B.A. ANIMATION AND VISUAL EFFECTS

(Detailed semesterised syllabus for programme in B.A. Animation and Visual Effects under the Choice Based Credit System)

INDEX

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ACKNOWLEDGEMENT

The B.A. programme in Animation and Visual Effects is branded for its creative approach and distinctive topics discussed. Our curriculum is inspired by the world of art and new creative techniques. The syllabus tries to transmit most essential and updated information to students. The programme gives an opportunity for the students to develop the basic skills in different types of animation, visual effects and compositing, video editing and cinematography along with interactive applications.

The Board of Studies puts on record our sincere thanks to the honourable Vice Chancellor and Pro Vice Chancellor of Mahatma Gandhi University, for their guidance and help, extended to us during the restructuring of the B.A. Animation and Visual Effects syllabus.

The Board of Studies would like to extend our sincere gratitude to the University Syndicate members for their understanding and support.

We thank the Registrar of the University, both Academic and Finance sections of the University and the members of BOS Core-Committee for offering their service for the flawless completion of the syllabus.

The successful completion of this syllabus is the end product of hard works done by academicians from various colleges and eminent personalities from the media industry. We would like to thank them for their valuable service during the restructuring process.

For the Expert Committee in Animation and Graphic Design,

Jean Sebastian

(Convenor)

Kottayam

26 March 2016

1. INTRODUCTION

The programme encourages innovation while stressing strong technical and presentation skills. Students gain a background in animation and visual effect history, theory, skill development and industry standard techniques. Students learn to create 2D, 3D and stop motion animations, visual effects by combining video with miniatures, CGI elements and motion graphics. They are also introduced to cinematography, graphic designing, video editing, web designing which would help them to explore other avenues in the media industry. Students have to experiment and develop their own creative approaches. The candidates become eligible for a degree after six-semesters of study, spanning over a period of three years and successful completion of the examination.

2. AIMS AND OBJECTIVES

The animation and visual effect programme prepares graduates for a wide range of careers in the industry such as 3D animation, 2D animation, film visual effects, TV motion graphics, advertisement industry etc.

The skills taught in the programme encompass craft at a technical level; yet also include design, drawing, critical thinking, creativity, daring, collaboration and a fundamental awareness of theory and history. Throughout the program, students are engaged in all aspects of animation/visual effect design and production. The programme starts from concept development and production design to the completion of finished segments.

3. ELIGIBILITY CRITERIA FOR ADMISSION

i. Eligibility for admission, norms for admission and reservation of seats for various Undergraduate Programmes shall be according to the regulations framed/orders issued by the University in this regard, from time to time.

ii. A pass in +2 or equivalent examination/Any Degree.

iii. As per the University regulations, admission for B.A. Animation and Visual Effects is arranged through CAP.

iv. Students can opt for any one of the Generic Elective Papers offered by different departments of the college in fifth semester (subject to the availability of vacancy in the concerned discipline). If the number of applications exceeds the number of vacancies for a particular Generic elective paper, priority will be given to the students from the parent department (core subject). Selection of students in the generic elective paper will be done in the college based on merit and interest of the students.

4. MEDIUM OF INSTRUCTION

The medium of instruction should be in English.

5. B.A. ANIMATION AND VISUAL EFFECTS – COURSE DESIGN

	Course	Type	Semester
1.	1-1. English I	Theory	1
2.	1-2. History of Art and Design	Theory	1
3.	1-3. Introduction to Raster Graphics	Practical	1
4.	1-4. Rudiments of Animation Drawing	Practical	1
5.	1-5. Techniques of Photographic Composition	Project	1
6.	2-1. English II	Theory	2
7.	2-2. History of Animation and Visual Effects	Theory	2
8.	2-3. Planning for Animation	Project	2
9.	2-4. Introduction to 3D	Practical	2
10.	2-5. Designing Characters for Animation	Practical	2
11.	3-1. 3D Character Creation	Practical	3
12.	3-2. Introduction to Motion Graphics	Project	3
13.	3-3. Classical Animation	Project	3
14.	3-4. Digital Matte Painting	Project	3
15.	3-5. Rigging for Animation	Project	3
16.	4-1. Stop Motion Techniques	Project	4
17.	4-2. Acting for Animators	Project	4
18.	4-3. 3D Character Motion	Practical	4
19.	4-4. Advanced Cel Animation	Project	4
20.	4-5. Visual Effects I	Project	4
21.	5-1. Visual Effects - II	Project	5
22.	5-2. Non Linear Editing & Colour Grading	Project	5
23.	5-3. Miniatures for Low Budget Filming	Project	5
24.	5-4. Dynamic Simulations	Project	5

	5-5. Generic Elective		5
25.	I. Audio Editing	Practical	
26.	II. Architectural Visualization	Practical	
27.	III. Introduction to Vector Graphics	Practical	
28.	6-1. Internship	OJT	6
29.	6-2. Animation Project	Project	6
30.	6-3. Visual Effects Projects	Project	6
	6-4. Core Elective		6
31.	I. Digital Animation 2D	Project	
32.	II. Methods of Shooting for Green Screen	Project	
33.	III. Match Moving Techniques	Project	
34.	6-5. 3D Lighting & Rendering	Practical	6
35.	6-6. Demo Reel Presentation	Project	6

6. DURATION OF COURSE

- The programmes shall normally extend over a period of three academic years consisting of six semesters.
- There shall be two Semesters in an academic year, the ‘ODD’ semester commences in June and on completion, the ‘EVEN’ Semester commences after a semester-break of three days with two months’ vacation during April and May.
- A student may be permitted to complete the Programme, on valid reasons, within a period of 12 continuous semesters from the date of commencement of the first semester of the programme.

7. EXAMINATIONS AND EVALUATIONS

The evaluation of each course shall contain two parts:

- Internal or In-Semester Assessment (ISA)
- External or End-Semester Assessment (ESA)

The internal to external assessment ratio shall be 1:4, for the course. There shall be a maximum of 80 marks for external evaluation and maximum of 20 marks for internal evaluation. Both internal and external marks are to be mathematically rounded to the nearest integer. For all papers (theory & practical), grades are given on a 10 - point scale based on the total percentage of marks. *(ISA+ESA)* as given below,

PERCENTAGE OF MARKS	GRADE	GRADE POINTS
95 and above	S Outstanding	10
85 to below 95	A+ Excellent	9
75 to below 85	A Very Good	8
65 to below 75	B+ Good	7
55 to below 65	B Above Average	6
45 to below 55	C Satisfactory	5
40 to below 45	D Pass	4
Below 40	F Fail	0
	Ab Absent	0

7.1 Credit Point and Credit Point Average: -

Credit Point (CP) of a paper is calculated using the formula: -

CP = C × GP, where C is the Credit and GP is the Grade point

Semester Grade Point Average (SGPA) of a Semester is calculated using the formula: -

SGPA = TCP/TC, where TCP is the Total Credit Point of that semester, ie, $\sum_1^n$ CPi*;TC is the Total Credit of that semesterie,* $\sum_1^n$ Ci*, where n is the number of papers in that semester.*

Cumulative Grade Point Average (CGPA) is calculated using the formula: -

CGPA = TCP/TC, where TCP is the Total Credit Point of that programme ie, $\sum_1^n$ CPi*; TC is theTotal Credit of that programme, i.e.,* $\sum_1^n$ Ci *, where n is the number of papers in that programme.*

Grade Point Average(GPA) of a Course (Common Course I, Common Course II, Complementary Course I, Complementary Course II, Vocational course, Core Course) is calculated using the formula: -

GPA = TCP/TC, where TCP is the Total Credit Point of course i.e., $\sum_1^n$ CPi*; TC is the Total Credit of that course, ie,* $\sum_1^n$ Ci, *Where n is the number of papers in that course.*

Grades for the different courses, semesters and overall programme are given based on the corresponding GPA as shown below,

GPA	GRADE
9.5 and above	S Outstanding
8.5 to below 9.5	A+ Excellent
7.5 to below 8.5	A Very Good
6.5 to below 7.5	B+ Good
5.5 to below 6.5	B Above Average
4.5 to below 5.5	C Satisfactory
4.0 to below 4.5	D Pass
Below 4.0	F Fail

7.2 Mark distribution for External examination and Internal evaluation: -

The external theory examination of all semesters shall be conducted by the University at the end of each semester. Internal evaluation is to be done by continuous assessment. For all papers (theory and practical) total marks of external examination is 80 and total marks of internal evaluation is 20.

Marks distribution for external and internal assessments and the components for internal evaluation with their marks are shown below:

11.1 for all Theory Papers

- **Marks of external Examination: 80**
- **Marks of internal evaluation: 20**

All the three components of the internal assessment are mandatory.

Components of Internal Evaluation of Theory	Marks
Attendance	5
Assignment/Seminar/Viva	5
Test paper(s) (1 or 2) (1x10=10; 2x5=10)	10
Total	**20**

11.2 for all Practical Papers

- **Marks of external Examination: 80**
- **Marks of internal evaluation: 20**

All the four components of the internal assessment are mandatory.

Components Internal Evaluation of Practical	Marks
Attendance	5
Test paper	5
Record*	5
Lab involvement	5
Total	**20**

*Marks awarded for Record should be related to number of experiments recorded and duly signed by the concerned teacher in charge.

11.3 for Projects

- **Marks of external Examination: 80**
- **Marks of internal evaluation: 20**

Components of External Evaluation of Project	Marks
Dissertation (External)	50
Viva-Voce (External)	30
Total	**80**

All the four components of the internal assessment are mandatory.

