SCHOOL OF PLANNING ARCHITECTURE AND DESIGN EXCELLENCE

BACHELOR OF DESIGN

COMMUNICATION DESIGN

CURRICULUM AND SYLLABUS

Under CBCS

(Applicable for Students admitted from Academic Year 2020-21)

HINDUSTAN
INSTITUTE OF TECHNOLOGY & SCIENCE
(DEEMED TO BE UNIVERSITY)

BACHELOR OF DESIGN

COMMUNICATION DESIGN

SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CRE DITS	S	TCH
			SEMESTER - I						
			THEORY						
1	PD	ELA4102	Communication Skills	2	0	0	2		2
2	CF	CDA1102	Introduction to Design	3	0	0	3		3
3	PD	CDA1103	Effective mass communication	3	0	0	3		3
			THEORY CUM STUDIO						
4	BS	CDA1104	Fundamentals and principles of Art	1	0	4	3		5
5	PD	CDA1105	Computer Fundamentals and Operation	1	0	4	3		5
			STUDIO						
6	PD	CDA1131	Freehand Drawing	0	0	8	4		8
7	PC	CDA1132	Elements of Design I	0	0	8	4		8

SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CRE DITS	S	TCH
			SEMESTER - II						
			THEORY						
1	CF	CDA1116	Introduction to Multimedia Communications	3	0	0	3		3
2	PD	CDA1117	Introduction to Photography and Videography	3	0	0	3		3
3	PD	CDA1118	Storyboarding and Scriptwriting	3	0	0	3		3
			THEORY CUM STUDIO						
4	PD	CDB1119	Introduction to Computer Programming	1	0	4	3		5
5	CF	CDA1120	Introduction to Typography	1	0	4	3		5
			STUDIO						
6	CF	CDA1141	Clay modeling	0	0	8	4		8
7	PC	CDA1142	Elements of Design – II	0	0	8	4		8

SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CRE DITS	S	TCH
SEMESTER - III								
SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CRE DITS	S	TCH
			THEORY						
1	CF	CDA1201	World of Images and Objects	3	0	0	3		3
2	BS	CDA1202	History of Art	3	0	0	3		3
			THEORY CUM STUDIO						
3	PD	CDA1203	Communication Design	1	0	4	3		5
4	CF	CDA1204	Fundamentals of Animation Design	1	0	4	3		5
5	PD	CDA1205	Graphic Design for Communication	1	0	4	3		5
			STUDIO						
6	PC	CDB1231	Design Studio - III	0	0	8	4		8
			ELECTIVE						
7	PE	CDC125X	Department Elective -I	3	0	0	3		3
SEMESTER - IV								
SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CRE DITS	S	TCH
			THEORY						
1	CF	CDA1216	Multimedia Design Fundamentals	3	0	0	3		3
2	CF	CDA1218	Web Design	3	0	0	3		3
			THEORY CUM STUDIO						
3	CF	CDA1217	Interface and Information Design	1	0	4	3		5
4	PD	CDA1219	2D Animation Techniques	1	0	4	3		5
5	PD	CDA1220	Audio Video Editing	1	0	4	3		5
			STUDIO						
6	PC	CDB1241	Design Studio – IV	0	0	8	4		8
			ELECTIVE						
7	PE	CDC126X	Department Elective -I	1	0	4	3		5
SEMESTER - V								
SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CRE DITS	S	TCH
			THEORY						

SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CREDITS	S	TCH
1	CF	CDB1301	Creative Thinking Process and Methods	3	0	0	3		3
2	PD	CDB1304	Ethics and Human Value	3	0	0	3		3
			THEORY CUM STUDIO						
3	CF	CDB1302	3D Modeling and Texturing	1	0	4	3		5
4	CF	CDB1303	Computer Generated Lighting and Rendering	1	0	4	3		5
			STUDIO						
5	PC	CDB1331	Design Studio - V	0	0	8	4		8
			ELECTIVE						
6	PE	CDC135X	Department Elective -I	1	0	4	3		5
7	PE	CDC135X	Department Elective -II	3	0	0	3		3
			SEMESTER - VI						
SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CREDITS	S	TCH
			THEORY						
1	CF	CDB1316	Industrial Management and Entrepreneurship	3	0	0	3		3
			THEORY CUM STUDIO						
2	CF	CDB1317	Game Design	1	0	4	3		5
3	CF	CDB1318	3D Animation Techniques	1	0	4	3		5
4	PD	CDB1319	Visual Effects & Digital Compositing	1	0	4	3		5
			STUDIO						
5	PC	CDB1341	Design Studio - VI	0	0	8	4		8
			ELECTIVE						
6	PE	CDC136X	Department Elective -I	3	0	0	3		3
7	PE	CDC136X	Department Elective -II	3	0	0	3		3
			SEMESTER - VII						
SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CREDITS	S	TCH
			THEORY						
1	CF	CDB1401	Animation Production Design	3	0	0	3		3
2	PD	CDB1402	New Media and Interaction Design	3	0	0	3		3
			THEORY CUM STUDIO						
3	PD	CDB1403	Design Management and Professional Practice	1	0	4	3		5
			STUDIO						
4	PC	CDB1481	Minor Project	0	0	8	4		8
5	PC	CDB1431	Design Studio – VII	0	0	8	4		8

			SEMESTER - VIII						
SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CRE DITS	S	TCH
			STUDIO						
1	PC	CDB1491	Major Project - Thesis	0	0	30	15		30

LIST OF DEPARTMENTAL ELECTIVES WITH GROUPING - SEMESTER WISE									
SEM	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	CRE DITS	S	TCH
III	DE	CDC1251	Basics of User Interface Design	3	0	0	3		3
III	DE	CDC1252	Basics of User Experience Design	3	0	0	3		3
IV	DE	CDC1261	Ergonomics	3	0	0	3		3
IV	DE	CDC1262	Illustration Techniques	3	0	0	3		3
V	DE	CDC1351	Moving Image Design	3	0	0	3		3
V	DE	CDC1352	Packaging and Printing	3	0	0	3		3
V	DE	CDC1353	Concept of Film making	3	0	0	3		3
V	DE	CDC1354	Brand Management Design	3	0	0	3		3
VI	DE	CDC1361	Game Design and Production Process	3	0	0	3		3
VI	DE	CDC1362	Advanced Illustration Techniques	3	0	0	3		3
VI	DE	CDC1363	Tangible User Interface	3	0	0	3		3
VI	DE	CDC1364	Environmental Graphic Design	3	0	0	3		3

SEMESTER I

COURSE TITLE		COMMUNICATION SKILLS		CREDITS	2
COURSE CODE	**ELA4102**	COURSE CATEGORY	CF	L-T-P-S	2-0-0-0
CIA		50%		ESE	50%
	1.	Enhance the communicative competence with focus on syntax and fluency		PO2, PO6, PO7, PO10	
	2.	Excel in oral and written medium and prepare them for employability		PO1,PO2, PO4, PO5. PO10	
PREREQUISITES					
MODULE - 1 :	**IMPORTANCE OF COMMUNICATION**				**(5)**
	Communication: Importance of Communication; Elements of good individual communication; organizing oneself; different types of communication; Barriers in the path of Communication				
MODULE – 2 **LISTENING SKILLS** **(5)**					
	Listening skills: Listening to conversation and speeches (Formal and Informal) Reading: Techniques of reading, skimming, Scanning, SQ3R technique				
MODULE – 3 **CREATIVE WRITING SKILLS(5)**					
	Creative Writing: Scope of creative writing; Report Writing, Paragraph, Letter Writing (formal and Informal), Memo, Circular, Preparation of Agenda, Minutes of the meeting, Notice, Description of projects and features				
MODULE – 4 **SPEAKING SKILLS** **(5)**					
	Speaking: How to converse with people, how to communicate effectively; Pronunciation drills, Phonetics, vowels, Diphthongs, consonants, Dialogue and Conversational skills, Role play, Telephone etiquette. Interview technique, preparing for interviews (HR questions) Mock Interviews				
MODULE – 5 **DIGITAL COMMUNICATION** **(5)**					
	Impact of internet on communication; communication through computers; voice mail; broadcast messages; e-mail auto response; etc. Video conference; Tele conference				
REFERENCE					
1	Professional Speaking Skills by Aruna Koneru, Oxford University Press, 2017				
2	Krishna Mohan & Meera Banerji: Developing Communication Skills Macmillan India ,2nd edition,2009				
3	K. Ashwathappa: Organizational Behavior, Himalaya Publishing House				

4	Daniel Colman: Emotional Intelligence, Bloomsburry publication India,2010
E.BOOKS	
1	English Language – TN College Text Book - http://www.textbooksonline.tn.nic.in/books/dted/dted1-english.pdf
MOOC	
	https://www.mooc-list.com/course/business-english-basics-coursera

COURSE TITLE	**INTRODUCTION TO DESIGN**			CREDITS	3
COURSE CODE	**CDA1102**	COURSE CATEGORY	CF	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction**				**9**
	Introduction of Design. Arts and Social Sciences. Design as a creative professional career. Interrelationship of Design to Engineering. Inter-relationship of 2D & 3D forms.				
MODULE – 2	**History**				**9**
	Brief history of developments in Designand Technology. Aesthetics, Ergonomic, Scientific and Engineering considerationsin Design.				
MODULE – 3	**Understanding Design**				**6**
	Case studies in Product, Communication, and Environment Designs. Stages in the design processes. Design and indigenous technology.				
MODULE – 4	**Role of Design**				**12**
	Role of Design in creating the future. Status of Design profession in India and worldwide				
MODULE – 5	**PROJECT**				**9**
	Design Project				
REFERENCE					
1	D. Norman, *Design of Everyday Things,* Currency Books, New York,1990.				
2	R. Hollis, *Concise History of Graphic Design,* Thames and Hudson,1994				
3	P. Sparke, *Introduction to Design and Culture in the 20th Century,* Routledge,1986				
4	Visual Intelligence, Donald D. Hoffman,2000				
5	M.N. Horenstein, *Design Concepts for Engineers,* Prentice Hall UK,2002				
MOOC					
	https://www.mooc-list.com/course/introduction-design-thinking-edx				

COURSE TITLE	**EFFECTIVE MASS COMMUNICATION**			CREDITS	3
COURSE CODE	**CDA1103**		PD	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%

PREREQUISITES	
MODULE - 1	**Communication** **6**
	Communication; Nature and Scope of Communication – Sociological and Psychological aspects of Communication – Levels of Communication; Intra-personal, Inter-personal, Group and Mass Communication, Verbal and Non-verbal Communication.
MODULE – 2	**Diffusion Process** **10**
	Diffusion process; One step; Two step, Multi step flow of Information; MassMedia and Society – MassCulture.
MODULE – 3	**Communication Models** **10**
	Communication models; Diffusion of Innovation Model. Communication Theories; Cognitive Dissonance, Normative Theories, Perception and Retention, Uses and Gratification Approach, Cultivation Approach, Marxist and Neo-Marxist Approaches
MODULE – 4	**Mass Communication** **10**
	Characteristics and functions of mass communication. Importance of mass communication.
MODULE – 5	**Mass Media** **9**
	Mass media – press, radio, TV, web and traditional media. Communicating with the masses – Public speaking ascommunication – audience, structure and formality. Group dynamics- Motivation, Persuasion and leadership traits. Using forms of mass communication- Creative and technical presentations in various areas like graphite, photography, PowerPoint presentations, debates and street plays
REFERENCE	
1	Kumar, Kewal J *Mass Communication in India*, Jaico Books, NewDelhi.
2	J.S. Yadava & Pradeep Mathur *Issues in Mass Communication: The Basic Concepts*, Kanishka Publishers, Delhi, 2008
3	Shymali Bhattacharjee., *Media and Mass Communication: An Introduction*, Kanishka Publishers, Delhi,2005.
4	Burgoon, Michael, Frank G Hansaker, Edwin J Dawson (1994), '*Human Communications*' (3rd ed), Sage, NewDelhi
5	Denis McQuail and S. Ven Windall, Longman, Singapore Publications, 1981, '*Communication models for the study of MassCommunication*'
6	Melvin L Defluer and Sandra J Ball, Longman Publications, '*Theories of MassCommunication*'.
MOOC	
	https://www.mooc-list.com/tags/mass-media

