Character And Background Designer - Sketching and Development of Character, Scenario Developer, Scenic and Aesthetic Design of Background
- Game Designer - Mobile Phone Game Designer, Video Game Designer, Game Level Designer, Computer Game Designer
- Special Effects Artist - Special Effects Illustrator for Movies, Special Effects Illustrator for Television
- Art Director – Creative Director of Visual Style for Movies and Television, Design Director, Director of Creative Operations, Executive Creative Director

5.3 Program Duration: Program Duration for Bachelor of Design in Game Design and Animation (BDES-GDA) Program is 4 years (8 semesters). The fourth year is spent to introduce the student to professional training and understanding required to complete a project independently.

6 Program Specific Outcomes

PSO1: Create desirable experience: Students will be able to design animated games that are highly desirable in the gaming industry because of the overwhelming experience they provide.

PSO2: Tools, Softwares and Technology: Students will be able to work with ease on tools and softwares used in entertainment business as well as emerging technologies to provide a refined experience.

PSO3: Comprehensive and narrative: Students will be highly skilled in rudiments of narrative filmmaking in a comprehensive format and will apply these skills to deliver detail-oriented work.

PSO4: Innovative: Students will demonstrate the ability to be creative, to explore and emerge with renewed perceptions in order to innovate and add to game designing practice.

PSO5: Practical and demonstrative: As part of this practical-focused curriculum, students will develop professional quality designs that will demonstrate their thorough understanding of Game Design and Animation.

PSO6: Trend Setters: Students will create trends in the entertainment industry that will be followed by rest of the designers.

i. Class Timings

The classes will be held from Monday to Friday from 9.10 am to 4.10 pm.

ii. **Program scheme:** - For Program scheme see **Annexure A & Annexure B.**

8. Syllabus for Bachelor of Design in Game Design and Animation

The syllabi of all courses for first year for BDes Game Design and Animation in association with ImaginXP Program offered by SOAD are given in the following pages. For each course, the first line contains; Course Code, Title and credits (C) of the course. This is followed by the course objectives, syllabus (Unit I to V), Text book and reference books.

Courses at a Glance

Four-Year B. Des Game Design and Animation

	Courses	Credits
Semester I	6	16
Semester II	7	26
Semester III	6	22
Semester IV	7	20
Semester V	6	21
Semester VI	7	19
Semester VII	6	22
Semester VIII	2	20
Total	46	166

8. Scheme of Studies for Bachelor of Design in Game Design and Animation Program

SEMESTER-I			
S.no	Course Code	Course Title	C
1	ADGA101A	FUNDAMENTALS OF DESIGN	4
2	ADGA103A	INTRODUCTION TO SKETCHING	3
3	ADGA105A	HISTORY OF ART, CULTURE & DESIGN	3
4	ADGA107A	FILM AND GAME APPRECIATION	3
5	ADGA109A	DIGITAL TOOLS- I	3
6	UCCS155A	COMMUNICATION SKILLS	4
7	UCDM301A	DISASTER MANAGEMENT	3
		TOTAL	23

SEMESTER-II			
S.no	Course Code	Course Title	C
1	ADGA102A	EFFECTS OF GAME: SOCIOLOGICAL, PSYCHOLOGICAL AND ANTHROPOLOGICAL	3
2	ADGA104A	BASIC KINEMATICS	4
3	ADGA106A	MATERIAL EXPLORATION	3
4	ADGA108A	DIGITAL TOOLS -II	3
5	ADGA110A	COLORS AND EMOTIONS	4
6	ADGA112A	DESIGN PROCESS: PROBLEM SOLVING PROJECT	4
7	ADGA114A	ENVIRONMENTAL SCIENCE	3
8	OE-I	OPEN ELECTIVE-I	4
		TOTAL	28

SEMESTER-III			
S.no	Course Code	Course Title	C
1	ADGA201A	PHOTOGRAPHY TECHNIQUES	4
2	ADGA203A	VISUAL DESIGN AND COMMUNICATION	4
3	ADGA205A	CHARACTER DESIGN	3
4	ADGA207A	CONCEPT ART FOR GAME	4
5	ADGA209A	PLOT BUILDING & STORYTELLING	3
6	ADGA211A	COMPUTER ANIMATION- 3D	4
TOTAL			22

SEMESTER IV			
S.no	Course Code	Course Title	C
1	ADGA202A	ENVIRONMENT & ASSET DESIGN FOR GAMES	4
2	ADGA204A	CONTEMPORARY GAME STUDIES	2
3	ADGA206A	ADVANCED KINEMATICS	4
4	ADGA208A	INTRODUCTION TO UX	3
5	ADGA210A	BOARD GAME DESIGN	3
6	ADGA212A	TECHNOLOGY IN ANIMATION & GAME DESIGN	2
7	OE-II	OPEN ELECTIVE-II	4
TOTAL			22

SEMESTER-V			
Sno	Course Code	Course Title	C

1	ADGA301A	BASICS OF 3D MODELLING, LIGHTING AND RENDERING	4
2	ADGA303A	BASICS OF VFX FOR FILM AND GAME DESIGN	3
3	ADGA305A	SOUND DESIGN	3
4	ADGA307A	MOTION GRAPHICS	3
5	ADGA309A	LEVEL DESIGN	4
6	ADGA311A	RIGGING AND ANIMATION	4
7		VAC-1	
		TOTAL	21

SEMESTER-VI			
S.no	Course Code	Course Title	C
1	ADGA302A	GAME ENGINE	3
2	ADGA304A	BASICS OF VIDEO EDITING	3
3	ADGA306A	COMPOSTING	3
4	ADGA308A	UX DESIGN FOR FUTURISTIC TECHNOLOGIES	2
5	ADGA310A	LIVE PROJECT 1 (Under the Mentorship of an Industry Expert)	6
6		VAC-2	
		TOTAL	17

SEMESTER-VII			
S.no	Course Code	Course Title	C

1	ADGA401A	ECONOMICS OF GAMES	3
2	ADGA403A	GAME INTERFACE DESIGN	4
3	ADGA405A	DESIGN OF GAMES ON MOBILE PHONES	3
4	ADGA407A	DESIGN MANAGEMENT	3
5	ADGA409A	ENTREPRENEURSHIP	3
6	ADGA411A	LIVE PROJECT 2 (Under the Mentorship of an Industry Expert)	6
TOTAL			22

SEMESTER VIII			
S.no	Course Code	Course Title	C
1	ADGA402A	INTERNSHIP (Minimum of Three Months)	12
2	ADGA404A	GRADUATION PROJECT	8
TOTAL			20

DETAILED SYLLABUS

SEMESTER I

ADGA103A	INTRODUCTION TO SKETCHING	L	T	S	P	C
Version 1.0		0	0	3	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. Demonstrate competence in linear methods of drawing images of the life model.
2. Demonstrate competence in tonal methods of drawing images of the life model.
3. Understand and be able to depict basic proportional relationships of the life model.
4. Understand rhythms of the body and natural forms and how they exist in the whole and parts of the figure.

Course Outcomes

- CO1. To sequence the basic methods, techniques & tools of sketching and drawing
- CO2. To illustrate the challenging and nuanced process of sketching and drawing
- CO3. To develop a working concept of what it means to draw.
- CO4. To reinforce the principles of traditional drawing skills.
- CO5. To articulate new ways of thinking, seeing, and creating.

Catalog Description

This is to develop the skills of freehand drawing among students as a way to how to express their ideas of draw and showing its in appropriate way that represents the subject to complete what the student had received in the first stage in the same subject, with a particular focusing on the architectural drawings with three-dimensional 3D perspective.

Course Content

Unit 1: Basics of Sketching and Drawing – 9 hours

History of sketching & drawing, Sketching & its types, Drawing & its types, Difference between sketching and drawing, Common drawing media, Basics of drawing - Line, points, squares, circles, triangles, 2d sketching & drawing

Unit 2: Shapes and forms – 9 hours

Creating layout, shape, line & shadows, shine, Overlap, Texture detail, 3D sketching & drawing. Perspective using forms, cuboid, prisms, cones, sphere.

Unit 3: Still- and real-life sketching – 9 hours

Application learning with still life, real life sketching.

Unit 4: Drawing Techniques – 9 hours

Blind contour drawing, Negative space drawing, One point perspective, Two point perspective, three point perspective linear perspective, planar analysis and line variations, contours, freehand perspective, line into value., Gesture Drawing, Drawing from a photo, Double image drawing

Unit 5: Drawing human figure – 9 hours

Human Anatomy- Proportion drawing using shapes and drawing human figure composition. John Muir Laws and Assignments on 2D drawing, 3D drawing and human figure composition

Text Books:

1. Keys to drawing - Bert Dodson

Reference Books:

1. Sketching the basics - Koos Eissen and Roselien Steur
2. Artist's Drawing Techniques - Dorling Kindersley

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination
Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury			End Term Studio Exam	End Term External Jury	
Weightage (%)	20M	30M			20M	30M	
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam	
Weightage (%)	NA	NA	NA	NA	NA	NA	

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA103A	C01		3									3		
	C02										3			
	C03			1										
	C04	2												
	C05						2							
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

Unit		Unit I	Unit II	Unit III	Unit IV	Unit V
Relevance to the local, national, regional and global developmental needs	Local			Application learning with still life, real life sketching		
	Regional					
	National					
	Global					John Muir Laws and Assignments on 2D drawing, 3D drawing and human figure composition
Relevance To the Employability / Entrepreneurship/ Skill Development	Employability					
	Entrepreneurship					
	Skill Development					
Relevance to the Professional Ethics, Gender, Human, Values Environment & Sustainability	Professional Ethics					
	Gender					
	Human Values					
	Environment & Sustainability					

SDG		<p>Quality Sustainable Development and Global Citizenship (SDG 4.7) (Inculcate responsible design approaches that are sustainable. Appreciation of the design process involved in resolving architectural design problems of Institutional nature with vernacular design approach.) Make cities and human settlements inclusive, safe, resilient and sustainable (SDG 11)- Integration in Design solutions</p>			
NEP		Promoting High-quality research (18.1-18.9)- Background study and research of the Design problem through case studies and Literature studies.	Promoting High-quality research (18.1-18.9)- Background study and research of the Design problem through case studies and Literature studies.	Promotion of Indian Languages, Arts & culture (22.1-22.15)- Use of vernacular architecture techniques for concepts and ideas	Adult Education and Lifelong Learning (21.1-21.10) Professional Education (17.1-17.5) (Ability to design and execute appropriate and original design for final design Proposal)
POE		Team Work- Working in groups of 3-4 for data collection and its presentation	Team Work- Working in groups of 3-4 for data collection and its presentation		
4th IR		Hands-on Experience (Design proposal developed by the students with help of faculty inputs)	Hands-on Experience (Design proposal developed by the students with help of faculty inputs)		

ADGA105A	HISTORY OF ART, CULTURE AND DESIGN	L	T	S	P	C
Version 1.0		3	0	0	0	3
Pre-requisites/Exposure	--					
Co-requisites	--					

Course Objectives

1. Understanding of core content and history of the discipline
2. Broad familiarity with diverse subfields within the discipline;
3. Opportunities to apply classroom learning in real-life setting
4. Deeper thinking and research in one specific area of study.

Course Outcomes

On completion of this course, the students will be able to

CO1. To sequence various art forms in history.

CO2. To understand art in cultural context.

CO3. To illustrate evolution in Design and UX.

CO4. To envisage the paradigm, shift in design as per the various technology changes.

Catalogue Description

Through this course students of art history not only learn to articulate histories of visual production, but also to think critically about the stakes of artistic creation and objects of culture more generally.

Course Content

Unit 1: Art Forms in History – 6 hours

Understanding history of different art forms – modern art, contemporary art, classical art, renaissance art

Unit 2: Historical Interpretation of Art – 6 hours

Art, architecture appreciation and historical interpretation of art in its cultural contexts.
Visit to museums, art galleries and historic monuments

Unit 3: Evolution of Design in Everyday Things – 9 hours

Understanding the evolution in design through forms and everyday things

Unit 4: Paradigm Shift in Design from 19th century to modern time – 9 hours

Journey of design across in the 19th century to modern times.

Unit 5: Project - 15 hours

Project submission on history of Art & design

Text Books

1. The story of the Art - Ernst Gombrich

Reference Books/Materials

1. Gardner's Art Through the Ages - Helen Gardner
2. Design by Evolution: Advances in Evolutionary Design - Luigi C. Barone

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Exam	Term
Weightage (%)	10M	10M	10M	10M	10M	50M	

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06
ADGA105A	C01						
	C02				3		
	C03	2					
	C04				3		
	C05						
	C06						

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA107A	FILM AND GAME APPRECIATION	L	T	S	P	C
Version 1.0		3	0	0	0	3
Pre-requisites/Exposure	--					
Co-requisites	--					

Course Objectives

- To understand elements and genres of films.
- To learn narrative setting in films.
- To understand elements and types of game designs.
- To develop students' interest in aesthetics, technical aspects and narratives of film and games.

Course Outcomes

On completion of this course, the students will be able to

- CO1. Appraise films and filmmakers from a technical, aesthetic, and cultural point-of-view.
CO2. Contextualize film in relation to historical periods, new technologies, economic and business structures, and other art forms and media.
CO3. Differentiate among the various phases of motion picture production.
CO4. Sequence various genres of games and comprehend the need of levels in games, what makes them engaging and factors that make it a success.

Catalogue Description

Through this course will make students aware of the complexity of film art and games. More sensitive to its nuances, textures, and rhythms, and more perceptive in “reading” its multilayered blend of image, sound, and motion.

Course Content

Unit 1: Introduction to Animated Films and Games – 9 hours

Purpose of entertainment, films as a means of entertainment and advertisement, concept of games, genres of animated films and games

Unit 2: Film Aesthetics – 12 hours

Significance of director, Stages of Filmmaking, Perspectives in Cinema, Elements of Cinematography, Framing and Composition, Shots, Establishing Shot, Angles, Camera Movement, sounds, Introduction to Editing, case study - I robot, Finding Nemo

Unit 3: Film Analysis – 9 hours

Elements of Post-production, target audiences of animated films, psychoanalytical study of animated films, messaging and narrative building through animated films

Unit 4: Game Genres – 6 hours

Evolution of games through times, game media and technology, expectations and emotional journey while playing games

Unit 5: Game Analysis – 9 hours

Importance of complexity levels of games, what makes games engaging, study successful games in last decade and factors behind their success

Text Books

1. Film Analysis A Norton Reader – Jeffrey Geiger
2. The Computer Animated Film : Industry, Style and Genre – Christopher Holliday
3. Writing for Video Game Genres : From FPS to RPG – International Game Developers Association (IGDA)

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA107A	C01	2									3			
	C02			2							3			
	C03							3			3			
	C04			2						2				
	C05													
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA101A	FUNDAMENTALS OF DESIGN	L	T	S	P	C
Version 1.0		0	0	0	8	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To explain elements, principles, laws and stages of action model of design
2. To interpret people's psychology and behaviour
3. To implement the laws and action model on real life problems.

