DEPARTMENT OF MEDIA SCIENCES
ANNA UNIVERSITY, CHENNAI

VISION

- To offer quality media studies and research, using state-of-the-art images for building an inter-disciplinary knowledge base, so as to contribute to development and democracy.
- To produce creative and technically apt professionals for the media industry.
- The theoretical and practical media courses taught in the PG programme will improve, explore, innovate and implement core media techniques by "learn by doing" philosophy.
- The PG programme will continue to prepare students for professional and personal success in today's exciting and innovative media landscape.

MISSION

- To create an enabling environment to nurture ideas, freedom of expression, creativity and scholarship, and develop leaders in the arena of media and mass communication.
- The mission of the PG programme is to excel in media education on fundamental media concepts, values and skills in various platforms that focus on problem solving, critical thinking, innovation and communications.
- To promote the understanding of ethical and legal implication of all forms of media and the importance of cultural and intellectual diversity, techno-savvy, civic engagement and social responsibility in preparing the students for leadership role in media industry.
- To enable students to understand the role of media in nation building.
- To instill a sense by creating and innovation among journal minds for better societal contribution.

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ANNA UNIVERSITY, CHENNAI
UNIVERSITY DEPARTMENTS

M.Sc. MULTIMEDIA (specialization in VISUAL COMMUNICATION) (TWO YEARS)

REGULATIONS 2023

CHOISE-BASED CREDIT SYSTEM
I TO IV SEMESTERS CURRICULA & SYLLABI

1. PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

I	To impart specialized skills required to design and develop interactive multimedia content.
II	To empower multimedia students to focus on creating interactive experiences for users through engaging interfaces through digital media.
III	To provide students with strong foundation in media studies, creativity and information technology.
IV	To enhance their ability to effectively disseminate information and messages by incorporating vital multimedia elements that attract and retain the attention of the users.
V	To prepare students to carry out multimedia research that will have benefits for the society.

2. PROGRAM OUTCOMES (POs):

PO	PROGRAM OUTCOMES
1	An ability to independently carry out research/investigation and development work to solve practical problems.
2	An ability to write and present a substantial technical report/document.
3	Students should be able to demonstrate a degree of mastery over the area as per the specialization of the programme. The mastery should be at a level higher than the requirements of the appropriate bachelor programme.
4	Students should be able to learn and apply various creative techniques & critical thinking methods in multimedia production and problem solving.
5	Students will be able to impart a technically-sound working knowledge of different multimedia software required for various purposes and able to demonstrate necessary skills required to produce interactive multimedia content.
6	Students will have an ability to write and present them efficiently to provide novel and greater enhanced experiences to users and able to develop socially relevant products with multimedia elements by applying technical knowledge and ethical principles.

3. PEO/PO Mapping:

PEO	PO					
	1	2	3	4	5	6
I	1	2	3	3	3	2
II	2	2	3	3	3	2
III	-	1	3	3	3	2
IV	1	2	3	3	3	2
V	3	3	3	3	-	3

PROGRAM ARTICULATION MATRIX OF M.Sc. MULTIMEDIA (specialization in VISUAL COMMUNICATION) (TWO YEARS)

		COURSE TITLE	PO1	PO2	PO3	PO4	PO5	PO6
YEAR 1	SEMESTER 1	Script Writing and Story-Boarding	2.6	3	3	2.8	2.7	3
		User Experience Design	3	2	-	2	2.3	2
		Programming with Python	3	2	-	-	-	-
		Audio Visual Production	1.5	2	2.5	2	3	3
		Professional Photography	2.5	3	2	2.5	-	3
		User Experience Design Lab	3	-	1	3	2	1.5
		Programming with Python Lab	3	2	-	3	-	-
		Digital Illustration Lab	2	2	2.5	2	3	1
		2D Animation Production Lab	2	-	2	3	3	3
	SEMESTER 2	Theories of Visual Analysis	1.5	-	1	1	1	-
		User Interface Development	-	-	1.5	-	2.2	1.5
		2D Game Design and Development	2	2	-	2	3	3
		3D Modeling and Animation	-	-	1.5	2	2	-
		User Interface Development Lab	-	-	-	2	2	-
		2D Game Design and Development Lab	1	1.5	1	2	3	3
		3D Modeling and Animation Lab	1	-	2	2	3	3
		Portfolio Presentation and Publishing	-	-	3	3	3	-
YEAR 2	SEMESTER 3	Visual and Special Effects	-	-	2.4	2.4	2.4	1
		Data Analysis	1	2.5	1.7	2.3	2.4	1.5
		Research Methodology for Visual Media	3	3	3	2	-	3
		Visual and Special Effects Lab	-	-	2	2	2	-
		3D Game Design and Development Lab	2	1	1	1	3	2
	SEMESTER 4	Mixed Reality	1	-	2	2.4	2.4	3

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M.Sc. MULTIMEDIA (specialization in VISUAL COMMUNICATION) (TWO YEARS)

REGULATIONS 2023

CHOISE-BASED CREDIT SYSTEM
CURRICULA AND SYLLABI

SEMESTER I

S.NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIOD	CREDITS
				L	T	P		
THEORY								
1.	MV3101	Script Writing and Story-Boarding	PCC	3	0	0	3	3
2.	MV3102	User Experience Design	PCC	3	0	0	3	3
3.	MV3103	Programming with Python	PCC	3	0	0	3	3
4.	MV3104	Audio Visual Production	PCC	2	0	2	4	3
5.	MV3105	Professional Photography	PCC	2	0	2	4	3
PRACTICAL								
6.	MV3111	User Experience Design Lab	PCC	0	0	4	4	2
7.	MV3112	Programming with Python Lab	PCC	0	0	4	4	2
8.	MV3113	Digital Illustration Lab	PCC	0	0	4	4	2
9.	MV3114	2D Animation Production Lab	PCC	0	0	4	4	2
			TOTAL	**13**	**0**	**20**	**33**	**23**

SEMESTER II

S.NO	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIOD	CREDITS
				L	T	P		
THEORY								
1.	MV3201	Theory of Visual Analysis	PCC	3	0	0	3	3
2.	MV3202	User Interface Development	PCC	3	0	0	3	3
3.	MV3203	2D Game Design and Development	PCC	3	0	0	3	3
4.	MV3204	3D Modeling and Animation	PCC	3	0	0	3	3
5.		Professional Elective – I	PEC	3	0	0	3	3
PRACTICAL								
6.	MV3211	User Interface Development Laboratory	PCC	0	0	4	4	2
7.	MV3212	2D Game Design and Development Lab	PCC	0	0	4	4	2
8.	MV3213	3D Modeling and Animation Laboratory	PCC	0	0	4	4	2
9.	MV3214	Portfolio Presentation and Publishing	PCC	0	0	4	4	2
			TOTAL	**15**	**0**	**16**	**31**	**23**

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S.NO	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIOD	CREDITS
				L	T	P		
THEORY								
1.	MV3301	Visual and Special Effects	PCC	3	0	0	3	3
2.	MV3302	Data Analysis	PCC	2	0	2	4	3
3.	MV3303	Research Methodology for Visual Media	RMC	3	0	0	3	3
4.		Professional Elective - II	PEC	2	0	2	4	3
5.		Professional Elective – III	PEC	2	0	2	4	3
PRACTICAL								
6.	MV3311	Visual and Special Effects Lab	PCC	0	0	4	4	2
7.	MV3312	3D Game Design and Development Lab	PCC	0	0	4	4	2
8.	MV3313	Industrial Project (Summer)	EEC	-	-	-	-	2
			TOTAL	**12**	**0**	**14**	**26**	**21**

SEMESTER IV

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIOD	CREDITS
				L	T	P		
THEORY								
1.	MV3401	Mixed Reality	PCC	2	0	2	4	3
2.		Professional Elective - IV	PEC	2	0	2	4	3
PRACTICAL								
3.	MV3411	Project Work	EEC	0	0	24	24	12
			TOTAL	**4**	**0**	**28**	**32**	**18**

TOTAL CREDIT FOR THE PROGRAMME: 85

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PROGRAMME CORE COURSES (PCC)

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			CREDITS	SEMESTER
				L	T	P		
1.	MV3101	Script Writing and Story-Boarding	PCC	3	0	0	3	1
2.	MV3102	User Experience Design	PCC	3	0	0	3	1
3.	MV3103	Programming with Python	PCC	3	0	0	3	1
4.	MV3104	Audio Visual Production	PCC	2	0	2	3	1
5.	MV3105	Professional Photography	PCC	2	0	2	3	1
6.	MV3111	User Experience Design Lab	PCC	0	0	4	2	1
7.	MV3112	Programming with Python Lab	PCC	0	0	4	2	1
8.	MV3113	Digital Illustration Lab	PCC	0	0	4	2	1
9.	MV3114	2D Animation Production Lab	PCC	0	0	4	2	1
10.	MV3201	Theories of Visual Analysis	PCC	3	0	0	3	2
11.	MV3202	User Interface Development	PCC	3	0	0	3	2
12.	MV3203	2D Game Design and Development	PCC	3	0	0	3	2
13.	MV3204	3D Modeling and Animation	PCC	3	0	0	3	2
14.	MV3211	User Interface Development Lab	PCC	0	0	4	2	2
15.	MV3212	2D Game Design and Development Lab	PCC	0	0	4	2	2
16.	MV3213	3D Modeling and Animation Lab	PCC	0	0	4	2	2
17.	MV3214	Portfolio Presentation and Publishing	PCC	0	0	4	2	2
18.	MV3301	Visual and Special Effects	PCC	3	0	3	3	3
19.	MV3302	Data Analysis	PCC	2	0	2	3	3
20.	MV3311	Visual and Special Effects Lab	PCC	0	0	4	2	3
21.	MV3312	3D Game Design and Development Lab	PCC	0	0	4	2	3
22.	MV3401	Mixed Reality	PCC	2	0	2	3	4
					TOTAL CREDITS		56	

RESEARCH METHODOLOGY AND IPR COURSE (RMC)

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			CREDITS	SEMESTER
				L	T	P		
1.	MV3303	Research Methodology for Visual Media	RMC	3	0	0	3	3

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PROFESSIONAL ELECTIVE COURSES (PEC) I, II, III & IV

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIOD	CREDITS
				L	T	P		
ELECTIVES (THEORY) FOR PROGRAMME ELECTIVE - I								
1.	MV3001	Quantitative Aptitude	PEC	3	0	0	3	3
2.	MV3002	Aesthetics of Films	PEC	3	0	0	3	3
3.	MV3003	Multimedia Marketing	PEC	3	0	0	3	3
4.	MV3004	Media Management	PEC	3	0	0	3	3
5.	MV3005	Constitutional Media Laws and Ethics	PEC	3	0	0	3	3
6.	MV3006	Entrepreneurship	PEC	3	0	0	3	3
7.	MV3007	Development Communication	PEC	3	0	0	3	3
8.	MV3008	Digital Journalism	PEC	3	0	0	3	3
9.	MV3009	Game Psychology	PEC	3	0	0	3	3
10.	MV3010	Big Data Analysis	PEC	3	0	0	3	3
ELECTIVES (THEORY-WITH-LAB) FOR PROGRAMME ELECTIVES – II, III & IV								
11.	MV3011	Traditional Art	PEC	2	0	2	4	3
12.	MV3012	Advanced Audiography	PEC	2	0	2	4	3
13.	MV3013	Editing Techniques	PEC	2	0	2	4	3
14.	MV3014	Digital Filmmaking	PEC	2	0	2	4	3
15.	MV3015	Documentary Filmmaking	PEC	2	0	2	4	3
16.	MV3016	Lighting and Rendering	PEC	2	0	2	4	3
17.	MV3017	Character Designing	PEC	2	0	2	4	3
18.	MV3018	Motion Graphics	PEC	2	0	2	4	3
19.	MV3019	Advanced Compositing Technique	PEC	2	0	2	4	3
20.	MV3020	Mobile Gaming	PEC	2	0	2	4	3
21.	MV3021	Programming for Gaming	PEC	2	0	2	4	3
22.	MV3022	Introduction to R Programming	PEC	2	0	2	4	3
23.	MV3023	Instructional Design for Digital Media	PEC	2	0	2	4	3
24.	MV3024	Social Media Analysis	PEC	2	0	2	4	3
25.	MV3025	Human-Centered Interactive Design	PEC	2	0	2	4	3
26.	MV3026	Deep Learning	PEC	2	0	2	4	3

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EMPLOYABILITY ENHANCEMENT COURSES (EEC)

S.NO	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			CREDITS	SEMESTER
				L	T	P		
1.	MV3313	Industrial Project (Summer)	EEC	-	-	-	2	3
2.	MV3411	Project Work	EEC	0	0	24	12	4

SUMMARY

S.No.	M.Sc. MULTIMEDIA (specialization in VISUAL COMMUNICATION) TWO YEARS					
	SUBJECT AREA	CREDITS PER SEMESTER				CREDITS TOTAL
		I	II	III	IV	
1.	PCC	23	20	10	03	56
2.	PEC	00	03	06	03	12
3.	RMC	00	00	03	00	03
4.	EEC	00	00	02	12	14
TOTAL CREDITS		**23**	**23**	**21**	**18**	**85**

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MV3101   **SCRIPT WRITING AND STORY-BOARDING**   **L T P C**
                                                                  3 0 0 3
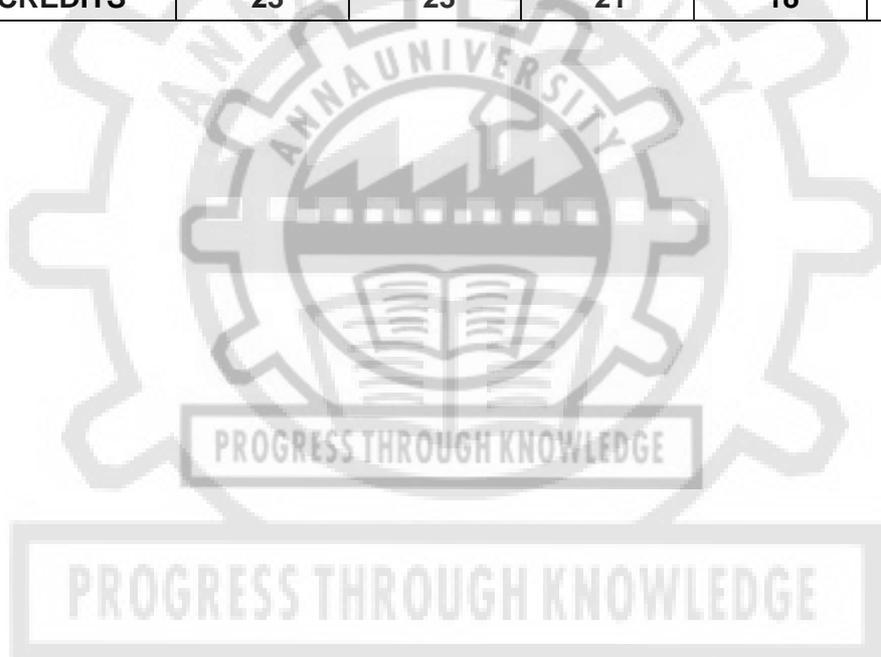
OBJECTIVES
- To impart knowledge on news reporting.
- To learn the art of script writing.
- To understand how to communicate through broadcast media.
- To identify best practices for script writing and story-boarding.
- To provide a knowledge of the Intellectual Property Rights and laws relevant to scripting and storyboarding.

UNIT I   WRITING   9
News story format – Inverted pyramid structure – Editorials - Broadcast news writing and Story structure - In-house journals, manuals, pamphlets – writing for the internet - News portals.

UNIT II   IDEATION AND CREATION   9
Concept creating Identifying suitable story concept/idea - Anatomy of a Screenplay - Beginning/middle/ end elaborating and breaking up the selected concept into scenes - Elaborating individual scenes - Slug line - Action – Dialogue - Creating a detailed script / screenplay.

UNIT III   SCRIPT WRITING FOR NON-FICTION AND FICTION-BASED   9
                  PROGRAMMES
Understanding the plot of the story - Arch plot, mini plot, Anti-plot, Character age, education and socio-economic background of the characters, Types of scripts for fictional programmes, Writing for Documentaries, Print Research, Field Research and Interview Research.

UNIT IV   STORY-BOARDING   9
Sketching the characters' personalities/ costumes/ poses - Sketching the features of backgrounds / exteriors or interiors of buildings in different perspectives - Developing sketches of props /accessories/ weapons/ vehicles - Pairing and synchronizing dialogue with digital images.

UNIT V   IPR, LAW AND SCRIPT WRITING   9
Forms of Intellectual Property, The Copyright Act, Case studies on Copyright, Information technology Act, Digital Media Ethics.
                                                         TOTAL: 45 PERIODS
OUTCOMES
At the end of the course, the student will be able to:
CO1.   Understand the nuances of writing for various media.
CO2.   Efficiently develop and write scripts for fictional programmes and non-fictional programmes.
CO3.   Use various commercial software for script and screenplay
CO4.   Design storyboards.
CO5.   Understand the Intellectual Property Rights and laws that safeguard the rights of a scriptwriter.

REFERENCES

1. F Banting, *Your Life as A Movie: Scripting and Producing Your Dreams Into Reality*, Createspace Independent Pub, 2015.
2. J Hart, *The Art of the Storyboard: A Film-makers Introduction*, Second Edition, Focal Press, 2007.
3. J Monaco, *How to read a film: Movies, Media, Multimedia*, Oxford University Press, 3rd Edition. USA. 2000.
4. M Neelamalar, *Media Law and Ethics*, Prentice Hall India Learning Private Limited, 2009.
5. P Sergio & A Jew, *Professional Storyboarding: Rules of Thumb*, Routledge First edition.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	2	3	3	3	3	-
2	-	-	3	3	3	-
3	-	-	3	3	2	-
4	3	-	3	3	-	-
5	3	-	3	2	3	3
Avg.	8/3 = 2.6	3/1 = 3	15/5 = 3	14/5 = 2.8	11/4 = 2.7	3/1 = 3

MV3102	USER EXPERIENCE DESIGN	L	T	P	C
		3	0	0	3

OBJECTIVES

- To identify the users and learn various methods to collect user behavior data.
- To develop a deep understanding of business-centered design.
- To create efficient prototype to communicate and validate the design definition.
- To apply UX process to web, mobile & small screen device.

UNIT I   INTRODUCTION TO DESIGN & CONCEPTUALIZING UX   9

Introduction to Design- Design Research, Importance of Visual Design, Understanding the importance of Usability, Accessibility and Interaction, Psychopathology of Everyday things-Human Centered design, Fundamental principles of interaction, Psychology of Everyday things-Introduction to UX – Understanding UX lifecycle & flow of events – it's importance and future, Elements of UX, Fundamental of User Experience (UX), Customer Experience (CX), Customer Digital Touch Points, User Interface Design (UI), Interaction Design (IxD), Human computer interaction (HCI). The effects of good UXD design, Flow and Interaction, Guiding principles– Fundamentals of business centered design & User centered design – Defining Information design and Interaction design.

UNIT II   USER RESEARCH TECHNIQUES   9

Need for data collection & prototyping – Different methods of data connection - User interview, Contextual enquiry, Heuristic Review, Survey, Empathy Map, Focus group, Research basics, User group definitions, Research techniques, Research analysis. Information Architecture Types

of Navigation, Card sorting, Reverse card sorting, Sorting Tools & data analysis – Person creation –Preparing task list – Writing user story, Information Architecture & use cases.

UNIT III WIREFRAMING, PROTOTYPING 9
Wireframe & Prototyping : Low fidelity wireframes, Hi fidelity wireframes, Wireframes tool (Balsamiq/Sketch) , Prototype tool (Adobe XD, InvisionApp), Annotating essentials, Wireframing essentials, Toolkits, Wireframing 101, Sample processing, Sketching, Digital wireframes, Visual design, Responsive design, Wireframes vs Prototypes, Mocktypes.

UNIT IV USER TESTING 9
Fundamentals, Design & method of user and usability testing: Design User Testing: Preparation for Usability test (Screeners, Scenario), How to create a Test Plan, Testing Tools, Usability Testing, Remote Usability Testing, Usability Metrics, How to capture data & Prepare Test Report, Visual design mockups exploration, Choosing a design testing approach, Qualitative and quantitative research, In-person and remote research, Moderated and automated techniques, Usability testing, Research, Logistics, Facilitation, Analyzing results, Crafting recommendations.

UNIT V UX FOR MOBILE & SMALL SCREENED DEVICE 9
UX for mobile device – Understanding small screen environment – Prototyping for Mobile devices – Usability testing & heuristic for mobile device – Experience definition for multiple platforms & form factor – Designing for small screen.

TOTAL: 45 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
- CO1. Understand the basic concepts, principles and fundamentals of user experience design.
- CO2. Learn the research techniques for user research.
- CO3. Learn strategies to create wireframes and prototypes for mobile application/product/website
- CO4. Understand the principles and need of user testing
- CO5. Design and develop content for multiple mobile resolutions.

REFERENCES
1. Don Norman, *The Design of Everyday Things*, Basic Books, 2013.
2. Dan Saffer, *Designing for interaction*, New Riders publications, 2010.
3. Steve Krug, *Don't Make Me Think! A Common Sense Approach to Web Usability*, Second Edition, New Riders publications, 2006.
4. Ted Roden, *Building the Real-time User Experience: Creating Immersive and Interactive Websites*, Shroff/O'Reilly, 2010.
5. Christian Kraft, *User Experience Innovation: User Centred Design that Works*, Apress, 2012.
6. Nan Guo, Helmut Degen and Xiaowen Yuan, *UX Best Practices: How to Achieve More Impact with User Experience*, McGraw-Hill/Osborne Media, 2012.
7. Tom Tullis and Bill Albert, *Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics*, Morgan Kaufmann Publishers, 2008.

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CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	-	1	-	-
2	3	-	-	-	-	2
3	-	-	-	3	3	2
4	-	2	-	2	2	-
5	-	-	-	2	2	2
Avg.	3	2	-	2	2.3	2

MV3103	PROGRAMMING WITH PYTHON	L	T	P	C
		3	0	0	3

OBJECTIVES
- To know the basics of algorithmic problem solving.
- To develop Python programs with conditionals and loops.
- To define and call Python functions, modules
- To work with strings and files in Python.
- To use Python data structures – lists, tuples, dictionaries.

UNIT I   INTRODUCTION TO PROBLEM SOLVING AND PYTHON   9

Fundamentals of computing – Problem Solving Strategies – Program Design Tools: Algorithms, Pseudo codes and flowcharts – Different Flow Controls - Types of Errors – Testing and Debugging – Introduction to Python programming – Python interpreter and interactive mode – Variables and identifiers – Datatypes – Input Operations – Comment – Indentations – Operators and Expressions – Operations on strings and other datatypes.

UNIT II   DECISION CONTROL STATEMENTS AND LOOPING   9
**   STATEMENTS**

Introduction to decision control statements – variations of If-elif-else constructs – Loop structures/iterative statements – While loop – For loop – Definite – Infinite loops - Nested Loops – Break – continue - pass statements – Else used with loop statements.