COURSE TITLE	**FUNDAMENTALS AND PRINCIPLES OF ART**			CREDITS	3
COURSE CODE	**CDA1104**	COURSE CATEGORY	BS	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					

MODULE - 1 **Elements of Art 9**

	Shape, Form, Texture, Space,

MODULE – 2 **Principles of Art 9**

	Balance, Movement, Emphasis, Variety, Unity, Pattern, Art Media and Techniques, Drawing and Painting-Sculpture, Architecture, Pottery, Weaving, body painting/printing and adornments *(clothing, tattoo and jewellery)*, Printmaking and Photography, Crafts, Graphic Design and Computer Art. The styles and forms of Art *(paintings sculpture and appliedart).*

MODULE – 3 **Two-Dimensional Art6**

	Influences of Western Art such as Impressionism, Expressionism, Cubism, Surrealism, Abstract Expressionism, Realism,Popular(Pop)Art,Optical(Op)Art, Minimalism, Photo-realism, ConceptualArt.

MODULE – 4 **Three-Dimensional Art12**

	Sculptures, statues, installations, kinetic art and performance art.

MODULE – 5 **Aesthetic theories9**

	Realism, emotionalism, formalism, feminism, andconstructivism.

REFERENCE	
1	*Art Fundamentals: Theory and Practice* by Otto G. Ocvirk,Robert Stinson, Philip R. Wigg,Robert O. Bone, David L.Cayton
2	*The Elements of Art and Composition* by Brenda Ellis. Publisher: Artistic PursuitsInc. Comb-binding, 92 pages, 68 lessons, 186 illustrations. ISBN: 978-1-939394-08-8, January 1, 2013, 3rdEdition
3	Fred, S. Kleiner, "*Gardener's Art through Ages*", Harcourt College Publishers,2001.
4	Bernard S. Myers, *Understanding the Arts*, Holt, Rinehart and Winston Inc,1964
5	Edith Thomory, "*A History of Fine Arts in India and the West"*, Orient Longman Publisher's Pvt.Ltd,1982

MOOC	
	https://www.mooc-list.com/tags/basic-art

COURSE TITLE	**COMPUTER FUNDAMENTALS AND OPERATION**			CREDITS	3
COURSE CODE	**CDA1105**	COURSE CATEGORY	PD	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Definition and History of computer**				**12**
	Definition of Electronic Computer, History, Generations, Characteristic and Application of Computers, Classification of Computers, Computer Languages, Generation of Languages, Algorithm, Flow charts.				
MODULE – 2	**Components of computer system**,9				
	Memory – different types, functions, concept of I/O devices.Types of software, Role of OperatingSystem				
MODULE – 3	**Number system** -				**6**
	Decimal, binary, octal, hexadecimal number systems and conversion from one system to another, Coding System -ASCII, EBCDIC.				
MODULE – 4	**Fundamentals of networking**12				
	Fundamentals of networking – network topology, concept of LAN, WAN, MAN, network devices – NIC, hub, bridge, switch, repeaters, gateway, modem, transmission media				
MODULE – 5	**Basics of Internet and Web technology**9				
	Internet and World Wide Web: Hypertext Markup Language, DHTML,WWW, Gopher, FTP, Telnet, Web Browsers, Net Surfing, Search Engines, Email, Benefits and impact of e-commerce,				
REFERENCE					
1	*Computer Fundamentals*, Pradeep K Sinha, PritiSinha				
2	Rajaraman, *Introduction to Computers*,PHI				
3	*Learning Word for Windows*: RajibMathur				
4	*ABC of Office*:Han				
MOOC					
	https://www.mooc-list.com/course/fundamentals-computer-architecture-coursera				

COURSE TITLE	**FREEHAND DRAWING**			CREDITS	4
COURSE CODE	**CDA1131**	COURSE CATEGORY	PD	L-T-P-S	0-0-8-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Drawing Man- Made Objects**				**12**
	Drawing from cubes, cones, cylindrical object, casts, drapery, and still life groups etc. Nature drawing from human figures – mainly based on general form and gesture – Head study. Drawing from Memory – To develop the sense of observation and the capacitytoretainandrecallimagesandtheir co-ordinations**.**				
MODULE – 2	**Nature Drawing**	**9**			

	Nature drawing to develop the sense of structure. Study from any kind of forms in nature-pods, shells, butterflies, flowers, plants, insects, minerals bones etc. To understand how these forms achieve their structural unity through adherence to principles with physical nature of the material beingobserved and studied through various rendering media and techniquesin various light conditions.
MODULE – 3**Introduction to Elements of Perspective6**	
	Study of basic solids, plan and elevation main aspects of parallel and 2 angular perspective.
MODULE – 4**Calligraphy12**	
	Basic discipline of beautiful handwriting, sense of letter form – Simultaneous judgment of the composition of the letters – spacing – organization – intuitive and logicalplanningofwriting–developmentof style.ACo-ordinateseriesofassignmentsof script writing with different types of traditional and modern tools. Studentsbe exposed to Calligraphic examples ofvarious traditional scripts.
MODULE – 5**Outdoor sketching9**	
	Rapid sketching from any objects from placeslike–streets,market,stationsetc.and also from Museums and Zoo etc. Students should be exposed to such drawing madeby master artists of different times.
REFERENCE	
1	Drawing By Daniel MarcusMendelowitz
2	*Dynamic Figure Drawing* Watson-Guptill Publications,1996
3	*Drawing: Space, Form, and Expression* Wayne Enstice, MelodyPeters
4	*Drawing distinctions: the varieties of graphic expression* By PatrickMaynard
5	*Basic figure drawing techniques* By GregAlbert
MOOC	
	https://www.mooc-list.com/tags/freehand-drawing

COURSE TITLE	**ELEMENTS OF DESIGN – I**		CREDITS	4
COURSE CODE	**CDA1132**	COURSE CATEGORY	PD	L-T-P-S	0-0-8-0
CIA	50%		ESE	50%
PREREQUISITES				
MODULE - 1	**Project -1**			**15**
	Project based on following contents: Implementation of design or art elements & principle on drawing.			
MODULE – 2**Project -2**	15			
	Project based on following contents: Graphic Design and Computer Art. The styles and forms of Art *(paintings, sculpture and applied art).* Basic concept of composition, Natural Study Perspective knowledge, Outdoor study, Calligraphy Life drawing etc.			
MODULE – 3**Project -315**				
	Project based on following contents: Doodle Design, Handmade drawing or Sketches implement on digital print making techniquesetc.			
MODULE – 4**Final Project**	15			
	Final design based project report			

COURSE TITLE	**INTRODUCTION TO MULTIMEDIA COMMUNICATIONS**			CREDITS	3
COURSE CODE	**CDA1116**	COURSE CATEGORY	CF	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1**Introduction**		9			
	Introduction to Multimedia; Definition, History and Applications of Multimedia; Characteristics of Multimedia; Components of Multimedia System; Static and Continuous Media				
MODULE – 2**Analog and Digital Signals10**					
	Analog and Digital Signals; Analog toDigital and Digital to Analog Conversion				
MODULE – 3**Data Compression10**					
	Data Compression Types of Data Compression; Introductionto various Compression Techniques – Shannon Fano, Huffman Coding, LZW Coding, Run-Length Encoding,JPEG, MPEG.				
MODULE – 4**Elements of Multimedia10**					
	Elements of Multimedia Understanding the Elements of Multimedia – Text,StillImages,Graphics,Audio,Video andAnimation. Introduction to VirtualReality;VR- Systems; VR Tools.				
MODULE – 5**The WWW**		9			
	The WWW - Overview of the Internet; Web Browsers, Internet Services- URL, Dial-ups, ISDN, E- mail, Chat, Cross-Platform Features, Audio & Video Streaming; Internet Applications – Audio & Video conferencing, Internet telephony, World Wide Web, Computer Networks.				
REFERENCE					
1	Tay Vaughan, *Multimedia: Making It Work*, Ninth Edition, Tata Mc-Graw Hill Education,2014.				
2	Jennifer Coleman Dowling, *Multimedia Demystified*, First Edition, Mc-Graw Hill,2012				
3	Patrick Buckley, Frederic Lardinois and DODOcase, *Virtual Reality Beginner's Guide + Google Cardboard Inspired VR Viewer*, Regan Arts, 2014				
MOOC					
	https://www.mooc-list.com/tags/social-media				

COURSE TITLE	**INTRODUCTION TO PHOTOGRAPHY AND VIDEOGRAPHY**			CREDITS	3
COURSE CODE	**CDA1117**	COURSE CATEGORY	PD	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%

PREREQUISITES	

MODULE - 1	**Basics of Photography**	**9**
	Introduction to Photography, History of camera, Types of camera, Principles of photography, Rule of Third, Golden Ratio	

MODULE – 2	**Parts of Still Camera**	**10**
	Aperture, shutter speed, lens, filters and flash, Camera Types, DSLR, Crop lenses, Modern equipments	

MODULE – 3	**Basics of Videography**	**10**
	Basic components of video camera, Basic shots and shot composition, Camera angles and movements, Camera mountings, camera control unit, Focus &Defocus.	

MODULE – 4	**Lighting for Photography and Videography**	**10**
	Importance of lighting in photography & Videography, Lighting equipment and control, Lighting techniques and problems.	

MODULE – 5	**Theory of Colours**	**9**
	Origin of Colour, Colour Temperature, White Balance: Process and Need.	