Course Outcomes

On successful completion of this course, the students have capability to

- CO1. Sequence elements and principles of design
- CO2. Comprehend stage model of action cycle
- CO3. Illustrate design laws and their importance in design field
- CO4. Articulate various rules of composition of design
- CO5. Gain hands-on experience of fundamentals of design

Catalog Description

This course will help students understand various elements and principles of design. They will study about multiple of stages of design action model and laws of design and learn how to design for people.

Course Content

Unit 1: Elements of Design – 6 hours

Introduction to design, Colour and its attributes, elements of design - line, shape including categories such as texture, space, form.

Unit 2: Design Action Model and Principles of Design – 12 hours

7 Stage model of action cycle for design tools, Unity, harmony and methods, balance and its types, hierarchy, Scale/proportion, dominance/emphasis, rhythm, similarity and contrast

Unit 3: Laws of Design – 12 hours

Gestalt's principle – 1, Hick's law, The Pareto principle - 80/20 rule, The rule of thirds, Proximity, Feedback, Hicks law, Fitts' law, The golden ratio, Occam's razor, Fibonacci sequence, Mental models, emotional design, Composition of Design

Unit 4: Designing for people- 12 hours

Understanding people's psychology and Behaviour, Famous Case studies on people centric

Unit 5: Project Work - 18 hours

Project work on fundamentals of design

Text Books:

1. Universal principles of Design - William Lidwell, Kritina Holden, Jill Butler

Reference Books/Materials

1. Design of Everyday life – Don Norman
2. Universal methods of design – Brus hanington
3. Hundred things every designer needs to know about people – Susan Weins Chenk

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA101A	C01	2												
	C02			3										
	C03						2							
	C04											3		
	C05												3	
	C06													

1=weakly mapped , 2= moderately mapped, 3=strongly mapped

ADGA109A	DIGITAL TOOLS I – ADOBE PHOTOSHOP	L	T	S	P	C
Version 1.0		0	0	2	2	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To illustrate the use of various tools in photoshop.
2. To demonstrate efficiency in managing the projects.
3. To design effective and engaging content for multiple platforms

Course Outcomes

On successful completion of this course, the students have capability to

CO1. Navigate through the many tools available in Photoshop, to create new projects and manage your work efficiently.

CO2. Create effective and engaging marketing content, edit and touch up images to get the perfect aesthetic.

CO3. Formulate professional-looking typography and designs that blend seamlessly with your graphics in a step-by-step process.

CO4. Construct custom designs for different projects, such as web design and social media.

Catalog Description

This course will teach students in and out of Adobe Photoshop. Students will learn how to use different tools of the software and how to use them to compose meaningful design content.

Course Content

Unit 1: Photoshop Basics - 6 hours

Understand the Photoshop Interface, customize workspace and Panels, create a new photoshop file, Place Photos and Graphics in project, Layer Panel, Aligning Layers in Photoshop, Linking Layers, Adding Layer styles and adjustments, using layer masks to erase parts of an Image

Unit 2: Selection Tools and Editing Photos – 6 hours

Intro to selection tools and removing subjects from the Background, Magic Wand and Object Selection Tools, Improving Edge Selections with the Refine Edge Tools, Selection a Specific Color, Automatic Object Selection, Easily Remove Objects from a photo, Intro to Editing Photos in Photoshop, Adjusting Exposure, Adjusting Colors and Making Photo Props, Cropping and Adjusting Photo Aspect Ratio, Basic Dodging and Burning, Editing Raw Photos with Camera RAW, Easy Sky Replacement

Unit 3: Shapes, Titles and Text, Layer Styles – 6 hours

Intro to Shapes, Creating Custom Shapes with Pen and Curvature Tools, Shape Tools Update, Rounded Corners, Custom Shapes, how to add text, wrapping text, making text Follow a line or shape, How to Add a line around Layers, Adding Glow to Your Layers, Adding Bevel and Emboss to your Layers.

Unit 4: Blend Modes, Filter Gallery, Retouching – 6 hours

What is Blend Mode and how to use them, easily remove a Black or White Background with Blend Modes, create a Spotlight Effect with Blend Modes, Using Filters to Add Style to Photos and Graphics, Adjusting the Strength of a Filter, Neural Filters, Landscape Mixer, Harmonization, Color Match, Intro to retouching, How to remove blemishes in Photoshop, Smoothing Skin, Removing Bags under Eye. Professional Dodging and Burning to Enhance a Portrait, Enhancing Eye Color, Enhancing Lip Color, Saving and Exporting

Unit 5: Project – 21 hours

Lab work on photoshop tools, Project using Photoshop

Text Books: As it is a studio based subject, there are no specific text books.

Reference Books/Materials

1. The Adobe Photoshop CC Book for Digital Photographers - Scott Kelby

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Navigate through the many tools available in Photoshop, to create new projects and manage your work efficiently.	PO5
CO2	Create effective and engaging marketing content, edit and touch up images to get the perfect aesthetic.	PO1, PSO2
CO3	Formulate professional-looking typography and designs that blend seamlessly with your graphics in a step-by-step process.	PO4, PSO4
CO4	Construct custom designs for different projects, such as web design and social media.	PO7

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA101A	C01					1								
	C02	3								3				
	C03				2							3		
	C04							2						
	C05													
	C06													

1=weakly mapped , 2= moderately mapped, 3=strongly mapped

SEMESTER II

ADGA102A	EFFECTS OF GAME: SOCIOLOGICAL, PSYCHOLOGICAL AND ANTHROPOLOGICAL	L	T	S	P	C
Version 1.0		2	1	0	0	3

Pre-requisites/Exposure	
Co-requisites	

Course Objectives

1. Sensitizing students to be more observant to sociological, psychological and anthropological effects of game.

Course Outcomes

- CO1. To interpret genres of games and what makes players attracted towards playing those games.
 CO2. To sequence how games affect psychology of players.
 CO3. To identify how games affect social skills and body of players.
 CO4. To develop games in ethical manner that does not negatively affect players.

Catalog Description

This course introduces students to effects of games on the players. Students will be able to recognize sociological, psychological and anthropological effects of games and will learn to create games in ethical manner.

Course Content

Unit 1: Retaining Factors of Games – 9 hours

What makes games interesting, how do games retain their users, How to find Retention Factor, Target & Stages, Bonuses & Gifts, addictive gaming

Unit 2: Sociological Impacts of Games – 9 hours

Impact on social skills and communication skills of gamers, development of social anxiety and Anti-socialness, how games affect Relationship building and maintaining skills of game players

Unit 3: Psychological Impacts of Games – 9 hours

Development of loneliness and depression, impacts of gaming culture – bullying and abuse, development of toxicity due to games – violent behaviour, recluse, rise of unrealistic expectations

Unit 4: Anthropological Impacts of Games – 9 hours

Physical games vs Video-games, Video-games as a means of surreal reality, Higher Heart beat and blood pressure due to excitement in games, muscle atrophy, obesity

Unit 5: Ethics and Values of Game Design – 9 hours

How to design games that are engaging and develop morality, avoiding stereotyping and violence, de-glorifying lawlessness and addiction

Text Books:

1. Getting Gamers : The Psychology of Video Games – Jamie Madigan

Reference Books:

1. Lost in A Good Game – Pete Etchells

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PS01	PS02	PS03	PS04	PS05	PS06
ADGA102A	CO1	2										2		
	CO2			3										
	CO3			3										
	CO4					2								
	CO5													
	CO6													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA104A	BASIC KINEMATICS	L	T	S	P	C
Version 1.0		0	0	4	0	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To acquaint the students to usage of terminology associated with movement of bodies.
2. To familiarize the students with series of motions of objects and camera

Course Outcomes

On completion of this course, the students will be able to

- CO1. Comprehend the movement of bodies and the terminology.
- CO2. Examine relative motion of objects and camera.
- CO3. Articulate series of motions and induced motions.

Catalog Description

This course introduced the concept of motion. Students will learn about basic body movements and degree of freedom.

Course Content

Unit 1: Introduction to Motion – 12 hours

Movements in Animation, Importance of Keeping movements, Projectile motion, Parabolic Movement, Trajectory, Rotation

Unit 2: Basics of Bones and Joints – 9 hours

Body proportions, How Bones build Body, Skeleton, Relative Motion of bones, Human Walk-cycle, Animal Walk-cycle

Unit 3: Degrees of Freedom – 6 hours

One, two and three degrees of freedom, gravity, rotation, Degrees of Freedom for Bones

Unit 4: Rigid bodies, Bounce & Collisions – 9 hours

Movement when a rigid body bounces off a static body (Wall, floor etc.), collision of projectiles, post-collision movement of bodies

Unit 5: Project Work – 24 hours

Project work on replicating simple kinematic motions.

Text Books: As it is a studio based subject, there are no specific text books.

Reference Books/Materials

1. Physics for Game Developers – Bryan Bywalec, David M. Bourg

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PS01	PS02	PS03	PS04	PS05	PS06
ADGA104A	C01	3							2	3				
	C02	3		3						3			3	
	C03			3									3	
	C04													
	C05													

	C06													
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1=weakly mapped 2= moderately mapped 3=strongly mapped

BGDA203	MATERIAL EXPLORATION	L	T	S	P	C
Version 1.0		0	0	3	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To identify various types of materials and their properties.
2. To comprehend the use of tools to carve different materials
3. To describe the textures of material and apply properties of paint according to the type of material.

Course Outcomes

On successful completion of this course, the students have capability to:

CO1. Practically experience properties of different materials and their textures.

CO2. Manage various materials and acquire knowledge to transform their concept thought in 3 dimensional form.

CO3. Use the full range of materials available to make animation videos.

CO4. Apply various tools while changing state or form of material.

Catalog Description

This course will teach students about different types of material used in game design and their properties. Students will learn to use the tools of carve various materials and gain knowledge about their texture and painting properties.

Course Content

Unit 1: Understanding materials and their properties – 9 hours

Handle and experience materials like cardboard, foam board, wood, clay and its various types, putty and its various types, plaster of Paris, plastics of various types especially used in 3D printers and resins of various types.

Unit 2: Carving of the material – 9 hours

Learning how to carve various materials according to its properties, Tools that are used to materials at different states of same material, Steps to shape the material from bring it to appropriate proportions to giving it more details of a desired design.

Unit 3: Joineries and Structure Building – 9 hours

Different types of joints, Technologies in joining, Joining dissimilar materials, use of staples, paper-clips, glues and tape

Unit 4: Texturing materials – 9 hours

Various types of textures, surface finish – glossy and matte, creating textures, learning how textures connect to emotions

Unit 5: Coloring materials – 9 hours

Types of paints, Direction of use for all types of paints, properties of paints according to its type.

Text book [TB]:

1. The Material Sourcebook for Design Professionals- Rob Thompson, Martin Thompson

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PS01	PS02	PS03	PS04	PS05	PS06
ADGA106A	C01	2						2						
	C02							2	2					
	C03						3			3				
	C04						3			3				
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA108A	DIGITAL TOOLS – II ADOBE ILLUSTRATOR	L	T	S	P	C
Version 1.0		0	0	2	2	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To illustrate the use of various tools in photoshop.
2. To demonstrate efficiency in managing the projects.
3. To design effective and engaging content for multiple platforms

Course Outcomes

On completion of this course, the students will be able to

CO1. Build and develop assets like colors, patterns & drawings.

CO2. Compose 3D and flat objects.

CO3. Design graphics using the right colour schemes, fonts and animations.

Catalog Description

This course will teach students in and out of Adobe Illustrator. Students will learn how to use different tools of the software and how to use them to compose meaningful design content.

Course Content

Unit 1: Introduction to Adobe Illustrator – 6 Hours

Introduction to Adobe Illustrator, Evolution, Importance, how to setup Adobe Illustrator, Introduction to tools and components, keyboard shortcuts, drawing shaping using tools, drawing icons using tools, pen tools, curvature tools, live shape effects, Exporting for Print and Web

Unit 2: Colours and Patterns – 6 Hours

Colour theory for designers, RGB & CMYK, colour schemes and how to choose them, colour trends, using colour themes in illustrator, How to Make Gradients, how to make long shadows, colour blending, gradients along strokes

Unit 3: Typography, Strokes and Lines – 9 Hours

What is typography, Elements and characteristics of typography, How to Use Type & Fonts, Advanced fonts tricks & tips, tools for typography in Illustrator, creating strokes and lines

Unit 4: Introduction to 3D and Animation in Illustrator – 9 Hours

Introduction to 3D in Adobe Illustrator, how to make Semi flat 3D icons & UI design, how to make 3D gradient lettering blends, how to make a pie chart line graph & bar graph, Advanced Image tricks & tips, Masking an Image, Bend & Warp Shapes and Text, Drawing Repeating Shapes and Patterns, Vectorizing an Image

Unit 5: Project – 15 Hours

Lab work on Illustrator tools, Project using Illustrator

Text Books: As it is a studio based subject, there are no specific text books.

Reference Books/Materials

- Adobe Illustrator CC: Classroom in a Book by Brian Wood
- Learn Adobe Illustrator CC for Graphic Design and Illustration by Chad Chelius & Rob Schwartz

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA108A	C01		3				3			3		3	3	
	C02		3				3			3		3	3	
	C03		3				3	3		3		3	3	
	C04													
	C05													
	C06													

1=weakly mapped , 2= moderately map, 3=strongly mapped

ADGA112A	DESIGN PROCESS: PROBLEM SOLVING PROJECT	L	T	S	P	C
Version 1.0		0	0	4	0	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To Introducing students to fundamental techniques of problem solving
2. Enhancing the skills in implementation of these techniques on problem statements

Course Outcomes

On successful completion of this course, the students have capability to

- CO1. Design solutions with 6D process
- CO2. Implementing different tools and techniques at correct form and place
- CO3. Illustrate advance technology and hands-on implementation on the project
- CO4. Concretize the skills learnt through practice sessions.

Catalog Description

Students will learn about 6D design process. They will understand the working of each stage and how it is implemented to solve to a design problem.

