PERIYAR MANIAMMAI UNIVERSITY

(Under Section 3 of UGC Act, 1956)

School of Computing Sciences and Engineering

Department of Mathematics and Computer Applications

Software Engineering Division

B.Sc. Animation and Multimedia

Regulation 2017

SEMESTER I

Type	Sub. Code	Subject Title	L	T	P	C	H
AECC 1	XAM 101	Study Skills and Language Lab	1	0	1	2	3
UMAN1	XAM 102	Ariviyal Tamil	3	0	0	3	3
CC1	XAM 103	Principles of Animation	4	1	0	5	5
CC2-(DSC2A)	XAM 104	Web Design	3	1	1	5	7
CC3-(DSC3A)	XAM 105	Animation Art	4	1	0	5	5
UMAN2	XAM 106	Human Ethics, Values, Rights and Gender Equality	3	0	0	3	3
		TOTAL	**18**	**3**	**2**	**23**	**26**

Total Credits: 23

SEMESTER II

Type	Sub. Code	Subject Title	L	T	P	C	H
AECC2	XAM 201	Environmental Studies	2	0	0	2	3
AECC3	XAM 202	Speech and Business Communication	3	0	0	3	3
CC4	XAM 203	Character & Environment Sketching	4	1	0	5	5
CC5- (DSC2B)	XAM 204	Audio and Video Editing	3	1	1	5	7
CC6- (DSC3B)	XAM 205	Visual Design	4	1	0	5	5
GE 1		*Generic Elective -I*	3	0	0	3	3
		TOTAL	**19**	**3**	**1**	**23**	**26**

Total Credits: 23

SEMESTER III

Type	Sub. Code	Subject Title	L	T	P	C	H
SEC1	XAM 301	Digital Animation Skills	2	0	1	3	5
CC7	XAM 302	Foundation Art	4	1	0	5	5
CC8-(DSC2C)	XAM 303	Graphics Design	3	1	1	5	7
CC9-(DSC3C)	XAM 304	2D Animation	3	1	1	5	7
GE 2		*Generic Elective -II*	3	0	0	3	3
		TOTAL	**15**	**3**	**3**	**21**	**27**

Total Credits: 21

SEMESTER IV

Type	Sub. Code	Subject Title	L	T	P	C	H
SEC2	XAM 401	Image Editing Skills	2	0	1	3	5
CC10	XAM 402	Digital FX	3	1	1	5	7
CC1-(DSC2D)	XAM 403	Cinematography & Non Linear Editing	3	1	1	5	7
CC1-(DSC3D)	XAM 404	Basics of Clay Modeling	4	1	0	5	5
GE 3		*Generic Elective -III*	3	0	0	3	3
		TOTAL	**15**	**3**	**3**	**21**	**27**

Total Credits: 21

SEMESTER V

Type	Sub. Code	Subject Title	L	T	P	C	H
SEC3	XAM 501	Compositing Techniques	2	0	1	3	5
DSE 1A	XAM 502	3D Animation	3	1	1	5	7
DSE 2A	XAME**	Elective I	4	1	0	5	5
DSE 3A	XAME**	Elective II	4	1	0	5	5
GE 4		*Generic Elective -IV*	3	0	0	3	3
Extra Credit		IPT 21 Days	0	0	0	2	
		TOTAL	**16**	**3**	**2**	**21 +2**	**25**

Total Credits: 21+2

SEMESTER VI

Type	Sub. Code	Subject Title	L	T	P	C	H
SEC4	XAM 601	Digital Television Production	2	0	1	3	5
DSE 1B	XAM 602	3D Modeling	3	1	1	5	7
DSE 2B	XAME**	Elective III	4	1	0	5	5
DSE 3B	XAM 604	Project Work	0	0	6	6	12
Extra Credit		NSS/NCC/RRC/SPORTS/RRC/YRC	0	0	0	1	
		TOTAL	**9**	**2**	**8**	**19 +1**	**29**

Total Credits: 19 +1

Total Credits: 131 Credits

Elective I:

Subject Code	Subject Name	L	T	P	C	H
XAME51	Media Aesthetics	4	1	0	5	5
XAME52	Media Technologies	4	1	0	5	5

Elective II:

Subject Code	Subject Name	L	T	P	C	H
XAME53	Script Writing and Story Board Designing	4	1	0	5	5
XAME54	Motion Capturing	4	1	0	5	5

Elective III:

Subject Code	Subject Name	L	T	P	C	H
XAME61	Film Making	4	1	0	5	5
XAME62	Games Development	4	1	0	5	5

NOTE:

AECC – Ability **E**nhancement **C**ompulsory **C**ourse **DSC– D**epartment **S**pecific **C**ourse

DSE – Discipline **S**pecific **E**lective **GE –** Generic **E**lective

SEC – Skill **E**nhancement **C**ourse **CC** – **C**ore **C**ourse **UMAN – U**niversity **MAN**datory

Credit Distribution

S.No.	Semester	Total No. of Hrs (Sem wise)	Total No. of Credits (Sem wise)
1.	I	26	23
2.	II	26	23
3.	III	27	21
4.	IV	27	21
5.	V	25	21
6.	VI	29	19
Total		**160**	**128**
IPT		--	02
NCC/NSS/SPORTS/RRC//YRC		--	01
		Total Credits	**131**

Summary

Total Number of Courses proposed with the credits is given below:

S.No.	Course Type	Numbers	Total Credits
1.	AECC (Theory & Lab)	03	07
2.	DSC(CC) (Theory & Lab)	12	60
3.	DSE	06	31
4.	SEC	04	12
5.	GE	04	12
6.	UMAN	02	06
	IPT	01	02
	NCC/NSS/SPORTS/RRC//YRC	--	01
	Total	**32**	**131**

Total Credits	AECC(%)	DSC(%)	DSE(%)	SEC(%)	GE(%)	UMAN (%)
128	07 (5.47%)	60 (46.88%)	31 (24.22%)	12 (9.38%)	12 (9.38%)	06 (4.69%)

XAM 101			STUDY SKILLS AND LANGUAGE LAB	L	T	P	C
				1	0	1	2
C	P	A		L	T	P	H
0.9	0.9	0.2		1	0	2	3

PREREQUISITE: Nil

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Identify*** different strategies of reading and writing skills.	Cognitive	Remember
CO2	***Revise*** the library skills in their learning process.	Affective	Internalizing values
CO3	***Apply*** different techniques to various types of material such as a novel, newspaper, poem, drama and other reading papers.	Cognitive	Apply
CO4	***Use*** visual aids to support verbal matters into language discourse.	Cognitive	Understand
CO5	***Prepares*** to face the written exam with confidence and without any fear or tension.	Cognitive Psychomotor	Understand Guided Response

UNIT I	**INTRODUCTION TO STUDY SKILLS**	**5**
Learning Skills and Strategies of Learning; Cognitive Study skills and physical study skills, Library skills (How to use Library), familiarization of library facilities by the librarian; familiarization of basic cataloguing techniques, how to ransack the library etc.		
UNIT II	**REFERENCE SKILLS**	**5**
How to use the library facilities for research and to write assignments; how to find out reference books, articles, journals and other e- learning materials; how to use a dictionary and thesaurus.		
UNIT III	**READING RELATED STUDY SKILLS**	**5**
Process of reading, various types of reading materials and varied reading techniques; familiarization to materials written by various authors; features of scientific writing and familiarization to scientific writing by renowned authors; note making skills.		
UNIT IV	**WRITING RELATED STUDY SKILLS**	**5**
Process of writing, characteristics of writing, discourse analysis, use of visual aids, and note making and note taking skills.		
UNIT V	**EXAM PREPARATION SKILLS**	**5**
Anxiety reduction skills; familiarization with various types of exam/evaluation techniques etc.		
LANGUAGE LAB		
SOUNDS OF ENGLISH LANGUAGE		**5**
Vowels, consonants, diphthongs, word stress, sentence stress, intonation patterns, connected speech etc		
VOCABULARY BUILDING		**5**
Grammar, synonyms and antonyms, word roots, one-word substitutes, prefixes and suffixes, idioms and phrases.		
READING COMPREHENSION		**10**
Reading for facts, meanings from context, scanning, skimming, inferring meaning, and critical reading. Active listening, listening for comprehension etc.		

LECTURE	TUTORIAL	PRACTICAL	TOTAL
25	-	20	45

TEXT BOOKS:

1. V.R. Narayanaswamy ,Strengthen Your Writing Orient Longman, 2000
2. Ghosh, R N; Inthira, S R, A Course in written English: Oxford Univ Press, New Delhi, 2001
3. Jaya Sasikumar, Champa Tickoo, Writing With A Purpose, Published by Oxford University Press, 2000
4. Freeman, Sarah: Study Strategies. New Delhi: Oxford University Press, 1979
5. Paul Gunashekar M.L. Tickoo, Reading for Meaning, S. Chand & Company Ltd., 2000
6. Bernard Hartley, Peter Viney, Streamline English: Departures, Oxford English,1990.
7. Bernard Hartley, Peter Viney, Streamline English: Destinations, Oxford : Oxford University Press, 1992.
8. Bernard Hartley, Peter Viney, Streamline English Directions, Oxford University Press 1982.

REFERENCES:

1. Jaya Sasikumar, Champa Tickoo, Writing With A Purpose, Oxford University Press 2001.
2. Freeman, Sarah: Study Strategies. New Delhi: Oxford University Press, 1979.
3. Reading for Meaning, Paul Gunashekar M.L. Tickoo, Published by S. Chand & Company Ltd. Sultan Chand & Company, 2000.
4. Susan Fawcett Evergreen: A Guide to Writing with Readings Paperback – January 4, 2013.

Mapping of Course Outcomes (CO) with Graduate Attributes (GA):

B.Sc. A&M	GA1	GA2	GA3	GA4	GA5	GA6	GA7	GA8	GA9
CO1	0	0	0	0	1	0	0	1	0
CO2	0	0	0	0	2	0	0	1	0
CO3	0	0	0	2	1	0	0	1	0
CO4	0	0	0	2	1	0	0	1	1
CO5	0	0	0	0	1	0	0	1	1
AVG	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**1**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 102			அறிவியல்தமிழ்	L	T	P	C
				3	0	0	3
C	P	A		L	T	P	H
2.9	0.1	0		3	0	0	3

PREREQUISITE: Nil

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize (அடையாளம் காணுதல்)***பல்வேறு அறிவியல் துறை சார்ந்த நுட்பங்கள், கலைச் சொல்லாக்க உத்திகள் போன்றவற்றைத் தமிழ்மொழி மூலம் அறிந்து கொள்ளல்.	Cognitive	Remember
CO2	***Choose (தெரிவு செய்தல்)***வடமொழி வேர்ச்சொற்கள், புவியியல், நிலவியல் பற்றிப் பழந்தமிழ் இலக்கியங்கள் மூலம் அறிந்து கொள்ளல்.	Cognitive	Remember
CO3	***Describe(விளக்குதல்)*** தொல்காப்பியம் மூலம் அறிவியல் செய்திகளை உணர்தல்.	Cognitive Psychomotor	Understand Set
CO4	***Apply (பயன்படுத்துதல்)***பல்வேறு கல்வித்துறை சார்ந்த பிரிவுகள், பல்வேறு கல்வித்துறை சார்ந்த பிரிவுகள் குறித்து தெளிவு பெறல்.	Cognitive	Apply
CO5	***Analyze (பகுத்தல்)***அறிவியல் சிறுகதைகளின் தோற்றம் மற்றும் வளர்ச்சிநிலை நாடகங்களின் பங்கு குறித்து தெளிவு பெறுதல்.	Cognitive	Analyze

அலகு– 1	அறிவியல்தமிழ் அறிமுகம்	9

அறிவியல்தமிழ் - பொறியியல், தொழில்நுட்பம், மருத்துவம், உழவியல். தமிழில் அறிவியல் - தமிழில் நுட்பம். படைப்புப் பணி – சொல்லாக்க உத்திகள் - நுட்பமான வேறுபாடுகளை உணர்ந்து சொல்லாக்கம் செய்தல் - கலைச்சொற்கள் - இந்தியமொழிகளுக்குப் பொதுவானகலைச் சொற்களைஉருவாக்குதல் - வடமொழிவேர்ச்சொற்களை மிகுதியாகக் கொண்டிருத்தலைப் பயன்படுத்துதல்.

அலகு– 2	பிற அறிவியல் துறைகள்	9

புவியியல், நிலவியல் பற்றி பழந்தமிழ் இலக்கியம் குறிப்பிடும் தகவல்கள் - தொல்காப்பியம் குறிப்பிடும் உயிரியல், மண்ணியல் பற்றிய அடிப்படைச் செய்திகள் - தமிழ் மருத்துவக் கல்வி அறிவியல் தமிழுக்கு இதழியல் உத்திகள் - வளர் தமிழ்.