Components Internal Evaluation of Project	Marks
Punctuality	5
Experimentation/Data collection	5
Knowledge	5
Report	5
Total	**20**

11.4 Attendance Evaluation for all Papers

% of Attendance	Marks
90 and above	5
85 – 89	4
80-84	3
76-79	2
75	1

(Decimals are to be rounded to the next higher whole number)

7.3 End semester examination (ESE): -

The End Semester Examination (ESE) shall be of 3/5-hour duration for written/practical respectively. The minimum required attendance for each semester shall be 75%. Those who do not attain the minimum attendance will not be eligible to register for the ESE examination.

7.4 Internal assessment test papers: -

At least one internal test-paper is to be attended in each semester for each course. The evaluations of all components are to be published and are to be acknowledged by the candidates. All documents of internal assessments are to be kept in the college for two years and shall be made available for verification by the University. The responsibility of evaluating the internal assessment is vested on the teacher(s), who teach the course.

7.5 External examination: -

The external examination of all semesters shall be conducted by the University at the end of each semester.

Students having a minimum of 75% average attendance for all the courses only can register for the examination. Condonation of shortage of attendance to a maximum of 10 days or 50 hours in a semester subject to a maximum of 2 times during the whole period of the programme may be granted by the University on valid grounds. This condonation shall not be counted for internal assessment.

Benefit of attendance may be granted to students attending University/College union/Co-curricular activities by treating them as present for the days of absence, on production of participation/attendance certificates, within one week, from competent authorities and endorsed by the Head of the institution. This is limited to a maximum of 10 days per semester and this benefit shall be considered for internal assessment also.

Those students who are not eligible even with condonation of shortage of attendance shall repeat the course along with the next batch.

There will be no supplementary exams. For reappearance/improvement, the students can appear along with the next batch.

A student who registers his/her name for the external exam for a semester will be eligible for promotion to the next semester.

A student who has completed the entire curriculum requirement, but could not register for the Semester examination can register notionally, for getting eligibility for promotion to the next semester.

A candidate who has not secured minimum marks/credits in internal examinations can re-do the same registering along with the University examination for the same semester, subsequently.

7.6 Pattern of question: -

Questions shall be set to assess knowledge acquired, standard and application of knowledge, application of knowledge in new situations, critical evaluation of knowledge and the ability to synthesize knowledge. The question setter shall ensure that questions covering all skills are set. She/he shall also submit a detailed scheme of evaluation along with the question paper.

A question paper shall be a judicious mix of very short answer type, short answer type, short essay type/problem solving type and long essay type questions.

Pattern of questions for external examination for theory paper: -

Pattern	Marks	Choice of questions	Total marks
Short Answer	2	9/12	18
Paragraph answer	4	6/9	24
Problem/ Short Essay	6	3/5	18
Long Essay	10	2/4	20
		20/30	80

7.7 Internship (On The Job Training) or midterm project: -

The candidates will have to undergo an on-job training or Internship of a *maximum* of 30 days, during the programme after the fifth semester. The internship will be at a professional Design Studio/Animation Studio/Television Channel/Game Studio/Film as per the field of specialisation of the candidate. The candidates will have to prepare a comprehensive Report. The Report should be attested by the organisation where the candidate did the Internship and the Report will be submitted to the faculty for evaluation along with the certificate of the work done from the firm. A member of the faculty will supervise the candidates during their Internship. The internships would have a credit of 2 with 100 marks and the marks would be submitted to the university at the end of the six semester.

7.8 Pass requirements: -

A separate minimum of 30% marks each for internal and external (for both theory and practical) and aggregate minimum of 40% are required for a pass for a paper. For a pass in a programme, a separate minimum of Grade D is required for all the individual papers. If a candidate secures F Grade for any one of the paper offered in a Semester/Programme, only F grade will be awarded for that Semester/Programme until he/she improves this to D Grade or above within the permitted period. (See Clause 8.3)

Students who complete the programme with 'D' grade in the "Regulations for Undergraduate Programmes under Choice Based Credit System 2016" will have one betterment chance within 12 months, immediately after the publication of the result of the whole programme.

Those students who possess the required minimum attendance during an academic year/semester and could not register for the semester examination are permitted to apply for National Registration to the examinations concerned enabling them to get promoted to the next class.

Students discontinued from previous regulations, CBCSS 2013, can pursue their studies in "Regulations for Undergraduate Programmes under Choice Based Credit System 2016" after obtaining readmission. These students have to complete the programme as per "Regulations for Undergraduate Programmes under Choice Based Credit System 2016".

Credit Transfer and Accumulation system can be adopted in the programme. Transfer of Credit consists of acknowledging, recognizing and accepting credits by an institution for programmes or courses completed at another institution. The Credit Transfer Scheme shall allow students pursuing a programme in one University to continue their education in another University without break.

7.9 Programme structure for model III, B.A./B.Sc./B. Com: -

Programme Duration	6 Semesters
Total Credits required for successful completion of the programme	120
Credits required from Common Course I	8
Credits required from Core + Complementary + Vocational Courses including project	109
Generic Elective (GE)	3
Minimum attendance required	75%

8. CONSOLIDATED SCHEME FOR B.A. ANIMATION AND VISUAL EFFECTS

Sm.	Course Code	Course Title	Course Type	Course Category	Hours /Week	Credit	Marks Inter.	Marks Ext.
I		1-1 English I	Theory	Common	5	4	20	80
	AG1CRT01	1-2 History of Art and Design*	Theory	Core	5	4	20	80
	AV1CMP01	1-3 Introduction to Raster Graphics	Practical	Comp.	5	4	20	80
	AG1CRP03	1-4 Rudiments of Animation Drawing*	Practical	Core.	5	4	20	80
	AG1PRP01	1-5 Techniques of Photographic Composition*	Project	Core	5	4	20	80
					25	**20**	**500**	
II		2-1 English II	Theory	Common	5	4	20	80
	AG2CRT04	2-2 History of Animation and Visual Effects*	Theory	Core	5	4	20	80
	AG2PRP02	2-3 Planning for Animation*	Project	Core	5	4	20	80
	AV2CRP02	2-4 Introduction to 3D	Practical	Core	5	4	20	80
	AV2CMP03	2-5 Designing Characters for Animation	Practical	Comp.	5	4	20	80
					25	**20**	**500**	
III	AV3CRP04	3-1 3D Character Creation	Practical	Core	5	4	20	80
	AV3PRP01	3-2 Introduction to Motion Graphics	Project	Core	5	4	20	80
	AG3PRP03	3-3 Classical Animation*	Project	Comp.	5	4	20	80
	AV3PRP02	3-4 Digital Matte Painting	Project	Core	5	4	20	80
	AV3PRP03	3-5 Rigging for Animation	Project	Core	5	4	20	80
					25	**20**	**500**	

IV	AV4PRP04	4-1 Stop Motion Techniques	Project	Comp.	5	4	20	80
	AV4PRP05	4-2 Acting for Animators	Project	Core	5	4	20	80
	AV4CRP05	4-3 3D Character Motion	Practical	Core	5	4	20	80
	AG4PRP05	4-4 Advanced Cel Animation*	Project	Core	5	4	20	80
	AV4PRP06	4-5 Visual Effects - I	Project	Core	5	4	20	80
					25	**20**	**500**	
V	AV5PRP07	5-1 Visual Effects - II	Project	Core	5	4	20	80
	AV5PRP08	5-2 Non Linear Editing and Colour Grading	Project	Comp.	5	4	20	80
	AV5PRP09	5-3 Miniatures for Low Budget Filming	Project	Core	5	4	20	80
	AV5PRP10	5-4 Dynamic Simulations	Project	Core	5	4	20	80
		5-5 Generic Elective		Elective	5	3	20	80
	AV5GEP01	i. Audio Editing	Practical					
	AV5GEP02	ii. Architectural Visualization	Practical					
	AV5GEP03	iii. Introduction to Vector Graphics	Practical					
					25	**19**	**500**	
VI	AV6OJP01	6-1 Internship	OJT		0	2	100	0
	AG6PRP06	6-2 Animation Project*	Project	Core	6	4	20	80
	AV6PRP11	6-3 Visual Effects Projects	Project	Core	6	4	20	80
		6-4 Core Elective		Core	5	4	20	80
	AV6OCP01	i. Digital Animation 2D	Project					
	AV6OCP02	ii. Methods of Shooting for Green Screen	Project					
	AV6OCP03	iii. Match Moving Techniques	Project					

	AV6CRP06	6-5 3D Lighting and Rendering	Practical	Core	5	4	20	80
	AG6PRP08	6-6 Demo Reel Presentation**	Project	Comp.	3	3	20	80
					25	**21**	**600**	
				Grand Total		**120**	**3100**	

Subjects denoted with "*" are common for B.A. Animation and Graphic Design as well as B.A. Animation and Visual Effects.

Subject denoted with "**" are common for B. A. Animation and Graphic Design, B. A. Animation and Visual Effects as well as B. A. Visual Arts.

COURSE 1-1

ENGLISH I (Theory)

OBJECTIVE

To develop effective verbal communication skills. To develop conversational skills for informal as wells as formal occasions such as professional meetings, interviews and group discussion. To enhance public speaking skills for the students.