UNIT III   FUNCTIONS, MODULES AND PACKAGES   9

Need for functions - Function Definition – Function calling and returning values – Scope and Lifetime: Local and global - Defining functions with Required Arguments, Keyword Arguments, Default Arguments, Variable - Length Argument – Lambda Functions – Recursive Functions- Documentation String - Modules and Namespace – User-defined modules – Python Module – Standard Library Modules – Packages in Python – Function Redefinitions.

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UNIT IV   STRINGS AND FILE HANDLING   9
Strings: Introduction, Immutable string formatting operators - indexing, traversing, concatenating, appending, multiplying, formatting, slicing, comparing, iterating strings – Basic Built-In String Methods Modules and Functions Regular expressions – Metacharacters in Regular Expressions, Introduction to Files – Opening and closing files – Reading and writing files – Searching through files – Renaming and Deleting Files - File positions.

UNIT V   DATA STRUCTURES   9
Sequence - List: Access, Update, Traversing a list, List Operations, List Methods, Using List as Stack, Queues - Tuples: Creating Tuples, Utility of Tuples, Basic Tuple Operations – Sets – Dictionaries – Creating, Accessing, Modifying, Sorting, Deleting.

TOTAL: 45 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
CO1.   Develop algorithmic solutions to simple computational problems.
CO2.   Develop and execute simple Python programs for solving problems.
CO3.   Decompose a Python program into functions.
CO4.   Represent compound data using Python lists, tuples, dictionaries etc.
CO5.   Read and write data from/to files in Python programs.

REFERENCES
1. R. Nageswara Rao, *Core Python Programming*, DreamTech Press Publisher, 2021.
2. Reema Thareja, *Python Programming: Using Problem Solving Approach*, Oxford UniversityPress, 2017.
3. John V Guttag, *Introduction to Computation and Programming Using Python*, Revised and Expanded Edition, MIT Press, 2013.
4. Charles Dierbach, *Introduction to Computer Science using Python*, Wiley India Edition, 2016.
5. Timothy A. Budd, *Exploring Python*, Mc-Graw Hill Education (India) Private Ltd., 2015.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	3	2	-	-	-	-
2	3	2	-	-	-	-
3	3	2	-	-	-	-
4	3	2	-	-	-	-
5	3	2	-	-	-	-
Avg.	3	2	-	-	-	-

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MV3104   **AUDIO VISUAL PRODUCTION**   **L T P C**
                                                                  2 0 2 3

OBJECTIVES
- To understand the evaluation of audio and video production.
- To inculcate the sense of production aesthetics in terms of sound recording, compositions, and continuity.
- To gain knowledge of studio equipment usage and benefits.
- To understand the various equipment available for production and the selection of equipment for different production requirements.
- To inculcate an aesthetic sense in audio and video production.

UNIT I   INTRODUCTION TO AUDIO AND VIDEO   12
History of video Audio recorders and production – Different formats and codec for video and audio – Features and functions of camera and microphones – Sound team – Sound preproduction – Pixel aspect ratio – Progressive and interlaced scanning – Screenplay writing.
Lab Component
- Practice with semi-professional video camera, Video switcher, Teleprompter, Audio switcher.
- Setting up the studio for video and audio production, Practice with camera format settings, Image control settings.
- Practice with wired and wireless microphones, setting up microphone – Synchronizing, sensitivity, pickup patterns, and audio decibels.

UNIT II   AESTHETICS OF PRODUCTION   12
Types of shots and camera angles – Scene strategies: Changing the line of action, creating a visual point of view, group interactions, moving through space and time, cheating on film – Visual Pre-production: Aesthetics of production, principles of continuity, closed and open frame 5-Shot rule – Pick-up patterns of microphone – Types of the lens – Types of camera mounting equipment – Understanding Sound – Frequency (Pitch), Amplitude (Loudness), Quality (Timbre), and Velocity – Different types of camera movements.
Lab Component
- Practise with shot, angle, and composition – Assignment on in-camera editing.
- Practice on continuity, 180 degrees and 30 degrees.
- Activities on pre- visualization.

UNIT III   COMPOSITION TECHNIQUES   12
5-Cs of cinematography – Three tools for pre-visualization – Effective Picture Making: Composting the Picture – Practical Composition – Composition principles – The effect of the picture frame – Proportions, framing, pictorial balance – the emotional influence of tone – Colour impact and dynamic composition – Subjective and objective treatment.
Lab Component
- Practise with types of camera angles.
- Assignment to understand bridging time & space.
- Assignment on audio interview.

UNIT IV   FUNDAMENTA OF LIGHTS AND SOUND   12
Components of sound: Dialogue, sound effects, automatic dialogue replacements, voice-over, Foley and music – Stylistic uses of sound: Sound Bridge, selective sound, and overlapped dialogue – Microphone techniques – The fundamental objectives of lighting, the sources of light, Three essential properties of light: Intensity, quality and colour temperature – Light and directionality – Fundamental lighting setup and principles – Exterior lightings – Lighting approaches and styles – Finding the appropriate lighting – Strategy and usage of light meters.

Lab Component
- Practicing with various styles of lighting setup.
- Lighting setup for indoor and outdoor – Three-point and five-point lighting setup.
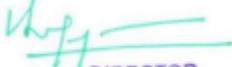
- Understanding the concept of colour temperature and how to bounce natural light – Light setup of blue or green screens.

UNIT V   INTRODUCTION TO STUDIO ATMOSPHERE   12
Video and audio monitors – Colourscope – Crew roles and responsibilities – Types of audio production scenarios – Video and audio studio management –Sound Control Room and Production Control Room – Mono and Stereo Sound – Different genres of video programmes.
<u>Lab Component</u>
- Production in Sound control room and Production control room.
- Produce programmes for various platforms like social media, television, and radio, commercial and corporate videos.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
CO1. Know how to write a script for various genres of production.
CO2. Practice with different types of microphones and audio equipment.
CO3. Handle the camera and related equipment with expertise.
CO4. Follow ethical and social values while representing society in a good way.
CO5. Produce socially responsible programmes to create change in society.

REFERENCES
1. Cherrier, M. H., *Voice & Vision: A Creative Approach To Narrative Filmmaking*. Focal Press, 2018.
2. Katz, B., & Katz, R. A., *Mastering Audio: The Art and the Science*, 2nd Edition, Focal Press, 2010.
3. Millerson, G., *Television Production*. Focal Press, 2001.
4. Owens, J., & Millerson, G., *Video Production Handbook*, 6th Edition, Focal Press, 2017.
5. Albert Moran and Michael Keane, *Television across Asia: Television Industries, Programme formats & Globalisation,* Routledge Curzon, Taylor & Francis Group, 2004.
6. Belavadi Vasuki, *Video Production*, Oxford University Press, 2012.
7. Robert Musburger & Michael Ogden, *Single-Camera Video Production*, Focal Press, 2014.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	1	2	2	2	-	-
2	-	-	3	2	3	-
3	2	-	2	-	3	-
4	-	2	3	-	-	3
5	-	2	-	-	-	3
Avg.	1.5	2	2.5	2	3	3

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	L	**T**	**P**	**C**
MV3105 **PROFESSIONAL PHOTOGRAPHY**	**2**	**0**	**2**	**3**

OBJECTIVES
- To create opportunities for professional and creative expression through the art of photography.
- To understand and explore photojournalism.
- To understand the genres of photography.
- To study different types of lighting techniques.
- To inculcate students with the aesthetic sense that is involved in creativity.

UNIT I   INTRODUCTION TO PHOTOGRAPHY   12
Comparison of SLR, DSLR and Mirrorless cameras to learn the functioning of various camera. Understand semi-manual modes like shutter and aperture priority mode, Learn exposure triangle, Depth of field, and focal length. Practice in various cameras and various modes.

UNIT II   COMPOSITION   12
Elements of monochrome and colour photography to understand contrast, texture, pattern, shapes, and perspectives. Framing and Composition with different shots and camera angles in various genres of photography. Capture black and white and colour photos with different shots and camera angles based on various themes.

UNIT III   COLOUR AND LIGHTING   12
Understanding Colour, Colour theory, Psychology of Colours, Composing with colours, Study of different types of Lights, Lighting, Soft light, Hard Light, Natural light, Three point lighting, Five point Lighting, Various patterns of Portrait lighting. Use of light meter, different metering modes, Practicing in available light on select themes. Use of different metering modes and manipulation of light to create different moods. Concentrating on assignments based on the use of colours in photography. Use of reflectors and diffusers – Practice in various patterns of lighting for portraits in indoor and outdoor, self-portraits and other genres.

UNIT IV   LENS AND FILTERS   12
Different types of Lenses and the use of different types of Lenses in various genres of photography. Practice in Photostory through basic research with multiple photographs.

UNIT V   GENRES OF PHOTOGRAPHY   12
Introduction to various genres of Photography. Practice in fully manual and semi-manual modes for capturing sports events and moving objects. Practice in social themes and selected genres of photography like product photography, food Photography, Event Photography etc.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
- CO1. Learn the principles of good composition in photography.
- CO2. Create new lighting strategies.
- CO3. Compose the perfect shot in photography.
- CO4. Develop an individual style of representing society through photographs.
- CO5. Take photographs covering all the different genres in photography.

REFERENCES
1. Bernhard J Suess, *Creative Black and White Photography*, Allworth Press, 2013.
2. Bryan Peterson, *Understanding Exposure*, Amphoto Books, 2016.
3. Bruce Barnbaum, *The Art of Photography*, Rocky nook, 2nd Edition,2017.
4. Ben long, *Complete Digital Photography*, CDP Press, 9th Edition, 2018.
5. Michael Busselle and David Wilson, *The Perfect Portrait Guide*, Rotovision, 2002.
6. Scott Kelby, *The Digital Photography Book*, Rocky nook, 2020.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	-	-	1	2	-	-
2	-	-	3	3	-	-
3	2	-	-	-	-	-
4	3	3	-	-	-	-
5	-	-	2	-	-	3
Avg.	2.5	3	2	2.5	-	3

			L	T	P	C
MV3111	**USER EXPERIENCE DESIGN LABORATORY**		0	0	4	2

OBJECTIVES

- To develop skills required for analyzing the usability of a website.
- To impart the skills required to create an information architecture document needed for a website.
- To establish the requirements for User Experience Concept Designing using techniques such as use cases, personality development and task description.

UNIT I   WEBSITE AND MOBILE APPLICATION ANALYSIS   12

The students must select different types of websites and analyze them critically using the design principles. The report has to be generated for each of the websites and an analysis of the result should be made. It delivers an understanding of the important features present on a website. In the same way, the mobile applications are to be chosen in different categories and the results should be summarized. In the end, students learn how to use and implement the design principles in websites and mobile applications.

UNIT II   CONCEPT GENERATION & FIELD STUDY   12

Generating a new concept for the project. It can be a product/website/mobile application. After generating the concepts, the students should do the user research (Identifying user research methods, planning for field visits, understanding users, preparing the questionnaire, task list, and designing for users) and prepare the wireframing based on preliminary research and present it to the course instructor.

UNIT III   PERSONA CREATION AND DATA ANALYSIS   12

Creating personas and scenarios, Creating user stories, red routes, and user journey maps, Applying interaction design principles.

UNIT IV   DESIGNING INTERFACE AND PROTOTYPING   12

Designing the information architecture – Design for network effects, pattern libraries and social patterns – Designing Interfaces and wireframes, UX prototyping.

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UNIT V   USABILITY TESTING & EVALUATION   12

The student will do the usability testing/ heuristic analysis for the project they have undertaken and after the necessary corrections are made, the final product/ website/mobile application will be submitted to the course instructor. The student must use HTML & CSS support for the completion of final product development.

TOTAL: 60 PERIODS

SOFTWARE
- Adobe XD, Figma, Adobe Dreamweaver.

OUTCOMES

At the end of the course, the student will be able to:
- CO1.   Identify the users and learn the user experience lifecycle in its entirety.
- CO2.   Engage in user research and identify the user needs
- CO3.   Create an efficient prototype to communicate and validate the design definition.

REFERENCES

1. Christian Kraft, *User Experience Innovation: User-Centered Design that Works*, Apress, 2012.
2. Craig Grannell, *The Essential Guide to CSS and HTML web design (Essentials),* Friends of ED publishers 2008.
3. Dan Saffer, *Designing for Interaction*, New Riders publications, 2010.
4. Don Norman, *The Design of Everyday Things*, Basic Books, 2013.
5. Ted Roden, *Building the Realtime User Experience: Creating Immersive and Interactive Websites*, Shroff O'Reilly, 2010.
6. Tom Tullis and Bill Albert, *Measuring the User Experience: Collecting, Analysing and Presenting Usability Metrics*, Morgan Kaufmann Publishers, 2008.
7. Trevor Van Gorp and Edie Adams, *Design for Emotion*, San Francisco: Morgan Kaufmann Publishers, 2012.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	3	-	-	3	2	1
2	3	-	-	-	-	-
3	-	-	1	3	2	2
Avg.	3	-	1	3	2	1.5

MV3112	**PROGRAMMING WITH PYTHON LABORATORY**	L	T	P	C
		0	0	4	2

OBJECTIVES
- To learn the problem-solving approaches to perform different operations using Python.
- To work with strings and to carry out various operations related to file handling and data structures in Python.
- To explore Python Standard Libraries (pandas, numpy. Matplotlib, scipy) and Pygame tool.

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UNIT I   INTRODUCTION TO PROBLEM SOLVING AND PYTHON   12
- Write algorithms to solve various scientific and technical problems.
- Draw Flowcharts for solving various problems.
- Write various python programs using simple statements, expressions and to perform different mathematical operations.

UNIT II   DECISION CONTROL STATEMENTS AND LOOPING   12
**   STATEMENTS**
- Write various python programs to solve problems using conditional statements.
- Write various python programs to write programs using iterative loops.
- Write various python programs by including exception handling.

UNIT III   FUNCTIONS, MODULES AND PACKAGES   12
- Write various python programs to create new module.
- Write programs using user-defined functions.
- Write various python programs using Python Standard Libraries (pandas, numpy. Matplotlib, scipy)

UNIT IV   STRINGS AND FILE HANDLING   12
- Write various python programs using strings and string methods.
- Write programs related to File handling.

UNIT V   USABILITY TESTING & EVALUATION   12
- To implement real-world applications using Lists and Tuples.
- To implement real-world applications using Sets and Dictionaries.
- Exploring Pygame tool.
- Developing a game activity using Pygame like bouncing ball, car race etc.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
CO1. Develop algorithmic solutions to simple computational problems.
CO2. Decompose a Python program into functions and to represent compound data using Python lists, tuples, dictionaries etc.
CO3. Read and write data from/to files in Python programs.

REFERENCES
1. R. Nageswara Rao, *Core Python Programming*, DreamTech Press Publisher, 2021.
2. Reema Thareja, *Python Programming: Using Problem Solving Approach*, Oxford UniversityPress, 2017.
3. John V Guttag, *Introduction to Computation and Programming Using Python*, Revised and Expanded Edition, MIT Press, 2013.
4. Charles Dierbach, *Introduction to Computer Science using Python*, Wiley India Edition, 2016.
5. Timothy A. Budd, *Exploring Python*, Mc-Graw Hill Education (India) Private Ltd., 2015.

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CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	3	2	-	-	-	-
2	-	-	-	3	-	-
3	-	-	-	-	-	-
Avg.	3	2	-	3	-	-

MV3113	DIGITAL ILLUSTRATION LABORATORY	L	T	P	C
		0	0	4	2

OBJECTIVES
- To proficiency in image editing techniques and tools.
- To learn and understand the basics of vector graphics.
- To utilize advance vector and raster illustration techniques and build portfolio with industry insights.

UNIT I   EXPLORING IMAGE EDITING TECHNIQUES   12

Line drawing: straight-line drawing, free-hand drawing – pixels. Typography: Fonts and Typefaces - Basic color theory and color palettes - Overview of the Adobe Photoshop interface and tools - Creating and manipulating basic shapes and line - create Logo, Visiting card, Letter Head, Brochure, Pamphlets, Danglers, Leaflets, Posters- CD cover, greeting card.

UNIT II   INTRODUCTION TO VECTOR DESIGN   12

Overview of the Adobe Illustrator interface and tools - Introduction to vector graphics and the advantages of using them - Designing Logos - Creating info graphics - Drawing and Illustration techniques using Illustrator tools - Creating custom shapes and curves - Working with gradients and patterns - Exploring different styles of illustration - Creating custom icons and graphics – Illustrating.

UNIT III   COMPOSITION TECHNIQUES AND LAYOUT   12

Fundamentals of composition techniques and layout using Illustrator - Incorporating photographic elements into illustrations - Working with mask filter and special effects - Working with transform and blend tools - Advanced vector and raster illustration techniques - Creating vector-based illustrations for t-shirt designs.

UNIT IV   INTRODUCTION TO PAGE LAYOUT AND DESIGN   12

Creating visual hierarchy and balance - InDesign. Layers, scale – Creating images for print and for webpages: managing file size. Types of Page Layouts - Techniques for designing effective layouts for print and digital media - Designing a Web Page - Designing 3D buttons, Menus - Product cover design – Newsletter - Designing a Calendar - Designing a Print Advertisement for Newspapers and Magazine - Book covers and posters - Creating digital illustrations for children's books.

UNIT V   INDUSTRY INSIGHTS AND TRENDS   12

Building a portfolio of digital illustrations - Presenting and critiquing student work - Creating dynamic illustrations with lighting and depth - Final project that demonstrates understanding the principles and techniques of Illustrations.

TOTAL: 60 PERIODS

SOFTWARE
- Adobe Photoshop, Adobe Illustrator, Adobe InDesign.

OUTCOMES

At the end of the course, the student will be able to:

CO1. Understand the fundamentals of digital illustration and vector graphics.

CO2. Apply color theory, composition principles and typography.

CO3. Create portfolio, professional-quality digital illustrations and graphics suitable for a variety of applications, including print and web.

REFERENCES

1. Jonas Gomes and Luiz Velho, Computer Graphics: Theory and Practice, CRC Press, 2012.
2. Glyn Dewis, Photoshop Workbook: The Professional Retouching and Compositing Tips, Tricks, and Techniques, 1st Edition, 2014.
3. Richard Colson, The Fundamentals of Digital Art, 2013.
4. Brian Wood, Adobe Illustrator Classroom in a Book, 2021.
5. Andrew Loomis, Creative Illustration, 2012.
6. Robert Morrison, ADOBE INDESIGN 2023 FOR STARTERS: Beginners Guide to Mastering and Getting Basic Knowledge About Adobe InDesign, 2023.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	3	2	-	1	-	1
2	-	2	2	2	3	1
3	1	2	3	3	3	-
Avg.	2	2	2.5	2	3	1

MV3114	2D ANIMATION PRODUCTION LABORATORY	L	T	P	C
		0	0	4	2

OBJECTIVES
- To appraise the knowledge and skills required to produce 2D animation sequences.
- To get familiarized with the principles of mechanics, anatomy, and physics of 2D animation.
- To impart the use of animation software in creating a range of productions.

UNIT I   INTRODUCTION TO 2D ANIMATION   12
- Create frame-by-frame animations.
- Create cutout animations / Flip books / Stop motion animations.
- Create tween animations – Classic tween, Motion tween and Shape tween.

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UNIT II   PRINCIPLES AND STYLES IN ANIMATION   12
- Create animations that include all basic principles like bouncing ball, falling balloon, ball rolling on wooden ramp/coming to halt.
- Create a character and background design.

UNIT III   MASKING   12
- Produce animations using static mask: text and image masking.
- Produce animations using dynamic mask: text and image masking.
- Produce animations for weighted object lifting, pushing, and pulling.

UNIT IV   ANATOMY IN ANIMATION AND 2D ANIMATION FILM-MAKING   12
- Create animations involving anatomy: Character walk, run, pose.
- Animate various facial expressions and include Lip Sync, Sound, Audio effects.
- Create animations using 3D tools and IK bones.

UNIT V   INTERACTIVE ANIMATION AND ITS APPLICATIONS   12
- Create animated advertisements.
- Design and develop a web banner.
- Create animated PSAs, mobile applications.
- Action Script: Website.
- Action Script: Quiz / Interactive presentation.
- Animation portfolio.

TOTAL: 60 PERIODS

SOFTWARE
- Adobe Animate

OUTCOMES
At the end of the course, the student will be able to:
- CO1. Develop an understanding of the principles of animation, tools used for creating 2D graphics and animation.
- CO2. Design 2D graphics, 2D character modeling and animation.
- CO3. Create a portfolio that meets industry expectations and create interactive animations.

REFERENCES
1. Richard Williams, *The Animator's Survival Kit: A Manual of Methods, Principles, and Formulas for Classical, Computer, Games, Stop Motion, and Internet Animators*, 2012.
2. Preston Blair, *Cartoon Animation (How to Draw and Paint Series)*, 1995.
3. Adobe Creative Team, *Adobe Flash Professional CC Classroom in a Book*, 2013.
4. Christopher Finch, *The Art of Walt Disney*, Abrams Publishers, 2011.
5. Frank Thomas and Ollie Johnston, *The Illusion of Life: Disney Animation*, 1981.
6. Dev Ramtal and Adrian Dobre, *Physics for Flash Games, Animation and Simulations*, Springer, 2011.
7. Sergio Paez & Anson Jew, *Professional Storyboarding*, Focal Press, 2013.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	2	3	3	3
2	2	-	2	3	3	3
3	2	-	2	3	3	3
Avg.	2	-	2	3	3	3

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MV3201	THEORY OF VISUAL ANALYSIS	L	T	P	C
		3	0	0	3

OBJECTIVES

- To understand the nature and purpose of visual analysis.
- To explore how to blend different types of approaches and useful tools with visual content.
- To understand different types of visual breakdown and theories related to it.
- To study the models for analysis.
- To understand different types of visual analysis and evaluations.

UNIT I   INTRODUCTION TO VISUAL ANALYSIS   9

Visual analysis: Definition and different perceptions – Methods of visual analysis – Scope of visual communication – Unit of analysis – Image analysis – Text, context, social practice in media.

UNIT II   VISUAL AESTHETICS   9

Aesthetic theory – Perception theory – Representation theory, Theory of Visual Rhetoric – Cognitive theory – Visual Semiotic theory – Reception theory – Narrative theory – Visual Ethics theory – Visual Literacy theory - Sensual Theories – Gestalt and Constructivism.

UNIT III   QUANTITATIVE APPROACH   9

Content analysis – definition – variables, values – result approaches – Reliability and Validity – Limitations and extension – Visual Rhetoric and Metaphor – Research Questions – Symbolism – Iconography.

UNIT IV   VISUAL ANTHROPOLOGY   9

Visual anthropology approach: definition, need – Types of contextual information analysis – Models of analysis – Direct and indirect analysis – Representation analysis – Semiotic approaches – Social semiotic analysis, visual semiotics and applications.

UNIT V   CRITICAL ANALYSIS AND EVALUATION   9

Critical analysis: Needs and purpose, perception and application – Evaluation: Textual analysis: Newspaper – Advertisement – Political ad – Television – Perceptual Theories: Semiotics and Cognitive.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
CO1. Understand the scope and limitations of visual media.
CO2. Learn the different visual representation techniques and its applications.
CO3. Learn to apply the theoretical and empirical tools of visual analysis.
CO4. Understand the theories of visual analysis.
CO5. Learn to analyze and evaluate visual content.