REFERENCE	
1	Wells, Liz, *Photography*, ISBN978-0-415-46087-3
2	Millerson Gerold, *Television Production*, FocalPress
3	Zettl, Herbert, *Handbook of Television Production*, Cengage Learning India Private Limited, Alps Building Ist Floor, 56-Janpath, New Delhi-110001, Reprint 2008
4	Belavady Vasuky, *Video Production*, OxfordPublication
5	Kobre, Kenneth, *Photo journalism*, Focal Press, IBSN978-0-7506-8593-1
MOOC	
	https://www.mooc-list.com/tags/photography
	https://www.mooc-list.com/tags/video

COURSE TITLE	**STORYBOARDING AND SCRIPT WRITING**			CREDITS	3
COURSE CODE	**CDA1118**		PD	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%

PREREQUISITES	

MODULE - 1	**Layout of the story**	**9**
	Character design, Situation, Background Building of the story, Insurmountable problems, Gradual or sudden crumbling, Types of screenplay- Proposalscript, shooting script, post-production script,	

MODULE – 2	**Story Content for a Screenplay**	**10**
	High concept, Originality and familiarity, Subplots, Character growth, Theme,	

	Identification & Motivation, Obstacle & Courage, Familiarity of setting, Film category & Cost,	
MODULE – 3 **Developing a Screenplay**		10
	Developing a Hero & other characters, Creating sympathy or hatred for the character, Make the character likeable	
MODULE – 4 **Structure of Screenplay**		10
	Three act - Individual scene, Fade in and Fade out, Cut to.	
MODULE – 5 **Introduction to Storyboard**		9
	Parts of storyboard - Advantages of storyboarding - Interactive Storyboarding- Designing of Storyboard exercise	
REFERENCE		
1	Chawdhary, Nirmal Kumar, *How to write film screenplay*, Kanishka publishers, distributers, New Delhi- 110002, 2009,ISBN978-81-8457-112-7.	
2	Rubenstein, Paul Max, Martin Jo Maloney, *Writing For the Media, Film Television, Video And Radio*, Prentive Hall, Englewood Clifts, New Jersey 07632, 1988, ISBN:0-13-971508-7-01.	
3	Whitaker, Harold, John Halas, Updated by Tom Sito, *Timing for Animation*, Focal Press Elsevier, New York & Singapore, 2009 ISBN:978-0-240-52160-2	
MOOC		
	https://www.mooc-list.com/course/powerful-tools-teaching-and-learning-digital-storytelling-coursera?page=5	

COURSE TITLE	**INTRODUCTION TO COMPUTER PROGRAMMING**		CREDITS	3
COURSE CODE	**CDB1119**	COURSE CATEGORY	PD	L-T-P-S	1-0-4-0
CIA	20%		ESE	80%

PREREQUISITES		
MODULE - 1	**Fundamentals of Computer**	12
	History of Computer, Generation of Computer, Classification of Computers, Basic Anatomy of Computer System, Primary & Secondary Memory, Processing Unit, Input & Output devices. Binary & Allied number systems representation of signed and unsigned numbers,BCD, ASCII, Binary. Arithmetic & logic gates. Assembly language,Highlevellanguage,compilerand assembler (basicconcepts)	
	Basicconceptsofoperatingsystemslike MS DOS, MS WINDOW, UNIX, Algorithm & flowchart.	
MODULE – 2 **Structure**		9
	Basic of structure, structures and functions, arrays of structures, bit fields, formatted and unformatted files.The C character set, identifiers and keywords, data type & sizes, variable names, declaration, statements	
MODULE – 3 **Operators and Expressions**		6
	Arithmetic operators, relational and logical operators, type conversion, increment and decrement operators, bitwise operators, assignment operators and expressions, precedence and order of evaluation.InputandOutput:Standardinputandoutput, formatted output .	
MODULE – 4 **Flow of Control**		12
	Statement and blocks, if-else, switch, loops	

	– while, for, do while, break and continue, goto and labels. One dimensional arrays, pointers and functions, multidimensional arrays.
MODULE – 5**Fundamentals and Program Structure9**	
	Basic of functions, function types,functions returning values, functions not returning values, auto, external, static and register variables, scope rules, recursion,function prototypes, C preprocessor, commandline arguments
REFERENCE	
1	Kerninghan, B.W. *The Elements of ProgrammingStyle*.
2	Yourdon, E. *Techniques of Program Structures andDesign*.
3	Schied F.S. *Theory and Problems of Computers andProgramming*.
4	Rajaraman V. *Fundamental ofComputers*.
5	M.M. Oka. *Computer Fundamentals*,EPH
MOOC	
	https://www.mooc-list.com/course/cs1011x-introduction-computer-programming-part-1-edx

COURSE TITLE	**INTRODUCTION TO TYPOGRAPHY**			CREDITS	3
COURSE CODE	**CDA1120**		PD	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction**				**9**
	Introduction to elements of graphic design - Text and image, grids and layout, composition, form and function, figure and groundphenomenon.				
MODULE – 2**Gestalt Laws** **10**					
	Gestalt Laws – Theory, implications, applications and ideas.				
MODULE – 3**Typographic parameters 10**					
	Typographic parameters: x-height, ascenders,descenders,kerning,trackingand leading. Variations of body text, headlines and display text. Grid in graphicdesign.				
MODULE – 4**Fonts and Characters10**					
	Typographicfontsand theircharacters.				
MODULE – 5**Printing Technology** **9**					
	Introduction to Printing Technology. Introduction to Digital MediaTechnology.				
REFERENCE					
1	Swan, *The new Graphic Design School*, VNR,1997				
2	R. Carter and P. B. Meggs, *Typographic Design: Form and Communication*, John Wiley & Sons, 2000.				
3	A. Darley, *Visual Degital Culture*, Routledge,2000.				
4	R. Hollis, *Concise History of Graphic Design*, Thames & Hudson,1994.				
5	P. B. Meggs, *Type and Image: the language of graphic Design*, VNR,1992.				
MOOC					
	https://www.mooc-list.com/course/introduction-typography-coursera				

COURSE TITLE	**CLAY MODELING**			CREDITS	4
COURSE CODE	**CDA1141**		CF	L-T-P-S	0-0-8-0
CIA	80%			ESE	20%
PREREQUISITES					
MODULE - 1	**Study of Two dimensional Space**				**9**
	A Co-ordinated series and basic design problems with analytical approach Carved, Modeled, Perforated, Mobile				
MODULE – 2	**Adding Dimensions**				**10**
	Dimensional organizational possibilities ,Various methods of joining such as interlocking, pastingetc.				
MODULE – 3	**Knowledge of 3D**	**10**			
	Paper, Card board, Wood block.				
MODULE – 4	**Clay Modeling**	**10**			
	Wire, Clay, Plasticize, Plaster of Parries, Metal sheets, Plastic, Foam, Thermocol, String, Gums and adhesives, Wax, Found objects, etc.				
MODULE – 5	**Coloring**	9			
	Color introduction, Pigment, fasteners, various stages of experiments.				
REFERENCE					
1	*Clay: the history and evolution of humankind's relationship with Earth's most primal element*, Suzanne Staubach.				
2	*Clay: a studio handbook*, VincePitelka				
3	*The Figure in Clay: Contemporary Sculpting Techniques by Master Artists,* By Suzanne J. E. Tourtillott.				
4	*Clay Tobacco Pipes*, By Eric G.Ayto.				

COURSE TITLE	**ELEMENTS OF DESIGN – II**			CREDITS	4
COURSE CODE	**CDA1142**	COURSE CATEGORY	PC	L-T-P-S	0-0-8-0
CIA	50%			ESE	50%
PREREQUISITES					
MODULE - 1	**Project -1**				**30**
	Project based on following contents: Color and Form ,Application of Elements of graphic design - Text and image, grids and layout, composition, , figure and groundphenomenon.				
MODULE – 2	**Project -2**	**30**			
	Project based on Form development :Relation betweenform and function				

SEMESTER III

COURSE TITLE	WORLD OF IMAGES AND OBJECTS			CREDITS	3
COURSE CODE	**CDA1201**		CF	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction**				**9**
	Understanding ofimages Study of types of images, meaning/expression ofimages. Color representation inimages. Object types – 2D/3D figure study,form studyetc.				
MODULE – 2 **Objects 10**					
	Understanding shape, form, color in objects. Brief history on Art, Images and Objects.				
MODULE – 3 **Experimenting images 10**					
	Study of photograph, painting, sketch etc. Experimenting with images andobjects – photographic image, objects.				
MODULE – 4 **Virtual images10**					
	Images and objects in digital and virtual world				
MODULE – 5 **Editing Technique9**					
	Image editing techniques , Introduction to editing software , communication through images, Info graphics and object design				
REFERENCE					
1	*The Designed World: Images, Objects, Environments*- By Richard Buchanan (Editor), Dennis Doordan (Editor), Victor Margolin				
2	*Images, Objects, and Ideas* - by Barry Nemett (Author), ISBN-13: 978-0697274595				
MOOC					
	https://www.mooc-list.com/instructor/peter-corke				

COURSE TITLE	HISTORY OF ART			CREDITS	3
COURSE CODE	**CDA1202**		BS	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction to Art history**				**9**
	Importance of "Art History" as a discipline while studying Visual Arts,				
MODULE – 2 **Pre & Proto Historic Period 10**					
	Prehistoric Cave paintings from Bhopal, Harappa & Mohenjedaro Civilization (townplanning, sculpture-Beard man, dancing girl, seals and script), Rock cut architecture, Architecture- Ajanta, Brahminical cave, Architecture - Ellora,				
MODULE – 3 **Indian Artist & Works10**					
	Gagendranath Tagore, Jamini Roy, Rabindranath Tagore, Amrita Sher Gill, Ramkinker Vaij etc				
MODULE – 4 **Western artists & Works10**					
	Michelangelo, Leonardo da Vinci, Vincent van Gogh, Paul Gauguin, Georges Seurat, Salvador Dali, Pablo Picasso etc.				

MODULE – 5 **Art criticism**			9
	Critical analysis of evolution and style of art through different time zones.		
REFERENCE			
1	*Typology* - G.M. Rege,Bombay.		
2	*Kalatmak Lykhai*, published byD.A.V.P.		
3	*Figure Painting in Water Colour*, Charles Reid Watson, GuptillPublication		
MOOC			
	https://www.mooc-list.com/course/live-history-art-artists-animators-and-gamers-coursera		

COURSE TITLE	**COMMUNICATION DESIGN**		CREDITS	3
COURSE CODE	**CDA1203**	COURSE CATEGORY	PD	L-T-P-S	1-0-4-0
CIA	20%		ESE	80%
PREREQUISITES				
MODULE - 1	**Project -1**			**10**
	Project based on following contents: Understanding design as applied to solving communication problems within the context of oursociety.			
MODULE – 2 **Project -2**	10			
	Project based on following contents: Structuring information in terms of classifications,hierarchy,order, sequence, etc.			
MODULE – 2	**Project -3**	10		
	Project based on following contents: Design of magazine, textbook, picture books, Children's books, exhibition, website, e-book, etc.			
REFERENCE				
1	Meggs, Phillip B.; *Type and Image: the language of graphic Design*, VNR,1992.			
2	R. Carter, D. B. Meg Phillip, Typographic Design: Form and Communication, John Wiley & Sons, 2000.			
3	Kimberly Elam , *Grid Systems: Principles of Organizing Type (Design Briefs)*, Princeton Architectural Press,2004.			
4	Erik Spiekermann, E.M Ginger; *Stop Stealing Sheep & Find Out How Type Works*, Second Edition, Adobe Press; 2 edition,2002.			
MOOC				
	https://www.mooc-list.com/course/design-thinking-ideation-iteration-and-communication-edx			

COURSE TITLE	**FUNDAMENTALS OF ANIMATION DESIGN**		CREDITS	3
COURSE CODE	**CDA1204**	CF	L-T-P-S	1-0-4-0
CIA	20%		ESE	80%
PREREQUISITES				
MODULE - 1	**Introduction to Animation**			**9**
	Introduction to Animation, Animation History, Animation techniques: Traditional animation practices and their importance and relation to contemporary animation techniques. Introduction to specialized areas: Cell-animation, character animation, clay animation and puppet animation, Principles of Animation, Production Pipeline.			
MODULE – 2	**Preproduction**			**10**
	Introduction to Pre-Production, Scripting, Storyboarding, Layout, Character Designing, Props Designing, Background Designing, Camera Angles, Frame Length.			
MODULE – 3	**Visual Culture**			**10**
	Importance of visual culture in the study of animation. Applying visual technology for animation.			
MODULE – 4	**Animation Production**			**10**
	Animation production: techniques for production and analyzing 2D and 3D animation. 3D Modeling, Texturing, Rigging, 3D Animation, CG Lighting, Visual Effects			
MODULE – 5	**Post production**			**9**
	Post Production processes, Importance of post-production, Compositing, and Rendering.			
REFERENCE				
1	K. Laybourne, *The animation book: a complete guide to animated filmmaking, from filp-books to sound cartoons*, Revised Edition, Three Rivers Press,1998			
2	S. Roberts, *Character Animation in 3D: Use of traditional drawing techniques toproduce stunning CGI animation*, Focal Press,2004			
3	*Beginner's Guide to Animation* – by Mark Murphy; Watson-GuptillPublication.			
4	O. Johnston, and F. Thomas, *The Illusion of Life: Disney Animation*, Walter FosterPublishing.			
5	W. T. Foster, *Cartooning: Animation Basics*, Revised Edition, Walter FosterPublishing.			
6	M. Nicholas, *Introduction to Visual Culture*, Routledge, London			
MOOC				
	https://www.mooc-list.com/tags/animation			