அலகு– 3	பல்வேறு கலைகளில் அறிவியல்	9

மொழியியல் கல்வி – கட்டடக் கலைக்கல்வி – சமுதாயக்கல்வி –சேய்மைக்கல்வி – மண்ணியல், புவியியல், கணக்கியல் ஆகியவை இணைந்தகல்வி - இக்காலக் கல்விப் பொதுநிலை – கலை,அறிவியல் - என்பவற்றின் விளக்கங்கள்.

அலகு– 4	அறிவியல் தமிழில் சிறுகதைகளின் பங்கு	9

சிறுகதை -இலக்கணம் உருவாக்கும் உத்திகள் - சிறந்த சிறுகதைகள் - சிறுகதை வகைகள் - நல்ல சிறுகதை உருவாக்கம் - வரலாறு – சமூகம் - மொழிபெயர்ப்பு மற்றும் அறிவியல் சிறுகதைகள்.

அலகு– 5	அறிவியல் தமிழில் நாடகங்களின் பங்கு	9

நாடகம் - நாடக இலக்கணம், இருவகைநாடகங்கள் - படிப்பதற்குரிய நாடகம் - நடிப்பதற்குரிய நாடகம் - சரித்திரநாடகம், சமூகநாடகம் - நகைச்சுவை நாடகங்கள் - அமெச்சூர் நாடகங்கள் - தொழில்முறை நாடகங்கள்.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	**---**	**---**	**45**

மேற்பார்வை நூல்கள்:

1. அறிவியல் தமிழ் - டாக்டர் வா.செ. குழந்தைச்சாமி
2. வளர் தமிழ் - இதழ்கள்
3. இலக்கியவரலாறு – சிறுகதை பற்றியது
4. இலக்கியவரலாறு – புதினம் பற்றியது

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	3	1	2	2	1	2	2	1	2
CO2	2	3	1	2	2	1	2	1	3
CO3	2	1	3	1	1	2	0	1	2
CO4	3	2	2	2	1	0	2	2	2
CO5	3	1	2	1	0	1	1	2	1
AVG	**3**	**2**	**2**	**2**	**1**	**1**	**1**	**1**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 103			PRINCIPLES OF ANIMATION	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
3	1	0		4	1	0	5

PREREQUISITE: Nil

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the importance of drawing and the animation.	Cognitive	Remember
CO2	***Choose*** the methods to make the drawings for animation.	Cognitive	Remember
CO3	***Describe*** the stages of animation and ***achieve*** the knowledge on animation.	Cognitive Psychomotor	Understand Set
CO4	***Apply*** the body languages concepts in making animated characters.	Cognitive	Apply
CO5	***Analyze*** the different actions to be performed by the character to make the realistic animation.	Cognitive	Analyze

UNIT I	INTRODUCTION	15

Drawings with the help of basic shapes, Animal study, Human anatomy, Shading techniques, Live model study, Introduction- Importance of confidence, Difference between "looking at the drawing" and "seeing the drawing", What is observation, Procedure- How to approach, Importance of Guideline- Line of action, Overcome the fear, Drawing for animation.

UNIT II	MAKE DRAWINGS FOR ANIMATION	15

An Introduction on how to make drawings for animation, Shapes and forms, About 2d and 3d drawings, Caricaturing – fundamentals, Exaggeration, Attitude, Silhouettes, Boundary- breaking exercises and warm ups, gesture drawing, Line drawing and quick sketches, Drawing from observation, memory and imagination.

UNIT III	STAGES OF ANIMATION	15

Drawing for Animation, Exercises and warm ups on pegging sheet, Quick Studies from real life, Sequential movement drawing, Caricaturing the Action. Thumbnails, Drama and psychological effect, Motion Studies, Drawing for motion.

UNIT IV	BODY LANGUAGE	15

The Body language, Re-defining the drawings, Introduction to animation production process,

Basic Principles in animation.		
UNIT V	**ACTIONS OF CHARACTERS**	**15**
Squash and stretch, Anticipation, Staging, Straight ahead and pose to pose, Follow through and overlapping action, Slow in and slow out, Arcs, Secondary action, Timing, Exaggeration, Solid drawing, Appeal, Mass and weight, Character acting, Volume, Line of action, Path of action, Walk cycles-animal and human.		

LECTURE	TUTORIAL	PRACTICAL	TOTAL
60	**15**	**---**	**75**

REFERENCES:

1. Graphics & Animation Basics , By Suzanne Weixel / Cheryl Morse
2. Basic Animation Ht25 - Walter Foster , By Walter Foster
3. Cartooning Basic Animation Ht25 - Walter Foster , By Walter Foster
4. Computer Graphics & Animation , By Prajapati Ak
5. Introduction To 3d Graphics & Animation Using Maya/Cd ,By Adam Watkins
6. www.animationmentor.com/animation-program/animation-basics.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	3	1	2	2	1	2	2	1	2
CO2	2	3	1	2	2	1	2	1	3
CO3	2	1	3	1	1	2	0	1	2
CO4	3	2	2	2	1	0	2	2	2
CO5	3	1	2	1	0	1	1	2	1
AVG	**3**	**2**	**2**	**2**	**1**	**1**	**1**	**1**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 104			WEB DESIGN	L	T	P	C
				3	1	1	5
C	P	A		L	T	P	H
2.8	1	0.2		3	1	3	7

PREREQUISITE: Nil

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the significance of Web Technology.	Cognitive Psychomotor	Remember Perception
CO2	***Express*** the knowledge on HTML, CSS and JavaScript in Web Design.	Cognitive	Understand
CO3	***Employ*** the understanding of the Client side scripts and actively ***participate*** in teams for the creation of web pages.	Cognitive Affective	Apply Respond
CO4	***Utilize*** the web designing tools effectively in the real world applications.	Cognitive	Apply
CO5	***Design*** and ***Establish*** the Website.	Cognitive Psychomotor	Create Set

UNIT I	**INTRODUCTION TO WEB TECHNOLOGY**	**12+9**

Basics of Internet – World Wide Web – Web Server – Proxy Server – Web Browsers – IP Address – Domain Name – HTTP – Uniform Resource Locator – Concept of Tier – Web Pages – Static Web Pages – Dynamic Web Pages – Search Engine – Search Tools.

Lab: 1. Usage of Microsoft Interdev.
2. Downloading Templates.

UNIT II	**HTML**	**12+9**

HTML Basics – HTML Editor – HTML CSS – Links – Images – Tables – Lists - Frames - HTML forms and Input tags.

Lab: 1. Formatting tags, ordered list and unordered list.
2. Tables, frame, image map and hyperlink.

UNIT III	**CSS**	**12+9**

CSS Basics – Texts and Fonts – Links, Lists and Tables – Background, Border and Outline – Position – Dimension and Display.

Lab: 1. Font, color and style
2. Background and Links

UNIT IV	**JAVASCRIPT**	**12+9**

Java Script Basics – Functions – Objects – Events – Scope – Strings – Numbers – Date – Arrays – Conditional and Looping Statements – Forms.

Lab: 1. Form Validation
2. Looping and Conditional Statements

UNIT V	**WEB APPLICATIONS**	**12+9**

Free Website Creation – Getting Server Space - Case Studies: College Website – Blog Creation – Online Education – Career Guidance.

Lab: Website Creation

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	15	45	105

REFERENCES:

1. Achyut S.Godbole, Atul Kahate, "Web Technologies TCP/IP To Internet Application Architectures", First Edition, Tata McGraw-Hill Publishing Company Limited, 2003.
2. N.P. Gopalan, J.Akilandeswari, "Web Technology: A Developer's Perspective", Second Edition, PHI Learning Private Limited, 2014.
3. Thomas A. Powell, "HTML & CSS: The Complete Reference", Fifth Edition, Tata McGraw Hill Education Private Limited, New Delhi, 2010.
4. Thomas A. Powell, Fritz Schneider, "JavaScript: The Complete Reference", Second Edition, Tata McGraw Hill Education Private Limited, New Delhi, 2008.
5. www.w3schools.com
6. www.tutorialspoint.com

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO						PSO		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	2	0	1	0	1	0	1	0	0
CO2	2	2	1	1	0	1	1	0	0
CO3	1	2	1	2	1	1	2	0	0
CO4	0	1	2	2	1	0	1	0	0
CO5	1	2	2	3	2	1	1	0	0
AVG	**1**	**1**	**1**	**2**	**1**	**1**	**1**	**0**	**0**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM105			ANIMATION ART	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
4	0	0		4	1	0	5

PREREQUISITE: 3D animation

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the importance of animation.	Cognitive	Remember
CO2	***Demonstrate*** the 3D character.	Cognitive	Understand
CO3	***Analyze*** the storyboard and animatics.	Cognitive	Analyze
CO4	***Formulate*** the frame by frame animation.	Cognitive	Create
CO5	***Organize*** the animation special effects.	Cognitive	Create

UNIT I	INTRODUCTION	15

What is mean by Animation – Why we need Animation – History of Animation – Uses of Animation – Types of Animation – Principles of Animation – Some Techniques of Animation – Animation on the WEB – 3D Animation – Special Effects - Creating Animation.

UNIT II	CHARACTER LIBRARIES	15

Planning your animation-script-design-storyboards-animatics-animation-animation method-Animation efficiencies-compositing and editing-making your project plan-delivery specifications-format-dimensions- frame rate-aspect ratio-schedule-script-designs-storyboards-character libraries.

UNIT III	STORYBOARDS AND ANIMATICS	15

Storyboards -Drawing storyboards on paper (traditional) –Acting-Drawing digitally-Drawing directly into software. Animatics -Acting in digital boards -Building animatics- Technical issues Aspect ratio - Pixel aspect ratio- Image size-Frame rate- Action safe and title safe - Exporting from After Effects - Importing into animation software.

UNIT IV	FRAME BY FRAME ANIMATION	15

The character library Animating a scene - First pass: blocking and timing poses -Second pass: in betweening and body acting-Third pass: lip sync . -Lip sync-Fourth pass: eye acting and expressions. Timing and animation-Blocking the animation -Adding breakdowns -Adding inbetweens - Facial animation and lip sync-Using shape tweens.

UNIT V	ANIMATION SPECIAL EFFECTS	15

Highlights and shadow modeling-Preparing the shadow model layer - Modeling the silhouette - Water Fire ,Smoke, Debris - Factors that increase file size, length-After Effects is a nondestructive program - Trimming- Pans and zooms - Export features Render queue -Transitions - Sound editing . Filters-Masks, painting, and text tools-Disadvantages of using After Effects.

LECTURE	TUTORIAL	PRACTICAL	TOTAL

60	15	-	75

REFERENCES:

1. Foundation Flash Cartoon Animation by Tim Jones Barry J. Kelly Allan S. Rosson David Wolfe.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	2	1	1	1	1	1	1	2	1
CO2	1	1	3	1	1	2	1	2	2
CO3	1	1	2	1	2	1	1	3	1
CO4	2	1	1	1	2	1	1	3	1
CO5	2	2	1	2	2	1	1	2	1
AVG	**2**	**1**	**2**	**1**	**2**	**1**	**1**	**2**	**1**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 106			HUMAN ETHICS, VALUES , RIGHTS AND GENDER EQUALITY	L	T	P	C
				3	0	0	3
C	P	A		L	T	P	H
2.6	0	0.4		3	0	0	3

PREREQUISITE: Nil

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Relate*** and ***Interpret*** the human ethics and human relationships	Cognitive	Remember Understand
CO2	***Explain*** and ***Apply*** gender issues, equality and violence against women	Cognitive	Understand Apply
CO3	***Classify*** and ***Develop*** the identify of human rights and their violations	Cognitive Affective	Analyze Receive
CO4	***Classify*** and ***Dissect*** necessity of human rights and report on violations.	Cognitive	Understand Analyze
CO5	***List*** and ***Respond*** to family values, universal brotherhood, fight against corruption by common man and good governance.	Cognitive Affective	Remember Respond

UNIT I	**HUMAN ETHICS AND VALUES**	**7**

Human Ethics and values - Understanding of oneself and others- motives and needs- Social service, Social Justice, Dignity and worth, Harmony in human relationship: Family and Society, Integrity and Competence, Caring and Sharing, Honesty and Courage, Valuing Time, Co-operation, Commitment, Sympathy and Empathy, Self respect, Self-Confidence and Personality- Living in harmony at various levels.

UNIT II	**GENDER EQUALITY**	**9**

Gender Equality - Gender Vs Sex -, Concepts, definition, Gender equity, equality, empowerment. Status of Women in India Social, Economical, Education, Health, Employment, HDI, GDI, GEM Contributions of Dr. B.R. Ambethkar, Thanthai Periyar and Phule to Women Empowerment.

UNIT III	**WOMEN ISSUES AND CHALLENGES**	**9**

Women Issues and Challenges- Female Infanticide, Female feticide, Violence against women, Domestic violence, Sexual Harassment, Trafficking, Access to education, Marriage. Remedial Measures – Acts related to women: Political Right, Property Rights, Right to Education, Medical Termination of Pregnancy Act, and Dowry Prohibition Act.