Course Content

Unit 1: Discover – 6 Hours

Gap Finding, empathize with stakeholders and users to understand the problem, Find the unmet needs and expectations of the user, analyze data and trends, ask questions relevant to receive insights to the problem

Unit 2: Define – 9 Hours

Problem Statement, Define the problem using mental models, Define the user, Define the context of the user, define the User Personas, User Scenarios, Task Analysis

Unit 3: Dream and Design – 9 Hours

Ideate for maximum number of solutions, define an evaluation criterion, Strategize the idea to base your design solution on, Create the Information Architecture and set priorities, Wireframing and Prototyping, Mockups

Unit 4: Develop and Deliver – 6 Hours

Test and Iterate, A/B Testing, Tool Based Testing, Design Documentation, Assets and Specs, Designer-Developer Handoff

Unit 5: Project – 15 Hours

Project on implementation of 6D process in any service/product

Text Books: As it is a studio-based subject, there are no specific text books.

Reference Books/Materials

1. Designing for Digital Age: How to create human-centered products and services - Kim Goodwin
2. The design of everyday things - Don Norman

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury							End Term Studio Exam			End Term External Jury		
Weightage (%)	20M	30M							20M			30M		
Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA112A	C01	3	3	3			3							
	C02									3			3	
	C03					3	3							
	C04							3						
	C05													
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA114A	ENVIRONMENTAL SCIENCE	L	T	S	P	C
Version 2.0		2	1	0	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To build a comprehensive understanding of various facets of life forms, ecological processes and how humans have impacted them during the Anthropocene era.
2. To identify relevant environmental issues, analyse the various underlying causes, evaluate the practices and policies, and develop framework to make informed decisions.
3. To develop empathy for various life forms and appreciate the various ecological linkages within the web of life.

Course Outcomes

On successful completion of this course, the students have capability to

CO1. Identify concepts and methods from ecological and physical sciences and their application in environmental problem solving.

CO2. Illustrate the scientific and historical context of environmental issues and the links between human and natural systems.

CO3. Comprehend the character of environmental problems and ways of addressing them.

CO4. Implement concepts and methodologies to analyze and understand interactions between social and environmental processes.

Catalog Description

This compulsory course on Environmental Science aims to train students to cater to the need for ecological citizenship through developing a strong foundation on the critical linkages between ecology-society-economy

Course Content

Unit 1: Fundamentals of Environmental Sciences – 6 Hours

The Fundamentals of Environmental Sciences, Spheres of the Earth, Laws of Thermodynamics, Meteorological Parameters, Biogeographic Provinces, Agroclimatic Zones of India, Sustainable Development, Natural Resources and their Assessment

Unit 2: Environmental Geosciences – 12 Hours

Composition of Air and Soil, Toxic Chemicals, Ecosystem Structure and Functions, Origin of Earth, Geochemical Classification of Elements, Weathering Reactions, Erosion, Transportation, and Deposition of Sediments, Soil Formation, Clay Minerals, Soil Physical, and Chemical Properties, The abundance of Elements In Earth, Crust, Hydrosphere and Biosphere, Partitioning of Elements, Geochemical Recycling Of Elements, Paleoclimate, Catastrophic Geological Hazards, Prediction Of Hazards And Mitigation Of Their Impacts

Unit 3: Energy and Environment – 9 Hours

Solar Radiation and its Spectral Characteristics, Principles of Generation of Hydro-Power, Fission and Fusion, Nuclear Fuels, Principles and Types of Nuclear Reactors, Methods to Produce Energy from Biomass, Energy Use Pattern, Emissions of CO₂ in Developed and Developing Countries, Radioactive Forcing and Global Warming, Large-Scale Exploitation of Energy Sources

Unit 4: Environmental Pollution and Control – 12 Hours

Air Pollution, Noise Pollution, Water Pollution, Soil Pollution, Thermal, Marine, and Radioactive Pollution, Solid Waste Management, Generation Rates, Solid Waste Components, Solid Waste Collection and Transportation, Solid Waste Processing and Recovery, E-Waste - Classification, Methods of Handling, And Disposal, Plastic Waste - Sources, Consequences, And Management

Unit 5: Environmental Assessment, Management, and Legislation – 6 Hours

Environmental Impact Statement and Environmental Management Plan, Environmental Impact Guidelines, Impact Assessment Methodologies, Procedure for Reviewing Environmental Impact of Developmental Projects, Life-cycle Analysis, Cost-Benefit Analysis, Guidelines for Environmental Audit, Hazard Identification, Hazard Accounting, Scenarios of Exposure, Risk Characterization and Risk Management, Overview of Environmental Laws in India

Text Books:

1. Environmental Pollution Control Engineering by C. S. Rao

Reference book(s) [RB]:

1. Environmental Science - Toward a Sustainable Future Twelfth Edition (English, Paperback, Richard T. Wright, Dorothy F. Boorse)
2. Environmental Science and Engineering by N. Arumugam, V. Kumaresan

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA114A	C01				3									
	C02											3		
	C03			2										
	C04				3			3						
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA110A	COLORS AND EMOTIONS	L	T	P	S	C
Version 1.0		0	0	4	0	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To understand the basics of color theory and how it is implemented in game design
2. To understand how the choice of color effectives the emotions of players.

Course Outcomes

On completion of this course, the students will be able to

- CO1. To comprehend what is color theory and how it is used in game design
- CO2. To illustrate how to select color palette for game design
- CO3. To articulate how emotion plays an important role in game design
- CO4. To get acquainted with emotion detection and modelling
- CO5. To implement emotional adaptation and expression in game

Catalog Description

This course will develop an understanding of color theory and how it affects the emotions of the players will playing a game. Students will study how to select the color palette and various models used to detect emotion.

Course Content

Unit 1: Color Theory for Game Design - 12 hours

The basics of color theory, Color Elements, Color Combination Schemes, Color Temperature, Hue Shifting Technique, Ready to use color palettes

Unit 2: The Psychology of Color for Game Development – 12 hours

Introduction, Chromathearp, How Culture Reponses to color Psychology Impacts Game Development, Personal Experiences, Fit, Adobe Color

Unit 3: Picking Color Palette – 12 hours

An Introduction to Color Palettes, Picking Palettes with Tools – Kuler , Color Scheme Designer 3, Color Blender, Common Types of Color Schemes, Color Schemes Based on Themes, Creating Perfect Color Palettes

Unit 4: Emotions in Game – 12 hours

Introduction, what games can do for emotion research, what can emotion research do for games, The Affective loop in games, Games as Emotion Elicitors – Game Content, Game non-player characters

Unit 5: Emotion Detection & Modelling and Emotional Adaptation & Expression in Games - 12 hours

Emotion Detection and Modelling in Games – Model- based Top-down Approaches, Model –free (bottom – up) Approaches, The Model’s Input, The Model’s output, Modelling Tools, Emotional Adaptation and Expression in Games- Adapting and Expressing Emotion through Agents and NPCs, Adapting and Expressing Emotion Through Game Content, Integration in the Affective Loop: When and How to Adapt, Evaluating Adaptation

Text Books:

1. Color: A Workshop for Artists and Designers by David Hornung.

Reference Books/Materials

1. On the Way to Fun: An Emotion-Based Approach to Successful Game Design – Roberto Dillon

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA110A	C01	2												
	C02			1										
	C03							2						
	C04											3		
	C05													2
	C06													

1=weakly mapped 2= moderately, mapped 3=strongly mapped

SEMESTER III

ADGA201A	PHOTOGRAPHY TECHNIQUES	L	T	S	P	C
Version 1.0		0	0	4	0	4
Pre-requisites/Exposure						

Course Objectives

1. To select and use appropriate photographic equipment and techniques to capture quality images of a variety of subjects, in studio and on location.
2. To use post-production techniques to edit and finish images in formats that meet industry standards and the needs of the client.
3. To create lighting schemes using appropriate techniques, equipment and accessories to produce quality images that meet the needs of the client.

Course Outcomes

CO1. Students will comprehend how today's photographic camera works and records images.

CO2. Students will explain the correct exposure in terms of light sensitive surface, light sensitivity, light metering, and qualities of light.

CO3. Students will describe alternative correct exposure in terms of depth of field and recording of movement.

CO4. Students will classify technological features on the camera, the process of film and print, and digital photography and defines the general composition rules of photography.

CO5. Students will learn to operate the camera and edit photos.

Catalog Description

Students gain knowledge and interest in photography and image creation. They will experience hands-on learning focused on the technical skills, and creative portfolio images.

Course Content

Unit 1: Exposure and Composition – 12 Hours

How does a camera work, Exposure, Aperture, Shutter Speed, exposure triangle, Using the Camera's Light Meter, Metering Modes, Exposure Compensation, Camera Exposure Modes: Automatic, Manual, Dynamic Range, HDR and Bracketing, what is Composition? Rule of Thirds, Negative Space, Perspective & Angle, The Golden Ratio, Creating Depth with Layering, Depth of Field, Manual Focus vs. Auto Focus, shooting objects in low light and shooting fast objects

Unit 2: Camera Anatomy and Equipment – 12 Hours

Camera Anatomy, Features of a Camera, Histogram, Reading Exposure with the Histogram, Manual Focus vs. Auto Focus, Camera Scene Modes, File Types, Camera's Sensor and its Sizes, Photo Resolution, White Balance and Color, Light Temperature, Shooting in Natural Light, Shooting with Your Camera's Flash and External Flash, Shooting with a Flash Outdoors, Prime vs Zoom, Kit vs. Pro Lens, Lens Stabilization, Lens Filters and Creative Filters, Memory Cards, Batteries & Chargers, Flashes and Lighting

Unit 3: Types of Photography – Part 1– 12 Hours

Shooting Portraits, Shooting Long Exposures – Day and Night time, Shooting Landscape Photos, Shooting Product Photos – Natural and Artificial Lights, Shooting in Low Light, Shooting Sports & Action,

Unit 4: Types of Photography – Part 2– 12 Hours

Shooting Macro Photos, Architecture and Street Photography, Shooting Events, Intro to Aerial & Drone Photography, Nature and Wildlife Photography, Time-lapse Photography

Unit 5: Photo Editing – 12 Hours

Introduction to Adobe Lightroom, Importing, Organizing & Filtering Photos, Crop & Rotate, White Balance, Saturation & Vibrance, Light Adjustments & Tone Curve, HSL Color Adjustments, Effects: Dehaze, Vignettes & Grain, Split Toning, Details: Sharpening & Noise Reduction, Optics: Lens Corrections & Chromatic Aberration, Geometry: Upright Tool, Saving & Sharing Photos, Removing Blemishes with the Healing Brush, Brush Adjustments for Targeted Edits, Linear and Radial Adjustments, Copying Settings, Presets

Text Books: As it is a studio-based subject, there are no specific text books.

Reference Books:

1. The Art of Photography By Bruce Barnbaum
2. Photography Theory By James Elkins
3. Visual Thinking by Rudolf Arnheim

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA201A	C01										3			
	C02	3			3									
	C03	3			3									
	C04									3	3			
	C05							3					3	
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA203A	VISUAL DESIGN AND COMMUNICATION	L	T	S	P	C
Version 1.0		0	0	4	0	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To comprehend and effectively communicate the design ideas
2. To design effective and engaging content for multiple platforms
3. To grasp the methods of presenting complex information visually
4. To apprehend the application of design communication and visualization

Course Outcomes

On completion of this course, the students will be able to

CO1. Compose meaningful, useful, and attractive visual designs to create and convey a message or a story, making it visually stand.

CO2. Evaluate the aesthetic content of artistic works within a specific historical, cultural, and/or commercial context.

CO3. Demonstrate an effective transference of ideas.

CO4. Recognize and apply aesthetic principles within non-original and original works, respectively.

CO5. Display a professional demeanor in managing time, materials, and information, as it reveals motivation, attitude, and work ethic.

CO6. Determine the mode of production required to achieve a specific product and to demonstrate level-appropriate mastery of skills—manual and/or digital—necessary to achieve those products.

Catalog Description

This course is focused on teaching participants how to create a book of visual standards and how to use it to create graphics with specific purposes like posters, social media posts and brochures. It will also give students an understanding of the processes and tools required to create interactive visualizations and explanations of data. It will allow students to appreciate correct visualizations, and to identify biased or manipulated interpretations.

Course Content

Unit 1: Introduction to Visual Design and its Elements – 9 hours

Visual Design, aesthetic appeal, Why Visual Communication Matters, How elements such as line, shape, colors can build visuals, visual conceptualization process

Unit 2: Typography, Composition and Layout – 9 hours

Different types with their names and character, mode, weight, orientation, position & sizes, readability and messaging to convey, Importance of layout, rules of composition, grids and types of grid, golden ratio

Unit 3: Visualization techniques and Ideation Methods– 9 Hours

Learning visualization techniques through - visual identity design, metamorphism visualization techniques, Innovation and creativity, exploring cross industry innovation, Brainstorming and mind mapping, crazy 8 method

Unit 4: Information Visualization and Communicating Design Ideas – 9 Hours

Information visualization through infographics and designing brand communication

Unit 5: Project Work – 9 hours

Text Books:

1. Graphic Design : The New Basics – Ellen Lupton, Jennifer Cole Phillips

Reference Books/Materials

1. The Visual Communication Book - Mark Edwards

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination
Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PS01	PS02	PS03	PS04	PS05	PS06
ADGA203A	C01	3	3	2	3	2	3	2	3	2	2	1	2	2
	C02	2		3	2	3	3	3			3			
	C03	3	3	3	3		3	3	3		3		3	2
	C04	3	3	3	3			3	2				3	3
	C05	1		3	3	2		3	2		2		3	
	C06			3	3	3	2	2	2	3	1		2	1

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA205A	CHARACTER DESIGN	L	T	S	P	C
Version .0		0	0	3	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To familiarize the students about basic techniques of drawing characters and silhouettes
2. To design pose and expressions of characters
3. To build story around the character.

Course Outcomes

On successful completion of this course, the students have capability to:

- CO1. Demonstrate the ability to render believable characters through a variety of mark making media, styles and techniques
- CO2. Purposefully explore a variety of compositional formats of their character including perspective, foreground, midground, background
- CO3. Create believable characters in a narrative setting
- CO4. Evaluate own work and the work of others through peer assessment and critique
- CO5. Establish drawing practice, process and development

Catalog Description

In this course students will learn the process of designing characters through conceptualisation and iteration. Using imaginative and observational skills students will create a visual narrative around their created character. Students will also produce visual outcomes that visually communicate the character design.