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REFERENCES
1. Kenneth L. Smith, Sandra Moriarty, Keith Kenney, & Gretchen Barbatsis, *Handbook of VisualCommunication: Theory, Methods, and Media*, Routledge, London, 2005.
2. David Machin & Andrea Mayr, *How to Do Critical Discourse Analysis: A Multimodal Introduction*, Sage, 2012.
3. Per Ledin & David Machin, *Doing Visual Analysis: From Theory to Practice*, Sage,2018.
4. Giorgia Aiello & Katy Parry, *Visual Communication: Understanding Images in Media Culture*, 1st Edition, Sage, 2020.
5. Christian Leborg, *Visual Grammar: A Design Handbook*, Princeton Architectural Press, 1st Edition, 2006.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	1	-	-	-	-	-
2	2	-	-	-	-	-
3	1	-	1	1	1	-
4	-	-	1	-	-	-
5	2	-	1	1	-	-
Avg.	6/4 = 1.5	-	3/3 = 1	2/2 = 1	1/1 = 1	-

MV3202	USER INTERFACE DEVELOPMENT	L	T	P	C
		3	0	0	3

OBJECTIVES
- To divulge the guidelines for creating an effective web page
- To impart the necessary skills for designing and developing a website.
- To learn the language of the web: HTML, CSS, JavaScript, jQuery, Angular JS.

UNIT I   HYPER TEXT MARK-UP LANGUAGE (HTML)   9

Introduction to HTML, Markup Tags, Types of Attributes, Presentation Tags, Semantic Elements, Inserting Images. Creating Hyperlinks, Client Side Image Mapping, Types of hyperlinks: external links and internal links, Lists and the different types of lists. Table and its related Tags. Incorporating form elements, Form Attributes, Inline frame, Adding Multimedia Contents using different media related, Adding Graphics, Head Document Elements.

UNIT II   CASCADING STYLE SHEETS   9

Introduction to CSS, Different ways to incorporate Styles, Styles - Background, Text, Font, Link, Lists, Tables, Border, CSS Pseudo Elements, separate style sheets for print and screen, Print Media: controlling line breaks, The box model: Styling with content, padding, borders and margin. using margins to separate and position, CSS Positioning: static, relative and absolute. CSS Floating: Floated elements and their margin, Transparency Effects: CSS transparency and "see-through" effects, Colors, Gradients, Shadows, 2D Transforms, 3D Transforms, Navigation Bar,

Dropdowns, Tooltips, Counters, Animations, Buttons, Pagination, Multiple Columns, User Interface, Box Sizing, CSS3 Responsive.

UNIT III   JAVA SCRIPT   9

Introduction to Scripting Language, Uses of JavaScript, how a scripting language works, different ways to incorporate JavaScript, Datatypes, Variables, Expressions, Operators, and Statements, Pre-Defined Dialog Boxes, HTML DOM: Map html elements using Document Object Model, JavaScript BOM. Arrays, User defined functions, Events and Event Handling, Pre-defined JavaScript Objects, Browser Objects, RegExp, Hoisting, Strict Mode, Functions.

UNIT IV   JQUERY   9

Introduction to jQuery, Syntax, Selectors, Events, Effects, HTML Traversing, AJAX, Introduction to jQuery Mobile, Mobile pages, Transitions, Buttons, Icons, Popups, Toolbars, Navbars, Panels, Collapsible, Tables, Grids, Lists, Forms, Themes, Events.

UNIT V   BOOTSTRAP   9

Introduction to Bootstrap - Basics, typography, tables, buttons, icons, pagination, list, panels, dropdown, navbar, form, inputs, media objects, filters. Bootstrap Grids- Grid System, Bootstrap Themes, Bootstrap CSS, Bootstrap JS references.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
   CO1.   Define the fundamental terms and concepts related to web development.
   CO2.   Logically separate the content from style.
   CO3.   Develop a full-fledged website using HTML5, CSS and JavaScript.
   CO4.   Expose to the programs related to jQuery.
   CO5.   Understand and implement the bootstrap in website.

REFERENCES

1. Craig Grannell, *The Essential Guide to CSS and HTML web design (Essentials)*, Friends of ED Publishers. 2008.
2. Danny Goodman, Michael Morrison, Paul Novitski, and Cynthia GustaffRayl, *JavaScript Bible*, Wiley Publications. 2010.
3. Jon Duckett, Gilles Ruppert, Jack Moore, *JavaScript and JQuery: Interactive Front-End Web Development Hardcover*, John Wiley and Sons Inc., 2014.
4. Cody Lindley, *jQuery Cookbook: Solutions & Examples for jQuery Developers*, O'Reilly Media Inc. 2010.
5. Lavanya R., *HTML 5*, Ane Book House, 2010.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	-	-	2	-	2	2
2	-	-	-	-	2	1
3	-	-	1	-	3	-
4	-	-	2	-	2	-
5	-	-	1	-	2	-
Avg.	-	-	6/4 = 1.5	-	11/5 = 2.2	3/2 = 1.5

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MV3203   **2D GAME DESIGN AND DEVELOPMENT**   L   T   P   C
                                                                             3   0   0   3

OBJECTIVES
- To explore the history of games and the gaming industry.
- To understand the fundamentals of game design and development.
- To learn the basics of C# game scripting for making a simple game.
- To learn and understand the functions of game engine software.
- To create a 2D game using game engine and design game mechanics that create engaging game play.

UNIT I   INTRODUCTION TO COMPUTER GAMES   9
Introduction to gaming – Game play, Emergent and progressive gameplay – gamification – History of games, Gaming industry - Introduction to Android games and iOS games - Types of games: FPS, role playing games, platform, racing, design elements – game elements: strategies, actions, outcomes.

UNIT II   GAME STORY AND GAME DEVELOPMENT PROCESS   9
Concept of games as stories, narrative in video game presentation – Uses of game theory - Campbell's Monomyth theory – The normal form, pure strategy – Nash equilibrium, dominated strategies and payoffs- Game design and development processes: Game identification, terminology, concepts, level design, and interface design.

UNIT III   GAME SCRIPTING   9
Introduction to C# – Scripts as behavior components – Data types – Variable and functions – Conditional statements – Loops, classes, instantiate, scope and access modifiers – Arrays – Invoke and enumerations – Awake and start – Update and fixed update – Vector math – Activating game objects –Events – Event handlers – Delta time.

UNIT IV   GAME BEHAVIOUR   9
Behavior – Rigid body 2D – Gravity using C# Script – Handling collisions of game object using Collider 2D – Creating game objects at runtime using Prefabs – Prefab instantiation - Parent and Child Game Objects – Detecting collisions with on collision enter – Add Velocity, force -light, camera and apartment -- Add script to character – Create particle system - Add sounds.

UNIT V   GAME DEVELOPMENT WITH ENGINE   9
Introduction to Unity Game Engine Tools & navigation, Camera control in Unity, Scene Navigation, Project setting / Player setting, Game publishing using Unity Sprite Editor, Sprite Animation, 2D Physics, 2D Components, UI system, 2D Game Project Gameplay: game worlds, object models - Creating and destroying game objects – Access the components – Events for game objects – Dealing with vector variables and timing variables — Coroutine and return types – Physics components: coordinates, vectors, rigid bodies and forces – Colliders and collisions.

TOTAL: 45 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
- CO1.   Describe and differentiate between different types of games.
- CO2.   Demonstrate an understanding of the overall game design process.
- CO3.   Design and implement basic levels, models, and scripts for games.
- CO4.   Understand the game design principles and techniques that can be applied to gameplay
- CO5.   Design and build their own functional game using game-engine.

REFERENCES

1. Dave Calabrese, *Unity 2D Game Development*, Packit Publishing, 2014.
2. Steve Rabin, *Introduction to Game Development*, 2010
3. Joe Hocking, *Unity in Action: Multiplatform Game Development in C#,* 2018
4. Gary Rosenzweig, *ActionScript 3.0 Game Programming University*, Pearson, 2013.
5. Jeannie Novak, *Game Development Essentials: An Introduction*, Delmar Cengage Learning, 2012.
6. Mario Zechner and Robert Green, *Beginning Android 4 Games Development*, Apress, 2012.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	2	-	-	-	-	-
2	-	-	-	2	-	-
3	-	-	-	-	3	-
4	-	2	-	-	-	-
5	-	-	-	-	-	3
Avg.	2/1 = 2	2/1 = 2	-	2/1 = 2	3/1 = 3	3/1 = 3

MV3204	3D MODELING AND ANIMATION	L	T	P	C
		3	0	0	3

OBJECTIVES

- To learn the history of 3D animation.
- To understand the 3D animation film making techniques.
- To learn the 3D modeling and texturing methods.
- To understand the 3D rigging and animation process.
- To learn the concepts of lighting and rendering in 3D.

UNIT I   INTRODUCTION TO 3D   9

Introduction to animation – Difference between 2D and 3D animation – 3D (cartesian) coordinate system – Exploring the 3D Animation industry – History of 3D Animation – Fundamentals of Digital Imaging: Types of Computer Graphics, Pixels, Computer graphics file formats, Anti-aliasing, Image resolution, Screen resolution, Screen size, Color Depth, Color Channer, Color Calibration, Fundamentals of Digital Video: Video resolution, Device Aspect Ratio, Video Safe Area, Video display methods (Interlaced and Progressive), Video compression, Video file formats.

UNIT II   3D ANIMATION FILM MAKING TECHNIQUES   9

Principles of Animation – 3D Animation Production Pipeline: Preproduction, Production and Postproduction – Building a good story: Story arc, Basic elements of story, The Hero's Journey story structure, Storytelling principles – Framing – Camera Movements – Transitions – 180 degree rule – Composition rules: Golden ratio, Rule of Thirds, Head room and Nose room.

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UNIT III   3D MODELING AND TEXTURING   9

3D Modeling Techniques: Polygon modeling, NURBS modeling, Sub-division surface modeling – Polygon modeling: Polygon primitives, Components of Polygon – NURBS modeling: NURBS primitives, NURBS curves, Components of NURBS – Difference between Polygon modeling and NURBS modeling – Modeling Workflows: From-scratch modeling, Primitive modeling, Box modeling, Boolean modeling, Laser Scanning, Digital Sculpting – Deformers for Modeling – 3D Text – Texturing: Hypershade and Materials, Texture Maps, UV mapping, 3D Paint tool.

UNIT IV   RIGGING AND ANIMATION   9

Overview of Rigging – Skeleton system – Bones and Joints – Parent and Child – Forward and Inverse Kinematics – Skinning methods: Direct skinning (Smooth and Rigid skinning) and Indirect skinning (Lattice and Wrap skinning) – Overview of Animation – 3D Animation methods - Keyframe – Graph Editor – Timeline – Animation with Deformers – Character animation. – Camera – Types of camera – Basic Camera attributes – Camera Animation.

UNIT V   LIGHTING AND RENDERING   9

Creating Effects: Particles, Hair and fur, Fluids, Rigid bodies and Soft bodies – Basic concepts of Lights – Types of Light – Basic attributes of Light – Lighting techniques Adding shadows – Light Effects – Introduction to Rendering – Types of renderer – Basic Render setting options – Render view – Batch rendering – Render Engine.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
CO1.   Understand the concepts of 3D animation.
CO2.   Gain an understanding on the 3D animation film making techniques.
CO3.   Learn the 3D modeling and texturing methods.
CO4.   Understand the 3D rigging and animation process.
CO5.   Learn the concepts of lighting and rendering in 3D.

REFERENCES

1. Roger King, *3D Animation for the Raw beginner using Autodesk Maya*, Chapman and Hall 2nd edition, 2019.
2. Andy Beane, *3D Animation Essentials*, John Wiley & Sons, Inc., 2012.
3. Frank Thomas and Ollie Johnston, *The Illusion of Life: Disney Animation*, 1981.
4. John Edgar Park, *Understanding 3D Animation Using Maya*, Springer, 2005th Edition, 2005.
5. Chris Maraffi, *Maya Character Creation: Modeling and Animation Controls*, New Riders, 2003.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	-	-	1	1	2	-
2	-	-	-	3	2	-
3	-	-	3	2	2	-
4	-	-	1	2	2	-
5	-	-	1	2	2	-
Avg.	-	-	6/4 = 1.5	10/5 = 2	10/5 = 2	-

Attested

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MV3211	USER INTERFACE DEVELOPMENT LABORATORY	L	T	P	C
		0	0	4	2

OBJECTIVES
- To acquire the knowledge and skills to design and develop a website
- To acquaint with HTML, CSS, JavaScript, JQuery and Bootstrap
- To impart the skills required to construct a web site that conforms to the web standards.

UNIT I   HYPERTEXT MARKUP LANGUAGES   12
1. Create a basic webpage using different presentation tags
2. Insert Images and tables
3. Create different types of Lists.
4. Create external and internal hyperlinks, Image Mapping, Mail Links
5. Create registration forms using all the form elements
6. Include Multimedia Elements in the website

UNIT II   CASCADING STYLE SHEETS   12
1. Create a CSS template for the website created above.
2. Create a box model using CSS
3. Skin a menu with CSS: Styling Navigational Links
4. Create a drop-down menu, image gallery, responsive designs

UNIT III   INTRODUCTION TO JAVA SCRIPT   12
1. Validate the website using Javascript objects
2. Creating dynamic Calendar, TimeStamp and Banner
3. Programs related to Event handling, Events, and Error handlings
4. Programs related to Window and Document objects.
5. Programs related to javascripts objects and methods.
6. Design and develop a professional interactive and dynamic website

UNIT IV   INTRODUCTION TO J Query   12
1. Programs related to jQuery Selectors, jQuery Events, jQuery Effects, jQuery HTML, jQuery Traversing, jQuery AJAX, jQuery Misc.
2. Programs related to jQuery-Mobile Pages, Mobile Transitions, Buttons, Mobile Icons, Mobile Popups, Toolbars, Navbars, Panels, Collapsibles, Tables, Mobile Grids, Mobile Lists, Mobile Forms, Mobile Themes, Mobile Events.

UNIT V   BOOTSTRAP   12
1. Programs demonstrating Bootstrap Basics, Bootstrap Grids, Bootstrap Themes, Bootstrap CSS, JS.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
  CO1.   Develop a full-functional website using HTML5, CSS and JavaScript.
  CO2.   Expose to the programs related to jQuery.
  CO3.   Implement the bootstrap in website and create responsive design websites.

REFERENCES
1. Craig Grannell, *The Essential Guide to CSS and HTML web design (Essentials)*, Friends of ED Publishers. 2008.
2. Danny Goodman, Michael Morrison, Paul Novitski, and Cynthia GustaffRayl, *JavaScript Bible*, Wiley Publications. 2010.

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3. Jon Duckett, Gilles Ruppert, Jack Moore, *JavaScript and JQuery: Interactive Front-End Web Development Hardcover*, John Wiley and Sons Inc., 2014.
4. Cody Lindley*, jQuery Cookbook: Solutions & Examples for jQuery Developers*, O'Reilly Media Inc. 2010.
5. Lavanya R., *HTML 5*, Ane Book House, 2010.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	-	-	2	2	2	-
2	-	-	-	2	2	-
3	-	-	-	2	2	-
Avg.	-	-	-	6/3=2	6/3=2	-

MV3212	**2D GAME DESIGN AND DEVELOPMENT LABORATORY**	**L**	**T**	**P**	**C**
		0	**0**	**4**	**2**

OBJECTIVES
- To understand the physics and mechanisms involved in the 2D game development process.
- To plan and create a 2D game using a game-engine and to implement game physics and player controls using Unity's physics engine and C# scripting.
- To design engaging game mechanics and levels that challenge players.

UNIT I   INTRODUCTION TO 2D GAMES ART   **12**
- Introduction to 2D game art
- Preparing a concept document.
- Developing game story, setting and characters.
- Developing key assets for games.
- Creating sprites

UNIT II   GAMEPLAY   **12**
- Developing gameplay.
- Design and create a traditional board game.
- Design and create a maze game.
- Design and create a puzzle game.

UNIT III   INTRODUCTION TO UNITY AND 2D GAME DEVELOPMENT   **12**
- Overview of Unity Interface
- Introduction to 2D game development
- Creating a simple 2D game
- Design and develop an Egg Catcher game.
- Design and develop shooting game.

Attested
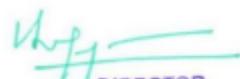
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UNIT IV   GAME MECHANICS AND PLAYER CONTROLS   **12**
- Designing game mechanics and player controls
- Implementing movement, jumping, and shooting using Unity's physics engine and C# scripting
- Adding obstacles and challenge
- Adding sound effects and background music
- Implementing particle systems and visual effects

UNIT V   LEVEL DESIGN AND GAME ENVIRONMENTS   **12**
- Creating a 2D game world
- Designing game AI and enemy behavior
- Implementing enemy movement and attack behavior using Unity's scripting language, C#
- Publishing for Desktop, Android, and iOS.
- Preparing a game design document.

TOTAL: 60 PERIODS

SOFTWARE
- Unity, Adobe Animate

OUTCOMES
At the end of the course, the student will be able to:
- CO1.   Create the design of a game and game play
- CO2.   Design and implement basic levels, models, and scripts for games
- CO3.   Design and build fully functional games using game-engine.

REFERENCES
1. Dave Calabrese, *Unity 2D Game Development*, Packit Publishing, 2014.
2. Gary Rosenzweig, *ActionScript3.0 Game Programming University*, Pearson, 2013.
3. Jeannie Novak, *Game Development Essentials: An Introduction*, Delmar Cengage Learning, 2012.
4. Mario Zechner and Robert Green, *Beginning Android 4 Games Development*, Apress, 2012.
5. Nikhil Malankar, *Learning Android Game Development*, Packt Publishing Ltd, 2017.
6. Patrick Alessi, *Beginning iOS Game Development*, John Wiley & Sons, 2011.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	-	2	1	-	-	-
2	1	-	-	2	3	-
3	-	1	-	-	-	3
Avg.	1/1 = 1	3/2 = 1.5	1/1 = 1	2/1 = 2	3/1 = 3	3/1 = 3

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MV3213   **3D MODELING AND ANIMATION LABORATORY**   **L T P C**
                                                                            0 0 4 2

OBJECTIVES
- To create 3D model from scratch using reference.
- To learn the concepts of texturing, lights, rigging, animation and rendering.
- To create a simple 3D animation.

UNIT I   INTRODUCTION TO 3D   **12**
- Introduction to 3D software interface.
- Learn to manipulate 3D objects.
- Create a model using polygon primitives.
- Learn to use extrude (with/without keeping faces together), wedge, bevel, bridge, cutting faces, editing with reflection, merging vertices, polygon booleans and nonlinear deformers.
- Create a model by modifying polygon objects.
- Create a polygon model with reference image.

UNIT II   NURBS MODELING   **12**
- Create a model using NURBS primitives.
- Learn to manipulate NURBS surfaces.
- Learn to detach NURBA surfaces, sculpting surfaces,
- Learn to work with NURBS curves, manipulating curves, open/close curves, loft, planar, revolve, extrude, projecting curves on surfaces, NURBS Booleans and converting NURBS to polygon.
- Create a NURBS model with reference image.

UNIT III   CREATING TEXTURES AND MATERIALS   **12**
- Introduction to basic materials.
- Learn to create and apply maps.
- Learn to work with Hypershade window.
- Use bitmaps as texture for the models.
- Create 3D model with transparency, specularity, reflections.
- Learn to use bump mapping and displacement mapping.
- Learn to project texture on surfaces.
- Create texture map on polygon surfaces.
- Explore the basics of UV mapping.

UNIT IV   RIGGING AND ANIMATION   **12**
- Introduction to Animation interface.
- Learn to animate objects, animate attributes, copying and adjusting keys, creating breakdown keys, modifying keys in the Graph editor.
- Create animation playback using Playblast.
- Animate an object along path.
- Learn to create motion trails.
- Create simple animation cycle.
- Introduction to basics of joints and skinning.
- Learn to fit skeleton to a mesh, deform the mesh using skin tool and paint skin weight
- Create a simple animation by animating skeletons.

UNIT V   LIGHTING AND RENDERING   **12**
- Explore the different types of lights.
- Learn to manipulate lights, add depth map shadow and use raytrace shadow.
- Learn to create camera, manipulate camera attributes, add depth of field.

- Introduction to Render setting window.
- Create a walkthrough animation using camera.

TOTAL: 60 PERIODS

SOFTWARE
- Autodesk Maya

OUTCOMES

At the end of the course, the student will be able to:

CO1. Create 3D models from reference images.

CO2. Learn the concepts of texturing, lights, rigging, animation and rendering.

CO3. Create a simple 3D animation.

REFERENCES

1. Roger King, *3D Animation for the Raw beginner using Autodesk Maya*, Chapman and Hall 2nd edition, 2019.
2. Andy Beane, *3D Animation Essentials,* John Wiley & Sons, Inc., 2012.
3. Frank Thomas and Ollie Johnston, *The Illusion of Life: Disney Animation*, 1981.
4. John Edgar Park, *Understanding 3D Animation Using Maya*, Springer, 2005th Edition, 2005.
5. Chris Maraffi, *Maya Character Creation: Modeling and Animation Controls*, New Riders, 2003.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	1	-	2	-	3	-
2	-	-	1	-	3	-
3	-	-	3	2	3	3
Avg.	1/1 = 1	-	6/3 = 2	2/1 = 2	9/3 = 3	3/1 = 3

MV3214	PORTFOLIO PRESENTATION AND PUBLISHING	L	T	P	C
		0	0	4	2

OBJECTIVES
- To document the learning journey throughout the entire program.
- To develop materials that will aid in self-promotion and professional presentation.
- To learn job search and interview skills and become more comfortable presenting their work and discussing their own professional goals.

UNIT I   RESEARCH   12
- Collect examples of successful portfolios from professionals in your field and analyze their structure and content.
- Create a mood board that visually represents the aesthetics and themes you want to convey in your portfolio.

Attested

33

UNIT II   DESIGN PRINT AND DIGITAL PORTFOLIO   12
- Get familiar with tools to create portfolio.
- Design portfolio in print format.
- Design portfolio in digital format.

UNIT III   PERSONAL BRANDING   12
- Create a self-identity system including resume, cover letter, and business cards.
- Develop a strategy for incorporating testimonials or client feedback into your portfolio to enhance credibility.
- Ways to apply for job postings – writing emails.

UNIT IV   PROFESSIONAL PRESENTATION TECHNIQUES   12
- Employ a variety of presentation techniques to display works.
- Present a short presentation (3-5 minutes) about self (Importance on body language, eye contact, and vocal projection).
- Demonstrate effective interpersonal skills in mock interview situations.

UNIT V   PUBLISHING   12
- Promote portfolio digitally in social media platforms
- Publish portfolio in print and digital formats
- Exhibit the portfolio works.

TOTAL: 60 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
- CO1.   Develop a complete print and digital portfolio.
- CO2.   Develop materials for self-promotion and professional presentation.
- CO3.   Develop job search and interview skills.