COURSE TITLE	**GRAPHIC DESIGN FOR COMMUNICATION**		CREDITS	3
COURSE CODE	**CDA1205**	CF	L-T-P-S	1-0-4-0
CIA	20%		ESE	80%
PREREQUISITES				
MODULE - 1	**Communication**			**9**
	Communicating ideas and concepts using various means of drawing and illustration techniques.			
MODULE – 2	**Media**			**10**
	Creation of artworks for reproduction using tools of new media. Basic visual			

	compositions using text and image for both page and screen.
MODULE – 3**Printing** 10	
	Traditional vs. Digital printing, Lithography, Gravure, Letter press, Screen printing, Digital printing. Dot gain and choice of papers for different quality of printing. Paper sizes and theirformats
MODULE – 4**Desktop Publication** 10	
	Desk Top Publication production, color separation, positives and plate making, exposure to pre-press activities in off-set printing.
MODULE – 5 **Project 9**	
	Designofstationary,visiting cards, letter heads, etc., booklets or label designs for smallproducts.
REFERENCE	
1	B. Gordon and M. Gordon, *Complete Guide to Digital Graphic Design*, Thames &Hudson, 2002.
2	A. Pipes, *Production for Graphic Designers*, Laurence King Publication,
3	T. Porter and S. Goodman, *Manual of Graphic Techniques, Vols. 1, 3, 4*, Architectural Press,
4	A. Glossman, *Printing Fundamentals*, Tappi Press,
5	T. Porter, *Design Drawing techniques for architects, graphic designers and artists*, Architectural Press, Oxford.
MOOC	
	https://www.mooc-list.com/tags/graphic-design

COURSE TITLE	**DESIGN STUDIO – III**		CREDITS	4
COURSE CODE	**CDB1231**	COURSE CATEGORY	PC	L-T-P-S	0-0-8-0
CIA	50%		ESE	50%
PREREQUISITES				
MODULE - 1	**Project -1 30**			
	Project based on following contents: Implementation of design or art elements, principle, drawing techniques,			
MODULE – 2**Project -2 30**				
	Project based on following contents: Communicating ideas and concepts using various means of drawing and illustration techniques.			

SEMESTER IV

COURSE TITLE	**MULTIMEDIA DESIGN FUNDAMENTALS**		CREDITS	3
COURSE CODE	**CDA1216**	CF	L-T-P-S	3-0-0-0
CIA	20%		ESE	80%
PREREQUISITES				
MODULE - 1	**Introduction**			**9**
	Need for Multimedia, Present and Future Market Potential.			
MODULE – 2 **Dimensions**		**10**		
	Dimensions of Multimedia – Functionality, Aesthetics, Content and Usability. Multimedia Product Possibilities			
MODULE – 3 **Authoring**		**10**		
	Understanding Authoring Tools – Types of Authoring Tools, Important Features.			
MODULE – 4 **Skillsets**	**10**			
	Multimedia Skills, Building an Efficient Team, Role of Multimedia Producer,Writer, Interface Designers, Audio and VideoSpecialist, MultimediaProgrammer			
MODULE – 5 **Multimedia Project**	9			
	Stages of creating a Multimedia Project – Planning and Costing, Designing and Producing, Design Aesthetics - Interface Design, Graphical User Interface, Target Audience, Social Media, Designing for the World Wide Web, Testing, Delivery			
REFERENCE				
1	Vic Costello with Susan A. Youngblood and Norman E. Youngblood, *Multimedia Foundations: Core Concepts for Digital Design*, Focal Press,2013.			
2	Tay Vaughan, *Multimedia: Making It Work*, Ninth Edition, Mc-Graw Hill Education,2014.			
3	Jennifer Coleman Dowling, *Multimedia Demystified*, First Edition, Mc-Graw Hill,2012.			
4	Gary Olsen, *Getting Started in Multimedia Design*, First Edition, North Light Books,1997.			
MOOC				
	https://www.mooc-list.com/course/creative-programming-digital-media-apps-coursera			

COURSE TITLE	INTERFACE AND INFORMATION DESIGN			CREDITS	3
COURSE CODE	CDA1217		CF	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Interface Media**				**9**
	Overview of Interface and Instructional considerations in interactive design. Case studies presentations of good websites and multimedia.				
MODULE – 2 **Information Architecture**					**10**
	Concepts of information architecture and user study, identification of information paths and how to integrate features and content for effective informationnavigation.				
MODULE – 3 **Information Design**		**10**			
	Storyboarding and identification of information hierarchies in information design systems. The use of metaphor in information design				
MODULE – 4 **Domains**		**10**			
	Development of an interface depending on the domains of learning as well as levels of learning, Creating design strategy documents for small learning modules. Understanding interactivity in multimedia.				
MODULE – 5 **Project**		**9**			
	Developing a CD for educational purposes or for a social cause.				
REFERENCE					
1	P. Mijksenaar and P. Wetendrop, *Open Here– The art of Instructional Design,* Thames and Hudson, 1999.				
2	J. Villamil and L. Molina, *Multimedia: production planning and delivery*, Prentice Hall, 1998.				
3	P. Mijksenaar, *Visual Information–Introduction to Information Design*, Princeton Architectural Press,1998.				
4	M. Woolman, *Type in motion, Innovation in Digital Information Graphics*, Thames & Hudson, 2002				
5	N. V. Luppa, *Designing Interactive Digital Media*, Focal Press,1998				
MOOC					
	https://www.mooc-list.com/tags/user-interface-design				

COURSE TITLE	WEB DESIGN			CREDITS	3
COURSE CODE	CDA1218		CF	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Web Design**				**9**
	History of Web and its background				
MODULE – 2 **Web Tools**		**10**			
	Web design tools and techniques – Photoshop, Dreamweaver, Flash, FrontPage and other important tools and software, Web authoring.				
MODULE – 3 **Web Technology**		**10**			

	Web design technology – Introduction to HTML, CSS, Java, PHP
MODULE – 4**Search Engine** 10	
	Word Press tools, SEO technology, Search engine technology.
MODULE – 5 **Web design for Screens**9	
	Web design for mobile , Digital pad, Monitor
REFERENCE	
1	*Using the internet* (4th Ed.), Prentice Hall, New Delhi,2000
2	*Building a website*, Tim Worsley, Orling Kindersely, New Delhi,2000.
3	*Web Designing Fundamentals*, Daniel Gray, Dreamtech Press, New Delhi,2000.
4	*How the Internet works*, Millennium Edition by PrestonGralla.
5	*Adaptive Web Design*, 2nd Edition By Aaron Gustafson, New Riders, December2015.
MOOC	
	https://www.mooc-list.com/tags/web-design

COURSE TITLE	**2D ANIMATION TECHNIQUES**		CREDITS	3
COURSE CODE	**CDA1219**	PD	L-T-P-S	1-0-4-0
CIA	20%		ESE	80%
PREREQUISITES				
MODULE - 1	**Introduction**			**6**
	Origin and development of Animation, Early Animation- Victorian, Zoetrope, The magic lantern, Thaumatrope, Flip Book, Praxinoscope, Traditional Animation, Feature Length Film, Stop motion, Computer Animation			
MODULE – 2**Future of Animation**				**10**
	Animated Humans, Cell Shaded Animation, Principle of Animation			
MODULE – 3**Process of Animation** 10				
	Synopsis writing, Budgeting, Developing a crew.			
MODULE – 4**Pre-production**10				
	Story Writing, Script /dialogue Writing, Screenplay, Model sheet-Character designs, Storyboard.			
MODULE – 5 **Production**9				
	Sound mixing, Special Effects, Color Corrections, Rendering, Exercise on Story, Storyboard and Screenplay Writing.			
REFERENCE				
1	*History of Animation*- Wikipedia, the free encyclopaedia 6-2-2010 p1-15			
2	Thomas, Frank and Ollie Johnston, *The Illusion of life Disney Animation*, Walt Disney production, New York, NY 10011, Revised Edition of Disney Animation, Popular Edition .			
3	*Principle of Traditional Animation applied to 3D computer Animation*" pixer son Rofael California In ACM Computer Graphics (21) 4th July 1987Rubenstein, Paul Max, Writing for Media, Prentice Hall, Englewood Cliffs, New Jersey 07632, 1988. ISBN 0- 13- 971508-8			
MOOC				
	https://www.mooc-list.com/tags/2d			

COURSE TITLE	**AUDIO VIDEO EDITING**		CREDITS	3
COURSE CODE	**CDA1220**	PD	L-T-P-S	3-0-0-0
CIA	20%		ESE	80%

PREREQUISITES	
MODULE - 1	**Introduction** 6
	Basic shots and their composition, Various camera movements and angles, Planning andproductionofprogramsinstudio,Single and multi-camera shooting, Shooting an interview.
MODULE – 2**Audio Editing** 6	
	Creating time line - cut, fade and mix, Introduction to editing tools, Applying effectstosound,Workingwithaudioediting software.
MODULE – 3**Video Editing** 6	
	Making edit decisions, Creating a time line, Maintoolsofediting,Basicstransitions:cut, dissolve, wipe and fade, Working onnon- linear editing software.
MODULE – 4**Advanced Editing Techniques**6	
	Audio mixing with visuals, Special audio- video effects, Video titling and graphics, Rendering and authoring, Editing montage and promos.
MODULE – 5 **Sound** 6	
	Properties of sound- Bass, Timber, Treble, Pitch, Tempo. Sound Aesthetics. Noise- Echo, Reverb and Distortion Sound Effect- Music & Special effects, Basics of Sound Recording Types of Sound- Mono, Stereo, Surround Concept of DolbySurround Sound.
REFERENCE	
1	Talbot, Michael -Smith, Sound engineering explained, Focal Press,2011.
2	Nisbett, Alec, The sound studio: audio techniques for radio, television, filmand recording, Focal Press,2003. Mott, Robert L., Sound effects: radio, TV, and film, Focal Press,1990.
3	Sonnenschein, David, Sound design: the expressive power of music, voice, and sound effects in cinema, Michael Wiese Productions,2001.
4	Viers, Ric, The Sound Effects Bible: How to Create and Record Hollywood Style Sound Effects, Michael Wiese Productions,2008.
5	Sergi, Gianluca, The Dolby era: film sound in contemporary Hollywood, Manchester University Press, 2004 - Altman, Rick, Sound theory, sound practice, Routledge,1992.
MOOC	
	https://www.mooc-list.com/tags/video-editing

COURSE TITLE	**DESIGN STUDIO – IV**			CREDITS	4
COURSE CODE	**CDB1241**	COURSE CATEGORY	PC	L-T-P-S	0-0-8-0
CIA	50%			ESE	50%
PREREQUISITES					
MODULE - 1	**Project -1**				**20**
	Project based on following contents: Interface and Information design, Developing a CD for educational purposes or for a social cause				
MODULE – 2	**Project -2**	**20**			
	Project based on following contents: Traditional Animation, Stop motion, Clay Animation, Paper cut animation.				
MODULE – 3	**Project -3**	**20**			
	Project based on following contents: 2D Character and background design, 2D digital animation concept.				