UNIT IV	**HUMAN RIGHTS**	**9**

Human Rights Movement in India – The preamble to the Constitution of India, Human Rights and Duties, Universal Declaration of Human Rights (UDHR), Civil, Political, Economical, Social and Cultural Rights, Rights against torture, Discrimination and forced Labour, Rights of Children. National Human Rights Commission and other statutory Commissions, Creation of Human Rights Literacy and Awareness. - Intellectual Property Rights (IPR). National Policy on occupational safety, occupational health and working environment.

UNIT V	GOOD GOVERNANCE AND ADDRESSING SOCIAL ISSUES	11

Good Governance - Democracy, People's Participation, Open and Transparence governance, Corruption, Impact of corruption on society, on how and whom to make corruption complaints, fight against corruption and related issues and character building, Fairness in criminal justice administration, Government system of Redressal. Issues and intervention in situations of family violence, substance abuse and corruption. Creation of People friendly environment and universal brotherhood.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	---	---	45

REFERENCES:

1. Aftab A, (Ed.), Human Rights in India: Issues and Challenges, (New Delhi: Raj Publications, 2012).
2. Bajwa, G.S. and Bajwa, D.K. Human Rights in India: Implementation and Violations (New Delhi: D.K. Publications, 1996).
3. Chatrath, K. J. S., (ed.), Education for Human Rights and Democracy (Shimala: Indian Institute of Advanced Studies, 1998).
4. Jagadeesan. P. Marriage and Social legislations in Tamil Nadu, Chennai: Elachiapen Publications, 1990).
5. Kaushal, Rachna, Women and Human Rights in India (New Delhi: Kaveri Books, 2000)
6. Mani. V. S., Human Rights in India: An Overview (New Delhi: Institute for the World Congress on Human Rights, 1998).
7. Singh, B. P. Sehgal, (ed) Human Rights in India: Problems and Perspectives (New Delhi: Deep and Deep, 1999).
8. Veeramani, K. (ed) Periyar on Women Right, (Chennai: Emerald Publishers, 1996)
9. Veeramani, K. (ed) Periyar Feminism, (Periyar Maniammai University, Vallam, Thanjavur: 2010).
10. Planning Commission report on Occupational Health and Safety http://planningcommission.nic.in/aboutus/committee/wrkgrp12/wg_occup_safety.p
11. Central Vigilance Commission (Gov. of India) website: http://cvc.nic.in/welcome.html.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**0**	**0**
CO1	0	2	0	0	2	1	0	0	0
CO2	0	2	0	0	1	2	0	0	0
CO3	0	1	0	0	1	1	0	0	0
CO4	0	1	0	0	3	2	0	0	0
AVG	**0**	**2**	**0**	**0**	**2**	**2**	**0**	**0**	**0**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 201			ENVIRONMENTAL STUDIES	L	T	P	C
				2	0	0	2
C	P	A		L	T	P	H
1.8	0	0.2		2	1	0	3

PREREQUISITE: Nil

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Describe*** the significance of natural resources and ***explain*** anthropogenic impacts.	Cognitive	Remember, Understand
CO2	***Illustrate*** the significance of ecosystem, biodiversity and natural geo bio chemical cycles for maintaining ecological balance.	Cognitive	Understand
CO3	***Identify*** the facts, consequences, preventive measures of major pollutions and ***recognize*** the disaster phenomenon.	Cognitive Affective	Remember Receiving
CO4	***Explain*** the socio-economic, policy dynamics and ***practice*** the control measures of global issues for sustainable development.	Cognitive	Understand Analysis
CO5	***Recognize*** the impact of population and the concept of various welfare programs, and ***apply*** the modern technology towards environmental protection.	Cognitive	Understand Apply

UNIT I	**INTRODUCTION TO ENVIRONMENTAL STUDIES AND ENERGY**	**12**

Definition, scope and importance – Need for public awareness – Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people – Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems – Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies – Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies – Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Case studies – Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification – Role of an individual in conservation of natural resources – Equitable use of resources for sustainable lifestyles.

UNIT II	**ECOSYSTEMS AND BIODIVERSITY**	**7**

Concept of an ecosystem – Structure and function of an ecosystem – Producers, consumers and decomposers – Energy flow in the ecosystem – Ecological succession – Food chains, food webs and ecological pyramids – Introduction, types, characteristic features, structure and function of the (a) Forest ecosystem (b) Grassland ecosystem (c) Desert ecosystem (d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) – Introduction to Biodiversity – Definition: genetic, species and ecosystem diversity - Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT III	**ENVIRONMENTAL POLLUTION**	**10**

Definition – Causes, effects and control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Thermal pollution (g) Nuclear hazards – Solid waste management: Causes, effects and control measures of urban and industrial wastes – Role of an individual in prevention of

pollution – Pollution case studies – Disaster management: flood, earthquake, cyclone and landslide.

UNIT IV	SOCIAL ISSUES AND THE ENVIRONMENT	10

Urban problems related to energy – Water conservation, rain water harvesting, watershed management – Resettlement and rehabilitation of people; its problems and concerns, climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, Wasteland reclamation – Consumerism and waste products – Environment Protection Act – Air (Prevention and Control of Pollution) Act – Water (Prevention and control of Pollution) Act – Wildlife Protection Act – Forest Conservation Act – Issues involved in enforcement of environmental legislation – Public awareness.

UNIT V	HUMAN POPULATION AND THE ENVIRONMENT	6

Population growth, variation among nations – Population explosion – Family Welfare Programme – Environment and human health – Human Rights – Value Education - HIV / AIDS – Women and Child Welfare – Role of Information Technology in Environment and human health – Case studies.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
30	15	---	45

TEXT BOOKS:

1. Miller T.G. Jr., Environmental Science, Wadsworth Publishing Co, USA, 2000.
2. Townsend C., Harper J and Michael Begon, Essentials of Ecology, Blackwell Science, UK, 2003
3. Trivedi R.K and P.K.Goel, Introduction to Air pollution, Techno Science Publications, India, 2003.
4. Disaster mitigation, Preparedness, Recovery and Response, SBS Publishers & Distributors Pvt. Ltd, New Delhi, 2006.
5. Introduction to International disaster management, Butterworth Heinemann, 2006.
6. Gilbert M.Masters, Introduction to Environmental Engineering and Science, Pearson Education Pvt., Ltd., Second Edition, New Delhi, 2004.

REFERENCE BOOKS:

1. Trivedi R.K., Handbook of Environmental Laws, Rules, Guidelines, Compliances and Standards, Vol. I and II, Enviro Media, India, 2009.
2. Cunningham, W.P.Cooper, T.H.Gorhani, Environmental Encyclopedia, Jaico Publ., House, Mumbai, 2001.
3. S.K.Dhameja, Environmental Engineering and Management, S.K.Kataria and Sons, New Delhi, 2012.
4. Sahni, Disaster Risk Reduction in South Asia, PHI Learning, New Delhi, 2003.
5. Sundar, Disaster Management, Sarup & Sons, New Delhi, 2007.
6. G.K.Ghosh, Disaster Management, A.P.H.Publishers, New Delhi, 2006.

E RESOURCES:

1. http://www.e-booksdirectory.com/details.php?ebook=10526
2. https://www.free-ebooks.net/ebook/Introduction-to-Environmental-Science
3. https://www.free-ebooks.net/ebook/What-is-Biodiversity
4. https://www.learner.org/courses/envsci/unit/unit_vis.php?unit=4
5. http://bookboon.com/en/pollution-prevention-and-control-ebook
6. http://www.e-booksdirectory.com/details.php?ebook=8557
7. http://www.e-booksdirectory.com/details.php?ebook=6804
8. http://bookboon.com/en/atmospheric-pollution-ebook
9. http://www.e-booksdirectory.com/details.php?ebook=3749
10. http://www.e-booksdirectory.com/details.php?ebook=2604
11. http://www.e-booksdirectory.com/details.php?ebook=2116

12. http://www.e-booksdirectory.com/details.php?ebook=1026
13. http://www.faadooengineers.com/threads/7894-Environmental-Science

Mapping of Course Outcomes (CO) with Graduate Attributes (GA):

B.Sc. A&M	GA1	GA2	GA3	GA4	GA5	GA6	GA7	GA8	GA9
CO1	2	0	0	0	2	2	0	2	3
CO2	2	0	0	0	2	0	0	0	1
CO3	2	0	3	0	3	3	0	2	2
CO4	2	0	3	0	3	3	2	3	2
CO5	2	0	0	1	2	2	0	3	1
AVG	**2**	**0**	**2**	**1**	**2**	**2**	**1**	**2**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 202			SPEECH AND BUSINESS COMMUNICATION	L	T	P	C
				3	0	0	3
C	P	A		L	T	P	H
2.6	0.2	0.2		3	0	0	3

PREREQUISITE: Study Skills and Language Lab

	COURSE OUTCOMES	DOMAIN	LEVEL
	After the completion of the course, students will be able to		
CO1	***Define*** and ***Describe*** how to make effective speeches academically and in social situations.	Cognitive	Remember
CO2	***Identify*** the forms of language used in different speeches and how to listen actively and critically.	Psychomotor	Perception
CO3	***Produce*** the proper tone of language required in writing and speaking in business communication.	Cognitive	Remember
CO4	***Initializing*** Values, Display knowledge on grammar and other linguistic features in writing various forms of business communication.	Affective	Internalizing values
CO5	***Comprehend*** and prepare how to write business reports, minutes, proposals etc.	Cognitive	Application

UNIT I	**PUBLIC SPEECH**	**9**

Introduction to public speaking; functions of oral communication; skills and competencies needed for successful speech making; importance of public speaking skills in everyday life and in the area of business, social, political and all other places of group work

UNIT II	**TYPES OF SPEECH**	**9**

Various types of Speeches**:** manuscript, impromptu, rememorized and extemporaneous speeches; analyzing the audience and occasion; Developing ideas; finding and using supporting materials; Developing speech out line; Organization of Speech; introduction, development and conclusion; language used in various types of speeches; Adapting the speech structures to the Audience; paralinguistic features

UNIT III	**BUSINESS COMMUNICATION**	**9**

Introduction to business communication; modern developments in the style of writing letters memos and reports: block letters, semi block letters, full block letters, simplified letters etc.

UNIT IV	**USE OF LANGUAGE**	**9**

The language used in memos/minutes/telephone memos/ letters/assignments; art of writing E-mail etc.

UNIT V	**USE OF GRAMMAR**	**9**

The use of active and passive voice; the use of grammar, propriety, accuracy , exactness , the tone & other elements of language used in these writings; The format of various types of Reports/ projects etc.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	---	---	45

TEXT BOOKS:

1. Strengthen Your Writing by V.R. Narayanaswamy (Orient Longman)
2. A course in written English: by Ghosh, R N; Inthira, S R [Author]; Moody, K W [Author].1978
3. Writing With A Purpose, Jaya Sasikumar, Champa Tickoo,Published by Oxford University Press , Paper Back , Language – English
4. Freeman, Sarah: Study Strategies. New Delhi: Oxford University Press, 1979.
5. Reading for Meaning, Paul Gunashekar M.L. Tickoo, Published by S. Chand & Company Ltd. Sultan Chand & Company

REFERENCES:

1. John Sealy, Writing and Speaking Author:, Oxford University Press, New Delhi Third Edition 2009.
2. Williams K S, Communicating in Business (8th Edition) Engage Learning India Pvt. Ltd., 2012.
3. John Sealy, Writing and Speaking, Oxford University Press, New Delhi Third Edition 2009.

Mapping of Course Outcomes (CO) with Graduate Attributes(GA):

B.Sc. A&M	GA1	GA2	GA3	GA4	GA5	GA6	GA7	GA8	GA9
CO1					1			1	1
CO2					2			1	2
CO3				2	1			1	1
CO4				2	1			1	2
CO5					1			1	3

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 203			CHARACTER & ENVIRONMENT SKETCHING	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
3.8	0.2	0		4	1	0	5

PREREQUISITE: Animation Art

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the significance of Pencil Drawing.	Cognitive	Remember
CO2	***Express*** the different ways of line drawing perspective in Pencil drawing.	Cognitive	Understand
CO3	***Employ*** the understanding of the lights in Pencil drawing.	Cognitive	Apply
CO4	***Utilize*** the various shading methods effectively in making the realistic drawings.	Cognitive	Apply
CO5	***Design*** and ***Draw*** the drawings using different types of pencils.	Cognitive Psychomotor	Create Set

UNIT I	**HISTORY OF PENCIL DRAWING**	**15**

Materials and Tools: Choosing the Right Kind and Quality-Pencil, Eraser, Drawing Pad, Drawing board, Paper Stumps or Cone Blenders, Pencil, Ruler Sharpener. BASICS IN DRAWING AND SKETCHING-The Different types of Pencil Grips-Tripod Grip, Extended Grip, Underhand Grip, And Overhand Grip

UNIT II	**LINES PERSPECTIVE**	**15**

Lines-Flat Lines, Accent Lines , Contour Lines, Scumble/Scribbling ,Cross Hatch Line ,Smudge Pointillism. Basic Perspectives in Drawing- An Introduction on Perspectives - Linear perspective, Zero Point Perspective, One Point perspective ,Two Point Perspective ,Three-Point perspective, Isometric Perspective ,Atmospheric Perspective. Basic Drawing Shapes

UNIT III	**LIGHTING**	**15**

Basic Elements of Light, Shadows, and Shading - Light, Shadows and Shadow Box. Constructing a Simple Shadow box, Kinds and Quality of Light, Hard Light, Soft light. Basic Elements of Shading - The Highlight or Full Light, The Cast Shadow, The Halftone The Reflected Light, The Shadow Edge

UNIT IV	**SHADING**	**15**

Different Shading Techniques - Regular Shading, Irregular Shading, Circular Shading, directional Shading. Add Tones and Values -Tips on Tones and Values, Examples on Shading.