REFERENCES

1. Fig Taylor, *How to create a portfolio and get hired*, Laurence Kind Publishing, 2ns edition, 2013.
2. Denise Anderson, *Stand Out: Design a personal brand. Build a killer portfolio*. Find a great design job, Peachpit publications, 1st edition, 2016.
3. Craig Welsh, *Design Portfolio: Self promotion at its best*, Rockport publishers, 2013.
4. Sara Eisenman, *Building Design Portfolios: Innovative concepts for presenting your work*, Rockport Publishers, 1st edition, 2008.
5. John Dimarco, *Web Portfolio Design and Applications*, IGI publishing, 2006.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	-	-	3	3	-	-
2	-	-	-	3	-	-
3	-	-	-	-	3	-
Avg.	-	-	3/1 = 3	6/2 = 3	3/1 = 3	-

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MV3301	**VISUAL AND SPECIAL EFFECTS**	**L**	**T**	**P**	**C**
		3	**0**	**0**	**3**

OBJECTIVES

- To provide students with a comprehensive understanding of the principles, techniques, and tools used in creating visual effects.
- To merge a live action footage with the visual effects.
- To stimulate particle items.
- To develop the technical and artistic skills necessary to design and execute high-quality visual effects.
- To foster critical thinking and problem-solving abilities within the context of visual effects production.

UNIT I   INTRODUCTION TO VFX   9

Principles of Motion Pictures and VFX – VFX Cues - Designing Visual effects shots - Introduction to interface – Import Media – Organize projects – compositions – Create Transparency for compositing – Keying – Trackers – Effects – Composite 3D Renders – Work with Rendering – Work with Immersive 360 VR- Typography – Working with Layers and Shapes – Animating – working with effects.

UNIT II   ART OF ROTOSCOPING   9

Miniatures – Motion capture – Rotoscoping and Paint – Rigging and Animation Rigging - Exploring Roto Tools: Keying effects, Rotobezier and holdout matte, improving the matter with effects, Preparation for roto, dividing to multiple masks, tracking a mask, using the Rotobrush tool, Refining soft edge, Roto Brush 2.0. Professional Roto Tools: Rotoscoping with Mocha AE, Adjusting the shape, Using Mocha Pro.

UNIT III   PARTICLES AND TRACKER   9

Working with emitters – Adjusting Particle attributes – Creating Custom Particles – Working in Three Dimensions – Building Multi-Systems – Creating Light Streaks – Creating Smoke – Creating Fire – Generating Whimsical Backgrounds – Fluid Dynamics. One-point tracking – Mask Tracker – Additional Trackers – Use Stabilization for Tracking – Planner Tracking – Camera Tracking – Mocha planar tracking.

UNIT IV   CAMERA AND LIGHTING   9

Front and rear projection system for visual effects - Working with cameras: Depth without Cameras – A quick camera primer – One node vs two node camera – Orthographic views – Adjusting custom views and framing layers – camera animation – depth of field - Photo Projection mapping - Mimicking camera movement from the real world – Camera in VR production. Lighting techniques: types of lights – 3-point lighting setup – shadows –Volumetric lighting.

UNIT V   COMPOSITING   9

Seven Essential of VFX Compositing - Compositing: Layer-based,Nodel based, Keyer - Types and Concepts - Compositing Tricks: Keying smoke and water – Handling tricky key shots – light warp – Matching shutter phase – Preserving transparency – adjustment lights – removing bonding. Fix it in Post: Day for night – Classic color match – Selective color match – Changing color match – contact shadows. Popular effects: Depth illusion, Film flash effect, Fake camera track, improving realism with displacement.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:

CO1. Apply artistic principles, color theory, and visual storytelling techniques to enhance the overall visual impact of a project.

CO2. Demonstrate proficiency in using industry-standard software and hardware tools for visual effects production.

CO3. Understand the technical aspects of visual effects, including compositing.

CO4. Effectively design and execute visually compelling and realistic visual effects.

CO5. Demonstrate their technical proficiency, creative vision, and ability to solve visual effects challenges, thus enhancing their employability in the industry.

REFERENCES

1. J. Gress, *Digital Visual Effects & Compositing*, New Riders, 2015.
2. J. A. Okun and S. Zwerman, Eds., *The VES Handbook of Visual Effects Industry Standard VFX Practices and Procedures*, Second ed., Focal Press.
3. S. Wright, *Compositing Visual Effects: Essentials for the Aspiring Artist*, Second ed., Focal Press, 2013.
4. K. E. Goulekas, *Visual Effects in a Digital World*, Second ed., Morgan Kaufmann, 2001.
5. B. Byrne, *The Visual Effects Arsenal VFX Solutions for the Independent Filmmaker,* Focal Press, 2009.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	2	2	1	-
2	-	-	3	3	3	-
3	-	-	2	2	3	-
4	-	-	3	2	2	-
5	-	-	2	3	3	1
Avg.	-	-	12/5 = 2.4	12/5 = 2.4	12/5 = 2.4	1/1 = 1

MV3302　　　　　　　　　　　　**DATA ANALYSIS**　　　　　　　　**L　T　P　C**
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　2　0　2　3

OBJECTIVES

- To learn the data acquisition, data cleansing, data analytics and visualization techniques.
- To learn the method of doing various data analysis techniques.
- To understand the various qualitative data analysis techniques.
- To understand the importance of statistical models.
- To learn the social media analysis and other textual analysis formats.

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UNIT I   DATA ANALYSIS – INTRODUCTION   12

Introduction: Definition of statistics, Nature of Statistics, Uses of Statistics, Types of statistics-Descriptive and Inferential, Statistics in relation to social sciences, Fundamental of statistical method – Law of statistical regularity, Law of inertia and large numbers. Description of Data, Various types of Analytics, Application of Data Analytics in industries and business. Popular Analytical tools, Data Presentation: Creating Tables and Graphs.

Lab Component
1. Understanding the importance of primary and secondary data
2. Working with sample primary and secondary data
3. Understanding the interface of statistics software and learning different tools
4. Creating survey form (Questionnaire development)
5. Scale Development Process – Preliminary Work
6. Understanding Samples & Population - Finding sample from population
7. Sample size determination
8. Identifying Sample error
9. Sample Data Collection (Pilot)
10. Importing primary data
11. Data Purification process
12. Understanding and cleaning outliners
13. Classification and Tabulation
14. Frequency Distribution, Graphical Representation,
15. Hypothesis Testing

UNIT II   DESCRIPTIVE ANALYSIS   12

Descriptive Statistics: Summary measures, variance measures, Probability Distributions. Inferential Statistics: Simple Inference for continuous Data, categorical Data, Types of Inferential Tests, Types of Hypotheses, Hypothesis Testing The p-Value, Analysis of Repeated Measures, Fixed Effects versus Random Effects.

Lab Component
1. Calculate mean for the given set of data using various methods for discrete and continuous data
2. Calculate weighted arithmetic average, Harmonic Mean, Geometric mean and positional averages
3. Calculate median, quartiles and percentiles for the given data using different methods for discrete and continuous data
4. Calculate mode for the given data for discrete and continuous data
5. Calculate Range, Co-efficient of range, Quartile Deviation and Co efficient of Quartile Deviation, and mean deviation
6. Calculate Standard Deviation for the given data
7. Calculate variance for the given data
8. Calculate Coefficient of Variation
9. Calculate Coefficient of Skewness
10. Measure of Kurtosis

UNIT III   INFERENTIAL ANALYSIS   12

Types of Hypotheses - Hypothesis Testing—Understanding the importance of p Value -- Types of Inferential Tests – Understanding Parametric and Non-Parametric tests -- Anova, t-test, 1

sample t-test, 2 sample t-test -- Goodness of fit, chi-square – Correlational Analysis – Regression Models, Linear Regression, Multiple Regression and Logistic Regression -- Predictive model, split the data, model selection, multicollinearity, predictions and quality checks. Principal Component Analysis, Factor Analysis, Cluster Analysis, Discriminant Function Analysis. Structural Equation Modeling (SEM) – its need and prerequisites.

Lab Component
1. Importing data and doing data purification process
2. Understanding when to use what test, and assumptions
3. Data Normality testing using graphical and statistical methods
4. Analysis of Variance (ANOVA)
5. T-test
6. Chi-square
7. Correlational Analysis
8. Regression analysis (Linear, Multiple and Logistic)
9. Factor Analysis & its related tests
10. Cluster Analysis
11. Discriminant Analysis
12. Running different non-parametric tests
13. Preparing a model based on the theoretical framework
14. Test the model using software (Exploratory and Confirmatory Factor Analysis)
15. Reliability and Validity testing
16. Using the same set of data and run the model using different software and understand the differences in the results
17. Path Analysis

UNIT IV   QUALITATIVE DATA ANALYSIS   12
Understanding Qualitative Data -- Qualitative Analysis -- Managing data, Reading and annotating, creating categories, Splitting and splicing linking data, making connections -- Ofmaps and matrices, Corroborating evidence, producing an account -- Introduction to Social Media Research – Analyzing Social Media Content using various software -- Retrieving data and doing text analysis, cloud mapping, word art creation, sentiment analysis, network analysis.

Lab Component
1. Understanding Qualitative data
2. Understanding the difference between deducting and inducting approach
3. Preparing Coding sheets (wherever necessary)
4. Data cleaning and labeling
5. Creating framework for analysis
6. Doing content analysis, narrative analysis and discourse analysis
7. Analyzing structured and unstructured text
8. Analyzing audio and video formats
9. Quality checking using credibility, validity and reliability of content
10. Social Media data analysis (Text analysis, Cloud mapping, Word art, Sentiment analysis)
11. Network Analysis

UNIT V   GENRES OF PHOTOGRAPHY   12
Fundamentals of Data Visualization- Design Principles: Visual Perception and Cognitive Load – Importance of Visual Analytics- Charting, Calculations, mapping, – Tools –Creating Dashboards

& Story telling using visualization techniques – Visualization for different types of data: time-oriented, multivariate, tree, graphs and networks, visualization systems, Interaction concepts and techniques - Textual Data Visualization methods.

Lab Component
1. Understanding the design principles used in visualization techniques
2. Understanding the interface of the software
3. Understanding the need of analysis and requirement of results
4. Preparing the data for respective analysis
5. Creating common visualization charts (bar, line, pie, etc)
6. Dashboard development
7. Testing different tools for various types of data
8. Testing the interaction concepts
9. Advanced visualizations (multiple source tables etc)
10. Data Story telling (creating data story)

TOTAL: 60 PERIODS

SOFTWARE
- Microsoft Excel, SPSS, AMOS, SMART PLS, R Studio, NVIVO, Tableau

OUTCOMES
At the end of the course, the student will be able to:
CO1.   Understand the importance and importance of different types of data analysis techniques
CO2.   Learn the descriptive and inferential statistical methods.
CO3.   Learn the qualitative data and social media analysis.
CO4.   Understand the importance and implement different data visualization techniques.
CO5.   Implement the various data visualization techniques to present results.

REFERENCES
1. Sabine Lanau And Brian S Everitt, *A Handbook Of Statistical Analyses Using SPSS*, Chapman and Hall / CRC Press, 2004.
2. James, G., Witten, D., Hastie, T., Tibshirani, R. *An Introduction to Statistical Learning with Applications in R*. Springer,2013
3. Nisbet, R., Elder, J., & Miner, G. *Handbook of Statistical Analysis and Data Mining Applications*, Academic Press,2009.
4. Robert I. Kabacoff, *R in Action: Data analysis and Graphics with R*, Manning Publications.
5. Kristi Jackson & Pat Bazeley, *Qualitative Data Analysis With NVIVO*, Sage Publications.
6. Tamara Munzner, *Visualization Analysis & Design*, A K Peters/CRC Press, ISBN 9781466508910, 2014
7. Scott Murray, *Interactive Data Visualization for the Web*, O'Reilly Media, Inc., 2nd Edition, 2017.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	1	-	1	2	2	-
2	-	-	2	2	2	-
3	-	-	2	3	2	-
4	-	2	-	-	3	1
5	-	3	2	-	3	2
Avg.	1/1=1	5/2=2.5	7/4=1.7	7/3=2.3	12/5=2.4	3/2=1.5

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MV3303   **RESEARCH METHODOLOGY FOR VISUAL MEDIA**   L   T   P   C
                                                                     3   0   0   3

OBJECTIVES

- To understand the characteristics and scope of research.
- To explore new research techniques and methods.
- To understand data collection and analysis.
- To learn the statistical techniques required for analysis.
- To understand the processes and methods involved in research evaluation.

UNIT I   INTRODUCTION TO RESEARCH METHODOLOGY   9

Research: Definition and types – Scope – Ethics – Need for research – Problem identification – Objective formulation – Research design – Developing a research plan – Research gap – Research theories and models: Agenda Setting Theory, Reverse Agenda Setting Theory, Actor-Network Theory, Cultivation Analysis, Uses and Gratification Theory, etc.

UNIT II   REVIEW OF LITERATURE   9

Analysis of review of literature – Primary, secondary and web source – Critical literature review Identifying gap areas from literature review – Research questions – Research methods.

UNIT III   QUANTITATIVE RESEARCH   9

Quantitative research methods: Need/aim/ scope – Types of data collection – Data collection techniques – Survey – Interviews – Questionnaire – Content Analysis – Statistical techniques/test – Data analysis with statistical packages – Interpretation and presentation of result.

UNIT IV   QUALITATIVE RESEARCH   9

Qualitative research: Need/aim/scope – Types: Observation, interviews, in-depth interview, focus group discussion – Semiotics – Frame analysis – Visual ethnography (including autophotography and photo elicitation) - Discourse analysis – Cultural studies – Multimodal and multi-sensorial research – Formative Research and Participatory research.

UNIT V   REPORT AND EVALUATION   9

Structure and types of report, technical report and dissertation, style manual, plagiarism – Citation and acknowledgement – Reproducibility and accountability.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
CO1. Use both quantitative and qualitative research methods.
CO2. Carry out research in the fields of advertising, social media, journalism, communication, etc.
CO3. Apply statistical techniques and tools.
CO4. Write a research report.
CO5. Take up independent researches.

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REFERENCES

1. C.R. Kothari and Gaurav Garg, *Research Methodology Methods and Techniques* (3rd edition), New Age International Publishers, New Delhi, 2014.
2. Gerard Guthrie, *Basic Research Methods: An Entry to Social Science Research*, Sage, New Delhi, 2014.
3. Kultar Singh, *Quantitative Social Research Methods*, Sage, New Delhi, 2007.
4. Ranjit Kumar, *Research Methodology: A Step By Step Guide for Beginners*, Sage, 4th Edition, New Delhi, 2014.
5. Roger D. Wimmer and Joseph R. Dominick. *Mass Media Research: An Introduction* (9th Edition), Thomson Wadsworth Publications, 2011.
6. Susanna Hornig Priest, *Doing Media Research: An Introduction*, Sage, New Delhi, 2009.
7. Luc Pauwels and Dawn Mannay, *The Sage Handbook of Visual Research Methods*, 2019.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	3	-	-	-	-	-
2	-	-	-	2	-	-
3	-	-	3	-	-	-
4	-	3	-	-	-	-
5	3	-	-	-	-	3
Avg.	6/2 = 3	3/1 = 3	3/1 = 3	2/1 = 2	-	3/1 = 3

MV3311	VISUAL AND SPECIAL EFFECTS LABORATORY	L	T	P	C
		0	0	4	2

OBJECTIVES

- To develop the technical and artistic skills necessary to design and execute high-quality visual effects.
- To stimulate particle items and merge a live action footage with the visual effects.
- To foster critical thinking and problem-solving abilities within the context of visual effects production.

UNIT I   LEARNING THE BASIC VISUAL ELEMENTS   12

- Understanding the transformations- translation and rotations duration, respeed, repositioning.
- Creating animations - ball bounce with footage using keyframes, motion blur, dope sheet.

UNIT II   INTORDUCTION TO ROTO   12

- Compositing with multiple footage using roto.
- Creating clean plates using Photoshop, clone, denoise, degrain.
- Retouching with the Rotopaint.

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UNIT III   WORKING WITH PARTICLE EFFECTS   12
- Working with types of emittors and particles space.
- Creating rain, snow, leaves, dust and smoke.
- Compositing particles into footages.
- Working with tracking – single, double, four-point tracking, rotation and scaling, stabilizing footage.

UNIT IV   WORKING WITH CAMERA AND LIGHTING   12
- Create camera animation.
- Mimicking camera movement from the real world.
- Creating three-point lighting set up.
- Setting up light for various shots.

UNIT V   COMPOSITING   12
- Compositing with multiple footage using roto.
- Composite 3D objects in live footage and match the light and atmosphere.
- Working with color correction and rendering.

TOTAL: 60 PERIODS

OUTCOMES

At the end of the course, the student will be able to:

CO1. Apply artistic principles, color theory, and visual storytelling techniques to enhance the overall visual impact of a project.

CO2. Demonstrate proficiency in using industry-standard software and hardware tools for visual effects production.

CO3. Demonstrate their technical proficiency, creative vision, and ability to solve visual effects challenges, thus enhancing their employability in the industry.

REFERENCES

1. J. Gress, *Digital Visual Effects & Compositing*, New Riders, 2015.
2. J. A. Okun and S. Zwerman, Eds., *The VES Handbook of Visual Effects Industry Standard VFX Practices and Procedures*, Second ed., Focal Press.
3. S. Wright, *Compositing Visual Effects: Essentials for the Aspiring Artist*, Second ed., Focal Press, 2013.
4. K. E. Goulekas, *Visual Effects in a Digital World*, Second ed., Morgan Kaufmann, 2001.
5. B. Byrne, *The Visual Effects Arsenal VFX Solutions for the Independent Filmmaker,* Focal Press, 2009.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	1	2	2	-
2	-	-	3	2	2	-
3	-	-	2	2	2	-
Avg.	-	-	6/3 = 2	6/3 = 2	6/3 = 2	-

Attested

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MV3312   3D GAME DESIGN AND DEVELOPMENT LABORATORY   L   T   P   C
                                                          0   0   4   2

OBJECTIVES
- To understand the 3D game design and development process, tools and techniques.
- To develop skills in 3D modeling and asset creation through industry-standard software tools.
- To understand the physics and mechanisms involved in the 3D game development process and to inculcate the knowledge of effective programming in gaming.

UNIT I   INTRODUCTION TO GAME ENGINEERING   12
- Introduction to the 3D user interface of game engine
- Setting up Unity and exploring the interface basics of game development
- Exploring game mechanics and game design principles
- Importing 3D assets into Unity and implementing them in game development

UNIT II   UNDERSTANDING 3D GAME ENGINE   12
- Accessing various components such as Physics components Colliders and collisions
- Understand and implement the law of physics
- Create player characters
- Create Interactions with objects in the game
- Building a simple game prototype using Unity

UNIT III   SCRIPTING AND GAMEPLAY MECHANICS   12
- Introduction to C# scripting in Unity
- Implementing gameplay mechanics such as movement, collision detection, and physics
- Developing user interfaces for different game genres
- Developing game menus
- Create a health and damage system for the player character including power-ups or other mechanisms.

UNIT IV   GAME DESIGN AND LEVEL CREATION   12
- Introduction to Nonlinear level design
- Create engaging and interesting game environments
- Creating game levels using Unity's level editor tools
- Designing levels with specific goals and objectives
- Implementing enemy AI and gameplay challenges

UNIT V   BUILDING AND SHARING 3D GAME   12
- Introduction to 3D Canvas
- Adding and Updating UI Elements to Game Canvas
- Finalizing game development and polishing game mechanics
- Adapting for Web build
- Conducting play testing sessions and analyzing user feedback
- Publish and share the games, using various distribution platforms and methods, such as online game portals, app stores, and social media

TOTAL: 60 PERIODS

SOFTWARE
- Unity

OUTCOMES

At the end of the course, the student will be able to:

CO1. Demonstrate proficiency in using Unity's interface, basic game mechanics, and core design principles and import 3D models into Unity

CO2. Write and modify C# scripts to implement and customize gameplay design and create game levels that incorporate specific goals and objectives.

CO3. Manage game development projects effectively, present their final game projects with professionalism.

REFERENCES

1. Joe Hocking, *Unity in Action: Multiplatform Game Development in C#,* 2018
2. Michael L. Kiley, *Introduction to Game Development: Using Processing, Unity, and Unreal* 2020.
3. Alex Okita, *Learning C# Programming with Unity 3D*, CRC Press, 2014.
4. Daniel Schuller, *C# Game Programming: For Serious Game Creation*, CENGAGE Learning Custom Publishing, 2011
5. Jeff W Murray, *C# Game Programming Cookbook for Unity 3D*, CRC Press, 2014.
6. Jeremy Gibson Bond, *Introduction to Game Design, Prototyping, and Development*, Addison-Wesley Professional, 2014.
7. Stefan Zerbst and Oliver Duvel, *3D Game Engine Programming*, Premier Press, 2004.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	2	-	-	1	-	1
2	-	1	-	-	3	-
3	-	-	3	-	-	3
Avg.	2/1 = 2	1/1 = 1	3/1 = 1	1/1 = 1	3/1 = 3	4/2 = 2

MV3313	INDUSTRIAL PROJECT (SUMMER)	L T P C
		- - - 2

The students shall undertake an internship for a minimum of four weeks in any media organization during the summer vacation (after the end semester examination of the second semester) and submit a consolidated report of the work done within a fortnight after the beginning of the third semester. The students will be evaluated based on presentation and oral examination.

Attested

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MV3401	**MIXED REALITY**	L	T	P	C
		2	0	2	3

OBJECTIVES
- To explore the history of Augmented Reality (AR) and Virtual Reality (VR).
- To explore the assets for AR and VR.
- To impart the practical and conceptual knowledge on AR and VR development process.
- To familiarize students with publishing AR and VR.
- To get familiarize with interaction techniques for AR and VR.

UNIT I   INTRODUCTION TO AR AND VR   12

Concepts of AR and VR – History of AR and VR – Characteristics and limitations of AR and VR– Types of AR: marker-based AR, marker less AR, projection-based AR, superimposition-based AR and location-based AR – Types of VR: Non-immersive VR, semi-immersive VR and fully immersive VR – Key components of AR and VR – AR and VR devices – Introduction to software for AR and VR – Current trends in AR and VR.

UNIT II   ASSETS FOR AR AND VR   12

Creating 3D objects for AR – Creating 3D objects and virtual space for VR – Meshes, Polygons and Vertices – Materials, Textures and Lights - Transforming models – Animation of objects for AR and VR – Particle system.

UNIT III   DEVELOPING GEAR FOR AR AND VR   12

AR and VR development process - Positioning anchors for AR – Tracking AR anchors – Types of anchors - Positioning the virtual observer for VR – Perspective projection, Stereo perspective projection, Human vision – Virtual world physics, simulation, collision detection, object motion in VR.

UNIT IV   PUBLISHING AR AND VR   12

Rendering the virtual world – visual displays, aural displays, haptic displays, vestibular and other senses - Publishing AR and VR prototype – Optimizing AR and VR prototype – Producing and publishing different types of AR – Producing and publishing different types of VR – Publishing 360º video into VR.

UNIT V   EXPERIENCING AND EVALUATING   12

Structure and types of report, technical report and dissertation, style manual, plagiarism – Citation and acknowledgement – Reproducibility and accountability.

TOTAL: 60 PERIODS

SOFTWARE
- Unity

OUTCOMES

At the end of the course, the student will be able to:
- CO1. Understand the concepts of AR and VR.
- CO2. Develop assets for AR and VR.
- CO3. Acquire the practical and conceptual knowledge on AR and VR development process.
- CO4. Develop and publish AR and VR.
- CO5. Experience and evaluate the AR and VR.