**Industrial Training Phase – I
(During summer break tentatively in the month of MAY - JUNE)

SEMESTER V

COURSE TITLE	**CREATIVE THINKING PROCESS AND METHODS**			CREDITS	3
COURSE CODE	**CDB1301**		CF	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction**				**6**
	Cognitive issues in creative thinking; Neurobiological studies of human brain lateralization with respect to creative thinking phenomena				
MODULE – 2	**Management**				**10**
	Introduction to knowledge engineering and management, Future casting; Case Studies; Issues in Intellectual Property Rights				
MODULE – 3	**Design Thinking**				**10**
	Modelling of Design Thinking and Tacit knowledge representation; Fuzzy thinking, vertical thinking, lateral thinking				
MODULE – 4	**Issues in creativity**				**10**
	Management issues in creativity and innovation; group versus individual creativity.				
MODULE – 5	**Creativity Tools and techniques**				**9**
	Creativity techniques and tools; Brain storming, Hypnologic imaginary, TRIZ method, Morphological analysis of ideas. Role of creativity in Innovation and Invention; Comparative studies ofcreativity in the Arts, Sciences, Engineering and Design.				
REFERENCE					
1	M. Runio and S. Pritzker (eds.)*, Encyclopedia of Creativity,* Academic Press,1999.				
2	G. Schreiber, H. Akkermans, A. Anjewierden, R. de Hoog, N. Shadbolt, W. Van de Velde and B. Wielinga, *Knowledge Engineering and Management*, MIT Universities Press India Ltd, 2000.				
3	E. De Bono, *Serious Creativity*, INDUS Harper Collins Publishers India,1992.				
4	D. Morey, M. Maybury and B. Thuraisingham, *Knowledge Management*, Universities Press MIT, 2000				
5	T. Proctor, *The essence of Management Creativity*, PHI, New Delhi,2002.				
6	H. Petroski, *Invention by Design*, Universities Press (India) Ltd.,2000.				
7	M. French, *Invention and Evolution – Design in Nature and engineering*, Cambridge University Press,1994.				
MOOC					
	https://www.mooc-list.com/tags/creative-thinking				

COURSE TITLE	**3D MODELING AND TEXTURING**			CREDITS	3
COURSE CODE	**CDB1302**		CF	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction to 3D**				**6**
	Basic 3D transforms translation, rotation, scaling.				
MODULE – 2	**Basic Modelling**			**10**	
	Concepts of Modeling with Subdivision Surfaces, Modeling and a Character with Polygon & NURBS: NURBS Topology, Tools & Methods, Modeling with Profile Curves, Designing and Modeling a Character with Polygon & NURBS.				
MODULE – 3	**Modeling Tools**	**10**			
	Modeling with Polygon Tools, Using Image Planes, Block Modeling, Sculpting the Character, Groups and Hierarchies.				
MODULE – 4	**Designing a Humanoid and Modeling the Head**		**10**		
	Human Anatomy for Modelers, Using Distortions for Artistic Purposes, Methods and Tools.				
MODULE – 5	**Texturing**	**9**			
	Shading textures, Colour, texture and surface styles. Hyper shade, UVKnowledge, Create UVs, UVs layout tools, Projection UVs map, Utilizes the UV texture, adding texture mapping on any objecting and character.				
REFERENCE					
1	Murdock, Kelly C., *3ds Max 7 Bible*, Wiley Dreamtech India Pvt. Ltd. New Delhi, 2005, ISBN: 81-265-0597-4.				
2	Kulagin, Boris, Dmitry Morozou, *3Ds Max & Animation with Character Studio 4 and Plug- Ins*, Firewall Media, New Delhi, 2006, ISBN:81-7008-820-8				
3	Kulagin, Boris, *3ds Max 8, From Modeling to Animation*, BPB Publications, B-14, Connaught Place, New Delhi-110001, 2007, ISBN:81-8333-201-3.				
MOOC					
	https://www.mooc-list.com/tags/3d-modeling				

COURSE TITLE	**COMPUTER GENERATED LIGHTING AND RENDERING**			CREDITS	3
COURSE CODE	**CDB1303**		CF	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					

MODULE - 1	**Introduction**	**9**
	Understanding natural lighting and shadow formations; Colour Theory; Properties of Light.	
MODULE – 2 **Lighting Design**		**10**
	Fundamentals of Lighting Design; Direct and Indirect Illumination; 3-point Lighting; Types of Lights and their attributes in a 3D software.	
MODULE – 3 **Tools and Techniques**	**10**	
	Indoor and Outdoor Lighting Techniques; Depth Map and Raytrace Shadows.	
MODULE – 4 **Rendering Techniques**		**10**
	Basic Rendering Techniques; Rendering in Layers; Lighting Passes; Rendering in Passes; VirtualCamerasandDepthofField; Pre-compositing	
MODULE – 5 **Light Effects**	**6**	
	Recreating Light effects such as Caustics, Global Illumination and Final Gather using Mental Ray; Key inputs for lighting a 3D scene as per industrial standards.	
REFERENCE		
1	Jeremy Birn, *Digital Lighting & Rendering*, Third Edition, New Riders,2014.	
2	Darren Brooker, *Essential CG Lighting Techniques with 3DS Max*, Third Edition, Focal Press, 2008.	
3	Chuck Gloman and Tom Letourneau, *Placing Shadows – Lighting Techniques for Video Production*, Third Edition, Focal Press,2013.	
4	Gerald Milerson, *Lighting for Television & Film*, Third Edition, Focal Press,2013.	
5	Lee Lanier, *Advanced Maya Texturing and Lighting*, Third Edition, Autodesk Maya Press, Wiley Publishing Inc.,2015.	
MOOC		
	https://www.mooc-list.com/course/website-performance-optimization-udacity?static=true&page=1	

COURSE TITLE	**ETHICS AND HUMAN VALUE**			CREDITS	3
COURSE CODE	**CDB1304**	COURSE CATEGORY	PD	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%
PREREQUISITES					

MODULE - 1	**Engineering Ethics**	**6**
	Senses of 'engineering ethics' – variety of moral issues – types of inquiry – moral dilemmas – moral autonomy – Kohlberg's theory – Gilligan's theory – consensus and controversy – professions and professionalism – professional	

	ideals and virtues – theories about right action – self- interest – customs and religion – uses of ethical theories
MODULE – 2 **Engineering as Social Experimentation**	**9**
	Engineering as social experimentation– engineers as responsible experimenters – codes of ethics – a balanced outlook on law – the challenger case study
MODULE – 3 **Responsibility for Safety**	**6**
	Responsibility for Safety, Safety and risk assessment of safety and risk – risk benefit analysis – reducing risk
MODULE – 4 **Responsibilities and Rights 6**	
	Collegiality and loyalty – respect for authority – collective bargaining – confidentiality – conflicts of interest – occupational crime – professional rights – employee rights – intellectual property rights – discrimination
MODULE – 5 **Global Issues**	**9**
	Multinational corporations – environmental ethics – computer ethics – weapons development – engineers as managers – consulting engineers – engineers as expert witnesses and advisors – moral leadership – sample code of conduct
REFERENCE	
1	Mike Martin and Roland Schinzinger, "*Ethics in Engineering*", McGraw Hill, New York,1996.
2	Charles D Fleddermann, "*Engineering Ethics*", prentice Hall, New Mexico,1999.
3	Laura Schlesinger, "*How Could You Do That: The Abdication of Character, Courage, and Conscience*", Harper Collins, New York,1996.
4	Stephen Carter, "*Integrity*", Basic Books, New York,1996.
MOOC	
	https://www.mooc-list.com/tags/ethics

COURSE TITLE	**DESIGN STUDIO – V**		CREDITS	4
COURSE CODE	**CDB1331**	COURSE CATEGORY	PD	L-T-P-S	0-0-8-0
CIA	50%		ESE	50%

PREREQUISITES		
MODULE - 1	**Project -1**	**20**
	Understanding of 2D & 3D.	
MODULE – 2 **Project -2**	**20**	
	Paper, Card board, Wood block, Clay etc	
MODULE – 3	**Project -3**	**20**
	Basic type of Clay Animation movie concept, Prototype Concept design through material or Software.	

COURSE TITLE	**INDUSTRIAL MANAGEMENT AND ENTREPRENEURSHIP**		CREDITS	3
COURSE CODE	**CDB1316**	CF	L-T-P-S	3-0-0-0
CIA	20%		ESE	80%

PREREQUISITES				
MODULE - 1	**Management**			**9**
	Meaning and Concept of Management, Principles and function of Management, Concept of Organizational Behaviour, Function of a Manager—Planning, Organizing, Coordinating and Controlling. Motivation—implication of Managers and application			
MODULE – 2	**Leadership and Decision making**			**10**
	Leadership and Decision Making: Qualities and Styles of Leadership, Decision making process. Individual Process in Organizations-Perception, attitude and personality, Factors that affect them, How they influence people. Group Process in Organizations, Group formation, Group effectiveness, Group Conflict.			
MODULE – 3	**Small Scale Industry**			**10**
	Small Scale Industry-Definition, Types of Small Scale Industry, How to Set up Small Scale Industry, Role and Problem of Small Scale Industry. Concept of Joint Stock Company, Private and Public Limited Company. Source of Finance for Entrepreneur-Bank, Government and Financial Institutions etc.			
MODULE – 4	**Human Resource**			**10**
	Evolution, Role and Status of Human Resource Management in India. Recruitment and Selection Process in Organization, Job Analysis, Job Specification, Selection Process-Test and Interview			
MODULE – 5	**Entrepreneurship**			**9**
	Entrepreneurship - Meaning, Types of entrepreneur, Qualities of an entrepreneur, Role of Entrepreneur, Factors affecting entrepreneurial growth. Entrepreneurship Development Programme - Concept, Objective and Importance, Engineer Entrepreneurship Training Programme Scheme. Trade Union and Collective Bargaining,			
REFERENCE				
1	S.S. Khanka - *Organisational Behaviour*, S. Chand Publishing, 4th Revised Edition,2010			
2	S.S. Sarkar, R. K. Sharma and S. K. Gupta – *Business Organisation and Entrepreneurship Development*, Kalyani Publishers,2014			
3	Cynthia L. Greene – *Entrepreneurship: Ideas in Action*, 6th Edition, South-Western Cengage Learning, 2017.			
4	M. Woolman, *Type in motion, Innovation in Digital Information Graphics*, Thames & Hudson, 2002			
5	N. V. Luppa, *Designing Interactive Digital Media*, Focal Press,1998			
MOOC				
	https://www.mooc-list.com/course/principles-management-saylororg			

COURSE TITLE	**GAME DESIGN**			CREDITS	3
COURSE CODE	**CDB1317**		CF	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%