MODULE I

Introduction to Presentation Skills: Soft Skills Development - Voice modulation, Body language, Gestures and Expressions while doing formal and academic presentations, Effective Communication skills, Group Discussion, Interview skills - Telephone, Face to Face, Video Conferencing, PowerPoint presentations and presentation aids

MODULE II

Introduction to Language: Phonetics - Phonetic symbols and its transcription, Word Stress, Pitch, Intonation

MODULE III

Introduction to Conversational Skills: Initiating conversation in various situations - meeting a stranger, making requests, giving an opinion, extending an apology, introducing oneself and others

MODULE IV

Introduction to Public Speaking: Making Short Formal Speeches - Welcome speech, Felicitations, Vote of thanks.

REFERENCE

1. Critical Thinking, Academic Writing: Anderson. Nayar. Sen; Pearson Publication & Presentation Skills
2. Communication skills in English: Sasikumar. Dutt. Rajeevan; Foundation Books

SOURCE MATERIALS FOR TEACHERS

1. Headway Academic Skills: Listening, Speaking and Study Skills Teacher's Guide Oxford University Press
2. Professional Speaking Skills: Aruna Koneru, Oxford University Press

COURSE 1-2

HISTORY OF ART AND DESIGN (Theory)

OBJECTIVE

The course will examine the role and development of the visual arts in past and present cultures throughout the world. This is designed to help students to develop art application, aesthetic judgment, and to increase visual perception and critical thinking skills.

MODULE I

Prehistoric visual communications - Paleolithic to the Neolithic Period - Lascaux, Altamira, Indian evidences. The earliest writing- Mesopotamian visual identification, Egyptian hieroglyphs, Chinese calligraphy, Pictographs to Alphabets

MODULE II

Development of art from the time of Civilizations upto the age of enlightenment – Mesopotamian, Egyptian, Indian, Chinese, Greek & Roman civilizations, Byzantine, Gothic, Renaissance era and Baroque.

MODULE III

Development of the art of printing - invention of paper and discovery of printing, invention of movable type. Early European block printing, Copperplate engraving etc. Illuminated Manuscripts & German illustrated books. Graphic design of the rococo Era

Development of art from imaginative to ideological – Romanticism, Impressionism, Expressionism and Cubism

MODULE IV

Twentieth Century graphic design- Industrial Revolution-Impact of technology upon visual communication - revolution in printing-development of photography as a communication tool- Victorian era graphic design-development of lithography

MODULE V

Art and Craft movements - Art Nouveau, Modernism, Art Deco, Bauhaus, Organic design, Minimalism, Pop art, Postmodernism, American Kitsch, Conceptual art.

REFERENCE

1. A Concise History of Art: G. Buzin
2. Encyclopedia of World Art (Vol. I & II): McGraw Hill Publication
3. Necessity of Art: Ernest Fisher
4. Meggs' History of Graphic Design: Philip B. Meggs, Alston W. Purvis
5. Graphic Design History: A Critical Guide: Johanna Drucker, Emily McVarish
6. The Dictionary of Visual Language: Philip Thompson, Peter Davenport

COURSE 1-3

INTRODUCTION TO RASTER GRAPHICS (Practical)

OBJECTIVE

Students develop a basic skill and understanding in raster graphic and its applications.

MODULE I

Digital image - Pixels - Bit depth - DPI - LPI - Resolution - File formats (Print and screen media formats - GIF, JPEG, TIFF, etc.) - Compression: Lossy - Lossless - Colour: Colour Coding - Process colour (CMYK) - RGB - Spot colour - Colour systems. Duotones, Tritones, Quadratones etc.

MODULE II

Selection tools, Retouching tools, Path making tools, Image adjustment options. Processing camera RAW layer, Channel, Mask, Path, Layer comp, Paragraph & character, Swatches, Adjustment layers

MODULE III

Preference settings, Colour settings, Assign profile automate, Script. proof setup, Gamut warning, Bit preview, Screen mode show, Pixel aspect ratio

MODULE IV

Saving with clipping path & alpha channel, PSD, PDF, EPS, TIFF, JPEG. Camera RAW

MODULE V

What is the use of blend modes? How to apply blend modes? Different types of blend modes - Normal modes, Darken modes, Lighten modes, Contrast modes, Comparative modes and Color modes. Application of blend modes - Creating custom textures for 3D models, Blending modes for compositing etc.

Exercise A: Project based on poster design (exercises should be conducted from manual scribbles to digital approach)

Exercise B: Project based on colour correction and photo restoration

REFERENCE

1. Adobe Photoshop Classroom in a Book: Adobe Creative Team
2. The Book of GIMP - A Complete Guide to Nearly Everything: Olivier Lecarme, Karine Delvare

COURSE 1-4

RUDIMENTS OF ANIMATION DRAWING (Practical)

OBJECTIVE

Rudiments of animation drawing is intended to provide the student an understanding of basic drawing techniques for animation.

MODULE I

Introduction to different drawing materials and tools - Dry Media (Pencils, Charcoals, Chalks, Crayons, Pastels, Erasers, Smudging Tools) - Wet Media (Dip Pens, Disposable & Cartridge Pens – Brushes) - Inks (Water Based, Alcohol Based, Indian/Chinese Ink) - Paints (Water Based, Acrylic, Oil) - Drawing Surfaces – (Papers – Newsprint, Watercolor Paper, Charcoal Paper, Canvas) - Tools for Erasing And Sharpening – Palettes – Knives - Easels.

MODULE II

Doodling and Noodling (Drawing Straight Lines, Drawing Curved Lines, Free Hand Drawing) Holding the Pencil - Angle & Direction of Lines (Drawing Lines, Circles, Ovals, Scribbles, Patterns Etc.) - Shapes & Forms - Memory & Imagination Drawing - Drawing with Grids

MODULE III

Drawing from Observation - Life Drawing - Use of Basic Shapes and Forms - Sketching Poses - Rapid Sketching from Live Models - Attitude - Gestures - Line Drawing - Quick Sketches - Thumbnails - Stick Figures - Line of Action - Balance - Rhythm - Positive & Negative Spaces - Silhouettes - Caricaturing Fundamentals - Exaggeration

MODULE IV

Perspective Drawing - Vanishing Points - Orthogonal Lines - Horizon - Eye Level - One Point Perspective - Two Point Perspective - Three Point Perspective - Multi-Point Perspective - Overlapping and Intersection of Shapes in One Point, Two Point & Three Point Perspective Views - Foreshortening

MODULE V

Tones - Lighting and Shading - Basic 3Dimensional Light Set Up - Several Types of Shadows - Cast Shadow - Contact Shadow - Contour Shadow - Reflected Light - Overhang Shadow - Highlight - Core Shadow - Objects & Shapes in Perspective with Light & Shade.

REFERENCE

1. Exploring the Elements of Design: Mark A. Thomas, Poppy Evans
2. The Art of Composition: Michael Jacobs
3. The Art of Pictorial Composition: Wolehonok
4. Complete Books of Artist Techniques: Dr. Kurt Herbers
5. Drawing for The Absolute and Utter Beginner: Claire Watson Garcia
6. Perspective Made Easy: Ernest R Norling
7. Perspective Drawing Handbook: Joseph D'Amelio

COURSE 1-5

TECHNIQUES OF PHOTOGRAPHIC COMPOSITION (Project)

OBJECTIVE

Techniques of Photographic Composition is intended to help students understand the basic knowledge of image making using digital camera. Students will be introduced to basic picture composition.

MODULE I

The Psychology of Visual Perception - Visual Aesthetics - Art of Filmmaking - Stages in Brief.

MODULE II

Photography as a communication tool - Basics of visual composition - Visuals - Image Sizes - Camera Angles - Elements and Principles of picture composition - Balance and Structure - Composing movement, rule of space - Rule of odd - Rule of third - Golden triangle etc. - Perspective and depth of field - foreshortening.

MODULE III

Basic features of DSLR camera - human eye and camera - Principles of Image formation - Properties of light and its control - Shutter - Lenses and exposure controls - Aperture, focus and depth of field, depth of focus. Colour Temperature, Direction, and Quality of Light etc. Measurement of light - Light meters. Histogram - Understanding basics of histogram.

MODULE IV

Grammar for motion picture: Camera Movements - Principle of continuity - Action, look, movement, tonal, emotion etc. - Imaginary line concept-crossing the line - 30^0 rule - 180^0 rule etc. - Meaning and aesthetic aspects of angle selection.

MODULE V

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

REFERENCE

1. Basic Principles of Photography: Gerald Millerson
2. Grammar of Shot (Second edition): Roy Thompson (Focal Press)
3. How to read a film: James Monaco
4. The T.V. Production: Handbook - Zetti Herbert
5. Elements of film: Lee .R. Bobker
6. The Art of Pictorial Composition: Wolohomok

COURSE 2-1

ENGLISH II (Theory)

OBJECTIVE

The course helps students to express ideas creatively. The imaginative qualities of the students are being sharpened and polished. The course aids students to achieve constructive as well as academic excellence.

MODULE I

Fundamentals of English Grammar: Parts of Speech, Subject - Verb agreement, Tenses, Active - Passive Voice, Phrasal Verbs, Affixes, Conditionals, Direct - Indirect Speech, Modals, Question Tags.

MODULE II

Introduction to Literary Terms: Figures of Speech and other literary terms

MODULE III

Introduction to Creative Writing: Poetry Writing, Short Story Writing, Script writing, Newspaper report, Content development for script and advertisement.

MODULE IV

Introduction to Academic Writing: Writing models: Letters - formal/informal, Resume and covering letter, Minutes and Agenda, Report and Notice writing, Essay, paragraph and note-making.