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REFERENCES

1. Ralf Doerner, Wolfgang Broll, Paul Grimm and Bernhard Jung, *Virtual and Augmented Reality (VR/AR): Foundations and Methods of Extended Realities (XR),* Springer, 2022.
2. Lila Bozgeyikli and Ren Bozgeyikli, *Virtual Reality: Recent Advancements, Applications and Challenges*, River Publishers, 2019.
3. Woodrow Barfield, *Fundamentals of Wearable Computers and Augmented Reality*, CRC Press, 2017.
4. Dr. Rajiv Chopra and Damandeep Singh, *Virtual and Augmented Reality*, Khanna Book Publishing, 2021.
5. Robert R Powell, *Future Cyborgs: Human Machine Interface for Virtual Reality Applications*, Biblioscholar, 2012.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	1	2	1	-
2	-	-	3	3	3	-
3	-	-	2	3	3	-
4	-	-	3	3	3	3
5	1	-	1	1	2	-
Avg.	1/1 = 1	-	10/5 = 2	12/5 = 2.4	12/5 = 2.4	3/1 = 3

MV3411	PROJECT WORK	L	T	P	C
		0	0	24	12

OBJECTIVES

- The main objective is to instill research interest in students and allow them to explore the various research techniques of multimedia. The students will carry out research under the guidance of a faculty member and submit a dissertation.

GUIDELINES FOR STUDENTS CHOOSING RESEARCH TOPIC

The students will be allowed to choose a research topic of their choice under the supervision of a faculty member. The topic should be related to multimedia/media studies. Interdisciplinary studies are allowed only if there is a multimedia/media element in the research topic.

RESEARCH PROJECT REVIEWS

The students will present before a screening committee to finalize the topic. This is followed by the first review to present their aim, objectives, scope, and need for the study, second review to present their review of literature and methodology, third review to present their findings before the research review panel. The review panel will be constituted by the Project Coordinator with approval of the Head of the Department. The review committee consists of the Supervisor, subject expert and Coordinator.

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FINAL VIVA-VOCE EXAMINATION AND DISSERTATION SUBMISSION

The final evaluation will be an external evaluation, where the students will present their research findings through a presentation and also by submitting a dissertation. The students have to follow the Anna University guidelines for dissertation preparation. The external evaluator will be from another University / College and will be approved by the Head and the Chairperson, Science and Humanities, Anna University. The student's dissertation will be scrutinized for plagiarism. Plagiarized works will not be considered for evaluation. The students are encouraged to present their research findings in conferences or publish their work in national / international journals with approval from their Supervisor.

OUTCOMES

- At the end of the semester, the students will understand the importance of research, the need to employ research techniques and tools, and they will gain confidence to work in a contemporary research area independently under guidance.

TOTAL: 360 PERIODS

MV3001	**QUANTITATIVE APTITUDE**	**L**	**T**	**P**	**C**
		3	**0**	**0**	**3**

OBJECTIVES

- To be proficient in basic mathematical operations and concepts.
- To develop mathematical and analytical skills.
- To interpret and analyze numerical data.
- To improve problem-solving and decision-making skills.
- To apply mathematical principles in practical situations.

UNIT I   NUMBER SYSTEM   9

Number system, Fractions, LCM and HCF, Square root and Cube root, Simplification, Averages, Surds and Indices, Percentages, Profit and Loss.

UNIT II   MATHEMATICAL REASONING   9

Sequence and Number series, Letter series, Graphical Missing Number, Alphabet test, Analogy test, Classification test, Coding and Decoding (Number coding, Letter coding, Statement coding), Direction test, Blood Relation test, Seating Arrangements, Calendar, Clocks, Syllogism.

UNIT III   MATHEMATICAL APTITUDE   9

Ratio and Proportion, Simple and compound interest, Chain Rule, Pipes and Cisterns, Time and Work, Speed, Time and Distance.

UNIT IV   NUMERICAL ABILITY   9

Trigonometry, Coordinate Geometry, Geometry, Mensuration Area Volume and Surface Area, Permutation and Combination, Probability, Mixtures and Allegations.

UNIT V   LOGICAL REASONING AND DATA INTERPRETATION   9

Argument structure, Types of reasoning within arguments, Inductive and Deductive reasoning, Reasoning logical diagrams (single-diagram, multi-diagram, Venn diagram), Data and its sources, Acquisition and Interpretation of data, Graphical data representation and analysis, Quantitative and Qualitative data analysis and interpretation.

Attested

TOTAL: 45 PERIODS

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OUTCOMES

At the end of the course, the student will be able to:

CO1. Understand and apply the properties and operations of integers, fractions, decimals, and real numbers.

CO2. Apply logical reasoning and mathematical principles to solve problems and puzzles.

CO3. Understand and apply the principles of geometry, including concepts related to lines, angles, triangles, circles, polygons, and solid figures.

CO4. Understand the basic principles of probability and statistics, including concepts related to probability.

CO5. Interpret and analyze data presented in the form of tables, graphs, charts, and diagrams to extract relevant information and solve problems.

REFERENCES

1. R. S. Aggarwal, *Quantitative aptitude for competitive examinations*, S Chand Publishing, 2022nd Edition, 2022.

2. Arun Sharma, *How to prepare for Quantitative Aptitude for Cat*, McGraw Hill, 10th Edition, 2022.

3. Aashish Arora, *Quanta Quantitative Aptitude*, Kiran Institute of Career Excellence Pvt Ltd, 1st Edition, 2022.

4. *CUET Common Universities Entrance Test: Quantitative Aptitude*, GK Publications Pvt Ltd, 2022.

5. KVS Madaan, *NTA UGC NET / SET / JRF Teaching and Research Aptitude*, Pearson Education, 7th Edition, 2023.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	1	-	-	2	-	-
2	1	-	-	2	-	-
3	1	-	-	2	-	-
4	1	-	-	2	-	-
5	1	-	-	2	-	-
Avg.	5/5 = 1	-	-	10/5 = 2	-	-

MV3002	AESTHETICS OF FILMS	L	T	P	C
		3	0	0	3

OBJECTIVES

- To understand the functions of cinema as an institution for production and distribution of social knowledge and entertainment.
- To expose students to a variety of film styles, narrative conventions, visual styles, genres and analyze the dominant forms of popular cinema.
- To develop a critically informed sense of the history and development of film conventions, both mainstream and alternative.
- To impart knowledge on the historical development and cultural impact of film as an art form.
- To analyze the ideologies on ethics and social justice through representations of culture on film.

UNIT I   INTRODUCTION TO FILMS   9

Origins and Evolution of cinema – Nature of cinema – Critical and technical terms used in film production and practice – Industrial and economic basis of commercial cinema – Production, Distribution and exhibition of cinema – Film genres – Story archetypes, structure of a narrative – Narrative forms – Mise-en-scene – Film techniques, film form and conventions – Mainstream and alternative narratives and film forms – Film analysis techniques – Mobile film-making.

UNIT II   FILM THEORIES   9

Ideology in films – Authorship in films – Auteurs film theory – Director as "Author" – Structuralism film theory – Marxist film theories – Feminist film theories – Genre theory, Psychoanalytical film theory – Formalist film theory and other theories.

UNIT III   WORLD CINEMA   9

Introduction to world cinema – Film movements from Soviet, France, Germany, Italy, Korean etc. – Hollywood and its history – Convergence and films production, distribution and consumption in digital era.

UNIT IV   INDIAN CINEMA   9

Introduction to Indian cinema – Cinema as a source material for History – Nationalism and Indian cinema – Rise of the Indian film industry – Hindi films versus other regional language films, structure of Indian Films – Popular and award winning Directors and their works – National award winning movies – Role of archives, film festivals and other institutions in the field of cinema – Trends in the film industry.

UNIT V   TAMIL CINEMA   9

History of Tamil cinema – Cinema as an institution – Cinema as popular culture – Influence of cinema on social, cultural economic, political milieu in India and Tamil Nadu – Understanding audiences – Censorship and regulation of films – Need for media literacy in society.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
   CO1.   Demonstrate a broad knowledge on film history, world cinemas and national cinemas.
   CO2.   Understand, analyze, and critically evaluate films using various theories for its aesthetic as well as cultural constructs.
   CO3.   Recognize the social, economic, and technological factors that shape films from different historical periods, ideological perspectives and cultural contexts.
   CO4.   Demonstrate their understanding of the critical and technical language associated with film studies.
   CO5.   Understand how films as a cultural force, intersect with religion, politics, race, gender, values, and globalization.

REFERENCES

Attested

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1. Andrew Dix, *Beginning Film Studies*, Atlantic Publishers, U.S.A., 2010
2. T. S. Baskaran, *History through Lens-Perspectives on South Indian Cinema*, Orient Blackswan Private Limited, Hyderabad, 2009.
3. W. Dissanayake, *Rethinking Indian Popular Cinema: Towards Newer Frames of Understanding,* Routledge, London, 2003.
4. K.M.Gokulsing , W . Dissanayake, *Routledge Handbook of Indian Cinemas*. Routledge, 2013.
5. Grieveson Lee, *Film & Media Studies*, University of California Press, 2018.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	1	2	-	-
2	-	-	-	-	-	-
3	1	-	-	-	2	-
4	2	-	-	-	-	3
5	1	2	-	3	-	-
Avg.	4/3 = 1.3	2/1 = 2	1/1 = 1	5/2 = 2.5	2/1 = 2	3/1 = 3

MV3003	MULTIMEDIA MARKETING	L	T	P	C
		3	0	0	3

OBJECTIVES
*   To introduce the concept and process of advertising and its role in marketing.
*   To educate the uses of digital advertising.
*   To educate the student about the advertising campaign.
*   To prepare professionals interested in careers in advertising, marketing, promotions, public relations or sales managerial jobs, or for individuals in the field.
*   To educate the student about the types of writing for the advertisement.

UNIT I   ADVERTISING INTRODUCTION   9
What is advertising, Evolution, Definition, Advertising as a Business process, Advertising as a Communication process, Audience categories and geographical factors, Types of advertising, Industrial products advertising, Product review.

UNIT II   ADVERTISING AND CAMPAIGN PLANNING   9
How and when advertising works, Advertising- effective ads, Market effects and intensity of advertising, Effects of advertising, Brand management, Advertising Campaigns and Marketing.

UNIT III   ADVERTISING AGENCY   9
Consumer behavior, Market behavior, Advertising Agencies role, function and structure, client agency relationship, New Advertising techniques, Integrating Advertising with other elements, IMC, appeals in advertising, Modern advertising.

UNIT IV   ADVERTISING ETHICS   9
Ethics in advertising, Copy Writing, Responsibilities of Copy writer, Advertorial, Infomercial, Media planning and Buying, Ethics in debates in modern advertising, Do's and Don'ts of advertising, Effective use of new media tools, Executing advertising process.

UNIT V   CREATIVITY   9

Attested

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Creativity in Advertising, Writing for print, Radio, Digital, Advertising in ICT age, Branding, Media research, Advertising and marketing research.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
- CO1. Learn the concepts of advertising.
- CO2. Know the opportunities available in the field of advertising.
- CO3. Produce multimedia advertisements.
- CO4. Learn the working pattern in an advertising agency.
- CO5. Plan and execute and advertisement campaign.

REFERENCES

1. J V Vilanilam, A K Varghese, *Advertising Basics – a resource guide for beginners*, Response Books (a division of Sage Publications), New Delhi, 6th printing, 2009.
2. Michael A Belch, Keyoor Purani, George E Belch, *Advertising and Promotion – An Integrated Marketing Communications Perspective,* Tata McGraw-Hill Publishing Company Limited, New Delhi, 7e, 2010.
3. Rajeev Batra, John G. Myers and David A. Aaker, *Advertising Management*, Pearson Dorling Kindersley (India) Pvt. Ltd., 5e, 2006
4. William F Arens, *Contemporary Advertising*, Tata McGraw-Hill Publishing Company Limited, New Delhi, 10 e, 2008.
5. Mario Pricken, *Creative Advertising: Ideas and Techniques from the World's Best Campaigns*, Thames & Hudson Ltd, 2008.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	3	-	-	1	2	3
2	-	2	3	-	-	-
3	3	1	-	1	3	-
4	-	3	1	1	-	-
5	-	1	-	3	-	3
Avg.	6/2 = 3	7/4 = 1.7	4/2 = 2	6/4 = 1.5	5/2 = 2.5	6/2 = 3

MV3004	MEDIA MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- To develop an understanding of the overview of media management.
- To introduce the various concepts, process, theories and terms of media management.
- To develop knowledge in human resource and financial management in media business
- To identify the various content/programming strategies, importance of audience research and its implication in media management.
- To prepare professionals interested in careers in media management, advertising, marketing, promotions, managerial jobs, or for individuals in the field.

UNIT I   INTRODUCTION TO MEDIA MANAGEMENT   9

Media Management – Definition, history, scope. Different types of media and its exclusive features – Print, electronic and digital media. Understanding the different terms of media management – Overview of print, electronic and digital media industry and its role in media management –Understanding the management setups in different media houses – Levels of management function – Management roles - Skills required for various levels of media management team –- Functions of media management – Strategies of media management – Ethical aspects to be followed in media management.

UNIT II   MEDIA MARKET PLACE AND THEORIES OF MANAGEMENT   9

Management as process – Understanding the media market place – Media market, market structure, forces affecting markets, alliances and partnerships, implications. Theories: Classical school of management – Administrative management – Bureaucratic management – Human relations school of management – Maslow's Hierarchy of Needs – Herzberg's hygiene and motivator factors' theory x & theory y, theory z – Modern approaches to management – System approaches to management – Total quality management – Structural theories – Transnational media management theory – Organizational culture theory – Technology and innovation – Leadership theory.

UNIT III   HUMAN RESOURCE MANAGEMENT   9

Personnel management – Understanding the importance of human resources in media industry – Strategic human resources framework - Process and working of human resources team, Human resources research – Responsibilities of HR Team – Role of HR management in the development of media industry – Powers of HR in industry – Hiring process of the industry – Interviewing orientation – Performance reviews – Legal issues in personnel management – Power of communication in HR management – Employee welfare and grievances: Working with unions, Understanding labour laws in India, structure, communication strategies and personnel. HR planning, policies, development, evaluation and compensation.

UNIT IV   FINANCIAL MANAGEMENT   9

Accounting function, cost control, meeting financial goals, implementing financial management, budgeting monitoring financial performances – Financial analysis – Ratio analysis, Break-even analysis – Reporting financial performance – Monitoring financial progress.

UNIT V   PROGRAMMING: STRATEGY AND DISTRIBUTION   9

Broadcast programming, sales, promotion and marketing strategies: Its implication in media business – Print media programming, radio programming, television programming, digital media programming and its challenges – Management issues in programming – Audience research & its importance: Research and analysis, source of audience research data, using audience data, intense competition for audiences, uses of audience research in media management – Media business: regulatory bodies, guidelines, and media ownership in India.

TOTAL: 45 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
  CO1. Acquire an understanding of the role, scope and purposes of media management.
  CO2. Critically evaluate the potential of convergent products and Cross media business models in view of the latest international developments in the media.
  CO3. Develop knowledge in human resource and financial management in media business
  CO4. Develop concepts, process, theories and terms of media management.

CO5. Identify careers in media management, advertising, marketing, promotions, managerial jobs, or for individuals in the field.

REFERENCES

1. Alan B. Albarran, *Management of Electronic Media* (6th ed.), Wadsworth, 2017
2. Peter K. Pringle, Michael F. Starr, *Electronic Media Management,* Fifth Edition, Elsevier,2006.
3. Philip Kotler et al., *Marketing Management*, Pearson Publications, 2016.
4. PravinDurai, *Human Resources Management*, Dorling Kindersley Publications, 2010.
5. Robert G. Picard, *The Economics and Financing of Media Companies*, Fordham UniversityPress, 2002.
6. Benjamin M. Compaine et al., *Who Owns the Media?* 3rd ed., Knowledge Industry, 2001.
7. David Croteau and William Hoynes, *The Business of Media*, Pine Forge Press, 2001.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	3	-	2	-	-	-
2	-	-	3	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
Avg.	3/1 = 3	-	5/2 = 2.5	-	-	-

MV3005   **CONSTITUTIONAL MEDIA LAWS AND ETHICS**   L T P C
                                                      3 0 0 3

OBJECTIVES

- To provide a basic knowledge of the Indian constitution.
- To focus on various laws related to media in India.
- To throw light on Intellectual Property Rights.
- To educate the students on the ethics to be possessed by media professionals.
- To provide knowledge on Cyber law in India.

UNIT I   OVERVIEW OF THE INDIAN CONSTITUTION   9
Fundamental rights in the Indian Constitution, Directive principles of state policy, Powers and privileges of parliament, provisions for declaring Emergency, provision for amending the constitution, Freedom of press and restrictions.

UNIT II   MEDIA LAWS IN INDIA   9
Official Secrets Act, Working Journalists Act, Drugs and Magic Remedies Act, Press Council Act, Cinematograph Act, PrasarBharati Act, Cable TV Networks (Regulation) Act, Laws of defamation relevant to media in India.

UNIT III   INTELLECTUAL PROPERTY RIGHTS   9
Indian Knowledge System and Intellectual Property Rights – A brief history, Forms of Intellectual Property, The Designs Act, Trade and Merchandise Marks Act, The Patents Act, The Copyright Act, Case studies on IPR.

UNIT IV   CODE OF ETHICS   9
Press council's code of ethics for journalists, AINEC code of ethics, Ethics of broadcasting, ethics of telecasting, codes for radio and Television, ethics of advertising.

UNIT V   CYBER LAW IN INDIA   9

Press council's code of ethics for journalists, AINEC code of ethics, Ethics of broadcasting, ethics of telecasting, codes for radio and Television, ethics of advertising.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:

- CO1. Acquire a basic knowledge of the Indin constitution.
- CO2. Be equipped with a thorough knowledge of laws related to media in India.
- CO3. Get a clear understanding of the Intellectual property rights in India.
- CO4. Acquire knowledge ob cybercrimes and cyber law in India.
- CO5. Well-versed in the ethical codes existing for various media in India.

REFERENCES

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2. Chris Frost, *Journalism Ethics and Regulation*, Routledge, 2013.
3. Tony Harcup, *The ethical journalist*, Sage, 2007.
4. Neelamalar M, *Media law and ethics*, Prentice Hall of India, 2010.
5. Packard A, *Digital Media Law*, John Wiley & Sons, 2010.
6. Stewart D, *Social media and the law: A guidebook for communication students and professionals*, Taylor &Francis; 2017.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	2	1	-	-	-	3
2	2	1	3	-	-	3
3	2	2	3	-	-	3
4	2	1	-	3	-	3
5	2	-	3	-	-	3
Avg.	10/5 = 2	5/4 = 1.2	8/3 = 3	3/1 = 3	-	15/5 = 3

PROGRESS THROUGH KNOWLEDGE

MV3006	ENTREPRENEURSHIP	L	T	P	C
		3	0	0	3

OBJECTIVES

- To understand different media industries and their management challenges.
- To educate the broadcast promotion.
- To create awareness of the unique and pragmatic aspects of the media management process.
- To understand the marketing strategy.
- To gain insight into ethical decision-making and into the human relations aspects of managing people.

UNIT I   INTRODUCTION TO MEDIA MANAGEMENT   9

Introduction to Management –Definitions, Skills, roles, and functions – Levels of management, strategic alliances and the electronic media industries – Mergers & acquisition, media management issues including leadership, management, marketing and budget, current issues and trends within media.

UNIT II THEORIES OF MANAGEMENT 9
Management as process – Classical school of management – Administrative management – Bureaucratic management – Human relations school of management – Maslow's Hierarchy of Needs – Herzberg's hygiene and motivator factors' theory x & theory y, theory z – Modern approaches to management – System approaches to management – Total quality management.

UNIT III HUMAN RESOURSE MANAGEMENT 9
Management & Leadership Styles, Defining Innovative Leadership, Business Models, Personnel management – Hiring process – Interviewing orientation – Performance reviews – Legal issues in personnel management – Labour issues: Working with unions, other labour law, structure, communication and personnel- Media Economics- Media Research.

UNIT IV BROADCAST PROMOTION AND MARKETING 9
Strategic Planning & Market Analysis, Social Media Strategies & Measurement, Audience Engagement & Metrics, Digital Disruption and Broadcasting, Mobile Strategies (How Online and Mobile Technologies Have Changed Broadcast), Emerging Technologies (Virtual, Augmented and Mixed Reality, Reuters Digital News Report), Diversity, Talent and Development, Market structure, Audience research and analysis, Sources of audience research data, Concentration in the market, Product differentiation.

UNIT V ENTREPRENEURSHIP 9
Introduction to Entrepreneurship: concept, Definition, Meaning – Entrepreneurship as a Career – Importance of Entrepreneurship- Entrepreneurial Qualities and skills- Types of Entrepreneurship- Entrepreneurship Development Program- Identification of Business Opportunities- Business Planning- purpose, process- Reasons for failure of Business-Planning - Market and Channel Selection - Growth Strategies - Product Launching – Incubation, Venture capital, IT startups -Knowledge and Skills of Entrepreneur of new venture financing.

TOTAL: 45 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
- CO1. Summarize and classify the essential concepts of media management
- CO2. Analyze national and international media markets with reference to key parameters.
- CO3. Reflect on the impact of digitalization and convergence on strategic markets and business processes.
- CO4. Critically evaluate the potential of convergent products and Cross media business models in view of the latest international developments in the media market.
- CO5. Work Independently conduct and evaluate small-scale empirical research projects, and interpret the generated data with regard to theoretical insights.

REFERENCES
1. Alan B. Albarran, Sylvia, M. Chan-Olmsted, Michael O. Wirth (Eds.). *Handbook of Media management and Economics*, Lawrence Erlbaum, Associates, London, 2006.

2. David Aaker. *Brand Equity*, Tata McGraw-Hill, 2003.
3. David Croteau and William Hoynes, *The Business of Media: Corporate Media and the public Interest*, Pine Forge Press, London, 2006.
4. Gabriele Siegert, Kati Förster, Sylvia M. Chan-Olmsted, Mart Ots, *Handbook of Media Branding,* 2015.
5. Gillian Doyle, *Media Ownership*, Sage, London, 2002.
6. Gillian Doyle, *Understanding Media Economics*, Sage, London, 2002.
7. Rajan Sexena. *Marketing Management*, Tata McGraw-Hill, 2003.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	3	-	2	-	-	-
2	-	-	3	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
Avg.	3/1 = 3	-	5/2 = 2.5	-	-	-

MV3007 **DEVELOPMENT COMMUNICATION** **L T P C**
3 0 0 3

OBJECTIVES
- To introduce students to key concepts of development communication.
- To provide an in-depth understanding of the concept and process of development
- To introduce the new paradigms, theories of development & strategies for participatory process for social change
- To develop skills for effective, small and large scale C4D strategies and interventions for behavior change and social transformation that promotes human rights, social inclusion and accountability.
- Understand the dynamic connection between theoretical and practical aspects of the creative process involved in C4D.

UNIT I   DEVELOPMENT & SOCIAL CHANGE: AN INTRODUCTION   9
Development: Meaning, concept, and approaches to development. Indicators of Development, Indices of development, Dominant paradigm of development. Development as economic growth. C4D: Definition, Basic principles, Key features, purpose, history, needs and significance, Community Development – Importance. Role of Government, NGO's and International Organization in development, Introduction to Social Change – Theories of Social Change, Factors & role of communication in social change.