Course Content

Unit 1: Drawing Characters and Silhouettes – 9 Hours

Research and Development – Who is your character, who is your target audience, keys to drawing with volume, Foreshortening, placement, shading, surface, size, contour, overlap, density, horizon, shadow, building designs from simple shapes, how shape affects our designs, how shapes define silhouettes, The importance of character silhouettes, how shape and silhouettes are important to creating a unique and strong character line up, how to bring an individual identity to a character's face

Unit 2: Expressions and Colours – 9 Hours

Line Weight, Symmetry vs. Asymmetry, Flow of Lines, Busy to Simple, Balance in Contrast, Balance in Colour, Actual Balance, Artist Balance, hands, feet, eyes, and mouth, Color Theory and design decisions for your character, color choices to reflect your characters' feelings and how you want your audience to react to them

Unit 3: Gestures and Building Relationships – 6 Hours

How design decisions relate to each other, Creating your character's gestures, Pose, movement & gesture, Positive negative space, props and cloth, archetypes, designing an animal using simple shapes

Unit 4: Creating a Story – 6 Hours

Storytelling, plot development, designing contrasting characters and placing them in a story telling moment, what a character turn around is, why it is important in character design, and how it is applied in designing for a production

Unit 5: Project – 15 Hours

Sketch and design a character with colours, create expressions, gestures and a story on it

Text Books

1. Character Design from the Ground Up by Kevin Crossley
2. Making Comics: Storytelling Secrets of Comics, Manga and Graphic Novels by Scott McCloud
3. Masters of Anatomy by Adam Hughes

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA205A	C01	3	3						3					
	C02		3									2		
	C03		3				3					2		
	C04			3			3						3	
	C05						3	3					3	3
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA207A	CONCEPT ART FOR GAME (ADOBE PHOTOSHOP SOFTWARE)	L	T	S	P	C
Version 1.0		0	0	3	2	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives:

- To understand what is concept art and how it is used in games
- To learn various tools to design 3D concept art
- To implement the concepts of modelling in Photoshop
- To learn how to give final additions to concept art

Course Outcomes

On completion of this course, the students will be able to

CO1. Understand the basic principles of Design, the design process & concept creation.

CO2. Comprehend how to develop a concept from initial idea through the design cycle into a well-rounded and effective concept.

CO3. Develop the core skills need to operate in the area of concept art creation. Understand and develop creative and engaging concept art elements and assets.

CO4. Understand the process and gain expertise in the creation of assets using relevant production methods and software.

CO5. Operate as a concept artist, through drawing and sketching, life drawing, object drawing and concept art creation.

Catalog Description

This course will provide student with a well-rounded knowledge of the design process, concept art and digital illustration. Gain a knowledge of development tools and software needed to create digital content and assets for games. Using creative projects the students will create engaging and creative answers to industry relevant projects. Understand the process and skills involved that are needed to become a concept artist. Develop a skill set that allows the student to be a creative concept artist.

Course Content

Unit 1: Compositional Studies for Concept Art - 6 hours

What is Concept Art? Importance of Concept Art, Advantages of Concept Art, How it used in game design, Learning with Examples

Unit 2: Intro to 3D for Concept Art – 12 hours

The Drawing Tools, The Modifying Tools, The Offset Tool, Move, Scale and Rotate, Groups and Components, Materials and Styles

Unit 3: Modelling and Exporting – 12 hours

Modeling the Platforms, Modeling the Temple, Framing the Composition, Exporting the Images, Importing to Photoshop

Unit 4: Painting the concept – 12 hours

Setting Up the Layers, Lighting the Foreground, Painting the Bridge Pt01, Painting the Bridge Pt02, Detailing the Cliff, Lighting the Cliff, The Background, Finishing

Unit 5: Project – 18 hours

Project on implementation of concept art using Photoshop

Text Books

- 1. The Big Bad World of Concept Art for Video Games: How to Start Your Career as a Concept Artist - Elliott Lilly**

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PS01	PS02	PS03	PS04	PS05	PS06
ADGA207A	C01	3										3		
	C02	3										3		
	C03		3	3						3		3		
	C04			3										
	C05					3	3						3	3
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA209A	PLOT BUILDING AND STORYTELLING	L	T	S	P	C
Version 1.0		0	0	3	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To give the rationale for the telling of stories.
2. To evaluate a story for its storytelling potential.
3. To outline a story in preparation for storytelling.
4. To present a story before an audience.

Course Outcomes

On completion of this course, the students will be able to

- CO1. Illustrate how writing for games differs from writing for other media.
- CO2. Identify which aspects of a game contribute to a memorable narrative.
- CO3. Discover how story is conveyed through games.
- CO4. Practice developing an idea from start to end.

Catalog Description

In this course, students develop their own storytelling talents, apply the techniques of storytelling, create storytelling guides, and perform a story for an audience.

Course Content

Unit 1: Plot building - 9 hours

What is a Plot? 4 Key Steps of Writing a Great Plot, Helpful Game Plot Lessons, what is Narrative Structure? Types of Narrative Structure, Types of Narrative Arcs for Plot Development

Unit 2: Story Structure – 9 hours

What is narrative structure? Basic story structure, seven story structures every writer should know Freytag's Pyramid, The Hero's Journey, Three-Act Structure, The Dan Harmon Story Circle, The Fichtean Curve, Save the Cat, The 7-Point Story Structure

Unit 3: Character Development – 9 hours

Character Types, Cipher Character, Fixed Character, Custom Character, Fixed Customization Character, Character Psychology, Character Traits, Creating Diverse Characters, Stereotypes, Tropes, Character DNA

Unit 4: Dialogues – 9 hours

What is dialogue, Types of Dialogue, Ambient Dialogue, Interactive Dialogue, Cutscenes, The Two Page Scene, Effective vs Non - Effective Dialogue, Script Process, Theme and Tone, Writing Ambient Dialogue, Writing Interactive Dialogue, MMO Dialogue, Mobile Dialogue, writing inside the Boxes, Giving Voice to a Character

Unit 5: Project Work – 9 hours

Project on implementation of concepts learned in class

Text Books:

1. Video Game Storytelling: What Every Developer Needs to Know about Narrative Techniques – Evan Skolnick
2. Slay the Dragon: Writing Great Video Games - Robert Denton Bryant and Keith Giglio

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA209A	C01	3		3										
	C02			3	3									
	C03								2		2			
	C04							3			2	3	3	
	C05													
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA211A	COMPUTER ANIMATION –3D (AUTODESK MAYA SOFTWARE)	L	T	S	P	C
Version 1.0		0	0	3	2	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To develop three-dimensional moving images in a digital environment.
2. To practice how to create 3D models within a scene.
3. To illustrate how to apply texturing, lighting and how to render them for animation.

Course Outcomes

On completion of this course, the students will be able to

CO1. Execute creative concepts and ideas through a variety and combination of techniques including hand drawn, computer generated, 2D and 3D storyboards and animatics.

CO2. Create sophisticated models for the entertainment, medical, and architectural industries.

CO3. Design 3D characters and creatures ranging from life-like and anatomically correct, to cartoon and anime styles.

CO4. Combine texture mapping, shaders, lighting environments, animating cameras and ‘rigs’ for 3D models and characters in animation sequences.

Catalog Description

This subject covers the major areas of 3D computer animation. It provides students with the opportunity to learn a major commercial 3D modelling, animation and rendering package. It also covers the principles and practice of pre-production planning, production management, and post-production of an animation project. The subject is project-based, and each student develops an animation of their choice.

Course Content

Unit 1: Introduction to 3D Animation

Introduction to Animation, 2D vs 3D animation, what are 3D objects and their properties, process of 3D modelling

Unit 2: 3D Modelling

Getting to know Autodesk Maya software and its interface, hands-on exploring the tools, creating 3D objects in Maya, How 3D objects are created within a scene

Unit 3: Layout and Animation

Positioning of objects and characters within a scene, camera movement, Conceptualizing and creating the storyboard, Getting to know tools in Autodesk Maya for animation

Unit 4: Rendering

Texturing, Lighting and setting up the cameras, Rendering objects, applying special effects

Unit 5: Project Work

Project on creating simple animation in Autodesk Maya.

Text Books - As it is a studio-based subject, there are no specific text books.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA211A	C01	3					3	3	3	3		3	3	
	C02		2		3		3	3	3	3		3	3	
	C03						3	3	3	3		3	3	
	C04	3	2		3		3	3	3	3		3	3	
	C05													
	C06													

1=weakly mapped 2= moderately map 3=strongly mapped

SEMESTER IV

ADGA202A	ENVIRONMENT & ASSET DESIGN FOR GAMES (UNITY SOFTWARE)	L	T	S	P	C
Version 1.0		0	0	3	2	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. The objective of the course is to develop a thorough understanding about Game Engines and its Components.
2. To implement 3D Environmental Design principles.
3. To use weather systems and post-processing to reach AAA quality of level design.

Course Outcomes

On completion of this course, the students will be able to

CO1. Design a beautiful forest scene in Unity using the tools provided in the course.

CO2. Use the tree maker in the course to build plants and bushes for your scenes.

CO3. Develop effective post-processing tools to make your environment look great.

Catalog Description

Over the period of the course, you will learn about Game Engines and understand Unity 3D's Interface. Our next step will be to research our theme, create mood boards, and bring our vision to life. We will add realistic textures, rocks, foliage, water, and lighting to bring our level to life. After our base level will be created, we will learn advanced topics such as weather systems and post-processing.

Course Content

Unit 1: Introduction to Unity Engine - 6 hours

About Unity, Rapid Production, Editor Setup and Basics, Inspector, Scene and Game Objects, Coordinates and Views, Scripts and Visual Studio, Lights, Baking - Light Mapping, Prefabs and GUI, Input and NGUI

Unit 2: Working with Unity Assets - 12 hours

Unity Standard Assets, Install Assets, installing assets using latest versions of Unity, Changing the Layout, Working with Terrains, The Bridge Tool, sculpting a Path, Texturing the Path, Baking a Lightmap,

Unit 3: Designing Terrain and its Elements – Part 1 – 12 hours

Sculpting the Terrain, Post Processing, creating a Stream, Adding Cliffs, Adding Rocks, Adding Ground Details, adding more Trees, Conifer Leaves Task, Adding Ferns, Painting Ground Moss, creating a bush, creating plants, Creating a small plant, Painting Plants, Painting Ivy

Unit 4: Designing Terrain and its Elements – Part 2 – 12 hours

Speed Design, Fixing FPS Issue, GPU Instancing, Painting Grass, Speed Design part 2, Adding More Cliffs, adding a Sea, Customizing the Water, Painting the Sand, Adding Details, Final Adjustments Adding a Wind Zone, Hedera

Unit 5: Project Work - 18 hours

Project in Environment & Asset Design for Games

Text Books: As it is a studio-based subject, there are no specific text books.

Reference Books:

1. Environment Art in the Game Industry - A Guide to Rich and Realistic Environments Using Substance Designer - Henry Kelly

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PS01	PS02	PS03	PS04	PS05	PS06
ADGA202A	C01	3	3						3	3		3	3	3
	C02	3	3	3					3	3		3	3	3
	C03	3	3	3					3	3		3	3	3
	C04													
	C05													
	C06													

1=weakly mapped , 2= moderately mapped, 3=strongly mapped

ADGA204A	CONTEMPORARY GAME STUDIES	L	T	S	P	C
Version 1.0		2	0	0	0	2
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To familiarize the students how games have evolved and what is their current standing in the market.
2. To familiarize the students how games have become a popular culture and can be used as a means of income.

Course Outcomes

On completion of this course, the students will be able to

CO1. Comprehend how games have evolved over time.

CO2. Explore how games create and affect popular culture.

CO3. Illustrate the basic ecosystem of games and how games earn money.

Catalog Description

This course covers concepts of video games and their history. It talks about games market and culture and how playing games can be a means of income.

Course Content

Unit 1: History of Video Games – 6 Hours

Journey from Game Arcade to Play Station, How evolution of technology has pegged widespread of video games, Evolution of Complexity and immersive-ness of video games

Unit 2: Games Market – 9 Hours

Free vs paid games, modes, medium of payment, types of video game payment systems, marketing of games, industry trends, reach of video games, game merchandise

Unit 3: Game Culture – 4 Hours

Subculture in video games, popularity of game characters in culture, adaptation of video game plots into films

Unit 4: Games as a means of income – 6 Hours

Game events and competitions, Participation in Gaming Tournaments, Sponsorships, Games Journalism, Video Game Guides and Tutorials, Game testing

Unit 5: Cognitive Benefits of Games – 5 Hours

improvement of visual contrast sensitivity, spatial attention, Focus and Observation Skills, increase speed of thought and focused critical thinking

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA204A	C01	3		3					3					
	C02	3		3					3			3		
	C03	3		3								3		
	C04													
	C05													
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA206A	ADVANCED KINEMATICS	L	T	S	P	C
Version 2.0		0	0	4	0	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To understand movements of clothes, accessories and jewelry on a body
2. To understand constrains and restrictions in kinematics
3. To use inverse kinematics in character animation

Course Outcomes

On successful completion of this course, the students have capability to:

- CO1. Implement real-time application of kinematics in games.
 CO2. Comprehend kinematics in games to make the game environment come alive
 CO3. Design new game mechanics while designing games.

Catalog Description

This course will help students develop advance movements of a character in game design and animation.

Course Content

Unit 1: Movement and its Effects – 12 Hours

Momentum, Effects of motion on Clothes, accessories, jewelry

Unit 2: Constraints and Restrictions -

Interpolation problems, limitations to movement due to degree of freedom

Unit 3: Role in Character Animation

Importance of believable movements of objects in Character Design, Feet and the ground, hand and grabbing, procedural animation,

Unit 4: Inverse Kinematics

Forward and Inverse Kinematics, Preparing a Rig, The end effector, chain of joints, pivot point of joints, hierarchy of bone movement

Unit 5: Project Work

Reference Books

1. Game Inverse Kinematics : A Practical Introduction – Ken Wright

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Implement real-time application of kinematics in games.	PO1, PSO1, PSO2, PSO4, PSO5

CO2	Comprehend kinematics in games to make the game environment come alive	PO3, PO1, PSO2, PSO4, PSO5
CO3	Design new game mechanics while designing games.	PO6, PO7,PSO4, PSO5

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Settlers
Course Code	Course Title	P O1	P O2	P O3	PO4	P O5	P O6	P O7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO6
ADGA206A	ADVANCED KINEMATICS	2		3			3	3	3	3		3	3	

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA204A	C01	2							3	3		3	3	
	C02			3					3	3		3	3	
	C03						3	3				3	3	
	C04													
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA208A	INTRODUCTION TO UX	L	T	S	P	C
Version 1.0		0	0	3	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To understand what makes a website/app usable
2. To learn common patterns that users look for
3. To measure the success of a site/app
4. To sell design or implementation changes to team members based on data

Course Outcomes

On completion of this course, the students will be able to

CO1. Describe the concept of UX design and how it has evolved

CO2. Interpret UX design process and methodology

CO3. Comprehend how UX industry work

CO4. Summarize the job, roles and responsibilities in UX industry

CO5. Identify importance of UX in digitalization and different types of industries

Catalog Description

User Experience (UX) used to be a term that was largely associated with designers. Today, UX has gone beyond design and extended its reach into building quality experiences for customers. When used correctly, UX best practices can optimise almost every aspect of a business – it's a vital aspect of fulfilling a business's objectives.