UNIT V	**FINISHING TOUCHES**	**15**

Erasing and Dusting , Mixed Media Applications - Watercolor Pencils, Oil Colored Pencils, Drawing with Pencils in Oil Painting, Pen and Ink Drawing, Wall Painting ,Cartoon Drawing , Tips to Draw Faster

LECTURE	TUTORIAL	PRACTICAL	TOTAL

45	15	--	60

REFERENCES:

1. Pencil Drawing - A Beginner's Guide (e-book) – http://nicheempires.com.
2. Basic Drawing Techniques by Richard Box Pub: Winsor & Newton, (U.S.A)
3. The Complete Book of drawing techniques -a professional guide for the artist by Peter Stanyer.
4. Still Life by Sanjay Shelar, Jyotsana Prakashan(India).Pub.
5. Drawing and Anatomy by Victor Perard , Kingsport Press Pub(U.K).
6. https://in.pinterest.com/explore/environment-sketch
7. www.craftsy.com / Online Classes/Art & Photo.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	3	2	3	2	2	1	2	1	2
CO2	2	3	2	2	1	2	0	1	1
CO3	2	2	3	1	2	1	1	2	3
CO4	3	2	1	3	1	2	2	1	1
CO5	2	1	3	2	0	1	1	2	3
AVG	**2**	**2**	**3**	**2**	**1**	**1**	**1**	**1**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 204			AUDIO AND VIDEO EDITING	L	T	P	C
				3	1	1	5
C	P	A		L	T	P	H
3	1	0		3	1	3	7

PREREQUISITE: Computer Fundamentals

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the basics and objectives of editing.	Cognitive	Remember
CO2	***Discuss*** the various types of editing.	Cognitive	Understand
CO3	***Explain*** 2D and 3D graphics.	Cognitive	Apply
CO4	***Classify*** various elements of audio.	Cognitive	Analyze
CO5	***Describe*** the procedure for format conversion.	Psychomotor	Perspective

UNIT I INTRODUCTION **12+9**

Concept and Objectives of Editing, Software and tools, Continuity and Jerk Enter and Exit in Frame, Title, Credits and Sounds. Sound editing, mixing sound, laying sound tracks, syncing sound and picture. Capturing video. Editing techniques for News, Documentary and Fiction and Ad Film.

Lab

1. Touring in to software
2. Setting up a project
3. Workspace

UNIT II ELEMENTS OF THE EDITING **12+9**

Picture transitions and their use, Elements of the editing, motivation, information, shot composition sound, camera angle, continuity. Types of the editings, action edit, and screen position edit, form edit, dynamic edit. Do's and don'ts of editing. Voice over and sound bytes, dubbing and mixing of sound. Computer hardware for editing.

Lab

1. Settings, Preferences and Managing Assets
2. Creating Videos
3. Creating Audios

UNIT III ON LINE EDITING **12+9**

On line editing in a multi-camera TV programme production. TV Graphics and Animation: Theory and Practice Elements of 2D Graphic Elements of 3D Graphics. 3D Modeling. 3D Animation. Special effects creation, Environmental special effects Lighting camera and texturing. Introduction to virtual sets. Film Analysis: The Editor's point of view Extensive sound recording, video editing, graphics and animation practical's. Participation in production exercises.

Lab

1. Adding Transitions
2. Exporting frames, clips and sequences
3. Applying Effects, Color Correction, and Opacity

UNIT IV	INTRODUCTION TO SOUND	12+9

Sound, Digital sound files, different sound formats, midi and digital audio, creating digital audio files, sound producing, sound extracting, Advantages and disadvantages of midi and digital, choosing between midi and Digital audio. Linking files: Sound for the World Wide Web, adding the sound to your multimedia project, production tips, audio recording, keeping track of your sound, testing and evaluation.

Lab

1. Adding audio effects
2. Editing and mixing audio
3. Adding video effects

UNIT V	RECORD CLIPS AND EDITING	12+9

Sound recording, editing digital recording, trimming, splicing and assembly, volume adjustments, format conversion, re sampling or downloading, fade-ins and fade - outs, equalization, time stretching, digital signal processing, reverting sound, making midi audio, audio file formats.

Lab

1. Creating Dynamic titles
2. Applying specialized editing tool
3. Integrating software with other applications

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	15	45	105

REFERENCES:

1. Editing Today: Smith, Ron F. and O'Connell, L.M, Published 2003, Blackwell Publishing
2. Nonlinear Editing: Media Mannel; Morris, Patrick, Published 1999 Focal Press.
3. Basic Elements of Filmmaking II Handbook, UW-Milwaukee Department of Film, 2004 Rob Danielson.
4. Audio system guide Video and film production by Chris Lyons, A shure Educational Publication
5. Filmmaking Guide by Tom Barrance ref:www.intofilm.org
6. http://www.amazon.in/Digital-Audio-Editing-Correcting-Enhancing/dp/0415829585
7. http://www.apress.com/9781484216477
8. http://www.amazon.com/Editing-Digital-Video-Complete-Technical/dp/0071406352
9. http://www.amazon.com/Audio-Video-Editing-Books/b?ie=UTF8andnode=15375301
10. http://www.amazon.in/The-Technique-Film-Video-Editing/dp/0240813979
11. https://opensource.com/resources/ebook/video-editing

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	3	1	2	2	2	1	1	1	1
CO2	2	1	2	1	2	1	1	2	1
CO3	1	1	1	1	1	1	1	3	1
CO4	1	0	1	1	2	1	1	1	1
CO5	1	1	2	1	1	2	3	2	1
AVG	**2**	**1**	**2**	**1**	**2**	**1**	**1**	**2**	**1**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 205			VISUAL DESIGN	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
3.8	0.2	0		4	1	0	5

PREREQUISITE: Nil

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the visual effects basics and its types.	Cognitive	Remember
CO2	***Summarize*** and ***Classify*** the fluid and fire effects with other effects.	Cognitive Psychomotor	Understand Perception
CO3	***Comparing*** the paint effects and liquid effects with other effects.	Cognitive Cognitive	Understand Analyze
CO4	***Implementing*** and ***applying*** special effects with Visual Effects.	Cognitive	Understand
CO5	***Experimenting*** and ***checking*** the visual effects in 2D and 3D effects.	Cognitive	Create

UNIT I	INTRODUCTION	15

Visual Effects- Description- Types- Particles – Analysis- Size- Sand Effects – Smoke Effects Fire Effects – Cloud Effects – Snow Effects.

UNIT II	FLUID EFFECTS	15

Fluid Effects-Coloring- designing Clouds Background – Designing Fog Effects – Explosion Effects– Fire Effects with flames - Space Effects and designs- Designing Thick Smoke.

UNIT III	PAINT EFFECTS	15

Designing Paint Effects – Coloring paints- Designing Trees and green effects – Designing Weather and seasons –Effects on seasons- Designing Glass image – Designing Different glass reflection- Designing Glow Effects – Liquid Effects and Reflection design.

UNIT IV	SPECIAL EFFECT	15

Special effect – Acquisition shooting progress – common types of special effects – Designing effects of Hair and shape – Designing Fur Effects- Designing Clothes and effects.

UNIT V	VISUAL EFFECTS TOOL AND ADVANCED FUNCTIONS	15

Visual Effects Tool and advanced functions– Converting images from 2D to 3D Pictures – Creating 3D Effects- Differentiation 2D effects and 3D effects.

LECTURE	TUTORIAL	PRACTICAL	TOTAL

60	**15**		**75**
REFERENCES:			

1. Visual Effects Cinematography Zoran Perisic, The Morgan Kaufmann Series in Computer Graphics,2012.
2. The Art and Science of Digital Compositing (The Morgan Kaufmann Series in Computer Graphics) by Ron Brinkmann ,2011.Doug sahlin, Flash MX Action script for designers, Wiley publishing, 2002.
3. Visual effect Society (VES), Jeffrey A. Okun, Susan Zwerman, 2010, Elsevier inc.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	**PO**							**PSO**	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	2	2	2	2	2	2	2	1	1
CO2	2	2	3	2	3	2	2	1	1
CO3	2	2	2	3	2	2	2	1	1
CO4	2	2	2	2	2	2	2	2	1
CO5	3	2	2	3	2	2	3	3	1
AVG	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**1**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM301			DIGITAL ANIMATION SKILLS	L	T	P	C
				2	0	1	3
C	P	A		L	T	P	H
1.6	1	0.4		2	0	3	5

PREREQUISITE: Nil

	COURSE OUTCOMES	DOMAIN	LEVEL
	After the completion of the course, students will be able to		
CO1	***Define*** and ***Explain*** Basic concepts in Drawing	Cognitive	Knowledge Evaluation
CO2	***Identify*** and ***design*** ***v***arious shapes	Psychomotor	Perception Origination
CO3	***Compose*** and ***Formulate*** the perspectives in drawing	Psychomotor Affective	Origination Organization
CO4	***Identify*** and ***design*** figures and animals	Psychomotor	Perception Origination
CO5	***Listen*** and **Create** natural drawing from everyday observations	Psychomotor Affective	Origination Organization

UNIT I	**SKETCHING USING SIMPLE SHAPES**	**6+9**

From scribbles to signs - The big three – overlapping shapes - foreshortening - Draw to tell stories – The plot thickens.

Lab

Drawing shapes

UNIT II	**PUT IT IN PERSPECTIVE**	**6+9**

Journey To The Vanishing Point - Objects in space – Conquering deep space -One point Perspective –two point perspective –three point prospective inclined plane perspective.

Lab

Drawing Perspective

UNIT III	**DRAWING FIGURES AND ANIMALS**	**6+9**

Speed sketching versus sustained drawing - Sketching and drawing performance – from simple shapes –overlapping shapes -line quality – sketching and drawing from life –sketching from television, dance, sport.

Lab

Drawing figures and Animals

UNIT IV	**DRAWING THE SCAPES**	**6+9**

Drawing techniques in Landscapes - Townscapes – seascapes - Drawing water, lake, ocean, rivers and falls – Drawing rocks and Mountains.

Lab

Drawing the Scapes

Drawing the seascapes		
UNIT V	**CAPTURING MOVEMENT**	**6+9**
Nature provides – the line of action - Everyday observations – fantasy and body language – Inspiration from classical mythology. **Lab** Drawing from observations		

LECTURE	**TUTORIAL**	**PRACTICAL**	**TOTAL**
30	**0**	**45**	**75**

REFERENCES:

1. Peter parr 2016, Blooms burry publishing "Sketching for Animation"
2. Pascal Naidon 2016 "The Vision for Pencil"

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	**PO**							**PSO**	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	3	1	2	2	1	1	1	3	3
CO2	2	1	1	2	1	1	1	3	3
CO3	3	1	2	1	2	1	1	3	3
CO4	2	1	2	1	1	2	2	3	3
CO5	3	1	2	3	1	2	2	3	3
AVG	**3**	**1**	**2**	**2**	**1**	**1**	**1**	**3**	**3**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 302			FOUNDATION ART	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
4	0	0		4	1	0	5

PREREQUISITE: Animation Art

	COURSE OUTCOMES	DOMAIN	LEVEL
	After the completion of the course, students will be able to		
CO1	***Recognize*** the concept of design principles.	Cognitive	Remember
CO2	***Sketch*** an art using different tools	Cognitive	Apply
CO3	***Examine*** various perspectives of drawing.	Cognitive	Apply
CO4	***Describe*** the various methods of drawings.	Cognitive	Remember
CO5	***Design*** a fine art using appropriate properties and methodologies.	Cognitive	Analyze

UNIT I	INTRODUCTION	15

The creative impulse - Looking at life and art – thinking about life and art : recording and communicating - understanding art-Line, communication, and the impulse to order – characteristics of line –directionality of line-line and shape – line and value – line and texture – interpretation of the quality of line – closure and continuity – the expressive language of line.