UNIT II   DEVELOPMENT COMMUNICATION & SOCIAL CHANGE   9
            THEORIES
Introduction to development models, theories, Diffusion of innovation, Agenda Setting, Health Belief Model, Theory of Reasoned Action/Theory of Planned Behaviour, Social Cognitive Theory, ACADA Model of Development Communication, P-Process Model, Magic Multiplier

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Effects, Participatory theories. Theories and Models of Social change, Behavior Change Communication BCC, Communication for Social Change CFSC Model, Social Support, Social Identity Model, Social Presence theory, Elaboration Likelihood Model, Protection Motivation Theory.

UNIT III   APPROACHES TO DEVELOPMENT   9

Paradigms - Modernization, Dependency theory, Participatory approach – Levels, types, tools, and theories of participatory model, social, cultural and political perspectives in development, sustainable development, need based approach, human development approach, right based approach, participatory approach, development as freedom, Millennium and SDGs. C4D Practices and Policies in India, Need of alternative communication. Community Development-Resources, Community Planning Process, Community Capacity Building, Community Assets and Capacity Assessment, Process of Community Development.

UNIT IV   ISSUES & CHALLENGES   9

Overview of issues & challenges for development. The Environment, Population Growth, Poverty, Agriculture and Malnutrition, Women in Development, Child Rights, Health, Economic Program me, Education, Free Speech, Information rights. Importance of Rural Development, Globalization, ICT and Development, Digital Divide, Issues & barriers in Development Planning. Discussing success case studies related to the development communication. Strategic Planning and Situation Analysis- Importance of Research – Formative, Process, Summative.

UNIT V   TOOLS AND PRACTICES   9

Interpersonal communication, Role of Media in Development: Folk Media, Printed & electronic media, new media/multimedia, use of social media for C4D, development Communication strategies, Importance of Social Marketing, Designing a holistic C4D project, Best Practices in C4D, success stories, case studies, role of international agencies, government, UN, universities & academia in development sector, employment opportunities for media professionals in C4D sector.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:

CO1. Critically assess the needs for C4D interventions initiatives to achieve development goals.

CO2. Understand from historical perspective the role of communication in development.

CO3. Apply this knowledge to analyze root, structural and direct causes of a social issue and generate insights related to behavior and social change for communication interventions.

CO4. Gain insights into the need for using participatory approach in development initiatives.

CO5. Design, plan a communication strategy and also monitor, evaluate an intervention.

REFERENCES

1. Sen, Amartya (2018). *Development as Freedom* (7th Edition), Oxford University Press: New Delhi.
2. Servaes, J., Jacobson, T. & White, S.A. (Eds.), *Participatory communication for social change*. Thousand Oaks: Sage.
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4. Freire Paulo, *Pedagogy of the Oppressed*, Bloomsbery, New York, 2018.
5. McPhail TL, *Development communication: Reframing the role of the media*. John Wiley & Sons, 2009.

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7. Servaes Jan, *Communication for Development & Social Change*, Sage Publications, 2008.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	3	2	2	1	1	2
2	2	2	2	1	1	1
3	2	2	3	1	1	2
4	3	2	1	1	1	1
5	3	2	2	1	1	2
Avg.	13/5 = 2.6	10/5 = 2	10/5 = 2	5/5 = 1	5/5 = 1	8/5 = 1.6

MV3008	**DIGITAL JOURNALISM**	**L**	**T**	**P**	**C**
		3	**0**	**0**	**3**

OBJECTIVES

- Students will increase their understanding of the importance of multimedia reporting and its effects on journalism.
- They will learn how to cover news assignments and develop storytelling skills using photojournalism, audio reportage and video journalism techniques.
- The course will help student recognize ethical dilemmas across different news platforms.

UNIT I   INTRODUCTION TO MULTIMEDIA STORY TELLING   9
What is Multimedia storytelling- story ideas – idea generation techniques – researching the story idea /angles – planning for the story – off beat story ideas - event based story ideas - visual stories.

UNIT II   RADIO JOURNALISM   9
Basic of Radio News, Sources and contacts, Wire services, Components of News, Radio news room setup, Radio News Reporting, News writing and presentation, Elements of editing, integrating audio bytes, Radio talks and discussions, radio interviews.

UNIT III   TELEVISION JOURNALISM   9
Basics of TV News- TV News room work process, Reporting for TV News-, Live News techniques, Structuring TV News, News Production techniques- Role of news producer, Graphics and other teams, visualization of News, voice-overs, TV interviews, Process of Live inputs, News Debates, News anchoring, Conducting News Interviews, Broadcasting News writing Techniques.

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UNIT IV   ONLINE JOURNALISM   9

Understanding difference between online and other types of journalism, emergence of social media- Development of the Online news media, Principles of Writing and editing for online media, e-magazines, Integration of text, video and graphics, Role of social media tools in news gathering, Search Engine Optimization (SEO) techniques- User centered design, Social media optimization- Live blogging and Mobile Journalism – cyber laws, copyright law, database rights, libel risks, privacy issues.

UNIT V   TECHNOLOGY ADVANCEMENT IN MULTIMEDIA JOURNALISM   9

OB van and its functions, Mobile technology and its role in aiding news coverage, Bi-media reporting, convergence newsroom, solo journalist and technology, broadcasting software. ChatGPT, Artificial Intelligence in Journalism.

MANDATORY ASSIGNMENT (Marks to be included in assessment):

1. At the end of Unit 2, 3, and 4, students will be asked to produce a news story for radio, television and online medium individually and submit for evaluation.

2. At the end of the semester the students will be assigned group assignment. They will produce either a half an hour news feature / issue based - radio news story or produce a half an hour news bulletin incorporating various issues. The students should write script, shoot and edit the news bulletin on their own (Which will be called 'news day assignment') and submit for evaluation, at the end of the semester.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:

   CO1.   Impart skills of news writing for radio, television and web media.
   CO2.   Expose to the latest technology in multimedia Journalism.
   CO3.   Build audiences and research by using social media.
   CO4.   Research, report and promote your work via Twitter, mobile platforms and the web.
   CO5.   Learn how to tell news stories via mobile devices.

REFERENCES

   1.   Andy Bull, *Multi-Media Journalism- A practical guide*, Routledge, 2015.
   2.   Andrew Boyd, *Broadcast Journalism*, Focal Press, 2007.
   3.   Paul Bradshaw, *The Online Journalism Handbook, Skills to survive and Thrive in the Digital Age,* Routledge, 2018.
   4.   Roland De Wolk, *Introduction to Online Journalism: Publishing News and Information*, Pearson Allyn and Bacon, 2001.
   5.   Sunil Saxena, *Breaking News: The Craft and Technology of Online Journalism*, Tata McGraw-Hill, New Delhi, 2004.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	-	3	-	-	2	-
2	-	-	-	-	2	-
3	2	-	-	2	-	-
4	-	2	-	-	2	-
5	-	-	-	-	2	-
Avg.	2/1 = 2	5/2 = 2.5	-	2/1 = 2	8/4 = 2	-

59

MV3009   **GAME PSYCHOLOGY**   L   T   P   C
                                                                    3   0   0   3

OBJECTIVES

- To understand the fundamentals of game psychology.
- To introduce social psychology theories and concepts for a better understanding of how people perceive, think and feel about the social world through the game.
- To understand the influence of gaming technologies on human behaviour, culture and society.
- To understand the mind of the gamer.
- To understand the psychology of the gaming world.

UNIT I   INTRODUCTION TO GAME PSYCHOLOGY   9

Definitions – Foundations of game psychology – Positive psychology approach, pro-social & antisocial behavior learning through the game – Stereotyping, prejudice, and discrimination: causes, effects, and cures – Global gaming industry: game effects on society, individuals and cultures.

UNIT II   GAME AND GAMER PERCEPTION   9

Learning social life lessons through the game – Understanding human values, Social representations, social norms, social cognition – Gamer attitude among people – Game psychology – History and development of the game and its engine – Game as an industry for earning.

UNIT III   GAME INFLUENCE ON BEHAVIOUR & RELATIONSHIPS   9

Value of game and relationship – Earning through game, emotions – Explaining Behaviour – Social beliefs, social influence, perception – Cultural influences – Friendship and love – Interpersonal attraction and close relationships – Para-social interaction, celebrity & fandom – Relaxing and addition through the game.

UNIT IV   SOCIAL INFLUENCE   9

Approaches – Prejudice, stigma, reducing intergroup conflict, aggression, attraction, altruism, application, propaganda and persuasion – The fine art of persuasion – Social Influence – Conformity – Bystander intervention through the game, learning of obedience to authority – Social facilitation – Social Status – Social roles – Social conformity, Interpersonal attraction, Behavioural influences on attitudes – Attitude formation – Cognitive dissonance.

UNIT V   GAME WORLD   9

Understanding psychology & internet – Psychological issues in addressing through playing online games – Interactive & emerging technologies, social influence in the virtual world – Social connection & social capital, personal media – Mobile, progress and future scope.

TOTAL: 45 PERIODS

OUTCOMES

At the end of the course, the student will be able to:

CO1. Apply the appropriate psychological theory.

CO2. Analyze the complex gaming environment.
CO3. Develop skills towards all generalizations about game psychology.
CO4. Develop critical thinking attitude.
CO5. Evaluate game messages based on evidence.

REFERENCES

1. Berne, E. *Games People Play: The Basic Handbook of Transactional Analysis.* TantoreBooks, 2016.
2. Bostan, B., & Tingoy, O. *Game Design and Gamer Psychology. Gamer Psychology andBehavior* (pp. 105 — 121). Springer, Cham., 2016.
3. Dixon, J., Barker, J. B., Thelwell, R. C., & Mitchell, I. (Eds.). *The Psychology of Soccer:More Than Just a Game.* Routledge, 2020.
4. Ferguson, C. J. (Ed.). *Video Game Influences on Aggression, Cognition, and Attention.*Springer, 2018.
5. Hodent, C. *The Psychology of Video Games.* Routledge, 2020.
6. Madigan, J. Getting Gamers: *The Psychology of Video Games and their Impact on thePeople Who Play Them.* Rowman & Littlefield, 2019.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	3	1	-	-	-
2	2	-	-	-	-	-
3	-	-	-	-	3	-
4	-	-	-	2	-	3
5	-	-	-	-	-	2
Avg.	2/1 = 2	3/1 = 3	1/1 = 1	2/1 = 2	3/1 = 3	5/2 = 2.5

MV3010	BIG DATA ANALYSIS	L	T	P	C
		3	0	0	3

OBJECTIVES

- To handle and processing Big Data.
- To know how and when data can be used to make key decisions.
- To learn data processing and create Algorithms.
- To introduce the data mining skills.
- To develop student skills on web mining.

UNIT I FUNDAMENTALS OF BIG DATA ANALYSIS 9

Introduction to Big Data and Big Data Analysis, Handling and Processing Big Data, Methodological Challenges and Problems, Example Applications, Big Data Analysis in Practice, Introduction to different bog data analytical tools.

UNIT II DATA SCIENCE 9

Introduction to Data Science, Relational Databases and SQL, Data Cleansing and Preparation, Building a Data Model, Data Summarization and Visualization, Association Analysis and Cluster Analysis.

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UNIT III   DATA MINING   9
Pre- processing Data: Filters, Missing Value, Data Mining, Decision Trees, Classification / Regression Algorithms. Normalization, Distance, Correlations, Machine Learning, Compare Items, Predictive Revenue Model, Class Prediction Model.

UNIT IV   LANGUAGE R   9
Introduction to R Language, Visualization, Data Procession, Time Series and Forecast, Indoor locationing, R Machine Learning.

UNIT V   WEB MINING   9
Case Study Session, Preparation of Case Study Report and Presentation and Case Study Presentation.

TOTAL: 45 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
- CO1. Apply the methods of data collection and data analytics to solve business and related problems in support of decision-making.
- CO2. Develop the skills necessary to use related software tools to perform data collection, cleansing, and analytics.
- CO3. Have deep knowledge about data consumer, recognizing the good and the bad in terms of data collection and applications.
- CO4. Understand how leading companies are using analytics.
- CO5. Learn about relevant legal and ethical issues and to explore the Machine Learning techniques.

REFERENCES
1. Ankam V. *Big data analytics*. Packt Publishing Ltd, 2016.
2. Dasgupta N. *Practical Big Data Analytics: Hands-on techniques to implement enterprise analytics and machine learning using Hadoop, Spark, NoSQL and R*. Packt Publishing Ltd, 2018.
3. Patil MR, Thia F. *Pentaho for big data analytics*. Packt Publishing Ltd, 2013.
4. Sedkaoui S. *Data analytics and big data*. John Wiley & Sons, 2018.
5. Snodgrass RT. *Developing time-oriented database applications in SQL*. Morgan Kaufmann Publishers, 2000.
6. Somani AK, Deka GC, editors. *Big Data Analytics: Tools and Technology for Effective Planning*. CRC Press, 2017.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	3	-	-	-	-	-
2	-	-	-	-	-	-
3	-	3	-	-	-	-
4	-	-	2	-	-	-
5	-	-	3	-	-	-
Avg.	3/1 = 3	3/1 = 3	5/2 = 2.5	-	-	-

Attested

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MV3011   **TRADITIONAL ART**   L   T   P   C
                                                                     2   0   2   3

OBJECTIVES
- To engage in the creative process or interpretive performance required for a visual artist.
- To understand how lines can be used to describe, model, or translate all of visual reality.
- To make students understand the principles of art.
- To introduce them to the basics of logo designing.
- To make them aware of the different styles of painting.

UNIT I   INTRODUCTION TO DRAWING   12
The elements of art – Line – Horizontal, vertical, diagonal / slanting, zigzag, and curve shape &
form – Geometric (square, circle triangle, rectangle, and oval); and Organic (Freeform), Space -
Distance between, around, above, below and within things.

UNIT II   PRINCIPLES OF ART   12
Balance – Formal, informal and radial, variety – Combining one or more elements to create
interest by adding slight changes – Harmony – Blending elements, emphasis – Stand out,
contrast, proportion – Relationship between two or more objects – Movement – Viewer's eye
throughout the work – Rhythm – Repeating an element to suggest vibration, pattern – Unity,
completeness.

UNIT III   COLOUR AND COMPOSITION   12
Definition, Hue, Saturation and Brightness – Historical background – Additive and Subtractive
colours – Theory of colours – Colour wheel – Warm and Cool colours – Primary, Secondary and
Tertiary colours and the right combination of these colours for various purposes – Colour
Symbolism and Psychology – Use of colours in painting, printing, creative production – Practice
in different colour mediums and airbrushes – Composition, light and shade drawing.

UNIT IV   TYPES OF DRAWING   12
Introduction to Chiaroscuro – Principle of perspectives – Linear perspective, Vanishing point
perspective – One, two, and three-point perspective – Lines and different strokes using different
pencils and brushes – Cartoons, caricature, scale drawing – The practice of birds, animals, and
human forms – Portraits and self-portraits.

UNIT V   HUMAN AND ANIMAL FORMS   12
The general form and gesture – Drawing from cast & figure light and shade, Basic Proportions,
Balance – Standing still or motion – gravity and perspective, shape making – Basic Shapes and
procedures – Study of eye, study of nose, study of ear and body – Importance of anatomy in
animation.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
 CO1. Complete drawings that work on the basic principles of one and two-point perspective or
       linear perspective.
 CO2. Understand the vocabulary which relates to each of the major elements of art, line, shape,
       value, colour, and texture.
 CO3. Understand the principles of art.

CO4. Grasp the basics of logo designing.

CO5. Gain awareness of the different styles of painting.

REFERENCES

1. Claire Watson Garcia, *Drawing for the Absolute and Utter Beginner*, Watson-Guptill, 2018.
2. Luca Botturi, Todd Stubbs, *Handbook of Visual Languages for Instructional Design: Theories and Practices,* Idea Group, 2008.
3. Mark Crilley, *The Drawing Lesson*, Random House, 2016.
4. Milind Mulick, Jyotsna Prakashan, *Water Colour*, Pune, 2001
5. Raviraj, *A Grammar Book of Art & Design*, New Century Book House Pvt Ltd, Chennai, 2008.
6. Wilbert Verhest, *Sculpture Tool Materials and Techniques*, Prentice-Hall, 2006.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	3	2	-	-
2	-	-	3	-	-	-
3	-	-	2	-	-	-
4	-	-	2	2	2	-
5	-	-	-	2	-	-
Avg.	-	-	10/4 = 2.5	6/3 = 2	2/1 = 2	-

MV3012	ADVANCED AUDIOGRAPHY	L	T	P	C
		2	0	2	3

OBJECTIVES

- To make students aware of the basic principles of sound.
- To learn about sound designing.
- To impart knowledge on acoustics and psycho-acoustics.
- To get to know various functions of sound.
- To understand the basics of studio management.

UNIT I   PRINCIPLES OF SOUND   12

The Human Ear; Characteristics of Sound: Compression & Rarefaction -Velocity, Amplitude and Acoustical Phase - Loudness, Frequency and Human Hearing - Timbre and Sound Envelope – Physical types of microphones – microphone selection and use.

UNIT II   SOUND AND ACOUSTICS   12

Educated Ear: Cognitive & Affective Information - Analytical & Critical Listening; Sound's Dynamic Range; Acoustics & Psycho - Acoustics of Sound: Binaural Hearing - Mono & Stereo effects– Surround sound system-Direct & Reflected Sound - Reverberation & Echo.

UNIT III   DESIGNING SOUND   12

The roles & responsibilities of a sound designer - Elements of Sound - Perception of various sounds. The steps involved in designing sound - Functions of Sound with respect to Dialogue – Sound aesthetics.

UNIT IV   SOUND-IMAGE RELATIONSHIP   12

Function of Sound with respect to Picture - Functions of Sound with respect to Special Effects - Functions of Sound with respect to Music – Special effects and its functions; dubbing; creative usage of sound.

UNIT V   STUDIO MANAGEMENT   12

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The general form and gesture – Drawing from cast & figure light and shade, Basic Proportions, Balance – Standing still or motion – gravity and perspective, shape making – Basic Shapes and procedures – Study of eye, study of nose, study of ear and body – Importance of anatomy in animation.

TOTAL: 60 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
- CO1. Make use of sound in different dimensions.
- CO2. Design innovative special effects and music.
- CO3. Have control over the sound recorded inside the studio.
- CO4. Get introduced to various functions of sound.
- CO5. Understand the basics of studio management.

REFERENCES

1. Stanley R Alten, *Audio in Media*, Wadsworth Pub Co; 10th edition, 2013.
2. Carole Fleming, *The Radio Handbook*, 9th Edition Routledge,2022.
3. David Miles Huber, *Modern Recording Techniques*, 9th Edition Focal Press,2021.
4. Francis Rumsey and Tim Mc Cormick, *Sound and Recording: Applications and theory*, 7th edition. Routlege, 2014.
5. M. Neelamalar, *Radio Programme Production*, PHI Learning Pvt. Ltd., 2017.
6. Tomlinson Holman, *Sound for film and television*, 3rd edition Routledge, 2010.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	3	-	-	1	-	-
2	-	3	-	-	-	2
3	-	-	2	3	3	2
4	-	-	-	2	2	-
5	-	-	-	2	2	2
Avg.	3/1 = 3	3/1 = 3	2/1 = 2	8/4 = 2	7/3 = 2.3	6/3 = 2

PROGRESS THROUGH KNOWLEDGE

PROGRESS THROUGH KNOWLEDGE

MV3013	EDITING TECHNIQUES	L	T	P	C
		2	0	2	3

OBJECTIVES

- To appreciate editing as a creative element of storytelling.
- To understand procedures, techniques and standard practices involved in video editing.
- To understand the aesthetic principles and concepts of video editing.
- To understand the processes of mastering the AV for different platforms.
- To understand both aesthetic and technical aspects of post-production.

UNIT I   INTRODUCTION TO EDITING   **12**

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History of editing – Analog or Linear editing techniques, editing workflow – Principles of editing – Roles and responsibilities of editing – Skills required for a successful editor – Elements of an edit – assessing the footage – Selecting the best shots. Five shot rule – Types of edit, cut, Transition, Treatment of editing, Time manipulation within shot & sequence.

UNIT II   VISUAL GRAMMAR   12
When to cut and why: Factors that lead to making an edit – Dimensions of edit – Order of shots – Duration of shots/ASL, Importance of tone, pace and rhythm – How to edit for different film genres – Montage - Color and culture Shot-reverse shot – Axial cut, B-roll, cutaway, Insert, Kuleshov effect – Parallel cutting, cross-cutting and dynamic cutting – Temporal editing, and associate editing – Components in sound design – Stylistic uses of sound.

UNIT III   EDITING TECHNIQUES   12
Types and functions of edit and trim options – Rendering and previewing sequences, working with markers – Creating Freeze frame and its types -   Time remapping - Adjusting layers – Nesting – Types of video transition, effects, and its usage in various work field- Adding , navigating, and setting key frames, animating effects – Masking and tracking – Basic Compositing - Blending mode options – Multi-camera editing workflow.

UNIT IV   AUDIO, TEXT, GRAPHICS AND COLOR CORRECTION   12
Modifying audio channels - Audio normalization - Edit, repair, and improve audio using – Essential Sound panel, Remix audio, Audio balancing and panning – Create a title, essential graphics – Working with captions – Text effects – Essential color correction Vocabulary – Color Correction, Workflow – Types of scopes and its functions – color space and management – Looks and LUTs – Lumetric effect – Legalizing for broadcasting.

UNIT V   EXPORTING, MASTERING AND COPYRIGHT ISSUES   12
Exporting media – Workflow and overview for exporting – Encoding settings – Video Compressions – Copyright, broadcasting rights – Copyright infringements – Preparation for various medium distribution techniques behind it.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
   CO1.   Know the workflow of the post-production process in various fields.
   CO2.   Produce various projects using different editing styles and layouts.
   CO3.   Produce professional-quality video projects for various platforms.
   CO4.   Produce videos without any copyright issues.
   CO5.   Inspire the audience with their skillful editing techniques.

REFERENCES
1. Alexis Van Hurkman, *Colour Correction Look Book*: Creative, 2013
2. Christoper J. Browen, *Grammar of the Edit*, 2018.
3. John Palmer, *The Censor, and the Theatres*, December 2018.
4. Jon Gress, *Visual Effects and Compositing*, 2014.
5. Karel Reisz, Gavin Millar, *The Technique of Film Editing*, 2010.
6. Ken Dancyger, *The Technique of Film and Video Editing: History, Theory and Practice,* Nov 2018.

CO-PO MAPPING

Attested

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CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	1	2	-	1	-	1
2	2	1	1	3	3	-
3	1	-	1	1	3	2
4	-	2	-	-	-	3
5	2	-	2	2	3	3
Avg.	6/4=1.5	5/3=1.6	4/3=1.3	7/4=1.75	9/3=3	9/4= 2.25

MV3014	DIGITAL FILMMAKING	L	T	P	C
		2	0	2	3

OBJECTIVES
- To brush up their technical knowledge towards production equipment.
- To transform the creative ideas into short films.
- To promote branding through corporate Videos.
- To understand the techniques of making bio-graphical film.
- They have to create a PSA video and make it to bring some behavior change at least among a particular community.