PREREQUISITES	
MODULE - 1	**Introduction** 9
	Understanding Video Games - Principles of Simple Games, Workability of simple games, Reason of playing games, Elements that define games and the gaming experience, Similarity and dissimilarity of games from each other; History of Gaming; Evolution of Gaming.
MODULE – 2 **Game classification** 10
	Classification of Games - Game Genre; Game Types; PvP and PvE, NPC;Player's Perspective; Designer's Perspective
MODULE – 3 **Small Scale Industry** 10
	Gaming Platforms; Types of Gaming – PC Gaming, Console Gaming, Mobile Gaming; GamingHardware-BuildingaGamingRig; Gaming Peripherals; Gaming inVirtual Reality
MODULE – 4 **Human Resource** 10
	The Gaming Industry; Pros and Cons ofGaming
MODULE – 5 **Narrative** 6
	End Users – Players learning the mechanics of your game, Rules that define gameplay, Rules communicated to your players, Rules bent and broken by player, Importance of a story in games
REFERENCE	
1	Steven Kent, *The Ultimate History of Video Games*, First Edition, Three Rivers Press,2001.
2	Simon Egenfeldt-Nielsen, Jonas Heide Smith and Susana Pajares Tosca, *Understanding Video Games: The Essential Introduction*, Third Edition, Routledge,2016
3	Jane McGonigal, *Reality is Broken: Why Games Make Us Better and How They Can Change The World*, Penguin Press,2011
4	Chris Melissinos, Patrick O'Rourke, Mike Mika and Elizabeth Broun, *The Art of Video Games: From Pac-Man to Mass Effect*, First Edition, Welcome Books,2012.
5	Chris Kohler, *Power Up: How Japanese Video Games Gave the World an Extra Life*, Second Edition, Dover Publications, 2015.
MOOC	
	https://www.mooc-list.com/tags/game-design

COURSE TITLE	**3D ANIMATION TECHNIQUES**		CREDITS	3
COURSE CODE	**CDB1318**	CF	L-T-P-S	1-0-4-0
CIA	20%		ESE	80%
PREREQUISITES				

MODULE - 1**Animation Basics**	6
	Introduction to 3D animation basics, Key Frame Animation, Animation Techniques: Non –Linear and Character Animation,Path Animation, Exercises and warmups.
MODULE – 2**Motion Studies** 10	
	Motion Studies, Line of action, Path of action, Quick Studies from real life: Drama and psychological effect, Study ofBody language: posture, gesture, facial expression, Acting and animation.
MODULE – 3**3D Animation Process** 10	
	The Animation Process: Posing, Timing and Refining, Working with Poses. Kinematics: IK and FK, Binding & Weight for character, different Skinning methods.
MODULE – 4**Character Rigging** 10	
	Character Rigging: Anatomy study, Understanding Skeletons and Joints, Useof Deformers, Creating bones for Character.
MODULE – 5**Character set-up9**	
	Character set-up for a wide range of complex body movement, with controls that are intuitive and flexible.

REFERENCE	
1	*The Animator's Survival Kit* - by Richard Williams; Faber Publications; Main - Revised edition (5 November 2009), ISBN-10:9780571238347.
2	*Mastering 3D Animation*, by Peter Ratner; Allworth Press (September 1, 2000), ISBN-10: 1581150687.
3	*Acting in Animation: A Look at 12 Films* by Ed Hooks; Heinemann Drama (February 9, 2005), ISBN-10:0325007055
4	*DigitalCharacterAnimation3-* byGeorgeMaestri;NewRidersPress(April22,2006),ISBN-10: 9780321376008
5	*TimingforAnimation-* byHaroldWhitakerandJohnHalas;FocalPress;2nd edition(September3, 2009), ISBN-10: 9780240521602.
6.	*Inspired3DAdvancedRiggingandDeformations*byBradClark,JohnHood&JoeHarkins;Course Technology PTR; 1 edition (March 25, 2005), ISBN-10:1592001165

MOOC	
	https://www.mooc-list.com/course/3d-models-virtual-reality-coursera

COURSE TITLE	**VISUAL EFFECTS AND DIGITAL COMPOSITING**		CREDITS	3
COURSE CODE	**CDB1319**		PD	L-T-P-S	1-0-4-0
CIA	20%		ESE	80%
PREREQUISITES				
MODULE - 1	**Introduction**			**6**
	Understanding Visual Effects (VFX), Categories, Types of Visual Effects, Use of VFX, Importance of VFX, Feature of VFX and Special Effects			
MODULE – 2	**Background**			**10**
	Stabilizing footage, Keying matte - blueand green screen, color correction, wire removal, rotoscopy, lights and camera, Tracking (Motion tracking with one point and multiple point tracking of alive footage).			
MODULE – 3	**Digital Compositing**			**10**
	Digital Compositing; Understanding Compositing, Passes Compiling, Mattesand compositing, Digital Matting Methods and tools,			
MODULE – 4	**Digital Processing**			**10**
	Compositing Techniques, Digitally Processing Image and Footages. Green and BlueScreens;UnderstandingChroma Keying and Composting.			
MODULE – 5	**Simulation**			**9**
	Understanding Fluids, Building Simulation, Particle Simulation, Particle Emitters, Particle Rendering, Paint Effects.			
REFERENCE				
1	*The Green Screen Handbook: Real-World Production Techniques*. Author: Jeff Foster; Sybex; 1st edition (March 15, 2010), ISBN-10:0470521074.			
2	*Maya Studio Projects Dynamics*. Author: Todd Palamar; Sybex; 1st edition (November 2, 2009), ISBN-10:0470487763.			
3	*The Visual Effects Arsenal*, Author: Bill Byrne; Focal Press; 1st edition (April 17, 2009), ISBN- 10:9780240811352.			
MOOC				
	https://www.mooc-list.com/course/fundamentals-graphic-design-coursera?page=3			

COURSE TITLE	**DESIGN STUDIO – VI**		CREDITS	4
COURSE CODE	**CDB1341**	COURSE CATEGORY	PD	L-T-P-S	0-0-8-0
CIA	50%		ESE	50%
PREREQUISITES				
MODULE - 1	**Project -1**			**20**

	Project based on following contents: 3D Animatic / Stillomatic: Line of action, Character blocking with poses, Story contents development and background design.	
MODULE – 2	**Project -2**	**20**
	Group Project based on following contents: Animated short film on a select topic/story: Implementingthe12principlesofanimation with an overview of the whole animation process, Character animation, Actingandlip-syncing & post-Production.	
MODULE – 3	**Project -3**	**20**
	Final design based project report.	

**Industrial Training Phase – II
(During summer break tentatively in the month of MAY-JUNE)

SEMESTER VII

COURSE TITLE	**ANIMATION PRODUCTION DESIGN**		CREDITS	3
CDB	**CDB1401**	CF	L-T-P-S	3-0-0-0
CIA	20%		ESE	80%
PREREQUISITES				
MODULE - 1	**Basics of Animation**			**6**
	BasicTypesofAnimation:RealTime,Non- real-time, Definition of Modelling,Creation of 3D objects. Exploring the MAYA Interface, Controlling & Configuring the Viewports, Customizing the Max Interface & Setting Preferences,			
MODULE – 2	**Concept of Objects**			**10**
	Working with Files, Duplicating Objects, Pivoting, Understanding 2D Splines &shape, Extrude & Bevel 2D object to 3D, Understanding Nurbs, Understanding Polygon,Boolean			
MODULE – 3	**Texturing**			**10**
	Explain of Modeling Design, Concept of Texturing, Understanding ofRigging/Setup, Implement of Principle of Animation Techniques, Concept of Lightingand Camera, Understand of basic Rendering			
MODULE – 4	**VFX**			**10**
	VFX and Compositing, Understanding of Motion graphics, Concept of colour correction, implement of Audio Video Editing, Final output.			
MODULE – 5	**Design**			**9**
	Define Concept or Idea, Story & Script develop, Understanding Storyboard design, Making Animatic design, Concept of Layout Design.			
REFERENCE				

1	Chawdhary, Nirmal Kumar, *How to write film screenplay*, Kanishka publishers, distributers, New Delhi- 110002, 2009,ISBN978-81-8457-112-7.
2	Whitaker, Harold, John Halas, Updated by Tom Sito, *Timing for Animation*, Focal Press Elsevier, New York & Singapore, 2009 ISBN:978-0-240-52160-2.
3	Eve Light Honthaner, *The Complete Film Production Handbook*, FocalPress.
4	Tay Vaughan, *Multimedia: Making It Work*, Ninth Edition, Mc-Graw Hill Education,2014.
5	Vic Costello with Susan A. Youngblood and Norman E. Youngblood, *Multimedia Foundations: Core Concepts for Digital Design*, Focal Press,2013.
5	Viers, Ric, *The Sound Effects Bible: How to Create and Record Hollywood Style Sound Effects*, Michael Wiese Productions, 2008.
6	Rumsey, Francis and Tim McCormick, *Sound and Recording*, Focal Press 2009, ISBN: 978024052163.
7	Darren Brooker, *Essential CG Lighting Techniques with 3DS Max*, Third Edition, Focal Press, 2008.
8	*Inspired 3D Advanced Rigging and Deformations* by Brad Clark, John Hood & JoeHarkins
MOOC	
	https://www.mooc-list.com/university-entity/national-film-and-television-school-nfts

COURSE TITLE	**NEW MEDIA AND INTERACTION DESIGN**		CREDITS	3
COURSE CODE	**CDB1402**	PD	L-T-P-S	3-0-0-0
CIA	20%		ESE	80%

PREREQUISITES	
MODULE - 1	**Introduction to New Media** 6
	Evolution of New Media - History to modern era**;** Technology in New Media **;** New Media culture – conventions and technique of old media**;PrinciplesofNewMedia:**Discrete representation **;** Numerical representation**;** Automation **;** Variability.
MODULE – 2**Concept of New Media**	10
	Changing relationship of representation. **;** Database as genreofnewmedia.**;**Logicofremediation**;** Concept of digital dialectic. **;** Digital Cinema and the history of moving Image. **;** The new language of cinema. **; Forms of New Media:** Installations - Sound art, Net art**;** Free software movement and open source. **;** New media art installation and cross-media practice**;** Interactivityand interface: Models of interactive systems.
MODULE – 3 **Interaction:**	10
	Basic concepts in Interaction Design. Interaction Models – issues in man-machineinterface, ergonomic considerations, dialog. Paradigms for interaction –time sharing, video display units, Programming toolkits, Sensor based context aware interaction,Multi-modal displays etc.
MODULE – 4**Interaction Design Process**	10
	: User focus; Scenarios; Navigation Design; Screen Design and Layout;

	Iteration and Prototyping. Design: Principles; Standards; Guidelines; Rules and HeuristicsPrinciples	
MODULE – 5 **Design**		**9**
	Design Techniques: Scenario building; Personas, Brain Storming, Story Boarding, Wire framing etc. Evaluation Techniques: Expert Analysis; Heuristic Evaluation; Evaluation through User Participation. Case examples in Human computer interaction	
REFERENCE		
1	B. Shneiderman, *Designing the User Interface: Strategies for Effective Human-Computer Interaction*, 3rd Ed., Addison Wesley,2000.	
2	J. Preece, Y. Rogers and H. Sharp, *Interaction Design: Beyond Human –Computer Interaction*, John Wiley & Sons, Delhi,2003	
3	A. Dix, J. Finlay, G.D Abowd and R. Beale, *Human Computer Interaction* , 3rd Ed., Pearson Education Ltd.,2004.	
4	W.O. Galitz, *The Essential Guide to User Interface Design of Interaction Design*, John Wiley & Sons, 2002.	
5	R. Grusin and J. D. Bolter, *Remediation: Understanding New Media*, MIT Press,2000.	
6	J. Thackara, *In the Bubble – Designing in a complex World*, Prentice Hall India,2005.	
7	N. Wardrip-Fruin and N. Montfort (eds.), *The New Media Reader*, MIT Press,2003	
MOOC		
	. https://www.mooc-list.com/instructor/jon-mccormack	

COURSE TITLE	**DESIGN MANAGEMENT AND PROFESSIONAL PRACTICE**			CREDITS	3
COURSE CODE	**CDB1403**	COURSE CATEGORY	PD	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Project -1**				**25**
	Performing design projects considering creativity, innovation and management.IPR and Copyright issues and management				
MODULE – 2**Project -2**			**20**		
	Managing design project, Workforcemanagement, Team handling, Clientconsultation, Businessdevelopment techniques.				