Course Content

Unit 1: Introduction to UX Design – 6 Hours

Understand the evolution of UX design as an industry practice and learning about UX industry experts, Design around us, Job roles and responsibilities in the UX industry, UX industry trends in various sectors, Ergonomics for UX Designers

Unit 2: Processes and Methodologies – 9 Hours

Understanding UX design processes and methodologies – user centred design, 5S model

Unit 3: Tools and Technology in UX Design – 9 Hours

Tools, prototype, Industry standards, Technology, NFC, Chatbot, Introduction to Voice User Interface and Gesture Based Interfaces

Unit 4: Multiple Domains and Trends in UX Design – 6 Hours

UX industry trends in various sectors

Unit 5: Project – 15 Hours

Project on UX design process, industry trends

Text Books

- Designing for Digital Age: How to create human-centered products and services - Kim Goodwin
- Sketching the User experiences - Bill Buxton
- The design of everyday things - Don Norman
- The elements of user experience - Jesse James Garrett

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Describe the concept of UX design and how it has evolved	PO1, PSO1
CO2	Interpret UX design process and methodology	PO3, PSO1
CO3	Comprehend how UX industry work	PO1, PO4, PSO2
CO4	Summarize the job, roles and responsibilities in UX industry	PO1
CO5	Identify importance of UX in digitalization and different types of industries	PO1, PO7

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA208A	INTRODUCTION TO UX	3		3	2			3	3	2				

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA208A	C01	3							3					
	C02			3					3					
	C03	3			2					2				
	C04	3												
	C05	3						3						
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA210A	BOARD GAME DESIGN	L	T	S	P	C
Version 1.0		0	0	3	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To comprehend the foundations and components of board games
2. To illustrate the concepts of mathematics involved in board game design
3. To design prototypes and playtest it

Course Outcomes

On completion of this course, the students will be able to

- CO1. Develop complete board or card games prototypes
- CO2. Build game projects with game design document and canvas
- CO3. Comprehend what are physical game components and when to use them
- CO4. Balance your game using math, randomness and probabilities
- CO5. Publish your game with a publisher or by yourself

Catalog Description

This course introduces the concept of board games. Students will learn mathematics involved in creating board games. They will come across foundations and components of board games and how to create a prototype and test it.

Course Content

Unit 1: Introduction to Board Games and Mathematics - 9 Hours

Introduction to Board Games, History of board games, Introduction to Math, Percentages and Simplification, Multiple Events, Probability, Possibilities Interval, Balancing a Game

Unit 2: Game Foundations and Components - 12 Hours

Game Components, Components Feel, Game Aesthetics, Game Genres, Game Tutorials, Game Moments, Game Mechanics, Generating and Capturing Ideas

Unit 3: Prototyping and Playtesting - 9 Hours

Paint Prototypes, Icons for the Game, Marketing and Card Templates, Game Assets, Graphics and Templates, Physical Components, Game Design Document and Canvas, Playtests, Game Scope and Expansions, Crowdfunding Platforms, Publishing Costs and Distribution

Unit 4: Project – 15 Hours

Create a board game concept

Text Books

1. The Board Game Designer's Guide eBook by Jamey Stegmaier
2. The Top 10 Mistakes New Board Game Designers Make (and How to Avoid Them) ebook by Joe Slack

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Develop complete board or card games prototypes	PO7, PSO1, PSO2, PSO4, PSO5, PSO6
CO2	Build game projects with game design document and canvas	PO2, PO3, PSO1, PSO2, PSO4, PSO5
CO3	Comprehend what are physical game components and when to use them	PO3, PSO1, PSO2, PSO4, PSO5
CO4	Balance your game using math, randomness and probabilities	PO3, PSO1, PSO2, PSO4, PSO5
CO5	Publish your game with a publisher or by yourself	PO4, PO6, PSO5, PSO6

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO 7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO 6
ADGA210A	BOARD GAME DESIGN		3	3	2		2	3	3	3		3	3	2

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA210A	C01							3	3	3		3	3	2
	C02		3	3					3	3		3	3	
	C03			3					3	3		3	3	
	C04			3					3	3		3	3	
	C05				2		2						3	2
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA212A	TECHNOLOGY IN ANIMATION & GAME DESIGN	L	S	T	P	C
Version 1.0		2	0	0	0	2
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To familiarize with evolution of animation technology and how it has impacted gaming and animation industry

Course Outcomes

On successful completion of this course, the students have capability to

- CO1. Comprehend history and evolution of animation technologies.
CO2. Illustrate how technology helped animation and gaming industry grow.
CO3. Articulate controls and commands in different devices and gadgets.

Catalog Description

Empowering students to use computers as 2D drafting and 3D modelling tool and to familiarize realistic rendering and presentation techniques using computers

Course Content

Unit 1: History and Evolution of Technology in Animation

Flipbook, Zoetrope, computer and graphic processing hardware, digital sculpting tools, stop motion animation, Technicolor in Animation, Case Study - Disney's Mickey Mouse, Looney Tunes series of Warner Bros.

Unit 2: Technology in 2D Animation & Game Design

Motion Graphics, Adobe After Effects, Flash, Case Study - Pokemon Sun & Moon, Pocahontas

Unit 3: Technology in 3D Animation & Game Design

3D modelling, Defining Points and Vertices, Motion Capture, Rendering, CGI (Computer Generated Imagery), Case Study - Ralph The Wrecker, Alita Battle Angel

Unit 4: Devices and Gadgets

Understand input and display Technologies in Gaming Arcade, Desktop games, Mobile Phone Games, Gaming Consoles, Tablets

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination
Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury		End Term Studio Exam		End Term External Jury
Weightage (%)	20M	30M		20M		30M
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Comprehend history and evolution of animation technologies.	PO1,PSO1, PSO4
CO2	Illustrate how technology helped animation and gaming industry grow	PO3, PSO2
CO3	Articulate controls and commands in different devices and gadgets.	PSO2, PSO4, PSO5

													Practical and demonstrative	Trend Setters
		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative		
Course Code	Course Title	P O1	P O2	P O3	P O4	P O5	P O6	P O7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO6

ADGA212A	TECHNOLOGY IN ANIMATION & GAME DESIGN	3		3					3	3		3	3	

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PS01	PS02	PS03	PS04	PS05	PS06
ADGA212A	C01	3							3			3		
	C02			3						3				
	C03									3		3	3	
	C04													
	C05													
	C06													

1=weakly mapped,2= moderately mapped,3=strongly mapped

SEMESTER V

ADGA301A	BASICS OF 3D MODELLING, LIGHTING & RENDERING (UNREAL ENGINE SOFTWARE)	L	T	P	S	C
Version 1.0		0	0	3	2	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

- 1.To understand terminologies associated with creation in a 3D workspace
- 2.To implement special effects and optimization.
- 3.To publish projects as per industry standards and work on real world applications.

Course Outcomes

On successful completion of this course, the students have capability to

- CO1. Work with and navigate the unique features of the digital 3D modeling workspace to create 3D objects.
- CO2. Identify characteristics of rendering 3D objects for optimal system processing and analysis.
- CO3. Create a 3D environment featuring lighting and textures.
- CO4. Design basic 3D models and animations.

CO5. Evaluate digital 3D projects, identify items for improvement, and implement changes.

Catalog Description

This course provides an introduction to creating, editing, and analyzing 3D models. Develops foundational skills to work with, and navigate the digital 3D modeling workspace to create 3D objects. Examines basic elements of the 3D development of modeling, texturing, lighting, animating, and rendering.

Course Content

Unit 1: Unreal Engine - 3D Modelling - 15 hours

Introduction to Unreal Engine Modeling, Creating Models in 3D Graphics – Modelling, Retopology, UV Mapping, Rigging, Skinning, Exporting and Importing Assets, Inside Engine – Level Editor, Material Editor, Blueprint Editor, Behavior Tree Editor, Persona Editor, Cascade Editor, UMG UI Editor, Matinee Editor, Sound Cue Editor, Paper2D Sprite Editor, Paper2D Flipbook Editor, Physics Asset Tool Editor, Static Mesh Editor, Media Player Editor

Unit 2: Unreal Engine – Lighting – 15 hours

Unreal Engine Overview, Initial Lighting Setup, Lighting the Outdoor Environment, Lighting the Indoor Environment, Post Processing

Unit 3: Unreal Engine – Rendering –12 hours

Rendering Overview, Supported Rendering Features, Textures, Materials, Physically Based Materials, Render Targets, Scene Capture, Render to Texture Blueprint Toolset, High Dynamic Range Display Output

Unit 4: Project Work – 18 hours

Project on 3D Modelling, Lighting & Rendering.

Text Books:

This course does not have a text book as this is a practical subject with hands on learning.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Work with and navigate the unique features of the digital 3D modeling workspace to create 3D objects.	PO1, PO3
CO2	Identify characteristics of rendering 3D objects for optimal system processing and analysis.	PSO1, PSO2, PSO3, PSO4, PSO5
CO3	Create a 3D environment featuring lighting and textures.	PSO1, PSO2, PSO3, PSO4, PSO5
CO4	Design basic 3D models and animations.	PSO1, PSO2, PSO3, PSO4, PSO5
CO5	Evaluate digital 3D projects, identify items for improvement, and implement changes.	PO7, PSO1, PSO2, PSO3, PSO4, PSO5

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	P01	P02	P03	PO4	P05	P06	P07	PS01	PS02	PS03	PS04	PSO5	PSO6
ADGA301A	BASICS OF 3D MODELLING, LIGHTING & RENDERING (UNREAL ENGINE SOFTWARE)	2		2				3	3	3	2	3	3	

	RE)													
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Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA301A	C01	2		2										
	C02							3	3	3	2	3	3	
	C03								3	3	2	3	3	
	C04								3	3	2	3	3	
	C05							3	3	3	2	3	3	
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA303A	BASICS OF VFX FOR FILM AND GAME DESIGN (NUKE SOFTWARE)	L	T	S	P	C
Version 1.0		0	0	3	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

- To understand and identify common visual effects used in motion graphics, Tv and Film.
- To Apply various tools and techniques for emulating realistic effects.
- To analyse and plan visual effects sequences.
- Students will be able to merge elements from various sources to achieve intended effect and composition.
- To make students understand the use of Visual effects in media and animation industry
- To make them fully understand the latest VFX techniques and software
- To Handle VFX for 2D, 3D and Live shoot Learning Video Editing Techniques
- To prepare the learners to design and execute compositing in Visual Effects using digital electronic media and develop the students in a core set of technical and creative skills related to digital filmmaking.

Course Outcomes

On completion of this course, the students will be able to

CO1. Identify, differentiate and apply the post production activity similar to film and TV

CO2. Articulate, integrate and assess the content with appropriate background through visual design in VFX shot

CO3. Analyse and measure different masking techniques and matte painting

CO4. Explain and distinguish with planning the camera movement and tracking live action images with appropriate framing

CO5. Compile and prepare different effects as a VFX shot.

Catalog Description

Students will learn compositing and how the vfx field integrates computer graphics and 3D components with live action plates. The main purpose of this course is to familiarize students with the core skills used in the vfx industry. Students continue to gain practical experience through editing, compositing, and vfx, integrating computer graphics and 3D components with live action plates.

Course Content

Unit 1: Introduction to Nuke - 6 hours

Introducing the class and main concepts, downloading nuke, concept of nodes vs layers, reiterating nodes and compositing structures, Basics of Nuke Interface, setting up project file, Additive Color Model, Formats and Images

Unit 2: Learning Nodes, Roto and Rotopaint – 9 hours

Basic nodes, Transforms, reformats, crops, Blurring, Creative nodes overview, Color Correction, Some other color nodes , Splitting Colors, Rotopaint and Rotoscoping ,Rotoscoping Moving Objects

Unit 3: Compositing Fundamental Concept – 9 hours

Premultiplication ,Animation, Lens Distortion, Grain and Sensor Noise, 2d Motion Tracking, Cleanplating a moving scene - Project Based

Unit 4: Keying, Chroma Keying Greenscreens and Rendering – 6 hours

Keying, Intermediate keying, how to complete the shot, Rendering the shot, Script organization, Cleanup, Precomping, Useful Tips

Unit 5: Project Work – 15 hours

Project on basics of VFX using Nuke

Text Books:

This course does not have a text book as this is a practical subject with hands on learning.

Reference Books/Materials

- Digital Modeling book by William Vaughan
- 3D Modeling For Beginners - Danan Thilakanathan
- Essential Skills for 3D Modeling, Rendering, and Animation by Nicholas Bernhardt Zeman
- Digital Lighting and Rendering by Jeremy Birn

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term	End Term Internal	End Term Studio	End Term External
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	Jury		Jury		Exam		Jury	
Weightage (%)	20M		30M		20M		30M	
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Exam	Term	
Weightage (%)	NA	NA	NA	NA	NA	NA	NA	

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Identify, differentiate and apply the post production activity similar to film and TV	PO1, PO3, PO4, PO6
CO2	Articulate, integrate and assess the content with appropriate background through visual design in VFX shot	PSO1, PSO2
CO3	Analyse and measure different masking techniques and matte painting	PSO1, PSO2, PSO4, PSO5
CO4	Explain and distinguish with planning the camera movement and tracking live action images with appropriate framing	PSO1, PSO2, PSO4, PSO5
CO5	Compile and prepare different effects as a VFX shot.	PSO1, PSO2, PSO4, PSO5

Course Code	Course Title	P O1	P O2	P O3	PO4	P O5	P O6	P O7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO6
ADGA303A	BASICS OF VFX FOR FILM AND GAME DESIGN	2		2	2		2		3	3		3	3	

	(NUKE SOFTWARE)													
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Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA303A	C01	2		2	2		2							
	C02								3	3				
	C03								3	3		3	3	
	C04								3	3		3	3	
	C05								3	3		3	3	
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA305A	SOUND DESIGN (LEXICON PCM REVERBS SOFTWARE)	L	S	T	P	C
Version 1.0		0	0	2	2	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To familiarize with software associated with sound design.
2. To understand the step by step process involved in

Course Outcomes

CO1. To provide students with new understandings and exploratory approaches in sonic arts practice and sound design.