UNIT I   FRAMING AND COMPOSITION   12
Practice in Various Camera movements, Capturing Shot, Scene, Sequence. Practice in various manual operations. Practice in 5C's of Cinematograpghy- Camera angles, Continuity, Cutting, Close – ups and Composition.

UNIT II   SHORT FILM MAKING   12
Script Writing, Characterization – Protagonist- Antagonist. Structuring, Camera Script, Idea Generation and confirming the script, Production and Post production.

UNIT III   SOCIAL AWARNESS FILMS   12
Identifying social issues of various importance- Health Environment – Economic – social cultural and political issues. Doing film on any of the above interested and relevant themes.

UNIT IV   CORPORATE FILMS   12
To project the profile of the company behind the brand – showcasing the visual power- focusing the consumer. Production of safety videos, new product launch, promotional videos, testimonial videos. Practice in anyone of the above mentioned ideas.

UNIT V   PLACE AND PERSONS OF HISTORICAL IMPORTANCE   12
Identifying of Historically important persons and places – doing background research on the subject – planning for a photo shoot to get an idea for film making – relating the subject with cultural or historical importance- indirectly serve as a tourism promotion.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
  CO1. Promote our cultural and historical values through films.
  CO2. Create an alternative way to create awareness through social awareness films.

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CO3. Become a professional's in making short film, corporate video, etc.
CO4. Have a good sense of knowledge on casting, constructing shots, location hunting and maintain continuity.
CO5. Maintain an appropriate colour tone is much more important to convey the message and give the impacts; students might have a good sense of colour knowledge.

REFERENCES

1. Patricia D. Netzley, *Encyclopedia of Movie special effects*, Oryx Press, 2000.
2. Paul Martingel, *Best Location shooting*, Focal Press, 2008.
3. Peter W. Rea & David K. Irving, *Producing and Directing the Short film and Video*, Fourth Edition, Focal Press, 2014.
4. Rusell Evans, *Practical DV Filmmaking*, Focal press, 2006.
5. Steven E Browne, *High-Definition Postproduction*, Focal Press, 2007.
6. Stuart Sweetow, *Corporate Video Production, Beyond the Board Room*, Focal Press, 2011.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	-	-	-	-	-	2
2	-	-	-	-	-	2
3	-	-	3	3	-	-
4	-	-	-	-	-	-
5	-	-	3	-	-	-
Avg.	-	-	6/2 = 3	3/1 = 3	-	4/2 = 2

MV3015	DOCUMENTARY FILMMAKING	L	T	P	C
		2	0	2	3

OBJECTIVES

- Understand the functions, importance and forms of documentary films.
- Learn structure and story curve in documentary.
- Examine the techniques involved in factual storytelling and its applications.
- Learn the rudiments of creating a documentary.
- Introduced to preproduction (idea conception, research), production (camera work, interview), and postproduction (sound and picture editing) aspects.

UNIT I   INTRODUCTION TO DOCUMENTARY   12

History of Documentary, Elements of the Documentary, Evidence and Point of View in the Documentary, Time – development and Structure. Docudrama, Documentary theory and the issue of representation.

UNIT II   DIFFERENT FORMS OF DOCUMENTARY   12

Poetic Documentaries, Expository Documentaries, Observational documentaries, Participatory documentaries, Reflexive Documentaries and Performative Documentaries. Documentaries of different issues – Wild life – Child Labour – Women trafficking – Gender issues.

Attested

UNIT III   DOCUMENTARY RESEARCH   12

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Content research and conceptualizing the appropriate treatment and style, Ethical issues for documentaries, Structural analysis for documentaries. Interview technique of documentaries, Different microphones for different occasions/locations, Sound design in documentary video - Writing proposals.

UNIT IV DOCUMENTARY PRODUCTION 12
Preproduction – Research leading up to the shoot –production team, Production –Camera Equipment and shooting Procedure – Lighting Location sound – Interviewing – Directing Participants, Post production – Designing a structure – Narration – using music –Titling.

UNIT V APPRECIATION OF DOCUMENTARIES 12
Screening of world renowned documentaries - BBC Documentaries- Indian Documentaries – Local issue based documentaries, Analysing the documentaries through various media techniques. Interaction with documentary film makers.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
CO1. Appreciate the importance of the documentary film formats.
CO2. Explore various documentary formats through viewing and analyses of important documentaries.
CO3. Develop an individual style in representing the society through documentary.
CO4. Examine the story structure and story formats.
CO5. Understand the steps involved in production of a documentary film.

REFERENCES
1. Alan Rosenthal. *Writing, Directing, and Producing Documentary Film*, SIU Press, 2007.
2. Andy Glynne. *Documentaries and How to Make Them*, Kamera Books, Harpenden, Herts, 2012.
3. Barry Hampe. *Making Documentary Films and Videos: A Practical Guide to Planning, Filming, and Editing Documentaries*, Henry Holt and Company, 2007.
4. Bill Nichols, *Introduction to Documentary*, Indiana University Press, 2001.
5. Genevieve Jolliffe and Andrew Zinnes. *The Documentary Film Makers Handbook: A Guerilla Guide*, Continuum International Publishing Group,New York, 2006.
6. Louise Spence and Vinicius Navarro. *Crafting Truth: Documentary Form and Meaning*, Rutgers University Press, New Brunswick, N.J., 2011.
7. Michael Rabiger, *Directing the Documentary*, Focal Press,2007.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	-	-	-	-
2	2	-	-	-	-	-
3	-	-	-	3	-	3
4	-	-	-	3	-	-
5	-	-	-	3	-	-
Avg.	2/1 = 2	-	-	9/3 = 3	-	3/1 = 3

MV3016	LIGHTING AND RENDERING	L	T	P	C
		2	0	2	3

OBJECTIVES
• To introduce the basics of lighting in 3D.
• To create photorealistic still imagery.
• To impart knowledge on lighting and rendering techniques.

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- To introduce virtual lighting technologies and tools necessary to create photorealistic imagery.
- To inculcate enhanced techniques for lighting the scene.

UNIT I LIGHTING THE 3D MODEL USING BASIC LIGHTING 12
Preview lights and to choose its colours – Point light and its properties – Direction light and its properties – Spotlight, penumbra angle, Barn doors and its settings – Area light and its implementation in a real-time environment.

UNIT II LIGHTING TECHNIQUES AND MENTAL RAY RENDERING 12
Software lighting techniques – Light intensity and digital colours– Light linking & object linking – Introduction about mental ray nodes – Interior scene lighting using mental ray-1 – Interior scene lighting using mental ray-2.

UNIT III PRODUCT LIGHTING AND ENVIRONMENT LIGHTING 12
Three-point lighting technique – Lighting a product using three-point lighting techniques – Photons and caustics lighting methods – global illumination and final gathering.

UNIT IV ADVANCED RENDERING MATERIALS 12
Advanced Materials for Mental Ray rendering – Light Baking for Games – Exploring Paint Effects features – Layer Based Rendering and its Memberships.

UNIT V EXTERIOR AND IBL RENDERING 12
Image-based Lighting for a 3D Object – Rendering an Exterior using Image-based Lighting – Optimization techniques for lighting the scene – Lighting a Photorealistic scene based on a live reference – Portfolio creation.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
- CO1. Learn the basic concepts of lighting in 3D.
- CO2. Gain awareness of the physical and virtual technology of lighting.
- CO3. Understand the interaction of lights with a 3D surface.
- CO4. Use advanced rendering materials.
- CO5. Incorporate lighting on a live reference.

REFERENCES
1. Lee Lanier, *Maya Studio Projects Texturing and Lighting*, 1st Edition, Sybex, 2011.
2. Jason Gregory, *Game Engine Architecture*, Third Edition, 2019.
3. Henry Plummer, *The Architecture of Natural Light*, 2009.
4. Jeremy Birn, *Digital Lighting and Rendering*, 3rd Edition, New Riders, 2013.
5. Christopher Meek, Kevin van den Wymelenberg, *Day-lighting and Integrated Lighting Design*, 2014.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	2	2	-	-
2	-	-	2	-	-	-
3	-	-	2	-	-	-
4	-	-	2	-	-	-
5	-	-	2	-	-	-
Avg.	-	-	10/5 = 2	2/1 = 2	-	-

Attested

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MV3017   **CHARACTER DESIGNING**   L   T   P   C
                                                                          2   0   2   3

OBJECTIVES
- To learn basic anatomy of a character.
- To apply basic properties of physics to the scene.
- To create a character walk cycle.
- To work with poly to develop the characters.
- To create motion for a character.

UNIT I   3D SURROUNDINGS   12
Weight – Environment – Solidity – Force – Construction, Bowling ball – Soccer ball, Balloon, animating 2D bowling ball – Creating a simple object.

UNIT II   CHARACTERS   12
Construction of animal character – Pantomime horse construction, Cartoon four-legged construction, four types of animal locomotion – walking, trotting, cantering and galloping, walk cycle or run cycle.

UNIT III   HUMAN ANATOMY   12
Basic human anatomy – spine, ribcage, pelvic girdle, skull, shoulders – Joints: Plane joints, Pivot joints, Hinge joints, Ball and socket joints, saddle joints – Constructing the basic character – Skin, Bones – Parent and child relation in bones – Child of joint – Naming conveniences of bones.

UNIT IV   PHYSICS IN 3D   12
Emotions – Eight basic efforts: pressing, flicking, wringing, dabbing, slashing, gilding, thrusting, floating – Body language – body postures, basic modes, palm, hand-arm and leg gestures.

UNIT V   EMOTION FOR THE CHARACTER   12
Emotions – happy, sad, smile anger, fear, disgust, pain – Eye movements, eyebrows, head angle, mouth and lip movement – M, B, P, F, V – Vowels – O, AR, A, E – Teeth and tongue movement – Basic rigging concept IK and FK concept.

                                                                               TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
- CO1.   Understand different principles involved in character animation.
- CO2.   Understand human anatomy in character animation.
- CO3.   Design the characters sketched by them.
- CO4.   Animate their characters.
- CO5.   Create animatics. Independently create characters for the animation movie.

REFERENCES
1. Andy Beane, *3D Animation Essentials*, John Wiley & Sons, Inc. 2012.
2. Bancroft T. *Creating Characters with Personality*. Watson-Guptill, 2016.
3. Giesen R, Khan A. *Acting and Character Animation: The Art of Animated Films, Acting, and Visualizing.* CRC Press, 2017.
4. Horn EV. *3D character development workshop: rigging fundamentals for artists and animators.* Dulles, VA: Mercury Learning and Information, 2018.
5. ONeill R. *Digital character development: theory and practice.* Boca Raton: CRC Press, 2015.
6. Roberts Steve. *Character Animation Fundamentals: developing skills for 2d and 3d character animation.* CRC Press, 2017.
7. Tinwell A. *The Uncanny Valley in Games and Animation.* AK Peters/CRC Press, 2014.

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CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	2	-	-	-
2	-	-	1	-	-	-
3	-	-	1	1	-	-
4	-	-	-	2	2	-
5	-	-	2	3	2	-
Avg.	-	-	6/4 = 1.5	6/3 = 2	4/2 = 2	-

MV3018	MOTION GRAPHICS	L	T	P	C
		2	0	2	3

OBJECTIVES

- To become visually literate and competent with the non-verbal languages of art and design.
- To develop visual, verbal and written responses to visual phenomena. To develop perception and create conceptualizations both rationally and intuitively.
- To learn the basic principles of storyboarding and project mapping.
- To learn the concept of tracking.
- To understand the usage of 3D in live-action.

UNIT I	INTRODUCTION TO GRAPHICS	12

General principles of Motion Graphics – Different software used for motion graphics, Photoshop, Final cut pro, Premier Pro, After Effects, Combustion, Nuke – Creating a Pipeline for production - Exercises for different software – Creating a storyboard.

UNIT II	KEYING, ROTO AND TRACKING	12

Understanding and working with keying concepts – Working with different types of keyers – Working with Roto shots – Removing the blue/green screen using different keyers – Working with 2D tracking – Working with planar tracking.

UNIT III	GRADING	12

Working with RGB – Colour waveform, colour histogram, Curves – Understanding the alpha value, Colour grading of Computer-generated objects – Adding lights and shadow – Matching light space and adjusting for brightness and colour – Masking the region – Working with layer and Node-based software.

UNIT IV	3D GRAPHICS	12

Camera tracking in different software – Combining of graphics elements into live-action – Creating and modifying 3D objects, importing 3D materials to various software – Creating a 3D title.

UNIT V	EMOTION FOR THE CHARACTER	12

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Emotions – happy, sad, smile anger, fear, disgust, pain – Eye movements, eyebrows, head angle, mouth and lip movement – M, B, P, F, V – Vowels – O, AR, A, E – Teeth and tongue movement – Basic rigging concept IK and FK concept.

TOTAL: 60 PERIODS

OUTCOMES

At the end of the course, the student will be able to:

CO1. Shoot graphic videos on their own.

CO2. Understand the concept of grading.

CO3. Assemble the green /blue screen footage.

CO4. Work with 3D environment digitally.

CO5. Understand the concept of rendering.

REFERENCES

1. Blazer L, *Animated storytelling: Simple Steps for Creating Animation and Motion Graphics*, Peachpit Press, 2015.
2. Ian Crook, Peter Beare, *Motion Graphics: Principles and Practices from the Ground U*p, Bloomsbury Publishing, 2017.
3. Jackson C, *After Effects for Designers: Graphic and Interactive Design in Motion*, Focal Press, 2018.
4. Jon Krasner, *Motion Graphic Design: Applied History and Aesthetics*, Focal Press, 2013.
5. Shaw A, *Design for Motion: Fundamentals and Techniques of Motion Design*, Focal Press, 2015
6. Stone RB, Wahlin L. *The Theory and Practice of Motion Design: Critical Perspectives and Professional Practice*, Routledge, 2018.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	3	3	-	-
2	-	-	1	-	2	-
3	-	-	1	1	2	-
4	-	-	1	2	2	-
5	-	-	1	2	2	-
Avg.	-	-	7/5 = 1.4	8/4 = 2	8/4 = 2	-

MV3019	ADVANCED COMPOSITING TECHNIQUE	L	T	P	C
		2	0	2	3

OBJECTIVES

- To understand the pipeline of visual effects.
- To study the new techniques involved in Compositing.
- To understand the working of visual effect shots.
- To instill knowledge about colour correction.
- To make students work with particles.

UNIT I   BASIC VISUAL ELEMENTS   12

To understand the UI of software, viewer, metadata, creating stick nodes, postage stamps, working with tracking – single, double, four-point tracking – rotation and scaling. To understand the x and y-axis of footage and to stabilize running footage. Match move an object to the footage and rendering.

Attested

UNIT II   INTRODUCTION TO ROTOSCOPING   12

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To understand and work with rotoscoping, Bezier, B – Splines, shapes, feather – Compositing with different footage using roto – Exporting and importing the alpha channel – Retouching with the Rotopaint – Working with wire removal shots – Creating and working with a clean plate, Working with Graph editors – Understanding and working with the match move process.

UNIT III　　　MATTE AND COLOUR CORRECTION　　　12
Working with blue/green matte footage, Using different keyers, IBK colour, Key light, Chroma key, Alpha key – Creating a garbage mask – Matching light space and adjusting for brightness and colour, Copying channel and working with shuffle channel options – Adding noise in the live-action videos, Removing grain and dust – Creating and working with titles, Particles in compositing, Creating the digital crowd, Colour correction and Grading the footage – Time warping, Understanding and working with distorted images and videos.

UNIT IV　　　WORKING WITH 3D　　　12
Working with 3D space in compositing – Creating the multiple pass render – Working with camera tracking – Applying the camera movement to footage –Creating an external geometry - Importing camera data and normalize it – Using HDRI images to light the source – Working with keyframe – Creating a Matte paint – Creating and merging the set extensions object to live- action – Obtaining the clean plate from the footage – Merging the multi-pass render to a single output – Matching the Lights and shadows.

UNIT V　　　ADDING ELEMENTS　　　12
Creating the depth map – Understanding the Z-Depth – Composite stereoscopic 3D – Working with particles, creating particle simulation – Working with Smart vectors – Understanding and working with deep compositing – Animating using python script.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
CO1.　Understand the visual treat in the films.
CO2.　Create new visual effects for their production.
CO3.　Develop the 3D Environment.
CO4.　Merge the live-action footage with visual effects.
CO5.　Simulate particle items.

REFERENCES
1.　Dinur E, *The Filmmaker's Guide to Visual Effects: The Art and Techniques of VFX for Directors, Producers, Editors and Cinematographers,* Focal Press, 2017.
2.　Ganbar R. *Nuke 101: Professional Compositing and Visual Effects*, Peachpit Press, 2014.
3.　Higgins S, North D, Monticone P, Rogers A, Polan D, Turnock J, Wright B, Overpeck D, Purse L, Dhir M, Allison T, *Editing and Special/Visual Effects*, Rutgers University Press, 2016.
4.　Hornung E, *The Art and Technique of Matchmoving: Solutions for the VFX Artist*, Focal Press, 2013.

5. Lanier L, *Advanced Visual Effects Compositing: Techniques for Working with Problematic Footage*, Focal Press, 2017.
6. Lanier L, *Aesthetic 3D Lighting: History, Theory, and Application*, Focal Press; 2018.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	2	-	-	-
2	-	-	2	-	3	-
3	-	-	-	-	3	-
4	-	-	-	-	3	-
5	-	-	-	-	3	-
Avg.	-	-	4/2 = 2	-	12/4 = 3	-

MV3020	MOBILE GAMING	L	T	P	C
		2	0	2	3

OBJECTIVES
- To understand the history and development of mobile games.
- To introduce the android mobile interface.
- To test several games in a mobile environment.
- To develop a user-friendly game in a mobile environment.
- To understand the best practices in mobile game development.

UNIT I   INTRODUCTION TO MOBILE GAMING   12

Overview of mobile gaming industry and its growth-Historical development of mobile gaming-Mobile platforms and technologies-Business models and monetization strategies in mobile gaming-Trends and challenges in mobile gaming-Impact of mobile gaming on society and culture-Cross-platform development and considerations for mobile games.

UNIT II   MOBILE GAME DESIGN   12

Principles of mobile game design-User interface (UI) and user experience (UX) design for mobile games-Game mechanics and gameplay elements in mobile games-Level design and progression systems in mobile games-Mobile game prototyping and playtesting-Storytelling and narrative design in mobile games-Game balancing and difficulty progression in mobile games-Gamification techniques for enhancing user engagement in mobile games.

UNIT III   MOBILE GAME DEVELOPMENT   12

Mobile game development tools and platforms-Programming languages and frameworks for mobile games-Graphics and audio development for mobile games-Optimization techniques for mobile game performance-Publishing and distribution of mobile games-Augmented reality (AR) and virtual reality (VR) integration in mobile games-Multiplayer functionality and network programming in mobile games.

UNIT IV TESTING GAME 12

Logic Introduction to logic-based problem solving – First-time User Experience – Continued User Experience – Final Game Evaluation – Bug Fixes – Multi-view Geometry – Bayesian Vision – Statistical classifiers – Clustering &segmentation – Voting methods – Generate & test.

UNIT V PACKAGING AND DEPLOYING 12

Performance best practices – Android field service app – Active transactions – Mobile app development hurdles – Rendering – Deploying and hosting in server-User-generated content (UGC) and community engagement in mobile games-Mobile game pricing strategies and free-to-play (F2P) vs. premium models-App store optimization (ASO) for mobile games-User acquisition and retention in mobile gaming.

TOTAL: 60 PERIODS

OUTCOMES

At the end of the course, the student will be able to:

CO1. Create a game prototype that mimics the mechanics and "game already exist".
CO2. Create an original game prototype.
CO3. Evaluate existing game technologies.
CO4. Deploy their prototype in the testing environment.
CO5. Recreate industry's best practices.

REFERENCES

1. Corke, P. (2017). *Robotics, Vision, and Control: Fundamental Algorithms in MATLAB®second,* completely revised (Vol. 118). Springer.
2. Hjorth, L., & Richardson, I. (2014). *Gaming in Social, Locative, and Mobile Media.* Springer.
3. Mukherjee, S. (2015). V*ideo Games and Storytelling: Reading Games and Playing Books.*Springer.
4. Willson, M., & Leaver, T. (Eds.). (2017). *Social, Casual and Mobile Games: The ChangingGaming Landscape.* Bloomsbury Publishing, USA.
5. Xu, X. (Ed.). (2014). *Interdisciplinary Mobile Media and Communications: Social, Political,and Economic Implications: Social, Political, and Economic Implications.* IGI Global.
6. Yan, Z. (Ed.). (2015). *Encyclopedia of Mobile Phone Behaviour.* IGI Global.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	-	-	1	2	-	-
2	-	-	-	-	3	-
3	2	-	-	-	-	-
4	-	-	-	-	3	-
5	-	-	-	-	-	3
Avg.	2/1 = 2	-	1/1 = 1	2/1 = 2	6/2 = 3	3/1 = 3

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MV3021   **PROGRAMMING FOR GAMING**   L   T   P   C
                                                                                       2   0   2   3

OBJECTIVES
- To understand the concepts of Game design and development.
- To learn the processes, mechanics and issues in Game Design.
- To understand the concepts of Game programming.
- To know about Game programming platforms, frameworks and engines.
- To enable student to develop games.

UNIT I   INTRODUCTION TO PROGRAMMING FOR GAMING   12
Overview of programming languages commonly used in game development - Basics of programming logic and problem-solving techniques - Introduction to game engines and development environments-Understanding game development frameworks and libraries - Introduction to version control systems for collaborative game development.

UNIT II   GAME PROGRAMMING   12
Data types, variables, and control structures in game programming-Functions and modular programming in game development-Object-oriented programming principles in game development - Debugging and error handling techniques in game programming - Introduction to game physics and collision detection algorithms.

UNIT III   GAME ENGINE DESIGN   12
Game engine architecture – Engine support systems – Resources, file systems, game loop, real-time simulation – Human interface devices – Collision and rigid body dynamics – Game profiling - Basics of computer graphics and rendering techniques.

UNIT IV   GAMING PLATFORMS AND FRAMEWORKS   12
Working with 2D and 3D graphics libraries and APIs-2D and 3D Game development using Flash, DirectX, Java, Python, Game engines – Unity – DX Studio- games Introduction to shaders and GPU programming for visual effects-Sprite rendering and animation techniques.

UNIT V   GAME DEVELOPMENT   12
Game asset management and resource loading techniques-Publishing and distribution of games on different platforms -Developing 2D and 3D interactive games using DirectX or Python – Isometric and tile-based games – Puzzle games, Single player games, Multi-player games.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
   CO1. Understand the concepts of game design and development.
   CO2. Design the game and use mechanics for game development.
   CO3. Explain the core architecture of the game's programming.
   CO4. Use game programming platforms, frameworks and engines.
   CO5. Create interactive games.

REFERENCES
1. Ernest Adams and Andrew Rollings, *Fundamentals of Game Design*, 2nd Edition PrenticeHall / New Riders, 2009.
2. Eric Lengyel, *Mathematics for 3D Game Programming and Computer Graphics*, 3rd Edition,Course Technology PTR, 2011.
3. Jesse Schell, *The Art of Game Design: A Book of Lenses*, 1st Edition, CRC Press, 2008.