REFERENCE

1. A Glossary of Literary Terms: Abrams, M.H; Wadsworth Publication
2. History of English Literature: Albert, Edward; Oxford University Press
3. Critical Thinking, Academic Writing & Presentation Skills: Anderson Nayar Sen; Pearson Publication
4. English Grammar and Composition: Wren Martin; S. Chand Publications

COURSE 2-2

HISTORY OF ANIMATION AND VISUAL EFFECTS (Theory)

OBJECTIVE

This paper should enlighten the students on the advancement made in the field of animation and visual effects so as the appreciate and understand where the technology used today developed from. It also inspires students to experiment with different types of animation and visual effects techniques so as to think of process improvements ideas for animation and visual effects.

MODULE I

Early Attempts for Animation: Early attempts to imitate and reproduce motion - Cave paintings - Persistence of vision & Phi phenomenon - Early animation devices - Initial attempts to make animation - Photography - Motion picture

MODULE II

Birth of Animation: Experimental animations (Drawn, Stop motion) all over the world - Pioneer animators - Major animation studios

MODULE III

Animation Techniques and Advancements: Animation techniques (Time lapse, stop-motion, Cut-out, Silhouette, Cel) - Technical advancements (Layer, Cel, Peg bar, Combining live action with cartoon characters, Synchronized sound, Technicolor process, Multi-plane camera etc.)

MODULE IV

Visual Effects: Use of miniatures in early films - Use of makeup, Rear projections, Pyrotechnics and matte paintings before the CGI era - Stereoscopic 3D - Realistic puppets and stop motion photography - Split screen technology - Space vision 3D - Stereovision 3D - Motion controlled camera - CGI Effects - Digital compositing - Animatronics - Motion capture - High speed cameras - The fusion camera system - Visual effects studios

MODULE V

Animation & VFX Around the World: American, Canadian, European, Indian, Japanese Studios

REFERENCE

1. Enchanted Drawings: The History of Animation: Charles Solomon
2. The World History of Animation: Stephen Cavalier
3. Cartoons: One Hundred Years of Cinema Animation: Giannalberto Bendazzi
4. Of Mice and Magic: Leonard Maltin
5. Before Mickey: The Animated Film, 1898-1928: Donald Crafton
6. The Anime Encyclopedia: A Guide to Japanese Animation Since 1917: Lowry
7. Special Effects: The History and Technique: Richard Rickitt
8. Special Effects - An Oral History: Pascal Pinteau

COURSE 2-3
PLANNING FOR ANIMATION (Project)

OBJECTIVE

Planning for animation is meant to guide the student through the various stages of pre-production before the production starts of an animation project. It starts from developing an idea through to selling of a story using storyboards and animatics.

MODULE I

Techniques of animation - Different types of animation - Workflows of different types of animation - Pre-production, Production and Post-production stages - Types of animation - Experimental animations.

MODULE II

Developing idea/concept - Story - Basic elements of a story - Types of stories - Creating story ideas - Sources of storyline - Adaption - Character roles - Characterization - Dialogues - Basic structure of a story - Old and modern structures - Concept of acts - Theme - Subplots - Tone - Genre - Writing for different types and groups of audience - Animation script - Animation script vs live action movie script - Shot - Scene - Sequence - Screenplay format - Elements of screenplay format - Montage

MODULE III

Character designing - Features of a character - Types/Kinds of characters - Designing props and assets of character - Creating turnarounds/Character model sheets - Blueprints - Character size comparison charts - Character attitude poses

MODULE IV

Storyboard - Definition - Importance of storyboarding - Different types of storyboards - Storyboard formats - Elements of storyboarding (Design, Color, Light and Shadow, Perspective, Staging, Composition rules) - Concept of panels and its usages - Floor plans - Storyboarding movements - Illustrating camera techniques in a storyboard - Visual continuity - Transitions - Digital storyboarding

MODULE V

Creation of Animatic - Scanning storyboard panels and synchronizing it with the sound tracks

REFERENCE

1. The Encyclopedia of Animation Techniques: A Comprehensive Step-By-Step Directory of Techniques, with an Inspirational Gallery of Finished Works: Richard Taylor
2. How to Write for Animation: Jeffrey Scott
3. Writing for Animation, Comics and Games: Christy Marx
4. Animation Writing and Development: From Script Development to Pitch: Jean Ann Wright
5. How to Draw Animation- Learn the Art of Animation from Character Design to Storyboards and Layouts: Christopher Hart
6. The Art of the Storyboard - Storyboarding for Film, TV, and Animation: John Hart
7. Exploring Storyboarding: Wendy Tumminello

COURSE 2-4

INTRODUCTION TO 3D (PRACTICAL)

OBJECTIVE

This course is meant to introduce the student to the world of 3D. In this course the student will learn about how to work in 3D space, model, texture, apply lights and finally take a render output of his/her creation.

MODULE I

Introduction to 3D animation, its uses and scope, 3D production pipeline, various 3D softwares-Different file types used in 3D animation and their applications- Basic skills for handling the selected software like transforming objects, object properties, hierarchies, pivots, etc.

MODULE II

Modeling techniques like Spline, NURBS, Polygon and SubD- Various tools and their applications, Detailed modeling of furniture, instruments, character props, etc.

MODULE III

Shaders and Materials, 2D and 3D textures, Texturing with HDR images, Different Types of Material Creation, Normal and Artificial Lighting - 1 Point, 2 Point, 3 Point Lighting in 3D Space, Common Light Attributes, Shadows and its attributes.

MODULE IV

Introduction to Animation, Keyframe creation, Animation curves, Animating through paths, Application of basic animation principles: Squash & Stretch - Timing & Spacing - Anticipation, Slow-In & Slow-Out. 3D Cameras, Creating Camera movements.

MODULE V

Exterior Modeling: - Environments - Buildings, Hills, City Etc. - Interior Modeling: - Architectural/Industrial Structures - Exterior Lighting – Interior Lighting, Rendering basics, Global illumination, Final gather.

REFERENCE

1. The Art of 3D Computer Animation and Effects: Isaac Kerlow
2. Autodesk 3ds Max 2014 Essentials: Randi L. Derakhshani, Dariush Derakhshani
3. Autodesk Maya 2014 Essentials: Paul Naas
4. Blender Master Class - A Hands-On Guide to Modeling, Sculpting, Materials, and Rendering: Ben Simonds
5. Blender Studio Projects: Digital Movie Making: Tony Mullen, Claudio Andaur
6. Digital Animation Bible - Creating Professional Animation with 3ds Max, Lightwave and Maya: George Avgerakis
7. 3D Automotive Modeling: An Insider's Guide to 3D Car Modeling and Design: Andrew Gahan

COURSE 2-5

DESIGNING CHARACTERS FOR ANIMATION (Practical)

OBJECTIVE

Character design for animation is intended to provide the student with an understanding of the anatomy of a human, a creature or a cartoon character.

MODULE I

Human Anatomy - Anatomy of Different Age Groups (Babies, Kids, Teens, Young Adults, Aged) - Basic Proportions - Basic Understanding of the Skeletal and Muscle System - Human Forms in Perspective.

MODULE II

Male and Female Anatomy - Body Structure, Proportion and Construction of body parts (Torso, Face, Eyes, Nose, Ears, Mouth, Hand, Feet Etc.) - Motion Analysis - Study of poses

MODULE III

Anatomy of Animals, Birds, Reptiles: Body Structure - Basic Forms, Proportion and Construction of Body Parts, Head, Legs, Tails - Use of perspectives while drawing animals, birds, reptiles and Insects - Understanding Motion and Grace

MODULE IV

Cartoon Characters - Understanding Cartoon Characters - Cartoon Constructions - Character Development - Drawing from Basic Shapes - Distortion of Proportions - Cartoon Faces, Eyes, Mouths, Hair, Nose, Hands, Feet - Facial Expressions

MODULE V

Classic Cartoon Characters (Humans, Animals, Birds, Reptiles - Cute, Screwball, Goofy, Heavy, Pugnacious - Fairy Tale Characters, Gnomes, Elves, Dwarves, Witches) - Anime Style

REFERENCE

1. How to Draw What You See: Rudy De Reyna
2. Figure Study Made Easy: Aditya Chari
3. Figure Drawing Without a Model: Ron Tiner
4. Classic Human Anatomy: The Artist's Guide to Form, Function and Movement: Valerie L. Winslow
5. Anatomy for the Artist: Sarah Simblet
6. The Art of Animal Drawing: Construction, Action, Analysis, Caricature: Ken Hultgen
7. Animal Drawing: Anatomy and Action for Artists: Charles R. Knight
8. Animal Anatomy for Artists: Eliot Goldfinger
9. Bird Anatomy for Artists: Natalia Balo
10. Cartoon Animation: Preston Blair
11. Disney Animation - The Illusion of Life: Frank Thomas and Ollie Johnston
12. How to Draw Animation- Learn the Art of Animation from Character Design to Storyboards and Layouts: Christopher Hart

COURSE 3-1

3D CHARACTER CREATION (Practical)

OBJECTIVE

3D Character Creation is intended to provide skills of character modeling to the student with an understanding of the anatomy of a human, a creature or a cartoon character.

MODULE I

Modeling humans - Basic proportions - Modeling of body parts (Head, Ear, Mouth, Limbs, Torso etc.)

MODULE II

Modeling animals and birds - Basic proportions, Modeling of body parts (Head, Ear, Horns, Mouth, Limbs, Torso, Tail, Wings etc.)