CO2. To equip students with knowledge and develop new artistic and technical skills in sound creation and design in the field of computer games.

CO3. To develop students research processes and a reflexive skill set with regard to future practice, thus enabling students to adapt to the ever expanding and rapidly changing area of sonic arts and related areas of sound design for games.

Catalog Description

This course will develop an understanding of sound design for games and its associated components such as: music, dialogue and voice, ambience and effects using lexicon pcm reverbs software.

Course Content

Unit 1: Introduction to Sound Design

Need of correct synchrony between image and sound, action and emotion realism, Background Music, Ambient sounds

Unit 2: Getting Started - The User Interface

Installation, Level Presets, Preset Category, Control Buttons, Input and Mix, Predelay, Tempo Mode Presets, Frequency, Impulse

Unit 3: The Parameters

Mix, Diffusion, Shape and Spread, Reverb Time, Bass Crossover, Chorus, Tail Width, Echoes, Reverse

Unit 4: Getting Hands-on

Importing animated video, Sound Effects Library, Add Audio Files – Editing Speeds, intensity and layers, Reverb Tricks

Unit 5: Project Work – 15 hours

Add sound to selected animated short film using Lexicon PCM Reverbs software.

Text Books:

This course does not have a text book as this is a practical subject with hands on learning.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	To provide students with new understandings and exploratory approaches in sonic arts practice and sound design.	PO1, PSO1
CO2	To equip students with knowledge and develop new artistic and technical skills in sound creation and design in the field of computer games.	PO3, PSO3, PSO4
CO3	To develop students research processes and a reflexive skill set with regard to future practice, thus enabling students to adapt to the ever expanding and rapidly changing area of sonic arts and related areas of sound design for games.	PSO1,PSO2, PSO4, PSO5,

																		Practical and demonstrative	Trend Setters
		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative							

Course Code	Course Title	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO 7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO 6
ADGA305A	SOUND DESIGN	2		3					3		2	3	3	

1=weakly mapped,2= moderately mapped,3=strongly mapped

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA305A	C01	2							3					
	C02			3							2	3		
	C03								3		2	3	3	
	C04													
	C05													
	C06													

ADGA307A	MOTION GRAPHICS (ADOBE AFTER EFFECTS / ANIMATE SOFTWARE)	L	T	S	P	C
Version 1.0		0	0	2	2	3
Pre-requisites/Exposure						
Co-requisites	--					

Course Objectives

1. To learn basics of Adobe After Effects
2. To showcase necessary skills to create beautiful animations using Graph editors in Adobe After Effects.
3. To learn various animation techniques including shape animation, text animation, and letter animation.

Course Outcomes

On completion of this course, the students will be able to

CO1. Apply the knowledge and concept of visual effects and motion graphics development.

CO2. Solve a visual effects and motion graphics problem with selected approach using appropriate application.

CO3. Select a suitable approach from relevance information to solve a visual effects and motion graphics application.

Catalog Description

This course is designed to expose the students to the basic visual effect and motion graphics. This includes understanding and designing aspects by using a visual effect and motion graphics application. The students will be exposed to the skill of using a visual effect and motion graphics software such as After Effect.

Course Content

Unit 1: Introduction and Basics of Adobe After Effects

Introduction, Workflow and Interface, Composition, Viewport and Timeline, Animation and Transform Properties, Shape Layers, Masks and Effects, Render and Export

Unit 2: Animation Principles, Types of Keyframes, Graph Editors and Shape Modifier

Principles of Animation, Types of Keyframes, Types of Graph Editors, Jumping Ball, Merge Path, Offset Path, Pucker & Bloat, Round Corner, Trim Path, Twist, Wiggle Path, Zig Zag, Repeater & Wiggle Transform

Unit 3: Text Animation and Animation Techniques

Text Animation, Title Animation, Animation Techniques, Morphing Animation, Lettering Animation Liquid Gradient Title Animation, Liquid Gradient Rainbow Title, Liquid Gradient Blank Space Title, Liquid Gradient Eclipse Title, Liquid Gradient Untitled Title

Unit 4: Modern Data Visualization, Advanced Motion Tracking and Call Out Titles in After Effect

Modern Data Visualization in After Effects, Advanced Motion Tracking and Call Out Titles in After Effect, Creating First Call Out Title Animation, Creating Second Call Out Title Animation, Creating Third and Fourth Call Out Title Animation, Tracking

Unit 5: Project Work

Project on Motion Graphics

Text Books:

This course does not have a text book as this is a practical subject with hands on learning.

Reference Books/Materials

1. AFTER EFFECTS CLASSROOM IN A BOOK - Brie Gynclid and Lisa Firdisma
2. Design for Motion - Austin Shaw

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury
Weightage (%)	20M	30M	20M	30M

Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs															
Course Outcomes (COs)													Mapped Program Outcomes		
CO1	Apply the knowledge and concept of visual effects and motion graphics development.													PO1, PSO1, PSO2, PSO4	
CO2	Solve a visual effects and motion graphics problem with selected approach using appropriate application.													PO1, PO3, PSO1, PSO4	
CO3	Select a suitable approach from relevance information to solve a visual effects and motion graphics application.													PO3, PSO1, PSO2, PSO4, PSO5	
		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters	
Course Code	Course Title	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO 7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO 6	
ADGA307A	MOTION GRAPHICS	2		3					3	3	3	3	3		

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA307A	C01	2							3	3		3		
	C02	2		3					3			3		
	C03			3					3	3		3	3	
	C04													

	C05													
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA309A	LEVEL DESIGN (UNREAL ENGINE SOFTWARE)	L	T	S	P	C
Version 1.0		0	0	4	0	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To comprehend the necessity of levels in a game.
2. To design levels to enhance game engagement and overall player experience.
3. To explore practical ideas that will satisfy business and franchise needs while ensuring audience immersion.

Course Outcomes

On successful completion of this course, the students have capability to

CO1. Describe and apply methods and theories of level design,

CO2. Design game environments, both with the intent to achieve specific emotional resonance and to enhance or illustrate specific parts of gameplay,

CO3. Build and implement an interactive environment as well as conduct iterative testing and modification of the design.

Catalog Description

Students are introduced to level design concepts and theories. By creating and discussing several examples of level design, students exercise their ability to value design decisions in an early stage of production. Students then apply these concepts, through production of their own level designs, tests and through implementation. The production is done in project form.

Course Content

Unit 1: Introduction to Levels in Game Design

Why levels matter – player engagement and experience, player capabilities, game mechanics, obstacles, and discoverable elements, authenticity and immersion

Unit 2: Level design Guidelines

Character Powers, Business and Franchise Needs, Audience Needs, Level Progression, Metrics Limitations – player's speed, Size, Jump Heights

Unit 3: Brainstorming

Coming up with Ideas, criteria of idea selection, intensity ramping – combining challenges together, increasing pace

Unit 4: Bubble Diagram

visualize the whole level and how its areas are connected, mapping the whole level in a simple way, connecting different areas of the level with arrows to denote a flow, creating path structure that is best suited for your objectives

Unit 5: Project Work

Project on ideating and creating levels for a simple game.

Text Books:

This course does not have a text book.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Describe and apply methods and theories of level design,	PO1, PO3
CO2	Design game environments, both with the intent to achieve specific emotional resonance and to enhance or illustrate specific parts of gameplay	PSO1, PSO2 PSO4
CO3	Build and implement an interactive environment as well as conduct iterative testing and modification of the design.	PO3, PSO4, PSO5, PSO6

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO6
ADGA309A	LEVEL DESIGN	2		3					3	3		3	3	2

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA309A	C01	2		3										
	C02								3	3		3		
	C03			3								3	3	2
	C04													
	C05													
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA311A	RIGGING & ANIMATION	L	T	S	P	C
Version 1.0		0	0	4	0	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To understand the structures and purposes of basic components of Props, Shapes, biped & Quadruped.
2. To understand how rigs are setup and moved.
3. To understand the tools and techniques used to rig and animate.
4. To apply the knowledge of effectively Create Character rigs for 3D Characters to enable animation for the Characters in a Scene.

5. To apply the concept of skins and how they deform with joint movement and animation

Course Outcomes

On successful completion of this course, the students have capability to

CO1. Understand and identify technical skills needed to set up Various Character and animate.

CO2. Calculate, manage, and assess rigs, alter and support character animations effectively with references.

CO3. Analyse and evaluate procedural deformer to geometry for animation with integrating principles

CO4. Measure and express custom character rigs and character movement

CO5. Produce the custom and Procedural Design character rigs for animating

Catalog Description

The different modules of the course will examine different areas of Rigging & Animation including deep knowledge of 3D tools, anatomy, coding, math and physics. Rigging & Animation is to build rigs for a wide variety of model and character types using the latest industry-standard methods. Advanced techniques for facial work, cloth, simulations, scripting and tool development.

Course Content

Unit 1: Basics of Rigging

Introduction to Rigging in 3d, Basics of Rigging, Hierarchies, Constraints, Wire Parameters, Bones, Kinematics, Controllers, Skinning

Unit 2: Scene Preparations, Root, and Spine Rig

Scene Preparations, Scene Scale, Naming, Geometry Cleaning, Normals, Scene Cleaning, Display Layers, Root and Spine Rig, The Root, Helpers, Root and Spine Bones, Root and Spine Controllers, Constraints

Unit 3: Arms, Hands, Finger, Legs and Feet

Arms, Hands, and Fingers, Arm Helpers, Arm Bones, Arm Controllers, Arm Constraints, Finger Hierarchy, Hand Constraints, Legs and Feet, Leg and Feet Helpers, Leg and Feet Bones, Inverse Kinematics, Leg and Foot Controllers, Knees, Reverse Foot and Finishing Up

Unit 4: Skinning, Attaching Geometry, Rig Enhancements

Skinning and Attaching Geometry, Pelvis and Torso, Spine (Rigid Weighting), Spine (Smooth Skinning), Arm Linking, Arm Skinning, Legs and Feet Linking, Leg Skinning, Finishing the Rig, Display Layers, Locking Controllers, Geometry Colors, Rig Enhancements, Custom Attributes, Wiring Parameters, Reaction Manager, Head Control, Animation Test

Unit 5: Project Work

Project on Rigging and Animation

Reference Books/Materials

1. Rig it Right! - Tina O Haiely
2. Body Language: Advanced 3D Character Rigging – Kelly L Murdock and Eric Allen

**Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination
Examination Scheme:**

Components	Mid Term Jury	End Term Internal Jury		End Term Studio Exam		End Term External Jury
Weightage (%)	20M	30M		20M		30M
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Understand and identify technical skills needed to set up Various Character and animate.	PO1, PO3, PSO1
CO2	Calculate, manage, and assess rigs, alter and support character animations effectively with references.	PO3, PSO2, PSO4
CO3	Analyse and evaluate procedural deformaters to geometry for animation with integrating principles	PO3, PSO2, PSO4
CO4	Measure and express custom character rigs and character movement	PO2, PO3, PSO1, PSO2, PSO4
CO5	Produce the custom and Procedural Design character rigs for animating	PO7, PSO5, PSO6

																		Practical and demonstrative	Trend Settlers
		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative							

Course Code	Course Title	P O1	P O2	P O3	PO4	P O5	P O6	P O7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO 6
ADGA311A	RIGGING AND ANIMATION	3	2	3				3	3	3		3	3	2

Course Code	Course Outcome	P01	P02	P03	P04	P05	P06	P07	PS01	PS02	PS03	PS04	PS05	PS06
ADGA311A	C01	3		3					3					
	C02			3						3		3		
	C03			3						3		3		
	C04		2	3					3	3		3		
	C05							3					3	2
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

SEMESTER VI

ADGA302A	GAME ENGINE	L	T	S	P	C
Version 1.0		3	0	0	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

This course will give basic understanding about function of game engines and how they perform in video games and learn about functions of different game engines.

Course Outcomes

With the successful completion of the course student should be able to

CO1. Identify how game engines perform in a video game.

CO2. Comprehend the working of game engines and its specialized components such as middleware.

CO3. Compare how different game engines function and collaborate through case studies.

Catalog Description

This course introduces students the concept of game engine. It explains various fundamentals associated with game engine and how they work. They will also study about game middleware and comparison of different game engines.

Course Content

Unit 1: Game Engine Fundamentals

Need of Game Engine, Software Framework to provide independent 2D and 3D Rendering, environment development, Components of Game Engine – graphics, sound, physics and Artificial Intelligence (AI) Features

Unit 2: Working of Game Engines

How Game Engines make visualising new games easy, Game Engine as a tool of collaboration to visualise data, products and processes

Unit 3: Game middleware

Integrated softwares in Game Engine that perform specific tasks such as Physics, graphics, networking, pathfinding, collisions, multiplayer management

Unit 4: Case Study - Crystal Space, Genesis3D, Irrlicht, OGRE, RealmForge, Truevision3D, and Vision Engine.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Identify how game engines perform in a video game.	PO1, PSO2
CO2	Comprehend the working of game engines and its specialized components such as middleware.	PO1, PSO2
CO3	Compare how different game engines function and collaborate through case studies	PO3, PSO2

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO 7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO 6
ADGA302A	GAME ENGINE	3		3						3				

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PS01	PS02	PS03	PS04	PS05	PS06
ADGA302A	C01	3								3				
	C02	3								3				
	C03			3						3				
	C04													
	C05													
	C06													

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADGA304A	BASICS OF VIDEO EDITING	L	T	S	P	C
Version 1.0		1	-	2	-	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To understand terminology used in video editing
2. To create, edit, and combine sequences
3. To edit and combine audio, video, and still images
4. To create titles and credits for videos
5. To publish a video to a format suitable for web use

Course Outcomes

Upon completion of the course students should be able to:

- CO1. Plan, design, and create digital video projects incorporating graphic and audio elements.
CO2. Transfer and capture digital video and audio from various cameras and external devices.
CO3. Edit and compress video for use in various delivery modes of digital media using standard digital video editing software.
CO4. Evaluate digital video projects, identify items for improvement, and implement changes.

Catalog Description

This course explores the post-production process for non-linear editing of digital video for use in video production and multimedia applications. Focuses on industry standard editing software to develop the foundational process of editing including continuity and montage principles.

Course Content

Unit 1: Premiere Pro Basics and Video Editing Basics

In addition to creating a project in Premiere Pro, you can also organize and import media in the tool. You can also start a new sequence and understand its structure, add clips to the timeline, and sync audio and video with the click of a button. There are also tools that help you with various editing tasks, such as the ability to create B-rolls and edit video properties.