UNIT II	SHAPES	15

Shapes - terms with shape – types of shape – positive and negative shapes – the shaped canvas – shape as icon. Value: Shades of gray – descriptive and expressive properties of value.

UNIT III	COLOR AND LIGHT	15

Color and light – properties of color – color mixing- color and Principles of Design – color schemes – other uses of color Texture: Types of Texture – texture and design – texture as subject-Space-actual Space – multiple perspectives – amplified perspective – parallel perspective.

UNIT IV	ACTUAL MOTION	15

Actual motion – implied motion - illusion of motion – time and motion in film and video – Unity and Variety: Ways to achieve unity – unity with variety - conceptual and symbolic unity and disunity.

UNIT V	EMPHASIS AND FOCAL POINT	15

Emphasis and focal point- Relationships between emphasis and focal point – methods of creating emphasis and focal point – multiple focal points – degree of emphasis – absence of focal point-Balance and Rhythm: actual balance and pictorial balance – pictorial balance – types of balance

– achieving balance in asymmetrical compositions – all over pattern – imbalance – types of rhythm - Scale – proportion.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
60	15	0	75

REFERENCES:

1. Louis Fichner Rathus, 2007, Foundations of art & design, Wadsworth Publishing Co Inc.
2. Alan Pipes, 2004, Foundations of art + design, Laurence King Publishing.
3. www.slideshare.net.
4. www.proko.com

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	3	2	1	0	1	1	1	1	1
CO2	2	2	3	2	1	2	2	1	1
CO3	1	1	2	1	2	1	1	1	1
CO4	1	1	2	1	2	3	1	1	1
CO5	1	1	2	1	2	2	1	1	1
AVG	**2**	**1**	**2**	**1**	**2**	**2**	**1**	**1**	**1**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 303			GRAPHICS DESIGN	L	T	P	C
				3	1	1	5
C	P	A		L	T	P	H
2.8	1	0.2		3	1	3	7

PREREQUISITE: Visual design

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Understand*** and ***recognize*** the Graphic Design concepts and its applications.	Cognitive	Understand Remember
CO2	***Understand*** the elements of design and ***Apply*** it to ***produce*** own shapes and color design.	Cognitive Psychomotor	Understand Apply Set
CO3	***Understand*** *the* principles of design and ***Apply*** it to ***develop*** a page for Website and print media.	Cognitive Psychomotor	Understand Apply Set
CO4	***Understand*** the poster design concepts and ***develop*** posters for advertisement and academic poster presentation.	Cognitive Psychomotor	Understand Apply Set
CO5	***Understand*** and ***equip*** themselves for self-employment and ***develop*** Presentation and Communication Skills.	Cognitive Affective	Understand Remember Receiving Responding

UNIT I	INTRODUCTION TO THE GRAPHIC DESIGN	12+9

Introduction to the Graphic Design Industry - History of Graphic Design - Future of Graphic design - Introduction to the equipment. The introduction of each piece of equipment would be tied to a relevant graphics project.

Lab

Using Photoshop: 1. Color Design
2. Shape Design

UNIT II	ELEMENTS OF DESIGN	12+9

Elements of Design - Colour - Line - Shape - Space- Texture - Value : Principles of Design Balance , Contrast, Emphasis/Dominance , Harmony , Movement/Rhythm , Proportion Repetition/ Pattern , Unity , Variety.

Lab

Using Photoshop: 1. Text & Shape Design

UNIT III	TYPOGRAPHY	12+9

Typography - Anatomy of a letter- Typefaces - Typographic Measurement - Typographic Standards - Typographic Guidelines - Creating images for print & web -Formats - Resolution. Raster Vs Vector -Editing Images - Ethics - Copyright laws.

Lab

Using Photoshop:

1. Page Design for Web
2. Page Design for Print

UNIT IV	POSTER DESIGN	12+6

Poster Design - Concept of Poster - Importance of posters - Qualities of a good poster - Project work on poster design - Calendar/Postage stamp design - Pennants/Buntings/Flags.

Lab

Using Photoshop: 1. Advertisement Poster Design
2. Academic Poster Design
3.Calendar Design

UNIT V	GRAPHIC DESIGN CAREERS	12+6

Careers in graphic design - Graphic Design careers and job avenues -Competencies for Employment employable skills - Building an artist portfolio - Setting up graphic design enterprise - Factors to consider - Building a portfolio of works - Meaning and Purpose - Hard and Soft copies.

Lab

Using Photoshop: 1. Personal Portfolio Design
2. Company Portfolio Design

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	15	45	105

REFERENCES:

1. Thinking with Type: A Primer for Designers: A Critical Guide for Designers,Writers, Editors, & Students Paperback – September 2, 2004 By Ellen Lupton.
2. Jennifer's-Introduction to Typography -An Advanced Communication Design Project-by Jennifer Simmer-Winter Term 2005
3. Typography- A guide to setting perfect type-by James Felici-Second Edition
4. Poster Design -A guide for FIMS students & staff: How to produce effective & attractive scientific posters
5. Policing Cyber crime by Petter Gottschalk-Bookboon.com
6. Portfolio Guidelines- All you need to know about your portfolio
7. Elements of Design (The Basics of Graphic Design)-net material
8. About Graphic Design- e-copy –net material
9. The Visual Display of Quantitative Information Hardcover – January 1, 2001,by Edward R. Tufte

Web Resources:

Poster Design:

1.https://www.ncsu.edu/project/posters/index.html
2. http://www.posterpresentations.com/html/free_poster_templates.html

Cyber crime:

3. http://www.posterpresentations.com/html/free_poster_templates.html
4. www.tutorialspoint.com

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A &M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	3	2	2	1	2	1	1	1	0
CO2	2	3	3	3	2	2	3	3	0
CO3	2	3	3	3	2	2	3	3	0
CO4	2	3	3	3	1	2	3	3	0
CO5	2	3	3	1	3	2	3	1	0
AVG	**2**	**3**	**3**	**2**	**2**	**2**	**3**	**2**	**0**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 304			2D ANIMATION	L	T	P	C
				3	1	1	5
C	P	A		L	T	P	H
2.8	1	0.2		3	1	3	7

PREREQUISITE: Nil

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the significance of 2D Animation.	Cognitive	Remember
CO2	***Summarize*** the knowledge on animation software and ***detect*** about the animation software.	Cognitive Psychomotor	Understand Perception
CO3	***Manipulate*** the symbols and text to animate, and ***identify*** and tested the animated symbols and text.	Cognitive Affective	Application Receiving
CO4	***Know*** about the action script used in animation software.	Cognitive	Understand
CO5	***Design*** and test the animation in web.	Cognitive	Create

UNIT I	INTRODUCTION TO 2D ANIMATION	12+9

Basic Animation – Principles of Animation - Animation Types – 2D Animation – Understanding - Animation workflow - 2D animation software's – Introduction to animation software.

Lab:

1. Installing software
2. Create a animation software file.

UNIT II	GETTING STARTED	12+9

Understanding about the Timeline – Organizing about the Timeline – using of tools panel – preview the animated movie – modify the content and stage – saving your movie– publishing your movie –- understanding strokes and fills - creating with shapes – editing shapes – working with graphics.

Lab:

1. Working with timeline.
2. Publish the movie.
3. Working with shapes.
4. Working with graphics.

UNIT III	MANIPULATING SYMBOLS AND ANIMATE	12+9

Create the Symbols – Editing and managing symbols – change the size, position and color effects with instances – applying filter with special effects – Animation – Animating position– changing the pacing and timing – Animating transparency – filter – transformation – changing the path of the motion – nested animation – testing the animation.

Lab:

1. Working with symbols.

2. Apply special effects in movies.
3. Create and manipulate the animation.
4. Testing the animation.

UNIT IV	ACTION SCRIPT	12+9

Introduction to Action script – Language basics – Data types –working with display object –error handling – networking basics and security – programming vector, bitmap graphics –Scripting animation – deploying flash on web.

Lab:

1. Working with display object
2. Error handling
3. vector and bitmap graphics
4. Deploy flash with HTML.

UNIT V	WORKING WITH AUDIO, VIDEO AND CONTROLLING FLASH CONTENT AND PUBLISH FLASH DOCUMENT	12+9

Import sound files – edit sound files – audio and video encoding options – use cue points – embed video– Load and display external files – Control the movie clip timeline – test document – publish the document – publish project for web –Test project with mobile interactions – other 2d animation tools.

Lab:

1. Manipulating audio and video files
2. Embed video
3. Manipulating content
4. Test document.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	15	45	105

REFERENCES:

1. Cartoon Animation (How to Draw and Paint series) by Preston Blair.
2. Adobe Flash Professional CS6 Classroom in a Book, by adobe systems
3. Doug sahlin, Flash MX Action script for designers, Wiley publishing, 2002.
4. Roger braunstein, Action script 3.0 Bible, Second edition, Wiley publishing inc, 2010.
5. www.w3schools.com
6. www.tutorialspoint.com

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	2	1	1	1	1	2	1	1	1
CO2	3	2	2	2	2	2	2	2	1
CO3	2	2	2	2	3	2	2	2	1
CO4	3	2	2	2	2	2	2	3	1
CO5	3	3	3	3	3	3	3	3	1
AVG	**3**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 401			IMAGE EDITING SKILLS	L	T	P	C
				2	0	1	3
C	P	A		L	T	P	H
2	1	0		2	0	3	5

PREREQUISITE: Digital Animation Skills

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Identify*** and ***describe*** the concept & objectives of Editing and software tools available.	Cognitive	Understand Remember
CO2	***Create*** new images using various effective tools using software packages.	Cognitive	Understand Remember Apply
CO3	***Develop*** their Knowledge and skills in image editing.	Cognitive Psychomotor	Apply Respond
CO4	***Renovate*** the damaged images files and export the files in various formats.	Cognitive	Remember Apply
CO5	***Create*** GIF animation, Business card, Advertisement Banner, Poster Presentation Banner.	Cognitive Psychomotor	Create organization

UNIT I INTRODUCTION — 6+9

Visual Design: Elements, Forms, Space, Time, Movements, Balance, Symmetry, Rhythm, Unity, Contrast and Scale. Visual Design Principles and its Functionality, Interactive Design: Characteristics of digital media interfaces**.**

Lab

1. Create a Paper work for a Advertising agency and a Commercial Organization on Logo, Visiting card, Letter head, Envelope and Poster design
2. Create a Paper work on 3 Dimensional Logos

UNIT II COLORS AND TYPOGRAPHIC — 6+9

About Colors and Typographic concepts for print, interactive and web media.

Lab

1. Create a Home page for a Advertising agency
2. Create a Button, Banner for WebPages

UNIT III MANAGING COLOURS — 6+9

Fundamentals of media elements and concepts of digital image editing. Getting to Know the Photoshop Interface, Using the Photoshop tools, Vector and Pixel, Bit Depth, Resolution, Image Color Corrections, Image Corrections, Black and white to Color Conversion.

Lab

1. Take a candid Black and white photo and convert that into color photo
2. Create a Logo, Visiting card, Letter head , Envelope and Poster design for Adverting agency and Commercial organization.

UNIT IV DIGITAL EFFECT — 6+9

Working with text objects, masks and Layer, Brushes, Paths, Graphics creation - brand and corporate identity manual, poster, brochure, label artwork presentation. Creative Logo Making, Filters and Blending Effects, 3D in Photoshop.

Lab

1. Create a Pamphlet
2. Create a CD label and CD cover design

UNIT V	CONVERSION TO WEB	6+9

Creating web based Layout, Converting files to web and print, Compositing Image Techniques, File Merge, Save, Import and Export techniques, Tips and Tricks in Photoshop.

Lab:

1. Create a Calendar design
2. Create a Dangler design (Front and back) for a new mobile.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
30	-	45	75

REFERENCES:

1. Peter Bauer, 2013,"Photoshop CC for Dummies", John Wiley & Sons, Inc.NJ
2. Adobe Creative Team, 2015, Adobe Photoshop CC in a classroom, Adobe Press published Pearson Education.
3. Martin Evening, 2015, The Adobe Photoshop CC, Adobe Press published Pearson Education.
4. Lesa Snider, 2013, Photoshop CC The Missing Manual, O'Reilly Media
5. Matt Kloskowski, 2012, Photoshop Compositing Secrets, Peachpit Press.
6. Derek Lea, 2009, Creative Photoshop CS4-Digital Illustration and Art Techniques Elsevier Press
7. http://www.freebookcentre.net/graphics-design-books/photoshop-ebooks-download.html
8. http://www.fromdev.com/2014/08/free-photoshop-tutorials-ebooks-learning-resources.html
9. http://psd.tutsplus.com/
10. http://tv.adobe.com/product/photoshop/
11. http://www.freebookcentre.net/graphics-design-books/photoshop-ebooks-download.html
12. http://it-ebooks.info/tag/photoshop/

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	2	2	2	2	2	1	1	2	2
CO2	2	3	3	3	3	1	1	3	2
CO3	2	3	3	3	3	1	1	3	2
CO4	2	3	3	3	3	1	1	3	2
CO5	2	3	3	3	3	1	1	3	2
AVG	**2**	**3**	**3**	**3**	**3**	**1**	**1**	**3**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 402			DIGITAL FX	L	T	P	C
				3	1	1	5
C	P	A		L	T	P	H
2.8	1	0.2		3	1	3	7

PREREQUISITE: 2D Animation

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the significance of Visual effects.	Cognitive Psychomotor	Remember Perception
CO2	***Express*** the knowledge on using green screen techniques in giving digital effects.	Cognitive	Understand
CO3	***Employ*** the understanding of the data acquisition techniques and actively ***participate*** in teams for the creation of Visual effects.	Cognitive Affective	Apply Respond
CO4	***Utilize*** the digital cinematography techniques effectively in designing the realistic applications.	Cognitive	Apply
CO5	***Design*** and ***Establish*** the complete digital effects by mixing digital sounds.	Cognitive Psychomotor	Create Set

UNIT I	VISUAL EFFECTS	12+9

Introduction – history – Preproduction Preparation –Previs – advanced techniques –acquisition – Types of Special effects – The elements - rain – wind – snow – ice -Mechanical effects

Lab :

Creating special effects such as Rain , Fire, Ice, Smoke Etc.