MODULE III

Modeling different types of human characters (Real, Stylized, Comic, Characters of different age group etc.) - Creation of blend shapes

MODULE IV

Texturing a character: UV Texture Layout, Unfolding UVs , Mirroring UV, Arranging UV Shells, Transferring UVs, Multiple UV sets, Optimizing Textures, Unwrap UVW, Optimizing Textures

MODULE V

Creating skin material using Subsurface scattering, Mental ray shaders and MIA materials for character texturing, 3d paint tool and its application.

REFERENCE

1. Mastering Autodesk Maya 2012: Todd Palamar SYBEX
2. Maya Character creation: Chris Maraffi

COURSE 3-2

INTRODUCTION TO MOTION GRAPHICS (Project)

OBJECTIVE

This course trains students in the essential vocabularies and concepts of motion graphics using type, shapes, objects and images.

MODULE I

Fundamental concepts for motion graphics, including graphics and promos for television networks, film titles and advertising. After effects animation techniques - Create a new composition, Timeline panels, Adding footage, Solid layers, Resolution, Quality, Basic animation, Rotation, Scale, Transform, Anchor point, Key frames, Text animation. Motion paths, Working with graph editor, Easy ease, Auto Bezier keyframes, Wiggler keyframe

MODULE II

Layer Management - Selecting, moving layers, replace footage, Trim in and out points, ripple insert, motion blur. Masking - create masks, transforming masks, mask points, feather, animating masks, Blending modes. Track mattes - luma, Alpha matte, Animated mattes, stencils

MODULE III

Cameras - 3D Space, Z dimension, 3D Rotation, Z scale, 3D motion paths, camera basics, camera settings, Lighting in 3D, lighting basics, parameters, manage shadow, 3D layers. Effects and Presets - Applying effects, effects and preset panel, Use mask path animation presets, Compound effects, Colour correction, Keying

MODULE IV

Tracking - Motion tracking, Motion stabilization, Mocha tracking, Time wrap

MODULE V

Elements from 3D, Audio, Rendering, file formats, Plugins

REFERENCE

1. Creating Motion Graphics with After effects: Trish and Chris Meyer, Focal Press
2. Creative Motion Graphic Titling for Film, Video, and the Web: Yael Braha and Bill Byrn

COURSE 3-3

CLASSICAL ANIMATION (Project)

OBJECTIVE

To provide a solid foundation of the principles animation, together with observational studies essential for the student of animation. Observational drawing from life includes drawing from the model or animal, to better understand gesture, poses and particularly movement. By the end of this course participants will be able to: 1. Appropriately plan out their animated scenes visually; 2. Demonstrate an understanding of composition and visual storytelling; 3. Demonstrate a basic understanding of character and scene design.

MODULE I

Animation equipment - Cels - Light box - Peg holes and Peg bars - Line/Pencil tests - Field charts - Rostrum camera - The exposure sheet (X Sheet) - Concepts of: Soundtrack, Track breakdown, Key frames, In-betweens, Clean-up etc.

MODULE II

Line of action - Path of action - Maintaining volume - Key drawings - Extremes and breakdowns - In-betweens - Spacing and charting - Timing ladder and numbering of animation drawings - Flipping key drawings - Animation methods: Straight ahead, Pose to pose and a combination of both

MODULE III

Experiments with basic principles of animation (Squash and stretch, Anticipation, Staging, Straight ahead and Pose to pose animation, Follow through and overlapping action, Slow out and Slow in, Arcs, Secondary action, Timing, Exaggeration, Solid drawing, Appeal)

MODULE IV

Acting for animators - Character acting - Difference between acting for drama and acting for animation - Studies from movies - Basics of animation acting - Posing, Timing, Staging - Voice acting - Expressions - Body language.

MODULE V

Animating walks - Normal and stylized walks - Walks of different types of human characters - Runs - Different types of runs - Runs of different types of human characters - Jumps - Skips - Leaps - Takes and double takes - Anticipation - Overlapping actions - Mass and weight.

REFERENCE

1. The Illusion of Life: Disney Animation: Ollie Johnston, Frank Thomas
2. The Animator's Survival Kit: Richard Williams
3. Cartoon Animation: Preston Blair
4. Timing for Animation: Harold Whitaker and John Halas
5. How to Make Animated Films: Tony White
6. Animation from Pencils to Pixels: Tony White
7. The Animator's Workbook: Tony White
8. The Male and Female Figure in Motion: Edward Muybridge

COURSE 3-4

DIGITAL MATTE PAINTING (PROJECT)

OBJECTIVE

This course will introduce the students to the art and craft of painting techniques like matte painting, rotoscopy, digital paint effects etc. Students apply this technique to the recreation of both realistic and fantasy scenes and character texturing. Emphasis also given to visual effect techniques like wire removal, paint animation etc.

MODULE I

Concept of digital painting, Basic tools for painting, Digital creation of charcoal drawings, pastel, watercolor and oil painting using Photoshop, Illustration techniques.

MODULE II

Character design: issues and limitations, Creating character history, Designing the physical look, Drawing, Sketching and painting of the character, Value and color in character creation.

Lighting for a character, Using and blending edges in painting, Creating textures and patterns, Painting an eye, face and hair, Painting real and fantasy characters.

MODULE III

Matte painting: preparing the background plate, articulated mattes, plate restoration, plate extension, adding 3D elements, creating sky mattes, static matte and motion matte painting, color grading, final output.

MODULE IV

Wire removal technique using various compositing softwares.

Rotoscopy: basics and examples, Tracing for animation, matting with green screen, Garbage matting, mid ground Roto, Compositing mid ground, colorizing, and animated wipe.

MODULE V

Project

REFERENCE

1. Bold Vision: A Digital Painting Bible: Gary Tonge
2. Digital Fantasy Painting Workshop: Martin Mckenna
3. Digital Character Design and Painting: Don Seegmiller
4. Complete Digital Painting Techniques: David Cole
5. Digital Fantasy Painting: Michael Burns
6. The Complete Guide to Digital Illustration: Steve Caplin, Adam Banks and Nigel Holmes
7. 100 Ways to Create Fantasy Figures: Francis Tsan
8. Drawing and Painting Fantasy Landscapes and Cityscapes: Rob Alexander and Martin McKenne
9. The Invisible Art: The Legends of Movie Movie Matte Painting: Mark Cotta Vaz and Craig Barron
10. D'artiste Matte Painting: Alp Altiner, Dylan Cole and Chris Stoski.

COURSE 3-5

RIGGING FOR ANIMATION (Project)

OBJECTIVE

This course will introduce various methods of rigging which is most essential part of 3D animation. Students can develop their technical skills during this course.

MODULE I

Study of skeleton Setups - Skeleton Creation, Joints and their manipulations, IK and FK - Attribute Controls, Rig Controls. Constraints - Locking and Hiding Animation Channels - Custom Attributes - Driven Keys, Connecting various attributes

MODULE II

Study of Expressions and Basic scripting for rigging. Creating and Organizing joint Hierarchies , Orienting Joints, Naming Joints, Mirroring Joints, IK leg, FK Blending, Rotate Plane Solvers, Creating Custom Attributes, Spline IK, Human Inverse Kinematics.

MODULE III

Creating Rigs for Props and characters.

Deformers, Skinning, Interactive/smooth binding, Controlling Skin Weights - Painting skin Weights, Editing skin weights in component editor, Use of Blend Shapes.

MODULE IV

Understanding the Muscle systems, Using capsules, Creating a muscle using muscle builder, Editing Muscle Parameters, Converting the smooth skin to a Muscle System, Sliding weights, Rig a cartoon character applying Muscle system. Study and Analysis of various Rigging setups.

MODULE V

Project: Students should create a demo reel of their rigging works.

REFERENCE

1. Animation Methods - Rigging Made Easy: Rig Your First 3D Character in Maya: David Rodriguez
2. Blender Studio Projects: Digital Movie Making: Tony Mullen, Claudio Andaur
3. Maya Character Rigging: Cheryl Cabrera
4. Game Character Development with Maya: Antony Ward
5. The MEL Companion: David Stripinis

COURSE 4-1

STOP MOTION TECHNIQUES (Project)

OBJECTIVE

In this course students are introduced to a wide range of stop motion styles, materials and techniques including clay, object and puppet animation utilizing both tabletop and multi plane setups. Students are encouraged to develop a personal approach while exploring possibilities in character design, armature and set building, lighting, etc.

MODULE I

Animation Principles - History of Stop Motion Techniques - Study of famous stop motion works and studios.

MODULE II

Study of Time lapse and Pixilation - Project works in Time lapse and Pixilation techniques.

MODULE III

Study of cutout animation - Project works.

MODULE IV

Study of Claymation - Different types of Armatures - Properties of Clays - Project works.

MODULE V

Sand Animation - Various aspects. Project works.

REFERENCE

1. The Art of Stop motion animation: Ken A Priebe
2. Stop motion: Craft skills for model Animation: Susannah Shaw
3. Stop motion: Passion, Process and Performance: Barry JC Purves
4. Creating 3D Animation - The Aardaman Book of Film making: Peter Lord & Brian Sibley
5. Stop motion Armature Machining: A Construction Manual: Tom Brierton
6. A Century of Stop Motion Animation from Melies to Aardaman: Ray Harry Hausen
7. Stop motion Filming and Performance: Tom Brierton
8. Stop motion Puppet Sculpting: Tom Brierton

COURSE 4-2

ACTING FOR ANIMATORS (Project)

OBJECTIVE

This course focuses on acting and directing skills that will strengthen the animator's ability to communicate visually. Students act out their characters and complete drawings of motion studies, expressions and poses.