Unit 2: Adding Style to Your Videos

This unit will teach you how to create a Zoom In / Zoom Out Effect using Keyframes, Blend Modes, Nests, and a cool sequence. You can also create a Circle Video Mask and a Split Create Effect with Borders. The Ken Burns Effect is a great way to add more emotion to your videos by blending in and out of photos.

Unit 3: Adding Video and Audio Transitions, Audio Editing in Premiere Pro

The Essential Pro has various tools that allow you to create video transitions and audio effects. You can also customize the properties of your videos and create custom audio transitions. In addition, you can also make audio tracks longer or shorter to match the length of your videos using the Track Mixer. You can also remove background noise from audio using the audio effects in the Essential Sound Panel.

Unit 4: Titles, Graphics and Color Correction

Using the Essential Graphics Panel in Premiere Pro, you can create graphics and titles for your videos. You can also automate certain tasks in the software such as: creating scrolling credits, replacing media in motion graphics templates, automatic speech to text feature, and color correction. You will learn how to fix white balance, Saturation, and exposure using the Lumetri Color.

Unit 5: Color Grading and Video Effects

You will learn how to create exposure and specific Saturations in your videos using the Lumetri Curves Tab, Match colors between shots with the Lumetri Color, and edit specific colors in your video with the Lumetri Color Wheels & Match Tab. You will also learn how to use the Lumetri Color HSL Secondary Tab to add a Vignette to your video and remove the various Lumetri Color adjustments that you have made.

Text Books:

This course does not have a text book as this is a practical subject with hands on learning.

Reference Books/Materials

1. The American Cinematographer Manual by American Society of Cinematographers
2. Film Directing Shot by Shot by Steven D. Katz
3. Understanding the Business of Entertainment by Gregory Bernstein.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Plan, design, and create digital video projects incorporating graphic and audio elements.	PO1, PO3, PO4, PO5
CO2	Transfer and capture digital video and audio from various cameras and external devices.	PSO1, PSO2, PSO4
CO3	Edit and compress video for use in various delivery modes of digital media using standard digital video editing software.	PSO2, PSO3, PSO4
CO4	Evaluate digital video projects, identify items for improvement, and implement changes.	PO3, PO7, PSO4, PSO5

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO 7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO 6
ADGA304A	BASICS OF VIDEO EDITING	2		3	2	2		3	2	3	2	3	3	

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA304A	C01	2		3	2	2								
	C02								2	3		3		
	C03									3	2	3		
	C04			3				3				3	3	
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA306A	COMPOSITING (UNITY SOFTWARE)	L	T	S	P	C
Version 1.0		0	0	3	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To learn combining visual elements from different sources into a single image.
2. To get hands-on real-time compositing operations between Unity's Render Pipeline and external media sources, such as videos or images.

Course Outcomes

On successful completion of this course, the students have capability to:

- CO1: Recall the evolution of the traditional methods of compositing to the modern techniques
CO2: Interpret various color manipulation techniques used for digital image generation
CO3: Demonstrate Layer manipulation techniques of the layer based compositing software – Unity
CO4: Demonstrate the Lighting and advanced compositing techniques of the layer based compositing software – Unity
CO5: Create Video Art for various application's like music, dance, media, automation and interactive film.

Catalog Description

This course teaches the students compositing and help them learn its various fundamentals through Unity Software.

Course Content

Unit 1: Introduction to Compositing

Introduction to Compositing, Fundamental concepts of Compositing, Introduction to the Unity Software Interface & Tools

Unit 2: Layer Control & Blending

Layer Control & Blending: Layer Editing, Stacking, Work Area, Effects & Presets, Motion Sketch, Smoother, Project Settings & Parameters

Unit 3: Transparency

Mask & Pen tool, Bezier curves, Track Matte, Luma Matte, Stencils

Unit 4: Keying

Keying: Import Issues, Footage Interpretation, Keylight basics, Color Correction, Alpha painting, Mocha Demo, Keyframes & Transform properties, Anchor Point, Keyframe types

Unit 5: Tracking& Output

Tracking: Stabilization, 1-point tracking, 4-point tracking

Text Books:

This course does not have a text book as this is a practical subject with hands on learning.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury:

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs															
Course Outcomes (COs)											Mapped Program Outcomes				
CO1	Recall the evolution of the traditional methods of compositing to the modern techniques											PO1, PSO1			
CO2	Interpret various color manipulation techniques used for digital image generation											PO3, PSO1			
CO3	Demonstrate Layer manipulation techniques of the layer based compositing software – Unity											PSO2, PSO4			
CO4	Demonstrate the Lighting and advanced compositing techniques of the layer based compositing software – Unit											PSO2, PSO4			
CO5	Create Video Art for various applications like music, dance, media, automation and interactive film.											PO7, PSO5			
			Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters

Course Code	Course Title	P O1	P O2	P O3	P O4	P O5	P O6	P O7	PS O1	PS O2	PS O3	PS O4	PSO5	PSO6
ADGA306A	COMPOSITIVE	3		3				3	3	3		3	3	

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA306A	C01	3							3					
	C02			3					3					
	C03									3		3		
	C04	3		3				3	3	3		3	3	
	C05							3					3	
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA308A	UX DESIGN FOR FUTURISTIC TECHNOLOGIES	L	T	S	P	C
Version 1.0		2	0	0	0	2
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To learn to design for futuristic technologies – AR and VR
2. To understand how to use various tools to do so.

Course Outcomes

On successful completion of this course, the students have capability to:

- CO1. Comprehend what are futuristic technologies, practice and illustrate them in new ideas
 CO2. Implement these technologies on different platforms after a clear understanding of how they work.

Catalog Description

Students will learn how to design for AR and VR and what technologies are used in order to do so.

Course Content

Unit 1: Designing for AR 9 Hours

What is augmented reality, Examples, Case studies on augmented reality, implementing augmented reality in different industry domains

Unit 2: Oculus for VR – Part 1 Hours

Design, Develop and Deploy for VR, VR Game Development and Prototyping, Using Unity to Develop VR Experiences, Locomotion and Ergonomics, Hand presence and Interaction

Unit 3: Oculus for VR – Part 2 Hours

UI Best Practices for VR, Sound in VR, Performance Requirements, Optimizing VR Applications, Testing your VR Application

Unit 4: Introduction to Internet of things (IOT) 9 Hours

What is Internet of things, Examples, Case studies on IOT, Implementing IOT in different industry domains

Reference Books:

1. Technology-Augmented Perception and Cognition by Tilman Dingler, Evangelos Niforatos
2. Augmented Reality: Principles and Practice - Dieter Schmalstieg
3. Augmented Reality: An emerging technologies guide - Gregory Kipper and Joseph Rampolla
4. Internet of Things: How Smart TVs, Smart Cars, Smart Homes, and Smart Cities Are Changing the World By Miller Michael
5. Building the Internet of Things: Implement New Business Models, Disrupt Competitors, Transform Your Industry By Maciej Kranz

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury:

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Comprehend what are futuristic technologies, practice and illustrate them in	PO1,PO2,

	new ideas												PO3, PSO2, PSO4	
CO2	Implement these technologies on different platforms after a clear understanding of how they work.												PSO1,PSO4, PSO5	
		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Lifelong learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO 1	PO 2	PO 3	PO4	PO 5	PO6	PO 7	PS O1	PSO 2	PSO3	PSO 4	PSO 5	P S O 6
AD GA3 08A	UX DESIGN FOR FUTURISTIC TECHNOLOGIES	3	2	3					3	3		3	3	

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA308A	C01	3	2	3						3		3		
	C02								3			3	3	
	C03													
	C04													
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA310A	LIVE PROJECT 1	L	T	S	P	C
Version 1.0		0	0	6	0	6
Pre-requisites/Exposure						
Co-requisites						

Course Objective

To carry out a design project in one of the specializations of the program under mentorship of an industry expert with substantial multidisciplinary component.

Course Outcomes

CO1. To enable students to gather firsthand experience on site.

Catalog Description

To guide the students in such a way so that they carry out a work on a topic as a forerunner to the full fledged project work to be taken subsequently in VIII semester. The project work shall consist of substantial multidisciplinary component.

Course Content

Short Film (Pre- Production)- 90 Hours

Create a short film implementing the knowledge gained throughout the course.

OR

Game Design (Pre-Production)- 90 Hours

Design a game implementing the knowledge gained throughout the course.

**Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury:
Examination Scheme:**

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs														
		Course Outcomes (COs)											Mapped Program Outcomes	
CO1		To enable students to gather firsthand experience on site.											PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2, PSO3, PSO4, PSO5, PSO6	
		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Lifelong Learning	Create desirable experience	Tools Software and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA310A	LIVE PROJECT I	3	3	3	3	3	3	3	3	3	3	3	3	3

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA310A	C01	3	3	3	3	3	3	3	3	3	3	3	3	3
	C02													
	C03													
	C04													
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

SEMESTER VII

ADGA401A	ECONOMICS OF GAMES	L	T	S	P	C
Version 1.0		3	0	0	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To understand fundamentals of economics and how it works in game design.
2. To familiarize with money flow in game design and current market trends.

Course Outcomes

On successful completion of this course, the students have capability to:

CO1. Describe how the ecosystem of Game design and development works.

CO2. Analyse value chain and job roles in the game development industry.

CO3. Classify market trends and consumption of games in the world.

Catalog Description

Students will learn about fundamentals of economics, value chain and job roles. They will gain an understanding of money flow in games and current market trends.

Course Content

Unit 1: Fundamentals of Economics – 9 Hours

Want-effort-satisfaction, consumption, production, distribution, finance, microeconomics and macroeconomics

Unit 2: Value Chain and Job Roles – 12 Hours

Game development – designing, programming, concept art, technical support to game engine and middleware, game testing

Publishing, Distribution, Retailer, Hardware/platform manufacturers

Unit 3: Game Money Flow – 9 Hours

Breakaways and startup culture, Piracy, licensing and shareware, trade shows, conferences, game competition events and media coverage

Unit 4: Current Trends – 9 Hours

Open source model of development, Community developers, advent of modern technology and rising game markets, customer preferences

Unit 5: Market Case Study – Call of Duty – Black Ops – 6 Hours

Reference Books:

The Economics of Online Gaming – Andrew Wagner

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury: Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury		End Term Studio Exam		End Term External Jury
Weightage (%)	20M	30M		20M		30M
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Describe how the ecosystem of Game design and development works.	PO1, PO3, PSO1, PSO4
CO2	Analyse value chain and job roles in the game development industry.	PO3, PO4, PSO1
CO3	Classify market trends and consumption of games in the world.	PO7, PSO1, PSO4

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Lifelong learning	Create desirable experience	Tools Software and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO6	PSO7
ADGA401A	ECONOMICS OF GAMES	3		3	3			2	3			3		

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA401A	C01	3		3					3			3		
	C02			3	3				3					
	C03							2	3			3		
	C04													
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA403A	GAME INTERFACE DESIGN	L	T	S	P	C
Version 1.0		0	0	4	0	4
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To learn how interface design works and importance of research in its design process
2. To ideate and prototype the design solutions obtained after brainstorming and research.

Course Outcomes

On successful completion of this course, the students have capability to:

CO1. Comprehend the design of interactive digital products, digital environments, systems that can fully meet the needs and desires of the target audience.

CO2. Illustrate the human-centered approach to designing games.

CO3. Design interface which can make the game engaging, exciting and simplistic.

Catalog Description

Students will learn how to design game interfaces. They understand and implement the design process of game interface through project work.

Course Content

Unit 1: Fundamentals of Interface Design -9 Hours

How Interface design of games matter, fundamentals of interface design (visibility, understandability, ease of task execution, efficiency and visual design), evolution of UI design and factors of that evolution

Unit 2: Research in Design -12 Hours

Human-computer interaction, speed of task completion, user research, considerations of human body in design, Figma setup, Figma Basics

Unit 3: Ideation -12 Hours

Brainstorming, low-fidelity and high- fidelity wireframes, adding interactive elements, Creating Wireframes in Figma

Unit 4: Prototyping -15 Hours

Information architecture, sketches in Figma, user flow, Prototypes in Figma, usability testing, redesign process if problems found in testing

Unit 5: Project Work -12 Hours

Project on design / redesign a simple and intuitive game interface.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury:

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage	NA	NA	NA	NA	NA	NA

(%)						
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Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs														
		Course Outcomes (COs)											Mapped Program Outcomes	
CO1	Comprehend the design of interactive digital products, digital environments, systems that can fully meet the needs and desires of the target audience.											PO1, PO2, PO3, PSO1, PSO4		
CO2	Illustrate the human-centered approach to designing games.											PO3, PO6, PSO1, PSO4		
CO3	Design interface which can make the game engaging, exciting and simplistic.											PSO1, PSO2, PSO4, PSO5		
		Design and Integration	Drawing and Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Lifelong Learning	Create desirable experience	Tools Software and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA403A	GAME INTERACTIVE DESIGN	3	2	3			2		3	3		3	3	

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA403A	CO1	3	2	3					3			3		
	CO2			3			2		3			3		

	C03								3	3		3	3	
	C04													
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA405A	DESIGN OF GAMES ON MOBILE PHONES	L	T	S	P	C
Version 1.0		0	0	3	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To understand the design process associated with mobile games.
2. To implement the UX principles, ideate and create prototypes.
3. To learn the best practices for mobile game designs.

Course Outcomes

On successful completion of this course, the students have capability to:

CO1. Comprehend the design of interactive digital products, digital environments, systems that can fully meet the needs and desires of the target audience.

CO2. Illustrate the human-centered approach to designing games.

CO3. Design interface which can make the game engaging, exciting and simplistic.

Catalog Description

Students will learn how create designs for mobile games. They will also learn the design process, principles and how to ideate and create prototype.