UNIT II	GREEN SCREEN TECHNIQUES	12+9

Overview – Function of backing – Fabrics and Paints – Backing Uniformity – Balancing screen brightness – Floor shots – virtual sets – limitations –Foreground lighting-Camera for blue screen – Negative scanning and Digital conversion – Commoditizing software

Lab :

Experiments using green screen effects

UNIT III	DATA ACQUISITION AND3D SCANNING SYSTEMS	12+9

Camera report – tracking markers – Cyber scanning – Lidar scanning and acquisition – 3D scanning systems – Lighting data – Clean plates – Monster sticks - Animation Capture - Real time match moving – recording camera data

Lab: Creating realistic advertisements

UNIT IV	PHOTOGRAPHIC REFERENCE	12+9

Shooting video as reference – Rules – set up - testing – Digital cinematography – Filming live action Plates - Case study – Shooting elements for composting – Assorted methods – Motion control – Types – Stop motion photography – Miniature effects

Lab : Design a movie on given topic by using photos, videos

UNIT V	DIGITAL SOUNDS	12+9

Digital Sound-Digital Mixers-Digital transfer-Sound file types (AIF-WAV)Digital Audio Workstations-Importing to Split stereo sound files-Sound bites-Virtual mixers-Real-time effects-Effects automation-Inserts and shifting-Effects processing-Amplitude compression-Reverberation-Sound with time-based image-Sound effects-Voiceovers

Lab : Mixing and editing Sounds and giving background music to Movies

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	15	45	105

REFERENCES:

1. Jeffery A.Okun, Susan zwerman, 2010, The VES Handbook of Visual Effects, Focal Press.
2. Bruce and Jenny Bartlett, "Practical Recording Techniques", 3rd Ed. Focal Press, 2002
3. Micah Laaker, Chistopher Schmitt , ADOBE Photoshop Ver.(8)CS in10 Simple Steps or Less, , First Edition, Willy Publishing Inc.,.
1. https://www.visualeffectssociety.com/
2. www.autodesk.com/solutions/visual-effects

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	2	3	4	5	6	7	1	2
CO1	3	2	2	2	2	1	1	2	1
CO2	2	3	2	2	2	1	1	1	1
CO3	2	2	1	2	2	1	2	2	1
CO4	1	1	3	1	2	2	1	3	1
CO5	2	2	1	2	3	1	1	2	1
AVG	2	2	2	2	2	1	1	2	1

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM403			CINEMATOGRAPHY & NON LINEAR EDITING	L	T	P	C
				3	1	1	5
C	P	A		L	T	P	H
2.6	1	0.4		3	1	3	7

PREREQUISITE: Audio and Video Editing

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Describe and Express*** basic concepts in photography.	Cognitive	Remember Understand
CO2	***Identify and Interpret*** fundamentals of cinematography.	Cognitive	Remember Understand
CO3	***Compose and Formulate*** various photographs and videos	Psychomotor Affective	Origination Organization
CO4	***Identify and Explain*** the responsibilities of crew members in a camera department.	Cognitive	Knowledge Evaluation
CO5	***Initiate and Organize a*** screen play and shoot a short film.	Psychomotor Affective	Origination Organization

UNIT I	**BASICS OF PHOTOGRAPHY AND LIGHT**	**12+9**

What is photography - How photography works - Picture structuring - Picture Structuring - The roles photographs play – Changing attitude towards photography -Personal style and approaches **– Light** -Wavelengths and colours – Shadows – when light reaches the surface – light intensity and distance – Making light from images.

Lab

Working with Digital Design, Layer Based Compositing

UNIT II	**LENSES AND DIGITAL CAMERA**	**12+9**

Lenses : Photographic lenses – Aperture and f – numbers – depth of field – how depth of field works – Depth of focus – lens care - **Cameras using film** – Essential components – Camera types –How view camera works –How direct viewfinder camera works –How reflex camera works - **Digital Camera** –overview how images are captured –film verses digital imaging routes – CCD limits to your final print size -Storing exposed shots on memory cards disk – point and shoot low end camera – high end camera shoots.

Lab

Working with Title Graphics ,Fire effect

UNIT III	**LIGHTING PRINCIPLES AND FILM PROCESSING**	**12+9**

Lighting principles and equipments- Basic characteristics of lighting – lighting equipment – Practical lighting problems - **Film Processing** – Equipments and general preparation – Processing black and white negatives –Processing chromomeric – **Digital image manipulation** Hardware - software programs – learning the ropes –working on pictures.

Lab

Working with Smoke Effect ,Rain effect

UNIT IV	BASICS OF CINEMATOGRAPHY	12+9

Film formats - video tape formats – Sync speed – Sync and MOS - Film Stock - Types of film – Film Speed -Aspect ratio - F Stops and T stops – Exposure Time and Exposure- Color Temperature and Color Balance Meters – The Camera – Gate – Shutter – inching knob – Viewing system –Lens – magazine - Motor – Batteries - Additional camera components – Filters – Camera Mounts.

Lab

Working with Node Based Compositing, Camera Tracking

UNIT V	THE CAMERA DEPARTMENT	12+9

Director of photography- Camera Operator – First Assistant Camera man – Second Assistant Camera man – Loader – SD or HD video production- **Second Assistant Camera man** - Working with the laboratory – laboratory supplies - Choosing and ordering expendable – Preparation of camera equipment - Preparation of camera truck – Preparation of dark room – Production – Magazine – slate – Post production – wrapping equipments.

Lab

Working with Non linear Editing, Audio -Video Synchronization

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	15	45	105

REFERENCES:

1. Michale Langford "Basic Photography", Focal Press Oxford Auckland Boston Johannesburg Melbourne New Delhi (UNIT : I, II and III)
2. David E Elkins , "The Camera Assistant's Manual "Focal Press Oxford Auckland Boston Johannesburg Melbourne New Delhi (UNIT : IV and V)
3. David Samuelson,2009 , "Motion Picture Camera Techniques"
4. Verne Carlson,2003 ,"The Professional Lighting Handbook"
5. Blain Brown,2003,"The Filmmakers Pocket Reference"

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	2	2	3	2	2	1	1	1	2
CO2	2	2	3	2	2	1	1	1	2
CO3	2	1	2	1	1	1	1	1	2
CO4	1	1	1	2	1	2	2	1	2
CO5	3	2	2	3	3	1	1	1	2
AVG	**2**	**2**	**2**	**2**	**2**	**1**	**1**	**1**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 404			BASICS OF CLAY MODELING	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
4	0	0		4	1	0	5

PREREQUISITE: Nil

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** how the study of clay relates to animation disciplines.	Cognitive	Remember
CO2	***Relate*** knowledge of the character design in clay materials and process.	Cognitive	Analyze
CO3	***Interpret*** design principles in their individual projects.	Cognitive	Understand
CO4	***Establish*** using clay modeling to build basic shapes.	Cognitive	Create
CO5	***Apply*** techniques for working in stop motion animation.	Cognitive	Apply

UNIT I	**INTRODUCTION**	**15**
Clay animation: concepts and types – clay tools – Armature – clay modeling process.		
UNIT II	**BASIC SHAPES IN CLAY**	**15**
Geomatrical shapes in clay – Background in clay- Vehicles in clay – Buildings in clay.		
UNIT III	**CHARACTER DESIGNING IN CLAY**	**15**
Model sheet of character-Humana body parts in clay – Animal models in clay – Fruits and vegetables – complete human figure in clay model.		
UNIT IV	**CLAY ANIMATION**	**15**
Cartoon designing in clay – Hair style in clay – Face mask in clay – case study making a indoor/outdoor with environment & characters in clay.		
UNIT V	**STOP MOTION ANIMATION**	**15**
Making of film using stop motion technique - Adding visual & Sound Effects - Digital Editing		

LECTURE	TUTORIAL	PRACTICAL	TOTAL
60	**15**	**0**	**75**

REFERENCES:

1. The Advanced art of stop motion animation by Ken.A.Priebe by cengage learning
2. A sculptor's Guide to Tools and Materials Second edition by Bruner F. Barrie

3. http://thevirtualinstructor.com/blog/sculpting-materials-for-beginners
4. http://www.chalkstreet.com/clay-modeling-and-pottery-for-beginners/
5. ebook - Clay Modelling for Beginners: An Essential Guide to Getting Started in the Art of Sculpting Clay

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	3	2	3	2	2	2	1	2	2
CO2	3	2	3	2	2	1	1	2	2
CO3	3	2	2	2	1	1	1	2	2
CO4	3	2	2	3	1	1	1	2	3
CO5	3	2	2	2	1	1	1	2	3
AVG	**3**	**2**	**2**	**2**	**1**	**1**	**1**	**2**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM501			COMPOSITING TECHNIQUES	L	T	P	C
				2	0	1	3
C	P	A		L	T	P	H
3	0	0		2	0	3	5

PREREQUISITE: Audio and Video Editing

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the basic concepts of logical effects.	Cognitive	Remember
CO2	***Select*** the various techniques to create an effective scene.	Cognitive	Apply
CO3	***Examine*** various color correction and image optimization.	Cognitive	Apply
CO4	***Classify*** the various unreal effects.	Cognitive	Understand
CO5	***Analyze*** a right motion tracking tools to produce an effective scene.	Cognitive	Analyze

UNIT I	INTRODUCTION	15

Composite in After Effects-A Basic Composite-Get Settings Right-The User Interface: Use It like a Pro-Effects in After Effects: Plug-ins and Animation Presets-Output: Render Queue and Alternatives-Assemble Any Shot Logically- The Timeline-Dreaming of a Clutter-Free Workflow-Timing: Keyframes and the Graph Editor-Shortcuts Are a Professional Necessity-Animation: It's All About Relationships-Accurate Motion Blur-Timing and Retiming

UNIT II	COLOR CORRECTION	15

Color Correction-Color Correction and Image Optimization-Levels: Histograms and Channels-Curves: Gamma and Contrast-Hue/Saturation: Color and Intensity-Compositors Match Colors-Beyond the Ordinary, Even Beyond After Effects- Rotoscoping and Paint-Roto Brush and Refine Edge-Articulated Mattes-Refined Mattes: Feathered, Tracked-Paint and Cloning-Avoid Roto and Paint

UNIT III	CAMERA AND OPTICS	15

The Camera and Optics-The Unreal After Effects Camera-3D and CINEMA 4D-The Camera Tells the Story-Don't Forget Grain-Real Cameras Distort Reality-Train Your Eye- Climate and the Environment-Particulate Matter-Sky Replacement-Fog, Smoke, and Mist-Billowing Smoke-Wind and Ambience-Precipitation

UNIT IV	PYROTECHNICS	15

Pyrotechnics: Heat, Fire, Explosions-Firearms-Energy Effects-Heat Distortion-Fire-Explosions-Advanced Color Options and HDR-What Is High Dynamic Range, and Does Film Even Still Exist?-Linear HDR Compositing: Life like-Linear LDR Compositing, Color Management and LUTs-Beyond Theory into Practice

UNIT V	EFFECTIVE MOTION TRACKING	15

Effective Motion Tracking-Track a Scene with the 3D Camera Tracker-Warp Stabilizer VFX: Smooth Move-The Point Tracker: Still Useful-Mocha AE Planar Tracker: Also Still Quite Useful-Camera Integration- Selections: The Key to Compositing-Beyond A Over B: How to Combine Layers-Edges on Camera -Transparency and How to Work with It-Mask Options and Variable Mask Feather-Mask Modes and Combinations-Animated Masks-Composite With or Without Selections: Blending Modes-Share a Selection with Track Mattes-Right Tool for the Job.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
30	0	45	75

REFERENCES:

1. Mark Christiansen Visual Effects and Compositing STUDIO TECHNIQUES Adobe® After Effects® CC
2. www.slideshare.net.
3. www.proko.com

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	1	0	2	1	2	1	2	3	2
CO2	1	1	2	1	1	1	2	1	1
CO3	1	0	1	1	1	1	1	1	1
CO4	1	1	2	1	2	1	1	1	1
CO5	1	1	2	1	2	2	2	1	3
AVG	**2**	**1**	**3**	**2**	**3**	**2**	**3**	**2**	**3**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 502			3D ANIMATION	L	T	P	C
				3	1	1	5
C	P	A		L	T	P	H
3	1	0		3	1	3	7

PREREQUISITE: 2D Animation

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the basics of blender frame work.	Cognitive Psychomotor	Remember Perception
CO2	***Apply*** textures, lighting and rendering to the objects.	Cognitive	Apply
CO3	***Create*** animated objects and manipulate rigging the objects.	Cognitive Psychomotor	Create Guided Response
CO4	***Design*** particles and ***apply*** fluid dynamics to create realistic objects.	Cognitive Psychomotor	Create Mechanism
CO5	***Analyze*** common problems in 3D animation to improve the performance in designing games.	Cognitive	Create

UNIT I	INTRODUCTION	12+9

History – Blender Interface – working with Views – Creating and editing Objects – Modeling – Modifiers - Mesh – Mesh editing – Proportional editing – Join and separating meshes – Boolean operations – Sculpt mode – retopology.