4. Mike McShaffrfy and David Graham, *Game Coding Complete*, Fourth Edition, CengageLearning, PTR, 2012.
5. Jason Gregory, *Game Engine Architecture*, CRC Press / A K Peters, 2009.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	1	-	1	-	-	-
2	-	-	-	2	-	-
3	-	-	-	-	3	-
4	-	-	-	2	-	-
5	-	-	-	-	-	3
Avg.	1/1 = 1	-	1/1 = 1	4/2 = 2	3/1 = 3	3/1 = 3

MV3022	**INTRODUCTION TO R PROGRAMMING**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**

OBJECTIVES
- To learn the fundamentals of R programming
- To perform quantitative analysis using R including data manipulation and visualization.
- To carry out different statistical analysis.
- To gain knowledge to perform text analysis and natural language processing.
- To facilitate data-driven decision making in media-related fields.

UNIT I   INTRODUCTION TO R PROGRAMMING   12
Introduction to R and its applications in media studies - Installing R and RStudio - Basic R syntax and data types - Working with variables and data structures in R - Basic data manipulation and exploration in R.
Practical Component:
1. Programs to perform basic operations for given vector of numbers.
2. To create a user-defined function in R that performs certain task.
3. Programs to generate a sequence of numbers from 1 to 10 and calculate their sum.
4. Program to create a vector in R and to add/modify/delete an item from the vector.
5. Program in R to read a CSV file and display its contents.
6. Program in R to create a bar plot of the number of tweets per day for a given dataset.

UNIT II   DATA MANIPULATION AND VISUALIZATION   12
Importing and exporting data in R - Data cleaning and pre-processing techniques - Manipulating and transforming data using dplyr package - Introduction to data visualization with ggplot2 package - Creating static and interactive plots for media analysis.
Practical Component:
1. Import a CSV file into R and remove any missing values from the dataset.
2. Use the dplyr package to filter a dataset based on a specific condition (e.g., select only rows where a certain variable is greater than a certain value).

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3. Create a scatter plot using ggplot2 to visualize the relationship between two variables in a dataset.
4. Use dplyr to group a dataset by a categorical variable and calculate the average value of a numeric variable for each group.
5. Use ggplot2 to create a stacked bar plot to show the distribution of a categorical variable in a dataset.
6. Apply the lubridate package to manipulate and format dates in a dataset (e.g., extract month and year from a date variable).

UNIT III STATISTICAL ANALYSIS WITH R 12

Overview of statistical concepts for media studies - Descriptive statistics and data summarization - Hypothesis testing and statistical inference in R - Correlation and regression analysis for media data - Introduction to experimental design and A/B testing in R.

Practical Component:
1. Perform a t-test in R to compare the means of two independent groups in a dataset.
2. Calculate the correlation coefficient between two variables in a dataset and determine if it is statistically significant.
3. Conduct a chi-square test in R to analyze the association between two categorical variables in a dataset.
4. Fit a linear regression model to a dataset and interpret the coefficients and significance levels.
5. Use the ANOVA test in R to compare the means of multiple groups in a dataset.
6. Perform a logistic regression analysis in R to predict a binary outcome variable based on several predictor variables.

UNIT IV TEXT ANALYSIS AND NATURAL LANGUAGE PROCESSING 12

Introduction to text mining and NLP in media science - Text data pre-processing and cleaning techniques - Analyzing text sentiment and emotion in R - Text classification and topic modeling with machine learning algorithms - Working with social media data and sentiment analysis.

Practical Component:
1. Remove stop words from a given text string in R.
2. Calculate the term frequency-inverse document frequency (TF-IDF) for a corpus of text documents in R.
3. Perform sentiment analysis on a collection of tweets using the textblob package
4. Apply topic modeling (e.g., Latent Dirichlet Allocation) to identify key topics in a corpus of news articles.
5. Use regular expressions in R to extract hashtags from a text string.
6. Build a classification model in R to predict the sentiment of movie reviews (positive or negative) using a text dataset.

UNIT V ADVANCED TOPICS IN R PROGRAMMING 12

Web scraping and data collection from online sources - Time series analysis and forecasting in media data - Network analysis and visualization of media networks - Introduction to machine learning in R - Building predictive models for media analytics.

Practical Component:
1. Scrape data from a website using the rvest package in R.
2. Create a time series plot to visualize the trend and seasonality in a media-related dataset.

3. Perform network analysis on a social media network to identify influential users using the igraph package in R.
4. Apply a machine learning algorithm (e.g., random forest or support vector machine) to predict user engagement on social media posts.
5. Use cross-validation techniques to evaluate the performance of a predictive model on a media dataset.
6. Implement a recommendation system in R to suggest personalized media content based on user preferences and behavior.

TOTAL: 60 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
  CO1. Efficiently write R programs for media studies related applications.
  CO2. Apply data manipulation and visualization techniques using R for media-related datasets.
  CO3. Perform statistical analysis and interpret results using R
  CO4. Utilize R for text analysis and natural language processing tasks
  CO5. Explore advanced topics in R programming to enhance data analysis and modeling capabilities in media science.

REFERENCES

1. Matloff, N. (2011). *The Art of R Programming: A Tour of Statistical Software Design.* No Starch Press.
2. Wickham, H., & Grolemund, G. (2017). *R for Data Science.* O'Reilly Media.
3. Kuhn, M., & Johnson, K. (2013). *Applied Predictive Modeling.* Springer.
4. Feinerer, I., Hornik, K., & Meyer, D. (2008). *Text Mining Infrastructure in R.* Journal of Statistical Software, 25(5), 1-54.
5. Silge, J., & Robinson, D. (2017). *Text Mining with R: A Tidy Approach.* O'Reilly Media.
6. Venables, W. N., & Ripley, B. D. (2002). *Modern Applied Statistics with S.* Springer.
7. Aggarwal, C. C. (2018). *Natural Language Processing with R.* Springer.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	2	-	-	-	-	-
2	-	2	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	3	-	-	-
Avg.	2/1 = 2	2/1 =2	3/1 = 3	-	-	-

Attested

80

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MV3023   **INSTRUCTIONAL DESIGN FOR DIGITAL MEDIA**   L   T   P   C
                                                                        2   0   2   3

OBJECTIVES
- To demonstrate a comprehensive understanding of the fundamental principles and theories of instructional design.
- To analyze the learning needs of the diverse audience for effective instructional material development and interface design.
- To design multimedia learning resources, experiences, and user interfaces for digital media platforms.
- To develop assessment strategies and methods to evaluate and assess learning outcomes in a digital learning environment.
- To apply ethical and legal considerations of instructional design for digital media, such as copyright, intellectual property rights, and data security.

UNIT I   INSTRUCTIONAL SYSTEMS DESIGN   12
Introduction to Instructional Systems Design — Learning theories and how they inform instructional systems design — Basic processes of instructional design — Need assessment and instructional goals — Learning objectives — Taxonomies of cognitive levels — Assessment: diagnostic, formative, summative — Effective instructional strategies — Engaging and inspiring acquisition of knowledge — Learning theories: Behaviorism, Cognitivism, Constructivism, and Connectivism.

UNIT II   MODELS OF INSTRUCTIONAL DESIGN   12
Models of teaching — Concept, features, and implications in the classroom — Bloom's Taxonomy — Dale's Cone of Learning — Vygotsky's theory of social development — Kirkpatrick's Model — ADDIE Model — Rapid prototyping — Dick and Carey Model — Component Display Theory (David Merrill) — Motivational Design — ARCS Model — Motivational Design Process — Robert Gagne's nine events of instruction.

UNIT III   TEACHING-LEARNING STRATEGIES   12
Learning as a science – Scaffolding and meta-cognition — Goal-centred criteria — Learner-centred criteria — Context-centred criteria — Assessment-centred criteria — Learning components of instructional strategies — Pre-instructional activities — Content presentation and examples — Learner participation — Assessment follow-through activities — Teaching strategies: summarizing, note taking, homework, and practice — Reinforcing effort and providing recognition — Cooperative learning — Differentiated learning — Designing and implementing inclusive classrooms — Four-quadrant approach to e-learning (video lecture, downloadable reading material, assessment and quizzes, and online discussion forum).

UNIT IV   EVALUATION OF INSTRUCTIONAL SYSTEMS   12
Components of the instructional package — Selecting existing instructional materials — The designer's role in material development and instructional delivery — Developing instructional materials — Formative evaluation — Rough draft materials — Human-computer interaction — Validation of instructional material — Outcome-based education (OBE) assessment — Printed materials, still pictures, and graphics — One-to-one evaluation with learners — Small-group evaluation — Field trials — Educational Decisions Model (CIPP Model).

UNIT V   DIGITAL TECHNOLOGIES FOR CONTENT DELIVERY   12
Introduction to Learning Management Systems — Web technologies for content delivery — Open educational resources — The learner and the intelligent tutoring systems — Research methods in instructional technology — Educational game design — Learning analytics — Educational data mining Strategies — Delivery and management — Production — The future of ISD — Instructional design and technology — Metacognition in instructional design.

TOTAL: 60 PERIODS

OUTCOMES

At the end of the course, the student will be able to:

CO1. To apply principles of instructional design.
CO2. To identify the steps and methods of the instructional design process.
CO3. To function independently and cooperatively in a multidisciplinary team.
CO4. To compare various instructional design models and perspectives.
CO5. To utilize emerging web technologies for online learning evaluation. To apply ethical and legal considerations related digital media platforms.

REFERENCES

1. W. Dick, L. Carry, and J. O. Carey, *The Systematic Design of Instruction, 6th Edition,* Allyn and Bacon, Boston, MA, 2005.
2. P. L. Smith and T. J. Ragan, *Instructional Design*, Wiley, New York, 1999.
3. W. J. Rothwell and H. C. Kazanas, *Mastering the Instructional Design Process: A Systematic Approach*, 2nd Ed.," 2008.
4. M. Molenda, J. D. Russell, and S. E. Smaldino, R. Heinich, *Instructional Media and Technologies for Learning,* Pearson College Div; 7th edition, 2001.
5. L. Botturi and S. T. Stubbs, *Handbook of Visual Languages for Instructional Design: Theories and Practices,* Idea Group, 2008.
6. R. C. Clark and R. E. Mayer, *e-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning,* 2016.
7. R. M. Gagné, *Principles of Instructional Design,* Thomson/Wadsworth, Belmont, CA, 2005.

CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	3	-	-	-	-	-
2	-	1	2	1	1	-
3	-	2	-	-	-	-
4	2	-	-	-	-	-
5	-	-	-	3	-	-
6	-	-	-	-	3	-
Avg.	5/2 = 2.5	3/2 = 1.5	2/1 = 2	4/2 = 2	4/2 = 2	-

MV3024	**SOCIAL MEDIA ANALYSIS**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**

OBJECTIVES

- Provide comprehensive understanding of social media analysis for media studies.
- Gain knowledge on collecting data from social media platform.
- Learn to perform sentiment analysis.
- Understand and perform social network analysis.
- Determine trend analysis and carry out predictive modelling to gain insights into media-related phenomena and audience behaviour.

UNIT I   INTRODUCTION TO SOCIAL MEDIA ANALYSIS   12

Overview of social media platforms and their impact on society - Introduction to social media analytics and its applications - Understanding data collection and ethical considerations - Introduction to popular social media analysis tools and software.

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Practical Component:
1. Explore the demographics of social media users: Collect data on the age, gender, and location of users on different social media platforms and analyze the trends.
2. Conduct a content analysis of social media posts: Select a specific topic or hashtag and analyze the content of social media posts to identify common themes and sentiments.
3. Compare the engagement metrics of different social media platforms: Collect data on likes, shares, and comments for a set of posts on different platforms and compare their engagement levels.
4. Analyze the impact of social media influencers: Choose a popular influencer and examine their effect on brand awareness or product sales by analyzing engagement and sentiment around their posts.
5. Investigate the use of hashtags: Collect data on the usage of specific hashtags over time and analyze how they correlate with trending topics or events.
6. Study the evolution of social media platforms: Research the history and development of a social media platform, and analyze the changes in user behavior and features over time.

UNIT II   SOCIAL MEDIA DATA COLLECTION   12

Techniques for collecting social media data (e.g., APIs, web scraping) - Data preprocessing and cleaning for social media analysis - Handling challenges and limitations in social media data collection - Case studies and hands-on exercises for data collection.
Practical Component:
1. Scrape social media data using APIs: Utilize the API of a social media platform to collect a specific set of data, such as posts, comments, or user profiles.
2. Gather data from social media through web scraping: Use web scraping techniques to collect data from social media platforms that do not provide public APIs.
3. Perform hashtag tracking: Track the usage of specific hashtags over a period of time by collecting data from various social media platforms.
4. Capture real-time social media data: Develop a script or program to collect live data from social media platforms and store it for further analysis.
5. Collect user-generated content: Identify and retrieve user-generated content, such as reviews or testimonials, from social media platforms to analyze sentiment or customer feedback.
6. Conduct surveys or polls on social media: Design and deploy surveys or polls on social media platforms to collect data on user opinions or preferences.

UNIT III   SOCIAL MEDIA SENTIMENT ANALYSIS   12

Introduction to sentiment analysis in social media - Techniques for sentiment classification and sentiment lexicon creation - Understanding the challenges of sentiment analysis in social media - Applications of sentiment analysis in brand monitoring and customer feedback analysis
Practical Component:
1. Classify social media posts as positive, negative, or neutral: Use machine learning techniques to train a sentiment analysis model and apply it to a dataset of social media posts.
2. Analyze sentiment around a specific brand: Collect social media data related to a brand and analyze the sentiment expressed in posts and comments to understand the overall perception of the brand.
3. Compare sentiment across different social media platforms: Gather data from multiple platforms and compare the sentiment expressed towards a particular topic or event.

4. Identify influential users based on sentiment: Analyze social media data to identify users whose posts or comments have a significant impact on the sentiment of others.
5. Detect sarcasm in social media posts: Develop a model or algorithm to identify sarcastic statements in social media posts by analyzing linguistic patterns and contextual cues.
6. Explore sentiment trends over time: Analyze sentiment scores over different time periods to identify shifts in public opinion or sentiment towards a specific topic or event.

UNIT IV   SOCIAL NETWORK ANALYSIS   12

Introduction to social network analysis and its importance - Concepts of nodes, edges, and centrality measures in social networks - Community detection and analysis in social networks - Practical applications of social network analysis in influencer - identification and network marketing

Practical Component:
1. Construct a social media network graph: Collect data on connections or interactions between users and visualize the network graph using social network analysis tools.
2. Identify key influencers in a social network: Analyze the network graph to identify users with the highest degree of influence or centrality within the network.
3. Measure the clustering coefficient of a social network: Calculate the clustering coefficient of a social network to assess the level of interconnectedness among users.
4. Analyze community detection in a social network: Apply community detection algorithms to identify distinct groups or communities within a social network.
5. Investigate the spread of information in a social network: Simulate the spread of information or rumors in a social network and analyze the patterns of diffusion.
6. Explore the relationship between network structure and user behavior: Analyze how the structure of a social network influences user engagement, information flow, or sentiment propagation.

UNIT V   TREND ANALYSIS AND PREDICTIVE MODELING   12

Identifying and analyzing trends in social media data - Time series analysis for trend detection and forecasting - Introduction to predictive modeling using social media data - Case studies and projects on trend analysis and predictive modelling

Practical Component:
1. Identify trending topics on social media: Collect data on hashtags or keywords and analyze their frequency or popularity to identify emerging trends.
2. Predict user behavior based on historical data: Use machine learning algorithms to build a predictive model that forecasts user actions, such as click-through rates or purchase behavior.
3. Forecast social media metrics: Analyze historical data on social media metrics (e.g., likes, shares, followers) and use time series forecasting techniques to predict future values.
4. Analyze the impact of social media campaigns: Collect data on campaign performance metrics and use statistical analysis to measure the effectiveness of social media marketing efforts.
5. Predict sentiment fluctuations during events: Gather historical data on sentiment during past events and build a predictive model to anticipate sentiment shifts during similar upcoming events.
6. Conduct trend analysis across different social media platforms: Collect data from multiple platforms and compare trends to identify common patterns or differences in user behavior and interests.

TOTAL: 60 PERIODS

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OUTCOMES

At the end of the course, the student will be able to:

CO1. Acquire skills to collect and preprocess social media data for analysis.

CO2. Apply sentiment analysis techniques to evaluate public opinion and sentiment on social media platforms.

CO3. Perform social network analysis to uncover network structures and dynamics within media-related contexts.

CO4. Conduct trend analysis to identify patterns and predict future trends in social media data and utilize predictive modeling techniques to make data-driven predictions and forecasts in media science.

CO5. Critically evaluate and interpret the results of social media analysis in the context of media research and decision-making.

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1. Boyd, D., & Crawford, K. (2012). *Critical questions for big data: Provocations for a cultural, technological, and scholarly phenomenon*. Information, Communication & Society, 15(5), 662-679.

2. Hutto, C. J., & Gilbert, E. (2014). *Vader: A parsimonious rule-based model for sentiment analysis of social media text*. In Eighth International AAAI Conference on Weblogs and Social Media.

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CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	3	-	-	-	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	3	-	-	-
5	-	3	-	-	-	-
Avg.	3/1 = 3	3/1 = 3	3/1 = 3	-	-	-

Attested

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MV3025	HUMAN-CENTRED INTERACTIVE DESIGN	L	T	P	C
		2	0	2	3

OBJECTIVES

- To acquire knowledge on the fundamentals of Human-Centred Interaction Design.
- To understand the step-by-step process involved in the development of Human-Centred Design.
- To impart knowledge on the field of Interactive Experience Designing in media, products and computer application designs.
- To help students develop good analytical abilities to gain knowledge of specific techniques and to develop creative solutions.
- To sensitize students about the needs of Indian users and the Indian industry.

UNIT I   INTRODUCTION TO DESIGN   12

Historical evolution of the field – Interactive system design (theory and practice) – Concept of usability – definition and elaboration – HCI and software engineering – GUI design and aesthetics – Prototyping techniques.

UNIT II   MODEL-BASED DESIGN AND EVALUATION   12

The basic idea – introduction to different types of models – GOMS family of models (KLM and CMN – GOMS) – Fitts' law and Hick Hyman's law – Model-based design case studies – Guidelines in HCI – Shneiderman's eight golden rules – Norman's seven principles – Norman's model of interaction – Nielsen's ten heuristics with examples of its use – Heuristic evaluation – Contextual inquiry – Cognitive walkthrough.

UNIT III   EMPIRICAL RESEARCH METHODS   12

Motivation – issues – research question formulation techniques – Experiment design and data analysis – Task modeling and analysis – Hierarchical task analysis (HTA) – Engineering task models and Concur Task Tree (CTT).

UNIT IV   DIALOG DESIGN   12

Introduction to formalism in dialog design – design using Finite State Machines – State charts and Petri Nets in dialog design – Cognitive architecture – Introduction to CA, CA types, the relevance of CA in IS design – Model Human Processor (MHP) – Object-Oriented Programming.

UNIT V   IMPLEMENTATION AND EVALUATION   12

Introduction to Implementation support – screen and resource management – Management and Architecture – Toolkits – Paint and Event Models. Types of Evaluation –Studies and Experiments – Mobile App Evaluation – From Data to Knowledge – Analysing and Interpreting Wason Card Test Data – From Evaluation to Validation.

TOTAL: 60 PERIODS

OUTCOMES

At the end of the course, the student will be able to:
- CO1. Understand the basic concepts in human-computer interaction.
- CO2. Understand the process involved in the development of a human-centred design.
- CO3. Comprehend the importance of design principles and the evaluation methods for user interfaces.
- CO4. Develop creative solutions through good analytical abilities.
- CO5. Devise creative solutions for issues and needs of Indian users and the Indian industry.

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REFERENCES
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2. Sears, A., and Jacko, J. A. (Eds.), Human-Computer Interaction: Design Issues, Solutions, and Applications, CRC Press, 2009.
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CO-PO MAPPING

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
1	-	-	-	-	-	-
2	2	-	-	-	-	-
3	-	-	2	-	-	-
4	-	2	-	3	3	3
5	-	2	-	3	3	3
Avg.	3/2 = 1.5	4/2 = 2	2/1 = 2	6/2 = 3	6/2 = 3	6/2 = 3

MV3026	DEEP LEARNING	L	T	P	C
		2	0	2	3

OBJECTIVES
- To present theoretical foundations, algorithms, methodologies, and applications of neural networks and deep Learning.
- To train and test application-specific deep learning models and to provide the practical knowledge.
- To apply the deep learning models in various real-world applications.

UNIT I   BASIC CONCEPTS OF DEEP LEARNING   12

Introduction to deep learning --– Neural networks – Back propagation – Stochastic Gradient Descent -- Introduction to recurrent neural networks -- Introduction to convolutional neural networks.

UNIT II   DEEP LEARNING IN IMAGE PROCESSING AND COMPUTER VISION   12

How deep learning can be applied in media and technology? -- Introduction to computer vision -- Introduction to Tensorflow and keras -- Computer vision and their real-life applications -- Scope of computer vision -- Generating alternative texts using computer vision [applied examples with Facebook & Instagram.

UNIT III   DEEP LEARNING IN TEXT & SPEECH ANALYSIS   12

Basic linguistics and terms – Language analysis – Natural Language Processing (NLP) projects: characteristics, planning, and other factors -- Sentiment Analysis -- Topic Modelling -- Visualization of speech data -- Transformations in speech data -- Applications based on speech data.

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UNIT IV   APPLICATION OF DEEP LEARNING IN MASS MEDIA ENVIRONMENT   12

Deep learning and their applications in digital marketing -- Processing and manipulating structured and unstructured data -- Working with social media data -- Caches and cookies -- Introduction to AI-based recommendation systems -- Implementation of AI-based recommendation systems -- Working with Netflix metrics.

UNIT V   DEEP LEARNING FOR BUSINESS ANALYTICS   12
Deep learning to evaluate TRP metrics and content performance -- Predicting content scope with regression models -- Analyzing product performance by processing user reviews -- Building predictive models with text data as an input.

TOTAL: 60 PERIODS

OUTCOMES
At the end of the course, the student will be able to:
- CO1.   Understand different methodologies to create application
- CO2.   Recognize the characteristics of deep learning models that are useful to solve real-world problems
- CO3.   Identify and apply appropriate algorithms
- CO4.   Design and implement different deep learning algorithms
- CO5.   Develop various models for real world problems solving and encoding the original data and reconstruct data.

REFERENCES
1. Giancarlo Zaccone, Md. Rezaul Karim, Ahmed Menshawy, Deep Learning with TensorFlow: Explore Neural Networks with Python, Packt Publisher, 2017.
2. Deng & Yu, Deep Learning: Methods and Applications, Now Publishers, 2013.
3. Ian Goodfellow, Yoshua Bengio, Aaron Courville, Deep Learning, MIT Press, 2016.
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5. Sebastian Raschka, Vahid Mirjalili, Python Machine Learning: Machine Learning and Deep Learning with Python, Packt publishing limited, 3rd Edition, 2019.

CO-PO MAPPING

CO	PO					
	1	2	3	4	5	6
1	2	-	-	-	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	2	-	-	-
5	3	2	2	-	-	-
Avg.	5/2 = 2.5	2/1 = 2	4/2 = 2	-	-	-

Attested

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