MODULE I

Historical Aspects - Pre-scientific and Scientific Theories of Acting. Aristotelian concept of Emotion and Acting - James Lange Theory - Stanislavsky System (Method Acting). Meyerhold system (Bio-mechanics) - Berthold Brecht (Alienation) - Samuel Becket (Absurd Theatre) - Grothovsky (Theatre of Poverty).

MODULE II

Why Characters Differ? - Character Types and Their Motion - Acting as Responding to a Situation - Heroes and Villains - Domination and Subordination - Primary and Secondary Characters. 'Anticipation Action - Result' - Exaggeration - Walks: Acting and Attitudes - Tell the Story Visually - Clear Staging for the Audience: Keeping it simple and Readable.

MODULE III

Emotion and Empathy - Emotional Involvement - Attaining Believability - Development of Drama - Conflict: Good Versus Evil - Character Goals - Mannerisms - Acting with senses - Animating force versus form - Blinks have Meaning - Camera itself an Actor (Subjective viewpoint).

MODULE IV

Body Acting and Gestures - Facial expressions - Feeling of the Character: Actions that show Joy or Inner Torments - Space and Effort - Speech Analysis - Acting for Camera - Techniques of Acting - Pantomime - Voice-over acting.

MODULE V

Project works on Acting.

REFERENCE

1. The Illusion of Life, Disney Animation: Frank Thomas and Ollie Johnston
2. Timing for Animation: Harold Whittaker, John Halas
3. The Animator's Survival Kit: Richard Williams
4. Acting in Animation: A Look at 12 Films: Ed Hooks
5. Action: Acting Lessons for CG Animators: Gibbs and Gibbs

COURSE 4-3

3D CHARACTER MOTION (Practical)

OBJECTIVE

This course focuses on acting and directing skills that will strengthen the animator's ability to communicate visually. Students act out their characters and complete drawings of motion studies, expressions and poses.

MODULE I

Principles of Animation, Working with Curves, Keyframes and Breakdowns - Animation Blocking and Working in passes - Camera Movements - Path Animation, Animation constraints - Pose creation - linear and Non-linear animation techniques - Mechanics of movements - Modifiers and Controllers.

MODULE II

Principles of 2D Animation Applied to 3d Computer Animation (John Lasseter): Squash & Stretch - Timing & Spacing - Anticipation - Slow-In & Slow-Out - Follow-through & Overlapping Action.

MODULE III

Principles (continued) - Arcs - Weight - Silhouette - Line of Action - Solid Drawing - Contrast - Pose to Pose & Straight Ahead Action - Balance - Staging etc. Cycling Animation: Walk, Run, and Sneak Cycles Sad Walk - Happy Walk - Jump. Using exposure sheets, Timing and spacing.

MODULE IV

Weight, Mass and movement - exercises in weight and mass, Secondary Action, Fast Action.

MODULE V

Animating the body: Body Language - Posing - Action - Reaction - Push and Pull - Lift - Throw - Staging.

REFERENCE

1. The Illusion of Life: Disney Animation: Frank Thomas & Ollie Johnston
2. The Animator's Survival Kit: Richard Williams
3. Digital Character Animation Part 1, 2 & 3: George Maestri
4. Character Animation: Steve Roberts
5. Animation: Mechanics of Motion: Chris Webster
6. Timing for animation: Harold Witaker & John Halas

COURSE 4-4

ADVANCED CEL ANIMATION (Project)

OBJECTIVE

This course is meant for analysing and study of animal locomotion in real world for use in animation.

MODULE I

Animation of four legged and two legged animals - Normal and stylized movements of animals

MODULE II

Bird flight/movements in different stages - Movements of reptiles - Animating insects & fishes

MODULE III

Phonetics - Standard mouth shapes - Dialogue animation - The soundtrack - Phrasing - Accents - Attitudes - Recoding of dialogues & voice-over - Marking in X Sheets - Synchronizing sound - Dialogue animation of humanoid characters

MODULE IV

Animating special effects: Cloth, Sky, Lightning, Rainfall, Snow, Water drops, Water ripples, Waves, Smokes, Fire, Explosions etc.

MODULE V

Project: Creation of a digital 2D animation short film with proper use of ink and paint, sound synchronization etc.

REFERENCE

1. The Animator's Survival Kit: Richard Williams
2. Cartoon Animation : Preston Blair
3. Timing for Animation : Harold Whitaker and John Halas
4. How to Make Animated Films: Tony White
5. Character Animation-2D Skills for Better 3D: Steve Roberts
6. Horses and Other Animals in Motion: Eadweard Muybridge
7. The Illusion of Life: Disney Animation: Ollie Johnston, Frank Thomas
8. Animation from Pencils to Pixels:Classical Techniques for the Digital Animator: Tony White
9. The Animator's Workbook: Step-By-Step Techniques of Drawn Animation: Tony White

COURSE 4-5

VISUAL EFFECTS - I (Project)

OBJECTIVE

Visual Effects-I is a continuation of "3-2 Introduction to Motion Graphics". This course introduces the student to advanced tools and compositing techniques. The main objective of this course should be to help the students solve any challenges they would face with respect to compositing.

MODULE I

Chroma key compositing - Principles of chroma key compositing, Pulling the matte using keyer. Despill operation to avoid blue spill contamination (hue operation), Garbage mattes to support keying, Colour correction and composite the foreground and background, Chroma shoot, Materials using for chroma screen, Lighting techniques for chroma shoot, Shooting the chroma. Advantages of video cameras with little compression (4:2:2,4:4:4) for chroma shoots, motion tracking in chroma screen for camera movements

MODULE II

Creating masks - Luma key, Chroma key, Difference mask, Color difference mask, Geometric primitive masks, Spline based manual drawing masks, Painting a mask

MODULE III

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

MODULE IV

Image blending - The mix operation, Multiply operation, Screen operation, Maximum operation, Minimum operation, Add operation, Subtract operation, Speed operation. Animation - Keyframe animation of layers using translation, Pivot, Rotation, Scale, Skew, Shear, Corner pin layer operations, Key frame animations, Stabilizing a shot, planar tracking

MODULE V

Other VFX applications - Morphing, Wraps, Adding atmospheres, Crowd duplication, Wire removal, Basics of stereo compositing.

REFERENCE

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

COURSE 5-1

VISUAL EFFECTS - II (Project)

OBJECTIVE

This course is intended to teach students how to composite live actors with virtual environments (3D and 2D).

MODULE I

Node based & layer based compositing. Structure of digital images - The Pixel, greyscale & colour images, four channel images, LDR & HDRI images, Image resolution, Pixel & image aspect ratio, Digitizing image, Bit depth, Compression, File formats, DPI

MODULE II

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

MODULE III

Multipass compositing - Specular pass, Diffuse pass, Occlusion pass, shadow pass, Reflection pass, Composite different passes, Creative control of passes using image blending (Add, Multiply, Screen etc.) and colour correction techniques. Multiplane compositing - 3D camera in composting program. 3D camera Movement through 2D image layers. Controlling speed of different layers to show depth. Depth Composting - Z channel, RGBAZ image, Composite crowded scenes using Z channel

MODULE IV

3D in live action - Principles of camera tracking, Film the live action for camera tracking, Camera track and solve the shot, import point cloud (track points) and camera data to 3D softwares, Use point cloud as a reference point for placing 3D objects, 2D motion tracking. Set Extensions - Film live action set, create photorealistic 3D set in 3D software, Composite live action set & 3D set adjusting lighting, shadows, Alignment and other interactive elements

MODULE V

3D composting systems - Uses of 3D compositing, 3D compositing scene, Simple geometric shapes, Texture maps, 3D camera, Lights shaders. Import 3D objects from 3D softwares, Composite 2D elements and 3D elements in 3D composite

REFERENCE

1. Compositing Visual Effects: Steve Wright
2. Digital Compositing for Film and Video: Focal Press: Steve Wright
3. Match moving: The Invisible Art of Camera Tracking: Tim Dobbert
4. Maya Visual Effects: The Innovator’s Guide: Eric Kellur

COURSE 5-2

NON LINEAR EDITING AND COLOUR GRADING (Project)

OBJECTIVE

The objective of this paper is to provide the basic principles involved in editing visuals and develop a basic skill with the tools and techniques available in standard Non linear video editing and colour grading.

MODULE I

Colour tv and video recording - Origin of television systems NTSC, PAL, SECAM - History of formats of video - B&C, VHS, SVHS, U-matic, Beta etc. Modern developments - DV.HD Tapeless media HD & LR

MODULE II

Shooting script and editing script - Cut and shot transition - Match cut - Jump cut - Scene transitions, Editing rushes - Online - Linear A B roll - Logging - Advantages and disadvantages - Editing software - Non linear softwares. Audible sound - Clapboard synchronization

MODULE III

Continuous shots - Concept of time and space - Introduction to video editing, Jump cut & editing principles - Time & space concepts.