Lab:

1. Making Objects using blender
2. Using modifiers
3. creating sculpt

UNIT II	MATERIAL AND TEXTURES	12+9

Camera settings and options – Lighting types and settings- Render settings – Basic material setting - Procedural materials – Basic Texture settings - Texture Paintings – Procedure painting – Setting up a world – Meta Shapes - Curves – Spins – NURBS.

Lab:

1. Applying textures
2. Cube painting

UNIT III	RIGGING AND ANIMATION	12+9

Animation basics - Key frames – Time lines – Dope sheet – Pivot Point –Rigging with bones – Forward Kinematics – Inverse Kinematics – Walk Cole.

Lab:

1. Create simple animation
2. Rigging Simple Character

UNIT IV	PARTICLES AND PHYSICS	12+9

Particle – Appearance – Behavior – settings – Particle interaction with objects and forces– external forces – using explode modifiers – Making hair – Fluid dynamics – smoke – soft body physics – Cloth dynamics.

Lab:

1. Making particles
2. Using fluid dynamics

UNIT V	GAME DESIGN	12+9

Game engine physics – textures in game engine– Game design – silly soccer game - shooting things – common problems – resources – video sequence editors.

Lab:

1. Designing simple games

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	15	45	105

REFERENCES:

1. Lance Flaveli, "Beginning Blender : Open source 3D modeling, animation and game design ", Apress, 2010
2. John m.Blain , "The complete guide to blender basics", Second edition, CRC Press 2015
3. Oliver Villa, "Learning Blender: A Hands-On Guide to Creating 3D Animated Characters", Second Edition, Addition Wesley Learning, 2014.
4. www.blender.org
5. www.cdschools.org/cdhs/site/default.asp.
6. www.BlenderNation.com.
7. www.blenderartists.org.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	2	3	4	5	6	7	1	2
CO1	3	2	2	1	2	1	1	2	1
CO2	2	3	1	2	2	2	1	1	1
CO3	1	2	2	2	3	1	2	3	1
CO4	2	2	3	2	2	1	1	2	1
CO5	2	1	3	2	2	1	1	2	1
AVG	2	2	2	2	2	1	1	2	1

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAME51			MEDIA AESTHETICS	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
4	0	0		4	1	0	5

PREREQUISITE: Nil

	COURSE OUTCOMES	DOMAIN	LEVEL
	After the completion of the course, students will be able to		
CO1	***Recognize*** and ***Express*** media aesthetics and light	Cognitive	Remember Understand
CO2	***Identify*** and ***Interpret*** lighting and color	Cognitive	Remember Understand
CO3	***Compose*** and ***Formulate*** various colors	Cognitive	Create
CO4	***Compare*** and ***classify*** media screens	Cognitive	Analyze
CO5	***Identify*** and ***Interpret*** depth and volume of a picture	Cognitive	Remember Understand

UNIT I	**INTRODUCTION**	**15**

Applied media Aesthetics definition – Applied Aesthetics and contextualism – context and perception – medium as structural agent – Applied media aesthetics methods. Light - The Nature of light – Lighting purposes and functions – The nature shadows - Outer orientation functions – Inner orientation functions.

UNIT II	**LIGHTING AND COLOR**	**15**

Lighting – Standard lighting techniques – Chiaroscuro lighting - Flat lighting – Media enhanced and media generated lighting – Single and Multiple Camera lighting – Color – What is color? How we perceive color – How we mix color – Relativity of color – Colors and feeling – Color energy.

UNIT III	**COLOR COMPOSITION AND VISUAL APPROACHES**	**15**

Functions and Compositions of colors – Informational Function of color – Compositional function of color - Desaturation Theory - Area- Aspect ratio - Object size – image size Deductive and inductive visual approaches.

UNIT IV	**SCREEN FORCES**	**15**

Forces within the screen - Horizontal and vertical directions – magnetism of the frame – Asymmetry of the frame – Figure and ground psychological closure -Vectors – Interplay of screen forces – stabilizing the field through distribution of Graphic mass and magnetic force – Stabilizing the field through distribution of vectors – Stages of balance - object framing g – Extending the field with multiple screen -Diving the screen.

UNIT V	**DEPTH AND VOLUME**	**15**

Depth and volume – z axis – graphics depth factors – Major graphication devices - Building screen volume - Volume duality - z axis Articulation - z axis blocking -Spatial paradoxes.

LECTURE	**TUTORIAL**	**PRACTICAL**	**TOTAL**
60	**15**	**0**	**75**
REFERENCES:			
1. Applied media Aesthetics 3rd edition			

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A &M	**PO**							**PSO**	
	1	2	3	4	5	6	7	1	2
CO1	2	1	2	1	1	1	1	2	2
CO2	2	1	1	1	1	1	1	2	2
CO3	2	1	2	1	2	1	1	2	2
CO4	2	2	1	1	1	2	2	2	2
CO5	2	1	1	1	1	1	1	2	2
AVG	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAME52			MEDIA TECHNOLOGIES	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
4	0	0		4	1	0	5

PREREQUISITE: Nil

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the concept of media production and the process and technically know-how.	Cognitive	Remember
CO2	***Illustrate*** and communicate ideas in the form of production in various media.	Cognitive	Analysis
CO3	***Create*** and communicate ideas visually in the form of media.	Cognitive	Create
CO4	***Understand*** the basic of production in print, radio, television and internet media.	Cognitive	Understand
CO5	***Examine*** the basic knowledge about media production.	Cognitive	Apply

UNIT I	**INTRODUCTION**	**12**
Various types of media - Paper, Television, Radio and Internet – History of media.		
UNIT II	**PRINT MEDIA**	**12**
Print media professional designing tools for News paper, magazine, brochures, advertisements, booklets, business cards, book covers- Image and text effects.		
UNIT III	**RADIO MEDIA**	**12**
How radio broadcasting works, radio studio, radio programme formats, radio play documentary, news, interviews, discussions, writing for radio, editing for radio.		
UNIT IV	**TELEVISION MEDIA**	**12**
Television production process, Electronic news gathering, basic steps of production, script writing and editing principles.		
UNIT V	**INTERNET MEDIA**	**12**
Internet – e-books, e-magazines, portals, web advertisements.		

LECTURE	TUTORIAL	PRACTICAL	TOTAL
60	15	-	75

REFERENCES:

1. Charles convonor, Designing for Print, Second Edition,John Wiley & Sons
2. Gorham Kindem and Robert B.Musburger, Introduction to Media Production: The path to digital production, Elsevier publication 2009

3. Lynnee Schafer Gross, Electronic Media Introduction, McGraw Hill, 2009
4. https://en.wikipedia.org/wiki/Media_(communication)
5. https://www.studyblue.com/notes/b/media-and-culture-an-introduction-to-mass-communication

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	3	2	3	2	1	1	2	1	2
CO2	2	2	2	1	1	1	2	1	2
CO3	2	1	2	1	1	1	2	1	1
CO4	3	2	3	2	1	1	2	1	2
CO5	2	2	2	1	1	1	2	1	2

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAME53			SCRIPT WRITING AND STORY BOARD DESIGNING	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
3.8	0.2	0		4	1	0	5

PREREQUISITE: Character and Environment Sketching.

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the significance of Script writing.	Cognitive	Remember
CO2	***Express*** the different ways of Story preparation in Script.	Cognitive	Understand
CO3	***Employ*** the understanding of the Writing skills in Story board designing.	Cognitive	Apply
CO4	***Utilize*** the various advertising methods effectively in making the realistic shooting spot.	Cognitive	Apply
CO5	***Design*** and ***Draw*** the story board writing using different types of subjects.	Cognitive Psychomotor	Create Set

UNIT I	**SCRIPT**	**12**
Script: concept, forms and utility, Basic principles of writing a script -Importance of script writing.		
UNIT II	**STORY**	**12**
Writer and Producer- Researching the script -Story Development ,Plots in script.		
UNIT III	**WRITING**	**12**
Descriptive writing ,Analytical writing -Writing fiction - Writing script for video programmes, Concept of Shooting Script.		
UNIT IV	**ADVERTISING**	**12**
Script writing for theatre, Script writing for Advertising -Script writing for planetarium.		
UNIT V	**STORY BOARD**	**12**
Introduction to Story board- Parts of storyboard --Advantages of storyboarding Interactive Story boarding -Designing of Storyboard exercise.		

LECTURE	TUTORIAL	PRACTICAL	TOTAL
60	15	--	75

REFERENCES:

1. Chawdhary, Nirmal kumar, How to write film screenplay, Kanishka publishers, distributers, New Delhi- 110002,– 2009,ISBN 978-81-8457-112-7.

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.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	**PO**								**PSO**	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**1**	**2**
CO1	3	2	3	2	2	1	2	1	1	2
CO2	2	3	2	2	1	2	0	0	1	1
CO3	2	2	3	1	2	1	1	2	2	3
CO4	3	2	1	3	1	2	2	1	1	1
CO5	2	1	3	2	0	1	1	2	2	3
AVG	**2**	**2**	**2**	**2**	**1**	**1**	**1**	**1**	**1**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAME54			MOTION CAPTURING	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
4	0	0		4	1	0	5

PREREQUISITE: 3D Animation

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Recognize*** the importance of Mocap.	Cognitive	Remember
CO2	***Demonstrate*** the 3D character.	Cognitive	Understand
CO3	***Analyze*** the retargeting and skeletal editing.	Cognitive	Analyze
CO4	***Formulate*** the composing and decomposing motions.	Cognitive	Create
CO5	***Organize*** the hand and facial motion capture**.**	Cognitive	Create

UNIT I	INTRODUCTION	15

An overview and history of motion capture-history of mocap-early attempts-rotoscoping-beginning of digital mocap-types of mocap-optical mocap systems-magnetic mocap systems –mechanical mocap systems-preproduction-importance of preproduction-precapture planning-script-story board-shot list-animatic-preparation for capture-capture volume-capture schedule.

UNIT II	PIPELINE	15

Setting up a skeleton for a 3D character-calibrations-system calibration-subject calibration-capture sessions-audio and video references-organization-preventing occlusions-cleaning and editing data-cleaning marker data-types of data-labeling and identifying-data cleaning methods-applying marker data to the skeleton.

UNIT III	SKELETAL EDITING	15

Retargeting - reducing need for retargeting - scaling a skeleton - fixing foot sliding - working on the spine blending motion - inverse kinematics - floor contact-rigid body - looping motion – poses – data application - a Stick with two markers - a stick with three markers - flexible objects.

UNIT IV	DECOMPOSING AND COMPOSING MOTIONS	15

Mapping multiple motions-decomposing and composing upper and lower body motions-synchronizing upper and lower body motions –breaking motion apart-mocap as forward kinematics animation -keyframe animation with inverse kinematics-integrating mocap animation and key-frame animation.