(A management based design project and execution practice for future professional career.)

COURSE TITLE	**MINOR PROJECT**			CREDITS	3
COURSE CODE	**CDB1481**	COURSE CATEGORY	PD	L-T-P-S	0-0-6-0
CIA	50%			ESE	50%
PREREQUISITES					
MODULE - 1	**Project -1**				**45**
	Project based on hypothetical concepts				

COURSE TITLE	related to Newmedia communication and animation design.			

**APProjectReporthastobesubmittedattheendoftheSemesterbytheconcernedstudents to the Department with approval from the Project Supervisor and CommitteeMembers.

COURSE TITLE	**DESIGN STUDIO – VII**		CREDITS	4
COURSE CODE	**CDB1431**	COURSE CATEGORY	PD	L-T-P-S	0-0-8-0
CIA	50%		ESE	50%
PREREQUISITES				
MODULE - 1	**Project -1**			**20**
	Project based on following contents: New media and Interaction.			
MODULE – 2	**Project -2**	**20**		
	Group Project based on following contents: Scenario building; Personas, Brain Storming, Story Boarding, Wire framing etc			
MODULE – 3	**Project -3**			**20**
	Final design based project report. Evaluation Techniques: Expert Analysis; Heuristic Evaluation; Evaluation through User Participation. Case examples in Human computer interaction			

SEMESTER VIII

COURSE TITLE	**MAJOR PROJECT - THESIS**		CREDITS	14
COURSE CODE	**CDB1491**	COURSE CATEGORY	PC	L-T-P-S	0-0-28-0
CIA	50%		ESE	50%
PREREQUISITES				
MODULE - 1	**Project**			
	This project would be based on design research and implementation.			
	Major Project will be done throughout the semester.			

(Project may be Industry-sponsored Project or a continuation of the Minor Project to implement in a practical basis.)
**APProjectReporthastobesubmittedattheendoftheSemesterbytheconcernedstudents to the Department with approval from the Project Supervisor and CommitteeMembers.

DEPARTMENT ELECTIVES

COURSE TITLE	**BASICS OF USER INTERFACE DESIGN**			CREDITS	3
COURSE CODE	**CDC1251**	COURSE CATEGORY	PE	L-T-P-C	1-0-4-3
CIA	20%			ESE	80%
PREREQUISITES					
MODULE – 1**Introduction**			8		
	Human–Computer Interface – Characteristics Of Graphics Interface –Direct ManipulationGraphical System – Web User Interface –Popularity Characteristic & Principles.				
MODULE – 2**Human Computer Interaction**			10		
	User Interface Design Process – Obstacles –Usability –Human Characteristics In Design– Human Interaction Speed –Business Functions –Requirement Analysis – Direct –Indirect Methods – Basic Business Functions – Design Standards – System Timings				
MODULE – 3**Websystem**			9		
	Characteristics– Components– Presentation Styles– Types– Managements– Organizations– Operations– Web Systems– Device– Based Controls Characteristics–Screen – Based Controls				
MODULE – 4**Multimedia**			9		
	Text For Web Pages – Effective Feedback– Guidance & Assistance– Internationalization– Accesssibility– Icons– Image– Multimedia – Coloring.				
MODULE – 5**Layout– Test**9					
	Prototypes – Kinds Of Tests – Retest – Information Search – Visualization – Hypermedia – WWW– Software Tools.				
REFERENCE					
1	Wilbent. O. Galitz ,"The Essential Guide To User Interface Design", John Wiley&Sons, 2001.				
2	Ben Sheiderman, "Design The User Interface", Pearson Education, 1998. 84				
3	Alan Cooper, "The Essential Of User Interface Design", Wiley – Dream Tech Ltd.,2002.				
4	The elements ofuserexperience - Jesse JamesGarrett				
MOOC					
	https://www.mooc-list.com/tags/user-interface-design				

COURSE TITLE	**BASICS OF USER EXPERIENCE DESIGN**			CREDITS	3
COURSE CODE	**CDC1252**	COURSE CATEGORY	PE	L-T-P-C	1-0-4-3
CIA	20%			ESE	80%
PREREQUISITES					
MODULE – 1**CONCEPTUALIZING USER EXPERIENCEDESIGN**					

	Introduction to UX - Understanding UX Lifecycle & flow of events - Person creation - Preparing Task list - Writing user story, IA and use cases - Fundamentals of business- centred design and User-centred design - Defining Information design and Interaction design
MODULE – 2 **DATA COLLECTION AND PROTOYPING**	
	Need for data collection and prototyping - Different methods of data connection and data analysis - Need for Prototyping and different methods of prototyping - Detailed study to wire framing
MODULE – 3 **VALIDATION**	
	Fundamentals of usability testing and heuristic analysis - Fundamentals of field testing - Remote usability testing - Preparing for usability testing, questioner, scenarios with tasks list, recruiting participants
MODULE – 4 **Mobile And Small ScreenDevice**	
	UX for Mobile device - Prototyping for Mobile devices - Usability testing and heuristic for mobile device - Experience definition for multiple platforms and form factor - Designing for small screen
MODULE – 5 **Design For Personas And Scenarios**	
	Designing forUsers-User Personas andScenarios -Understanding and designing business with "requirementgathering"-Design for NetworkEffects-Design PatternLibraries - Social DesignPatterns
REFERENCE	
1	Ted Roden, Building the Realtime User Experience: Creating Immersive and Interactive Websites, Shroff/O'Reilly,2010.
2	Christian Kraft, User Experience Innovation: User Centred Design that Works, Apress, 2012
3	Tom Tullis and Bill Albert, Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics, Morgan Kaufmann Publishers,2008.
4	Trevor van Gorp and Edie Adams, Design for Emotion, Morgan Kaufmann, San Francisco,2012
MOOC	
	https://www.mooc-list.com/tags/ux-design

COURSE TITLE	**ERGONOMICS**			CREDITS	3
COURSE CODE	**CDC1261**	COURSE CATEGORY	PE	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction**				**10**
	Design today- Human aid to lifestyle, Journey, Domain, Philosophy and Objective, tual task comfort: two way dialogue, communication model, Ergonomics/ human Factors fundamentals				
MODULE – 2 **Project -2**	**10**				
	Human body- structure and function, anthropometrics, Static and dynamic anthropometry, Stand Posture- erect, Anthropometry landmark:Sitting postures,				

	Anthropometric measuring techniques, Statistical treatment of data and percentile calculations
MODULE – 3	**Project -3** **10**
	Communication and cognitive issues, Psycho-social behaviour aspects, behaviour and stereotype, Information processing and perception, Cognitive aspects and mental workload, Human error and risk perception
MODULE – 4	
	Visual performance, Visual displays, Environmental factors influencing human performance
MODULE – 5	
	Ergonomics design methodology, Ergonomics criteria/check while designing, Design process involving ergonomics check, Humanising design: Design and human compatibility, comfort and adaptability aspects
REFERENCE	
1.	Bridger, RS: Introduction to Ergonomics, 2nd Edition, Taylor &Francis, 2003.
2.	Dul, J. and Weerdmeester,B.Ergonomics for beginners, a quick reference guide, Taylor & Francis, 1993.
3.	Green, W.S. and Jordan,P .W, Human Factors in Product Design, Taylor & rancis, 1999.
4.	D. Chakrabarti, Indian Anthropometric Dimensions for ergonomic design practice, National Institute of Design,Ahmedabad, 1997
5.	G.Salvendy (edit), Handbook of Human Factors and ergonomics, John Wiley & Sons, Inc., 1998
6.	Singh,S (Edt),Ergonomics Interventions for Health and Productivity, Himanshu Publications, Udaipur, New Delhi, 2007
MOOC	
	https://www.mooc-list.com/tags/human-factor

COURSE TITLE	**ILLUSTRATION TECHNIQUES**			CREDITS	3
COURSE CODE	**CDC1262**	COURSE CATEGORY	PE	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction7**				
	Illustration course focuses on image making, narrative and creative problem solving. Drawing and image making - figure and reportage drawing and the relationships between ideas, visual research and outcomes in project work.				
MODULE – 2	**History 9**				
	The definition and role of illustration. The history of illustration. Illustrator as a flexible, trans global, entrepreneurial producer of self-initiated projects.				
MODULE – 3	**Visual Thinking9**				
	Cognitive, improvisatory, gestural and kinetic processes with drawing.				

	Practice drawing character designs, caricature creations, environmental landscape drawing, and other pre-production drawing techniques.	
MODULE – 4	**Color**	**10**
	Hue, value, and saturation. The Structure of Color. Color Interaction. Color Unity. Color Research. The Psychology of Color. Color Study on the Computer. The composition of color on the computer in CMYK.	
MODULE – 5	**Idea Generation 10**	
	Idea Generation-the approaches, theories and strategies. Exercising creativity. The Basics. Techniques. What Image Mean. Using Images. Images in Practice. Mark Making.	
REFERENCE		
	Thinking Visually , Mark Wigan, 2014	
	The Illustrators bible: The Complete Sourcebook of Tips, and Tricks , Rob Howard, 2010	
	Graphic Style: From Victorian to Digital , Steven Heller, 2011	
	Illusive: Contemporary Illustration And Its Context , Robert Klanten	
MOOC		
	https://www.mooc-list.com/tags/sketching-techniques	

COURSE TITLE	**MOVING IMAGE DESIGN**			CREDITS	3
COURSE CODE	**CDC1351**		PE	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Project -1**				**15**
	Project based on following contents: Cinema as an Art and Industry, Cinema as propaganda, World Cinema, Indian Cinema (main stream and parallel).				
MODULE – 2 **Project -2**					**15**
	Project based on a thematic/hypothetical subject: Documentary film, narrative and experimentalfilms				
MODULE – 3 **Project -3**	**15**				
	Project based on following contents: Digital Cinema, new filmmakers and the influence of internet.				
REFERENCE					
1	Rodriguez, Robert, *Rebel without a Crew: Or How a 23 Year Old Filmmaker With $7,000 Became a Hollywood Player*, Publisher: Penguin Group; First Plume Printing, September 1996.				
2	Murch, Walter, *In the Blink of an Eye* Revised 2nd Edition, Publisher: Silman James Pr; 1st edition (April1995).				
3	Dix, Andrew, *Beginning film studies*, Publisher: Manchester University Press, 15 Jul2008.				
4	Ray, Satyajit, *Our Films Their Films*, Publisher: OrientLongman Pvt. Ltd., Third Edition, 1993.				
MOOC					