Course Content

Unit 1: Mobile Game Design Process - 6 hours

Introduction to Playability and Playing Experience, what are UI and UX Designs? Basic Elements of Mobile Game UI Design

Unit 2: Building Mobile Games with People in Minds – 9 hours

Introduction, UX Principles – Breaking Barriers and Building Structure, Breaking Barriers – Audience-suitable complexity, designing for flexibility, Building Structure- Leverage familiarity, Assistance nearby, Effective minimal tutorials, Clarity of depth, Reding focus

Unit 3: Ideation and Prototyping - 9 hours

Brainstorming, low-fidelity and high- fidelity wireframes, adding interactive elements, Creating Wireframes in Figma, Information architecture, sketches in Figma, user flow, Prototypes in Figma, usability testing, redesign process if problems found in testing

Unit 4: Mobile Game Design Best Practices – 6 hours

Ergonomics of mobile phone device, Do research first, ensure accessibility to everyone, Consider the user distraction, add only necessary functions, simplify your interface, refine in-game navigation, locate your UI properly, give feedback on users’ actions, use pop-up windows wisely, Get the most out of in-game ads, always test your creations

Unit 5: Project – 15 hours

Project on Designing Games on Mobile Phones

Reference Books:

- Visual Design Concepts For Mobile Games- Christopher Carman
- Mobile Game Design Essentials -Dr. Claudio Scolastici , David Nolte

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury: Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Comprehend the design of interactive digital products, digital environments, systems that can fully meet the needs and desires of the target audience.	PO1, PO2, PO3, PSO1, PSO4

CO2	Illustrate the human-centered approach to designing games.	PO3, PO6, PSO1, PSO4
CO3	Design interface which can make the game engaging, exciting and simplistic.	PSO1, PSO2, PSO4, PSO5

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Lifelong learning	Create desirable experience	Tools Software and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setter
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA405A	DESIGN OF GAMES ON MOBILE PHONES	3	2	3			2		3	3		3	3	

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA405A	C01	3	2	3					3			3		
	C02			3			2		3			3		
	C03								3	3		3	3	
	C04													
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA407A	DESIGN MANAGEMENT	L	T	S	P	C
Version 1.0		3	0	0	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. Learn how to identify and interview stakeholders
2. Learn how to perform competitive analysis
3. Understanding design management
4. Implementing design management in product design and business

Course Outcomes

On successful completion of this course, the students have capability to:

- CO1. Identify, define and describe design management practice in relation to various types of businesses and business models and its effect on social, environmental, political, cultural, and economic systems.
- CO2. Identify, define and solve human-centered design opportunities
- CO3. Formulate and conduct design research
- CO4. Apply design thinking and visual thinking processes to understand the framework of problem solving.
- CO5. Explore and iterate multiple ideas.
- CO6. Express ideas through visual representations and create prototypes that consider utility, usability and desirability of solutions.

Catalog Description

This course prepares students to harness the power of design and creativity as well as leadership and management skills to innovatively solve business and societal challenges. Students will learn the full scope of the design process and pair that with frameworks for leadership and thinking that will bring about inventive, successful results.

Course Content

Unit 1: Business and Design – 6 Hours

Strategy building, Aspects of key guidelines in a business, values and emotions of user Behavior and cognitive psychology of market and business, Design policies, Importance of understanding business requirements, Discovering business goals

Unit 2: Stakeholder and Competitive Analysis – 9 Hours

Importance of understanding business requirements, discovering business goals, Internal and external stakeholders, stakeholder analysis, stakeholder interviewing, meeting stakeholder expectations and feedback, Direct and Indirect Competitors, Competitor Analysis and its practice, Steps to Conduct Competitor analysis, Parameters to conduct competitor analysis

Unit 3: Design Management – 9 Hours

What is design management, Taking Charge of Processes and People, The Evolution of Design Management, Areas of Design Management, Why Does Design Management Matter, Where Does Design Management Fall Within Businesses? Value Proposition Canvas, Creating a project Roadmap

Unit 4: Zeplin and Jira and Introduction to Product lifecycle management – 9 Hours

Learning how to develop and deliver documentation using Zeplin and How to communicate well and assign tasks among and within teams using Jira, what is Product Lifecycle Management (PLM)? What is the Product Life Cycle? Product life cycle stages, Benefits, areas of PLM

Unit 5: Project – 12 Hours

Identify what kind of stakeholders are present in a given service or product. Map the respective stakeholders, and prepare a set of key questions as a questionnaire Engage in a roleplay session (in pairs or groups in class) to practice stakeholder interviewing. Using Stakeholder analysis, identify relevant business goals. Analyse and conduct competitor analysis of the given service or product.

Reference Books:

- The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses by Eric Ries
- Fundamentals of User-Centered Design by Still and Crane
- UX Strategy: How to Devise Innovative Digital Products that People Want: Jaime Levy

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury: Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury		End Term Studio Exam		End Term External Jury
Weightage (%)	20M	30M		20M		30M
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs			
	<table border="1"> <tr> <td>Course Outcomes (COs)</td> <td>Mapped Program</td> </tr> </table>	Course Outcomes (COs)	Mapped Program
Course Outcomes (COs)	Mapped Program		

													Outcomes		
CO1	Identify, define and describe design management practice in relation to various types of businesses and business models and its effect on social, environmental, political, cultural, and economic systems.											PO1, PO2, PO3, PSO1, PSO4			
CO2	Identify, define and solve human-centered design opportunities											PO3, PSO1, PSO4			
CO3	Formulate and conduct design research											PO3, PSO1, PSO4			
CO4	Apply design thinking and visual thinking processes to understand the framework of problem solving.											PSO1, PSO4, PSO5			
CO5	Explore and iterate multiple ideas.											PO3, PSO5			
CO6	Express ideas through visual representations and create prototypes that consider utility, usability and desirability of solutions.											PO4,PO6, PSO5, PSO6			
		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Lifelong learning	Create desirable experience	Tools Software and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters	
Course Code	Course Title	PO 1	PO 2	PO 3	PO4	PO 5	PO6	PO 7	PS O1	PSO 2	PSO3	PSO 4	PSO 5	PS O 6	
ADGA407A	DESIGN MANAGEMENT	3	2	3	2		3		3			3	3	2	

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA407A	C01	3	2	3					3			3		
	C02			3					3			3		
	C03			3					3			3		
	C04								3			3	3	
	C05			3									3	

	CO6				2		3						3	2
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1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA409A	ENTREPRENEURSHIP	L	T	S	P	C
Version 1.0		3	0	0	0	3
Pre-requisites/Exposure						
Co-requisites						

Course Objective

1. To understand entrepreneurship
2. To acquire knowledge on the set and functions of a business firm.
3. To learn game design and animation is a business

Course Outcomes

- CO1. To understand and appreciate Entrepreneurship.
- CO2. To integrate and assess the methods of managing a game design and animation business.
- CO3. To analyse market Research scientifically, running pilots and tests before launching.
- CO4. To explain the role of managers in the business firm.
- CO5. To Create Business Plans and to run a game design and animation firm.

Catalog Description

The subject deals with the basics of business especially help the game design and animation students to become an entrepreneur. Basic knowledge on a business firm is given to start or run a media firm. This subject furnishes knowledge on the traits of a manager, to run a production house as an entrepreneur and how to deal economy is dealt in this course.

Course Content

UNIT I

The heroic entrepreneur, key traits of successful entrepreneurs; Discovering an opportunity – serving a need; Entrepreneurial society; demand & supply; opportunity cost; scarcity.

UNIT II

Market trends, subjective value, comparative advantage, competition, pricing, business ethics and CSR. Competition and cooperation.

UNIT III

Specific analytics, testing tools for every business niche, online tools, free tools and software, gauging results, using pilot data to build and streamline the original business idea.

UNIT IV

Creating a business plan, value system, incentives, perks, value added services, social responsibility in business.

UNIT V

Gathering customer feedback, using free online tools to gauge customer experience, build on it, using Industry analytics, identifying mentors, investors, venture capitalists, etc.

Text Books:

1. Entrepreneurial Journalism: How to build by Mark Briggs, Sage/CQ Press, 2012, LA, Edition 2
2. The Lean Start-Up by Eric Ries
3. The Start-up Way by Eric Ries

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury:

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	To understand and appreciate Entrepreneurship.	PO1
CO2	To integrate and assess the methods of managing a game design and animation business.	PO3, PSO1
CO3	To analyze market Research scientifically, running pilots and tests before launching.	PO3, PSO4
CO4	To explain the role of managers in the business firm.	PO1, PO4, PO5, PO6
CO5	To Create Business Plans and to run a game design and animation firm.	PO7, PSO5, PSO6

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Lifelong learning	Create desirable experience	Tools Softwares and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA409A	ENTREPRENEURSHIP	3		3	3	3	3	3	3				3	3

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA409A	C01	3												
	C02			3					3					
	C03			3	3	3	3	3	3				3	3
	C04	3			3	3	3							
	C05							3					3	3
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

ADGA411A	LIVE PROJECT 2	L	T	S	P	C
Version 1.0		0	0	6	0	6
Pre-requisites/Exposure						
Co-requisites						

Course Objective

To carry out a design project in one of the specializations of the program under mentorship of an industry expert with substantial multidisciplinary component.

Course Outcomes

CO1. To enable students to gather firsthand experience on site.

Catalog Description

To guide the students in such a way so that they carry out a work on a topic as a forerunner to the full fledged project work to be taken subsequently in VIII semester. The project work shall consist of substantial multidisciplinary component.

Course Content

Short Film (Pre- Production)- 90 Hours

Create a short film implementing the knowledge gained throughout the course.

OR

Game Design (Pre-Production)- 90 Hours

Design a game implementing the knowledge gained throughout the course.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury:

Examination Scheme:

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)	20M	30M	20M	30M		
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)	NA	NA	NA	NA	NA	NA

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs

		Course Outcomes (COs)											Mapped Program Outcomes	
CO1		To enable students to gather firsthand experience on site.											PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2, PSO3, PSO4, PSO5, PSO6	
		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Lifelong learning	Create desirable experience	Tools Software and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trends Setters
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA411A	LIVE PROJECT II	3	3	3	3	3	3	3	3	3	3	3	3	3

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA411A	C01	3	3	3	3	3	3	3	3	3	3	3	3	3
	C02													
	C03													
	C04													
	C05													
	C06													

1=weakly mapped, 2= moderately mapped, 3=strongly mapped

SEMESTER VIII

ADGA402	INTERNSHIP	L	T	S	P	C
Version 1.0		0	0	0	0	12
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To explore career avenues and find a suitable career path.
2. To encourage students to apply what they have learned in the academics into practice in an organizational set-up.
3. To build and expand student's knowledge in a particular domain where they are working in an internship.
4. To understand how corporate environment works and to build and hone work habits, professional and inter-personal skills in oneself.

Course Outcomes

CO1. Students will develop employer-valued skills such as strategic management, analytic thinking, teamwork and communications.

CO2. Students will observe and participate in business operations and learn decision-making from mentors and experience.

CO3. Students will get hands-on exposure in the domain in which they are performing their job.

CO4. Students will expand their network of professional relationships and contacts.

Course Content

Students have to undergo practical training of minimum three months in game design and animation related industries/ training centers/ co-operate offices so that they become aware of the practical application of theoretical concepts studied in the class rooms.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury

Examination Scheme:

Components	Internal Jury	External Jury
Weightage (%)		

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)						
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)						

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Students will develop employer-valued skills such as strategic management, analytic thinking, teamwork and communications.	PO4, PO5, PO6
CO2	Students will observe and participate in business operations and learn decision-making from mentors and experience.	PO3, PO4, PO6, PSO1, PSO2, PSO3, PSO4, PSO5
CO3	Students will get hands-on exposure in the domain in which they are performing their job.	PO7, PSO5,
CO4	Students will expand their network of professional relationships and contacts.	PO7, PSO5

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary Approach	Conduct	Communication and Teamwork	Lifelong learning	Create desirable experience	Tools Software and Technology	Comprehensive and narrative	Innovative	Practical and demonstrative	Trend Setters
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA402A	INTERNSHIP			3	3	3	3	2	3	3	2	3	3	2

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA402A	C01				3	3	3							
	C02			3	3		3		3	3	2	3	3	
	C03							2					3	
	C04							2					3	
	C05							2					3	
	C06													

1=weakly mapped , 2= moderately mapped, 3=strongly mapped

ADGA404A	GRADUATION PROJECT	L	T	S	P	C
Version 1.0		0	0	0	0	8
Pre-requisites/Exposure						
Co-requisites						

Course Objectives

1. To provide students with the opportunity to apply the knowledge and skills acquired in their courses to a specific problem or issue.
2. To allow students to extend their academic experience into areas of personal interest, working with new ideas, issues, organizations and individuals.
3. To encourage students to think critically and creatively about academic, professional or social issues and further develop their analytical and ethical leadership skills necessary to address and help solve these issues.
4. To provide students with the opportunity to refine research skills and demonstrate their proficiency in written and/or oral communication skills.
5. To take on challenges of teamwork, prepare a presentation in a professional manner and document all aspects of design work.

Course Outcomes

CO1. Student will have an ability apply knowledge of mathematics and applied and/or natural sciences to areas relevant to the discipline

CO2. Student will have an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

CO3. Student will be able to identify, formulate, and solve engineering problems.

CO4. Student will have an understanding of professional and ethical responsibility.

CO5. Student will have recognition of the need for, and an ability to engage in life -long learning.

CO6. Student will be able to communicate effectively and to function on multidisciplinary teams.

Course Content

The major project experience is the culminating academic endeavor of students who earn a degree in their graduate programs. The project provides students with the opportunity to explore a problem or issue of particular personal or professional interest and to address that problem or issue through focused study and applied research under the direction of a faculty member. The project demonstrates the student's ability to synthesize and apply the knowledge and skills acquired in his/her academic program to real-world issues and problems. This final project affirms students' ability to think critically and creatively to solve problems, to make reasoned and ethical decisions and to communicate effectively.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination/Jury

Examination Scheme:

Components	Internal Jury	External Jury
Weightage (%)		

Components	Mid Term Jury	End Term Internal Jury	End Term Studio Exam	End Term External Jury		
Weightage (%)						
Components	Class Test 1	Presentation 1	Class Test 2	Presentation 2	Attendance	End Term Exam
Weightage (%)						

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Student will have an ability apply knowledge of mathematics and applied and/or natural sciences to areas relevant to the discipline	PO1, PO2, PO3, PSO1, PSO4
CO2	Student will have an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	PSO2, PSO3, PSO4, PSO5, PSO6
CO3	Student will be able to identify, formulate, and solve engineering problems.	PSO2, PSO3, PSO4, PSO5, PSO6
CO4	Student will have an understanding of professional and ethical responsibility.	PO5
CO5	Student will have recognition of the need for, and an ability to engage in life -long learning.	PO7
CO6	. Student will be able to communicate effectively and to function on multidisciplinary teams.	PO4, PO6

		Design and Integration	Drawing Work	Critical Analysis	Employability & Interdisciplinary	Conduct	Communication and Teamwork	Life-long learning	Create desirable experience	Tools and Technologies	Comprehensive and Innovative	Practical and demonstrative	Trend Setters	
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA 404A	GRADUATION PROJECT	3	3	3	3	3	3	3	3	3	3	3	3	3

Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
ADGA404A	C01	3	3	3					3			3		
	C02									3	3	3	3	3
	C03									3	3	3	3	3
	C04					3								
	C05							3						
	C06				3		3							

1=weakly mapped, 2= moderately mapped, 3=strongly mapped