UNIT V	HAND AND FACIAL MOTION CAPTURE	15

Anatomy of a hand- rig and marker set for the hand – rigid hand-mitten- mitten with an independent thumb –mitten with stretches-ultimate-capturing hands –facial motion capture-anatomy of face-camera setup and capture-facial rig- marker set –facial data stabilization – facial data editing.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
60	15	-	75

REFERENCES:

1. MoCap for Artists: Workflow and Techniques for Motion Capture Paperback – Import, 9 May 2008 by Midori Kitagawa (Author), Brian Windsor (Author)
2. Understanding Motion Capture for Computer Animation (eBook) by Alberto Menache ,2010,Elsevier Trade Monographs (Verlag).978-0-12-381497-5 (ISBN)
3. Motion Capture in Performance: An Introduction By Matt Delbridge, 2015, Palgrave Macmillan Publishers, St Martin's Press, 175,Fifth Avenue, Newyork.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	2	1	1	1	1	1	1	2	1
CO2	1	1	3	1	1	2	1	2	2
CO3	1	1	2	1	2	1	1	3	1
CO4	2	1	1	1	2	1	1	3	1
CO5	2	2	1	2	2	1	1	2	1
AVG	**2**	**1**	**2**	**1**	**2**	**1**	**1**	**2**	**1**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 601			DIGITAL TELEVISION PRODUCTION	L	T	P	C
				2	0	1	3
C	P	A		L	T	P	H
3	0	0		2	0	3	5

PREREQUISITE: Nil

COURSE OUTCOMES:

Course Outcomes		Domain	Level
After the completion of the course, students will be able to			
CO1:	***Recognize*** about the digital media.	Cognitive	Remember
CO2:	***Summarize*** the shooting progress	Cognitive	Understand
CO3:	**Identify** the editing and sharing in movies.	Cognitive	Understand
CO4:	***Implementing*** the advanced in movies.	Cognitive	Understand
CO5:	***Experimenting*** the movie maker tools to create the quality in movies.	Cognitive	Create

UNIT I	INTRODUCTION	6+9

Digital media – Idea of Movie creation – Preproduction – Planning - story script - Production – Shooting progress – Post production – introduction to Movie maker.

Lab

1. Installing movie maker

UNIT II	SHOOTING PROGRESS	6+9

Director – Assistant Producer – Production Manager – basic camera work - three way shooting – lighting – trailer preparation. – organize your clips

Lab

1**.** Capture video from device.
2.Organize the videos from the movie maker

UNIT III	EDITING AND SHARING	6+9

Adding – arranging – splitting – trimming – combining – Edit audio tracks – Narration recording – Adjust – Save your movie – sharing

Lab

1. Splitting videos
2. Adding audio
3. Finish your movie

UNIT IV	ADVANCED IN MOVIE	6+9

Working with still images – Adding sound effect – video transition – Video Effects

Lab

1. Video transition
2. Video effects

UNIT V	PLAYING MOVIES	6+9

Playing with movies – audacity – creating movie with quality sound effects – creating skins for videos.

Lab:

1. Create skin for videos.
2. Audacity for narration for quality sound.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
30	-	45	75

REFERENCES:		

1. Digital Television Production, Jeremy orleber, 2002, Arnold publishing.
2. Television production Handbook, Herbert zettl, 11 edition, Wordsworth, cengage learning 2006.
3. Microsoft windows movie maker handbook, John M'Chalak, Seth McEvoy.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc.	**PO**							**PSO**	
A&M	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	2	1	1	1	1	2	1	1	1
CO2	3	2	2	2	2	2	2	2	1
CO3	2	2	2	2	3	2	2	2	1
CO4	3	2	2	2	2	2	2	3	1
CO5	3	3	3	3	3	3	3	3	1
AVG	**3**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAM 602			3D MODELLING	L	T	P	C
				3	1	1	5
C	P	A		L	T	P	H
3	1	0		3	1	3	7

PREREQUISITE: 3D Animation

	COURSE OUTCOMES	DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Understand*** the definition of Computer Based Animation and Modeling. Experiment with the geometrical 2D and 3D shapes.	Cognitive Psychomotor	Understand Remember
CO2	***Understand and Apply*** 2D modeling in simple objects with lines and connect with compound objects.	Cognitive	Understand Remember Apply
CO3	***Design*** 3D modeling with 3d objects.	Cognitive Psychomotor	Apply Respond
CO4	***Identify*** different types of lighting and cameras and Apply in real world application.	Cognitive	Remember Apply
CO5	***Creating and Applying*** standard materials, adding material details with maps, creating compound materials.	Cognitive Psychomotor	Create organization

UNIT I **COMPUTER-BASED ANIMATION** **12+9**

Definition of Computer-based Animation, Basic Types of Animation: Real Time ,Non-real-time, Definition of Modeling, Creation of 3D objects. Exploring the Max Interface, Controlling & Configuring the Viewports, Customizing the Max Interface & Setting Preferences, Working with Files, Importing & Exporting, Selecting Objects & Setting Object Properties, Duplicating Objects, Creating & Editing Standard Primitive & extended Primitives objects, Transforming objects, Pivoting, aligning etc.

Lab:

1. Introduction to 3D Studio Max.
2. Exploring the Max Interface
3. Creating & Editing Standard Primitive Objects

UNIT II **2D SPLINES & SHAPES& COMPOUND OBJECT** **12+9**

Understanding 2D Splines& shape, Extrude & Bevel 2D object to 3D, Understanding Loft & terrain, Modeling simple objects with splines, Understanding morph, scatter, conform, connect compound objects, blobmesh, Boolean , Pro-boolean & pro-cutter compound object.

Lab:

1. 2D Splines, Shapes & Compound Objects.
2. Understanding 2D Splines & Shape
3. Convert 2D to 3D object using extrude, bevel, loft, terrain etc.

UNIT III **3D MODELLING** **12+9**

Modeling with Polygons, using the graphite, working with XRefs, Building simple scenes, Building complex scenes with XRefs, using assets tracking, deforming surfaces & using the mesh modifiers, modeling with patches & NURBS

Lab:

1. 3D Modeling
2. Modeling with polygon objects
3. Building Simple & Complex Scene

UNIT IV	LIGHTING & CAMERA	12+9

Configuring & Aiming Cameras, camera motion blur, camera depth of field, camera tracking, using basic lights & lighting Techniques, working with advanced lighting, Light Tracing, Radiosity, video post, mental ray lighting etc.

Lab:

1. Lighting & Camera
2. Configuring & Aiming Cameras
3. Using Camera Motion Blur & Depth of Field

UNIT V	TEXTURING	12+9

Using the material editor & the material explorer, creating & applying standard materials, adding material details with maps, creating compound materials & material modifiers, unwrapping UVs & mapping texture, using atmospheric & render effects etc.

Lab:

1. Texturing with Max
2. Using Material Editor
3. Create & Apply standard material
4. Material Modifier

LECTURE	TUTORIAL	PRACTICAL	TOTAL
45	15	45	105

REFERENCES:

1. TedBoardman, 3d'sMax5Fundamentals, Techmedia"2004,
2. Michele Busquet, Modeling, Animate with 3d'smax6, "Many world, 2006.
3. Michael E. Mortenson, 3D Modeling, Animation, and Rendering, Create space,2010.
4. Boris Kulagin, "3ds Max 8 from Modeling to Animation, BPB,2006.
5. Michael G., 3D Modeling and Animation, IRM Publishing,2005
6. Lance Flavell, Beginning Blender: Open Source 3D Modeling, Animation, and Game Design, Apress, 2010.

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	2	3	4	5	6	7	1	2
CO1	2	2	2	2	2	1	1	2	2
CO2	2	3	3	3	3	1	1	3	2
CO3	2	3	3	3	3	1	1	3	2
CO4	2	3	3	3	3	1	1	3	2
CO5	2	3	3	3	3	1	1	3	2
AVG	2	3	3	3	3	1	1	3	2

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAME61			FILM MAKING	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
3.4	0.4	0.2		4	1	0	5

PREREQUISITE: 2D Animation, 3D Animation

	COURSE OUTCOMES	DOMAIN	LEVEL
	After the completion of the course, students will be able to		
CO1	***Observe*** the basics of Animation and ***Perceive*** the process of Film Making.	Cognitive Psychomotor	Remember Perception
CO2	***Interpret*** the knowledge on Pre Production activity.	Cognitive	Understand
CO3	***Employ*** the understanding of Production activity	Cognitive	Apply
CO4	***Utilize*** the awareness of Post Production activity and ***Achieve*** the good quality in the Pre Production, Production and Post Production of Film Making.	Cognitive Psychomotor	Apply Set
CO5	***Contribute*** more actions in ***Design***ing the Animated Movie.	Cognitive Affective	Create Respond

UNIT I	**ANIMATION BASICS – I**	**15**

The Bouncing Ball – Generic Walks – Personality Walks – Generic Runs –Key Generic Run Stages – Additional Pointers for Runs – Head-on Runs – Quadruped Walks – Weight – Standard Rubber Ball – Ping-Pong Ball – Bowling Ball – Comparing the three versions.

UNIT II	**ANIMATION BASICS – II**	**15**

Anticipation – The Benefits of Anticipation – Anticipations are for everything - Dialog – Body Language – Facial Animation - Lip Synching – Two-Character Dialog – Final Project – Staggers – Successive Breakouts of Joints – Eye Blinks – Eyebrows.

UNIT III	**ANIMATED FILM PRODUCTION – I**	**15**

Production Challenge – Exploring Ideas, Storytelling and Scriptwriting – Concept Art, Viz Dev and Camera Maps – Character Design – Thumbnails – Storyboards.

UNIT IV	**ANIMATED FILM PRODUCTION – II**	**15**

Filmmaking Techniques – Audio Record – Animatic and Bacher Boards – Backgrounds and Environment Layouts – Color Script – Audio Breakdown – Block in Key Poses - Placement and Timing.

UNIT V	**ANIMATED FILM PRODUCTION – III**	**15**

Two-Dimensional In-Betweening – Rolling, Flipping and Pencil Testing – Clean-up – Scanning – Background and Environments – Coloring – Compositing – Rendering – Final Edit.

LECTURE	TUTORIAL	PRACTICAL	TOTAL
60	**15**	**-**	**75**

REFERENCES:

1. Tony White, How to make animated films, Focal Press, Elesvier, 2009.
2. Kit Laybourne, The Animation Book: A complete guide to animated film making – from flip-books to sound cartoons to 3D animation, Crown Publishing Group, 1998.
3. Mark Simon, Producing Independent 2D Character Animation: Making and Selling a Short Film, Focal Press, Elesvier, 2003.
4. https://en.wikibooks.org/wiki/Movie_Making_Manual

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	**PO**							**PSO**	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	1	0	3	0	1	1	2	3	0
CO2	1	2	0	1	1	0	1	0	2
CO3	1	2	0	2	1	0	1	0	2
CO4	1	2	0	1	3	1	1	0	2
CO5	2	3	2	2	3	2	1	1	0
AVG	**1**	**2**	**1**	**1**	**2**	**1**	**1**	**1**	**1**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation

XAME62			GAMES DEVELOPMENT	L	T	P	C
				4	1	0	5
C	P	A		L	T	P	H
4	0	0		4	1	0	5

PREREQUISITE: 2D Animation

COURSE OUTCOMES		DOMAIN	LEVEL
After the completion of the course, students will be able to			
CO1	***Identify*** the basic principles, concepts and process of gaming	Cognitive	Analyze
CO2	***Identify*** all the components of a game and their functions.	Cognitive	Remember
CO3	***Demonstrate*** their competency by building game using Blender and Python	Cognitive	Understand
CO4	***Explain*** the basic of production process for the game	Cognitive	Apply
CO5	***Formulate*** with the concepts, tools and techniques for working in game design and development	Cognitive	Create

UNIT I	INTRODUCTION	15
Introduction to computer game design – Types of games, Understanding hardware – Network requirements.		
UNIT II	**GAME ENGINE & CODE STRUCTURE**	**15**
Introduction to computer game engine Blender/Torque – File structures – Modeling – Scene development – Code structure python.		
UNIT III	**PRODUCTION PROCESS**	**15**
Pre production for the game terminology, story board and concepts – Post production for the game techniques, peer to peer working, updating process.		
UNIT IV	**GAME DESIGN & DEVELOPMENT**	**15**
Utilize an object, character, events, instances and actions animations in a game – backgrounds and rooms usage in a game.		
UNIT V	**AUDIO VISUAL DESIGN**	**15**
Audio design - Understanding sound and effects in a game – adding sounds and effects in a game.		

LECTURE	TUTORIAL	PRACTICAL	TOTAL
60	**15**	**-**	**75**

REFERENCES:

1. Introduction to Game Development by Steve Rabin Charles River Media, May 2005
2. Beginning Blender: Open Source 3D Modeling, Animation, and Game Design by Lance Flavell
3. The Art of Game design by Jesse Schell, CRC Press
4. http://www.cs.uncc.edu/~tbarnes2/GameDesign/

Mapping of Course Outcomes (CO) with Programme Outcomes (PO):

B.Sc. A&M	PO							PSO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**
CO1	2	2	2	1	1	1	2	1	2
CO2	2	2	2	1	1	1	2	1	2
CO3	2	1	2	1	1	1	2	1	1
CO4	3	2	3	2	1	1	2	1	2
CO5	3	2	3	2	1	1	2	1	2
AVG	**2**	**2**	**2**	**1**	**1**	**1**	**2**	**1**	**2**

3–High Relation, 2–Medium Relation, 1–Low Relation, 0–No Relation