MODULE IV

Overview of what is meant by "Color Timing" - History of color manipulation from early hand color techniques, three strip, Hazeltine, early telecine color timing - Where we are today: Digital intermediate (DI), Color, Da Vinci etc. - 4:4:4/4:2:2 etc. 10bit vs. 8bit, resolution etc. - DI - Film Vs Video latitude - First hands-on session with color. Controlling specified areas of the image through use of secondaries, Shapes vs keys, Tonal ranges, Tracking

MODULE V

Compositing using nodes, Filters and plugins, Noise reduction and addition, Colour manipulation tools, Filters, Colour manipulation using blending mode, Layer blending, Advanced colour correction, Creating mood for the scene, Tinting footages, Exposure adjustments, Brightness and contrast

REFERENCE

1. Video Production Handbook: (Focal Press)
2. HD Cinematography: (Focal Press)
3. Non linear Editing: Bryce Button (Focal Press)
4. Grammar of edit (Second edition): Roy Thompson (Focal Press)
5. Make the cut: Lori Jane Coleman A.C.E & Diana Friedberg
6. Grammar of Shot: Roy Thompson (Focal Press)

COURSE 5-3

MINIATURES FOR LOW BUDGET FILMING (Project)

OBJECTIVE

This subject is intended to introduce the student to the use of models and miniatures in filmmaking. In a world where CGI seems to always be the first choice, models and miniatures offer realism and immediate feedback in-camera to let you know if you got the shot at a lower budget. This subject will also introduce the student to the rich history of miniatures and its practical application in special effects for film at every level.

MODULE I

Discuss the use of miniatures in special effects. Application of miniature in film and stop motion animation. History of miniatures in filmmaking. Discuss the utilisation of miniatures in film starting from "Le Voyage dans la Lune", "Close Encounters of the Third Kind", "Titanic", "Inception", "Interstellar" and "The Wolf of Wall Street". Discuss the advantages of using miniatures over CGI

MODULE II

Building a miniature set - Castle, House, Furniture, Trees etc. Making model miniatures using foam, wood, plastic, metal, glue etc. Painting the details on the models. Special effects using scaled models/replica of military tanks, helicopter, UFO, the Taj Mahal and the use of remote controlled vehicles for film. What are Bigatures and what are its advantage? Discuss the possibilities of using 3D printers in creating miniature models using 3D applications

MODULE III

What is forced perspective/foreground hanging miniatures? How to create low cost visual effects using forced perspective at the foreground?

MODULE IV

Tips for filming miniature models - Depth of field, Tilt-shift photography technique, Chroma shot. Camera speed - Problems with scaled models (Gravity doesn't scale proportionately with size), Solution: Shoot it at high speed (overcranking) and play the footage back in slow motion e.g. a miniature explosion. Setting up the miniature lights, Atmospheric effects for miniature sets like fog, smoke, wind, lightning etc.

MODULE V

Final composite using a compositing softwares - Keying, Garbage matte, Colour correction, Colour grading, Masks, Tracking, Effects and Presets. Adding sound effects for more realism

REFERENCE

1. Industrial Light & Magic: Into the Digital Realm: Mark Cotta Vaz
2. Industrial Light & Magic: The Art of Innovation Hardcover: Pamela Glintenkam
3. Special Effects: The History and Technique Hardcover: Richard Rickitt
4. Plastic Reality: Special Effects, Technology, and the Emergence of 1970s Blockbuster Aesthetics: Julie A. Turnock
5. Techniques of Special Effects of Cinematography: Raymond Fielding

COURSE 5-4

DYNAMIC SIMULATIONS (Project)

OBJECTIVE

This course is meant to teach the basics of dynamic simulation using 3D softwares. It is meant to introduce the student to a different type of animation using mathematical calculations to get a desired effect through simulation.

MODULE I

Techniques of Dynamic Simulation - Study of Particles - Emitters, Animating particles, Render the particles, Goals, Non particle, Particle, Multiple goals, Particle collisions, Render particles Movements with Forces.

MODULE II

Soft and Rigid Bodies - Soft bodies, Rigid bodies, Rigid body constraints, Edit rigid body constraints, springs, soft and rigid body limitations, Paint soft body tool, Edit rigid body attributes, Combine rigid body dynamics and keys. Dynamics effects. Creating crowd animations

MODULE III

Cloth Simulation - Hair and Fur - Fluid Dynamics.

MODULE IV

Dynamic destructions. Effects of Fire, Water, Earth and Air.

MODULE V

Combining digital plates with live action footage, Colour grading and making final outputs.

REFERENCE

1. Digital compositing for Film and Video: Steve Wright
2. Special Effects: An Oral History: Pascal Pinteau
3. Special Effects: The History and Technique: Richard Rickitt
4. Maya Visual Effects: The Innovator’s Guide: Eric Kellur

COURSE 5-5. GENERIC ELECTIVE

I. AUDIO EDITING (Practical)

OBJECTIVE

The students should have a basic knowledge in audio aspects and basic audio editing techniques.

MODULE I

Physiology of Sound - Audible Sound Spectrum - Creative use of Sound - Aesthetic Applications - Recognizing Realistic sound for artistic fulfillment - Discussion on Sound Tracks in different films.

MODULE II

Different Methods of Recording Sound - Recording Sound in Controlled Situation - Playback - Pre-recording - Dubbing - Post Synchronization - Voice Recording - Music Recording - Acoustics for Audio Studios - Micro phones for Location Recording - Microphone for Studio Recordings

MODULE III

Sound Design for Animation - Historical Voice Talent in Animation - Casting Voice Talent - Working with Voice Actors - Recording Dialog - Synchronization - The Role of Music in Animation - Functions of SFX in Animation - Discussion on Sound Tracks in different animation films.

MODULE IV

Basic audio editing techniques and concepts - conversion of files from one format to another, mono - stereo conversions - Audio special effects - audio plug-ins.

MODULE V

Introduction to Digital Audio Workstation - Midi and digital sound - Basic mixing techniques - Introduction to mastering - Delivery formats.

REFERENCE

1. Practical recording Techniques: Bartlett, Bruce and Jenny Bartlett
2. Audio and Video Systems: R. G. Gupta
3. Sound: Efron
4. Acoustics: Mackenzie
5. From Microphone to Ear: G. Slot
6. Designing for Animation: Robin Beauchamp

COURSE 5-5. GENERIC ELECTIVE

II. ARCHITECTURAL VISUALIZATION (Practical)

OBJECTIVE

This course covers the popular 3ds Max program for architecture modelling and visualization.

MODULE I

3ds max Interface, Modelling concepts - Spline based modelling, Mesh modelling, Parametric modelling. Creating a Company logo - Spline sub objects, Splines to 3D, cross section modifier, surface modifier, Extrude, Bevel, lathe, loft, Weld vertices. Introduction to modifiers. Polygons - Editable poly sub objects, Edit poly modifier, Slice plane, Cut tool, Parametric deformers, Free form, AEC extended - Stairs, Windows, Doors, Foliage etc.

MODULE II

Furniture modeling using polygons - sofa, chair, tables, bed, shelf, curtain, towels, mirror etc.

MODULE III

Introduction to texturing, Standard materials and shades, creating uniform textures, UV map, Unwrap UV, Different maps, Editing UV coordinates. Arch & Design materials, mental ray Pro Materials. Applying texture on furniture, floor, glass and metal materials. Multi Sub Object Materials for furniture, doors, windows etc.

MODULE IV

Introduction to digital lighting, Light theory, Creating 3-point lighting system, Exposure Controls, Basic lights and photometric lights, light effects, Sunlight and Daylight system. Advanced lighting - Selecting advanced lighting, enabling light tracing, lighting for radiosity, local and global lighting settings, advanced lighting materials, rendering with mental ray, mental ray lights and shadows understanding caustics and photons, controlling indirect illumination. Camera - Controlling Camera, Aiming Camera, Lens settings, field of view, environment range, clipping planes, Depth of field, Motion blur.

MODULE V

Animation - Keyframe animation, Animation along trajectories, Modify animation using function curves, Parameter Curve Out-of-Range. How to import architectural plan (.DWG format) and model the structure, Create a camera walk through of the finished architecture model. Rendering tools, Completing a project from modeling through rendering.

REFERENCE

1. Realistic Architectural Visualization with 3ds Max & Mental Ray: Jamie Cardoso & Roger Cusson
2. Essential CG Lighting Techniques with 3ds Max: Darren Brooker

COURSE 5-5. GENERIC ELECTIVE

III. INTRODUCTION TO VECTOR GRAPHICS (Practical)

OBJECTIVE

This course covers the most popular illustration programs used by graphic designers. The potential applications for these programs are explored, from fine-tuned illustrations to successful typographic studies and to get through knowledge in various vector tools and its application

MODULE I

Introduction: What is Vector? Technical Differences of Vector & Raster Imaging, Adobe Illustrator/Inkscape, Document Profile, Artboards, File Size, Page Orientation, Units, Bleed, Colour Mode, Raster Effects Resolution.

MODULE II

Tools: Stroke & Fills, Basic Shape Tools, Pen Tool, Transformation, Rotation, Perspective, Grid, Guides. Type Tool: Character and Paragraphs, Type controls, Path and Area typing, Paragraph Styles. Glyphs.

MODULE III

Panels: Work Space, Tools and control, Align and pathfinder, Appearance, Artboards, Brushes, Color, Color guide, Gradient, Layers, Links, Stoke options, Symbols transparency.

MODULE IV

Advanced Options & Settings: Preference settings, Color settings, Assign profiles expand, Envelop distort, Colour guide, Perspective grid smart guide, Live paint, Image trace, Wrap, Clipping mask, Path. **Preview:** Outline, Over print, Pixel preview, Proof setup. **Export:** AI, EPS, PDF, SVG, SVGZ and other raster formats.