COURSE TITLE	**PACKAGING AND PRINTING**			CREDITS	3
COURSE CODE	**CDC1352**	COURSE CATEGORY	PE	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Printing 10**				
	Main kinds of films and photographic papers used in graphic organization, Cross section of films, Main-base, Stripping, Anti halation Coating, Protective Coating, Paper positive materials, Developers, Reducers, and Intensifiers. Light sensitive materials for printing image carrier for major printing processes.				
MODULE – 2	**Paper for Printing 10**				
	Paper and Non- Paper Substrate used for printing and packaging industry. Types of Plastic Substrate – Polyethylene, Polypropylene, Polyvinyl Chloride (PVC), Polyethylene teraphthalate (PET), Polyester, Polystyrene, Cellophane, Metal, Foils, Laminates.				
MODULE – 3	**Printing Inks &Coatings10**				
	Ingredients used in Printing Inks, Coatings and Varnishes. Colorant – Dyes, Pigment, Vehicles, Additives, Binders, Types of printing Inks – Paste Inks, Liquid Inks, Letter Press Inks, Offset/ Lithographic Inks, Gravure Inks, Flexo-graphic Inks. Constituents of coating & varnishes. Application, advantages and limitations of coatings & Varnishes.				
MODULE –4	**Adhesives for Printing &Packaging**			**9**	
	Adhesives for Printing &Packaging : Adhesion, Types of Adhesive – Animal Glues, Fish Glues, Casin Adhesives, Starch Based Adhesives, and Natural resin Adhesives, Cellulose Adhesives, Rubber based adhesives, Synthetic resin adhesives, Inorganic Adhesives, Hot Melt.				
MODULE –5	**Materials**			**6**	
	Miscellaneous Materials : Different types of rubber used in printing, Book binding Materials – Leather, Cloth, Rexene, Threads, Tapes, Stitching Wire, Covering Materials, Varnishes, Laminates Eye-lets, thermoform				
REFERENCE					
1.	Hardware Bible: Winn IL RochTechmedia..				
2.	Desk Top Typography: Quark X Press				
3.	Page Maker 6.0: BPB Publication				
4.	Printing in a Digital World – David Bergsland				
5.	Introduction to Prepress - Hugh Speirs				
6.	Computer Technology – Sinha&Sinha				
MOOC					
	https://www.mooc-list.com/tags/digital-technology				

COURSE TITLE	**CONCEPT OF FILM MAKING**			CREDITS	3
COURSE CODE	**CDC1353**		PE	L-T-P-S	3-0-0-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction**				**9**
	DefinitionofFilm,Conceptandideageneration, Scope of Documentary/Film, Story development-treatment-scriptment-plotpoints– structure, Writing the screenplay, Re-writing the screenplay, Scenic design and props, Concept of virtual studio, Financing the movie				
MODULE – 2**Preproduction**		**9**			
	Casting Locations, Shot list, Script, Tech scout, Film Production design				
MODULE – 3**Production**		**9**			
	Principleofphotography/videography–setting up,RehearsalSettingupshots,Singleandmulti- camera shooting, Checking thetake.				
MODULE – 4**Post production**		**9**			
	Editing, Sound mixing, Music, Test screenings, Movie distribution				
MODULE – 5**Short Film**		**9**			
	Emerging trends in short films, Theory of storytelling, Framing and time distribution, Editing and management.				
REFERENCE					
1	Renee Dunlop, *Production Pipeline Fundamentals for Film and Games*, FocalPress				
2	Eve Light Honthaner, *The Complete Film Production Handbook*, FocalPress.				
MOOC					
	https://www.mooc-list.com/tags/film				

COURSE TITLE	**BRAND MANAGEMENT DESIGN**			CREDITS	3
COURSE CODE	**CDC1354**	COURSE CATEGORY	PE	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction9**				
	Describe the characteristics of a brand-Define the main concepts of branding - purpose of brandExamine brand concepts in real - life setting - articulating the context of and the rationale for the application				
MODULE – 2**Developing Brand Elements 10**					

	Describe the process and methods of developing brand elements -Reasons and process of developing brand associations – Identify effective marketing and marketing communications strategies- use of social/digital platforms	
MODULE – 3	**Evaluation 10**	
	Describe the process and methods of measuring brand performance-Interpret basic quantitative and qualitative brand performance data - Understand various marketing intelligence acquisition methods - Propose brand evaluation plans	
MODULE – 4	**Managing Brand**	**6**
	Describe the main concepts and tools for managing brands over time, geographic areas, and market segments -Formulate effective branding strategies for both consumer and business products/services - Analyze new product development and brand extension programs based on market information	
MODULE – 5	**Brand Equity**	**10**
	Design marketing and marketing communications programs that build brand equity	
REFERENCE		
1.	Strategic Brand Management (4th edition), Kevin Lane Keller, Prentice Hall, 2012.	
2.	Cases, readings, and simulation materials available at Harvard Business Publishing	
3.	Marketing/Brand Intelligence page on the course site and research resource page for VIC6316 available at http://businesslibrary.uflib.ufl.edu/vic6316	
MOOC		
	https://www.mooc-list.com/tags/brand-management	

COURSE TITLE	**GAME DESIGN AND PRODUCTION PROCESS**		CREDITS	3
COURSE CODE	**CDC1361**	COURSE CATEGORY	PE	L-T-P-S	1-0-4-0
CIA	20%		ESE	80%
PREREQUISITES				
MODULE - 1	**Introduction**			**10**
	Game Design Origins – Understanding Games, Game Rules, Cheats, Cheat-Codes, Easter Eggs; Gameplay Styles and Strategies. Brainstorming and makinga simple paper-based game.			
MODULE – 2	**Game Design 10**			
	Core Game Design Concepts; Introduction to Artificial Intelligence; Visual Design; Detailed Development of Visuals; Navigation and Interfaces; Designing Levels and the Game Design Document			
MODULE – 3	**Game Elements10**			
	Genres, Platforms & Applications.-Player Elements: Market, Theory & Interactivity. Game Tracking and Legal Issues; Distribution and Marketing.			
MODULE – 4				
	Understand the process of creating games using objects and rooms -Understand the global user interface - Process player input using the keyboard and mouse -			

	Use the file, edit, and add menus to manipulate sprites, sounds, and backgrounds
MODULE – 5	**Production**
	Development & Business Cycles. - Preproduction: Planning& Processing. o Production: Prototyping & Play testing. - Post-Production: Maintenance & Marketing.
REFERENCE	
	Fullerton, T. (2007). Game Design Workshop (GDW): A playcentric approach to creatinginnovative games. Burlington, MA: Morgan Kaufmann Publishers.
	Anthropy, A. & Clark, N. (2014) A Game Design Vocabulary
	Schell, J. (2008) The Art of Game Design. Burlington
	Salen, K. and Zimmerman, E. (2004) Rules of Play: Game Design Fundamentals
MOOC	
	https://www.mooc-list.com/tags/game-design

COURSE TITLE	**ADVANCE ILLUSTRATION TECHNIQUES**			CREDITS	3
COURSE CODE	**CDC1362**	COURSE CATEGORY	PE	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction**				**7**
	Media and Techniques: pencil and ink, pastels, watercolor, gouache, acrylics, oils, airbrushing, printmaking, collage and assemblage, computer illustration, mixed media.				
MODULE – 2**Experimental Illustration 9**					
	Experimental Illustration- exploration of a variety of media, such as gouache, acrylic, mixed media, 3D, and transfer techniques. An atmosphere of artful play and serendipity is promoted, which is then capitalized on by controlled experimentation.				
MODULE – 3	**Visual Thinking**	**9**			
	Character Creation - explore the process of designing characters as well as the objects they possess and the environments they inhabit-Develop characters and environments that are both personally and culturally resonant and imaginative.				
MODULE – 4	**Digital Illustration**				**10**
	Digital Illustration - creation of illustrations using digital media -explore industry standard graphic application - learn to work with digital media as traditional art making medias, as a means, not an end, to the creative process. Emphasis on drawing, painting, design, and concept and color theory.				
MODULE – 5	**Idea Generation**				**10**
	Idea Generation-the approaches, theories and strategies. Exercising creativity. The Basics. Techniques. What Image Mean. Using Images. Images in Practice. Mark Making.				
REFERENCE					
1.	Thinking Visually , Mark Wigan, 2014				
2.	The Illustrators bible: The Complete Sourcebook of Tips, and Tricks , Rob Howard,				

	2010
3.	Graphic Style: From Victorian to Digital , Steven Heller, 2011
4.	Illusive: Contemporary Illustration And Its Context , Robert Klanten
MOOC	
	https://www.mooc-list.com/tags/sketching-techniques

COURSE TITLE	**TANGIBLE USER INTERFACE**			CREDITS	3
COURSE CODE	**CDC1363**	COURSE CATEGORY	PE	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction**				**6**
	An overview and introduction of tangible user interface; Visibility; Affordance; Legible mapping; Feedback; Constraints; History of TUI;				
MODULE – 2**User Interfaces**	**10**				
	Graspable user interfaces; Tangible bits; Digital-physical coupling; Embodiment of physical representation; Balancing physical-digital representations; Mechanisms of interactive control; Active-passive TUI				
MODULE – 3	**Embodiments**	**10**			
	Types of embodiments; Tokens, containers and tools; Pyfo, token, constraint and TAC paradigm				
MODULE – 4	**Metaphors**				**9**
	Metaphor of verb; Metaphor of noun; introduction to tools and technologies necessary for designing and building tangible user interfaces;				
MODULE – 5	**Reality Based Interfaces**				**10**
	Introduction of reality-based interfaces; Organic user interfaces; SMaG-speech, manipulations and gestures; Studio/Project assignments in design of tangible user interfaces will be given to the students				
REFERENCE					
1	K. Ryokai, R. Aipperspach and D. Nguyen, *Theories and practices of tangible user interfaces*, School of Information, University of California, Barkeley,2007				
2	T. Igoe, *Making things talk – practical methods for connecting physical objects*, O'Reilly Media, 2007				
3	O. Shear and E. Hornecker, *Tangible User Interface*, Now Publishers Inc.,2010.				
4	D. Saffer, *Designing gestural Interfaces: touch screens and interactive devices*, O'Reilly Media, 2007				
MOOC					
	https://www.mooc-list.com/course/design-thinking-prototyping-and-user-testing-edx				

COURSE TITLE	**ENVIRONMENTAL GRAPHIC DESIGN**			CREDITS	3
COURSE CODE	**CDC1364**	COURSE CATEGORY	PE	L-T-P-S	1-0-4-0
CIA	20%			ESE	80%
PREREQUISITES					
MODULE - 1	**Introduction**				**10**
	Environmental Graphic Design (EGD) technology elements arranged into systems - the concepts changing content,motionand interactionbetweena user in a place and information way finding, place making,				
MODULE – 2	**Exhibition Design 10**				
	Exhibition design, public spaces				
MODULE – 3	**Master planning10**				
	Research and master planning, Mapping				
MODULE – 4	**Branded Environments**				
	Branded Environments, Themed Environments, Retail Store Design				
MODULE – 5	**Public Design**				
	Civic Design ,Pictogram Design				
REFERENCE					
	Lankow,J.(2012). Infographics: The power of visual storytell- ing. Hoboken,NJ: Wiley.				
	Marcel,F.(2014). Infographics and data visualization tools to engage yourlanguage learners.*Contact,40*(1),44-50.				
	Schriver,K.A.(2012). What Do Technical Communicators Need to Know about InformationDesign? In J. John- son–Eilola &S.Selber (Eds.).Solving problems intechnical communication.Chicago, IL: University of Chicago Press.				
MOOC					
	https://www.mooc-list.com/tags/infographics				