MODULE V

Design Exercises: (All design exercises should be conducted from manual scribbles to digital approach)

- Logo or corporate identity design
- Designs based on typography
- Symbols or Icons Designs

REFERENCE

1. Adobe Illustrator Classroom in a Book: Adobe Creative Team
2. The Book of Inkscape - The Definitive Guide to the Free Graphics Editor: Dmitry Kirsanov

COURSE 6-1

INTERNSHIP

OBJECTIVE

To acquire practical industry based experience. Internship is on the job training to assimilate the professionalism in a career. Internships offer students a period of practical experience in the industry relating to their field of study. The students will have to undergo an Internship at an animation studio or a post-production visual effect studio as per the field of specialisation of the candidate for a month either at the end of the fifth semester or the beginning of the sixth semester.

The students would prepare individual reports after the Internship and the same should be attested by the organization under which the student did the internship. The students' comprehensive report will be submitted to the HOD for evaluation. A faculty member will monitor the students during the internship. The internships would have a credit of 1 with 100 marks and the marks would be submitted to the university at the end of the six semester.

COURSE 6-2

ANIMATION PROJECT (Project)

OBJECTIVE

Students should create an animation not less than three minutes excluding titles using any of the following methods for their animation project,

- Full 2D Animation
- Full 3D Animation
- Full Stop-motion Animation
- 2D Animation + 3D Animation
- 3D Animation + Stop-motion Animation
- 2D Animation + Stop-motion Animation
- 2D Animation + Visual Effects
- 3D Animation + Visual Effects
- Stop-motion Animation + Visual Effects
- 2D Animation + 3D Animation + Visual Effects
- 3D Animation + Stop-motion Animation + Visual Effects
- 2D Animation + Stop-motion Animation + Visual Effects
- Live Action + Animation

Project should be worked out through various production stages after the final approval by the supervising faculty. Students have to complete the final project within the given time period. Student should keep all the important paper works (script, storyboard and character designs) along with them. Viva Voce is part of the examination.

COURSE 6-3

VISUAL EFFECTS PROJECT (Project)

OBJECTIVE

Students develop an innovative body of work making use of the skills and knowledge acquired during the previous courses (Visual Effects, Graphic Design, Videography and Video editing etc). This guided project culminates into a final presentation accompanied by a process book*.

Working closely with the faculty, students define specific production goals to explore or complete an animation project of their choosing. Emphasis is on the conceptual, aesthetic and technical processes. Students are encouraged to share their specific areas of expertise while producing the final projects.

The **process book is an excellent chronicle of the work flow and completed work during the course of the semester. It is a vehicle to gather scraps of notes, ideas, mock-ups, working files and final outcome of assignments and projects.*

COURSE 6-4. CORE ELECTIVE

I. DIGITAL ANIMATION-2D (Project)

OBJECTIVE

This course is intended to develop a strong knowledge of 2D animation process through various digital applications. Students will explore various production skills needed for work in digital 2D animation production.

MODULE I

Seven basic animation concepts, 2D animation workflow, Pre production, Traditional, paperless and cut out work flow. Flash animation: setting up a good FLA, Frame by frame animation, and Animating with tweens.

MODULE II

Creating special effects in 2D, After effects and Flash, Camera mechanics.

MODULE III

Digital animation in Toon Boom: setting up a scene, drawing creation, line art and color art, drawing tools, palettes, multiplane environment, pegs, drawing key frames.

MODULE IV

Creating templates, Importing sound, Editing sound, Lip sync, Ink and paint, Compositing, Rendering the movie.

MODULE V

Project Work

REFERENCE

1. Flash Cartoon Animation: Learn from the Pros: Glenn Kirpatrick and Kevin Peety
2. The Art of Flash Animation: Creative Cartooning: Mark Stephen Smith
3. Flash + After effects: Add Broadcast feature to Good Flash Designs: Chris Jackson
4. The Animator's Guide to 2D Computer Animation: Hedley Griffin
5. How to Make Animated Films: Tony White
6. Digital Pre-Introduction Basic: Toon Boom Animation Inc.
7. Digital Pro-Cut out and Paperless Animation: Toon Boom Animation Inc.

COURSE 6-4. CORE ELECTIVE

II. METHODS OF SHOOTING FOR GREEN SCREEN (Project)

OBJECTIVE

The students should gain detailed knowledge with regard to shooting within a studio for green screen.

MODULE I

Basics of visual storytelling - Camera angles and movements, Use of Light meter, Filters and Flashes - Basic lighting techniques - Colour temperature

MODULE II

Components of a Studio - Studio Floor - Shooting with a Single Camera - Prepare a Floor Chart with Flow of Action, Movement, Camera Set Ups etc. - Multi Camera setup and studio Lighting.

MODULE III

Modern day Travelling Mattes and how they works: Luma-Key matte, Chroma-key matte, Difference mattes, Blue Screen matte, Green Screen mattes, etc. Green Vs. Blue screen, shadow matting, Poorly lit green screens and its problems, Pulling the Mattes, different type Keyers,

MODULE IV

Basic Setups for Shooting Green Screen: Lights- Key, Fill, Back, Side Spill suppressor light - Matte keying fabrics and materials, Flood lights an Umbrella lights, Lighting the backing, Lighting the talent, creating tracking markers for motion tracking, White balancing the camera before shooting, Shooting with HD camera. Matching with background objects, Interacting with the background and objects,

MODULE V

Project: Students should do two projects by shooting green screen and composite it with a background.

REFERENCE

1. Advanced Photography: M.T. Lang Ford
2. Basic Motion Picture Technology: Happe
3. Professional Lighting Handbook: Carlson
4. The Green Screen Handbook: Jeff Foster
5. The Visual Effects Arsenal: Bill Byrne
6. Green Screen Made Easy: Jeremy Hanke, Michele Yamazaki

COURSE 6-4. CORE ELECTIVE

III. MATCH MOVING TECHNIQUES (Project)

OBJECTIVE

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

MODULE I

History of tracking, Basics of Match moving, Camera tracking softwares, working method of film Cameras

MODULE II

2D tracking process, Track placements, Plate issues.

MODULE III

Good calibration process, Calibrating cameras, Evaluating the solution for a camera tracking, Calibrations and Camera moves, Setting up a coordinate system supervised tracking.

MODULE IV

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

MODULE V

Project Work

REFERENCE

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

COURSE 6-5

3D LIGHTING AND RENDERING (Practical)

OBJECTIVE

This course trains students in advanced 3D Lighting and Rendering

MODULE I

Maya and Mental ray materials & its application. Dgs_material, Diffuse, Glossy, and Specular attributes, Dielectric shaders/materials

MODULE II

Scientific light theories - Artistic theories - Digital Lighting theory - Working with Maya lights - Light types and attributes

MODULE III

3-point lighting concepts, Computer-generated imagery - Effective use of key light, fill light, backlight. Lighting an interior scene - Daylight - Artificial lighting - Working with shadows - Depth map shadows - Raytraced shadows. Three-point lighting - Lighting a character - Mood lighting**,** Lighting surfaces - Faking Radiosity - Expression based lighting

MODULE IV

Software Rendering - Setting Render Globals - Creating physical fogs - Paint effects**.** Render passes - Batch rendering - Interactive photorealistic rendering. Hardware Rendering - Using the timeline - Rendering a sequence

MODULE V

Render Wrangling - Preparing render sequences - Render diagnostics - Optimizing scene size - baking simulations, Batch rendering - Command line rendering - Render management solutions - LOD - Optimizing lights, Shadows, Ray tracing

REFERENCE

1. Advanced Maya Texturing and Lighting with CDROM: Lee Lanier, Wiley Publishing
2. Texturing and Modeling: A Procedural Approach: David S. Ebert
3. Digital Lighting & Rendering (Third Edition): Jeremy Birn

COURSE 6-6

DEMO REEL PRESENTATION (Project)

OBJECTIVES

Demo reel presentation is intended to assist the student to prepare for a job interview. Students will have to present their demo reel which is a culmination of their original works or of their area of expertise. The faculty will share tips and strategies to create an engaging demo reel and to face a job interview successfully. The demo reel should be in video format or a website or in print format depending on the student's creativity. The student is free to use his/her individual creative style to present the final demo reel.

MODULE I

Preparing for an interview - Research the organization, Compare your skills and qualifications to the job requirements, Prepare responses, Plan what to wear, Plan what to bring, Pay attention to nonverbal communication, Follow up. How to write a successful Media CV?

MODULE II

What is a demo reel? Tips to create a successful demo reel - Keep it short, Make it specific, Choose a style - Collage or samples, Put your best work first, Your work only, Slate it - Include contact details at the start or the end of the demo reel, Showcase your involvement, Highlight impressive clients, Emphasise technical ability - Before and after shots of their work, Be mindful of aspect ratios, Say "No" to copyrighted music, Cut to the beat, Don't repeat footage, Quality control, Online all the time, DVDs for delivery, Label with contact info, Active and accessible, Show your personality, Ask a critic

MODULE III

Discuss the importance of self-promotion. Getting visibility - Youtube, Vimeo, Facebook, Blogs, Web page, Business cards, Job portals etc.

REFERENCE

1. Interview: How to Master Interviews and Stand Out Among Your Peers: Stefan Anderson
2. Success in Interview: Anand Ganguly

WEBSITE REFERENCE

1. http://www.premiumbeat.com/blog/top-20-tips-for-creating-a-successful-demo-reel/
2. https://careerservices.princeton.edu/undergraduate-students/interviews-offers/preparing-interviews
3. http://www.kent.ac.uk/careers/cv/mediacv.htm
4. http://www.bbc.co.uk/academy/production/article/art20130702112136472