



UNIVERSITY OF MUMBAI'S



GARWARE INSTITUTE OF CAREER EDUCATION & DEVELOPMENT

Syllabus for the Bachelor in Visual Effects

Credit Based Semester and Grading System with effect from
the Academic Year

(2017-2018)

AC 11-05-2017

Item No.

UNIVERSITY OF MUMBAI'S



Syllabus for Approval

Sr. No.	Heading	Particulars
1	Title of the Course	Bachelor in Visual Effects
2	Eligibility for Admission	10+2 pass – with minimum 45% marks Admissions on the basis of Written Test & Interview.
3	Passing Marks	50% passing marks
4	Ordinances / Regulations (if any)	
5	No. of Years / Semesters	Three years full time/ 6 semester
6	Level	Bachelor
7	Pattern	Yearly / semester
8	Status	New
9	To be implemented from Academic Year	From academic year 2017-18

Date: 11/05/2017

Signature : Dr. Anil Karnik, I/C.

Director, Garware Institute of Career Education & Development

UNIVERSITY OF MUMBAI'S
GARWARE INSTITUTE OF CAREER EDUCATION & DEVELOPMENT

Ordinances, Regulations and Syllabus Relating to
BACHELOR'S IN VISUAL EFFECTS
(THREE YEAR FULL-TIME COURSE)
(Academic year 2017-2018)

Introduction

The field of cinema is rapidly changing. With the advent of 2D and 3D stereoscopic, the way of looking and experiencing films is altering. VFX has grown tremendously in the past decade because of the onslaught of new and changing technology. Visual effect is used in games, movies and television shows. With the advanced technology and equipment's Hollywood and Bollywood uses VFX to create overwhelming effects and realistic environments. The Indian VFX and animation industry is expected to grow up to Rs. 7340 crores rupees by the year 2017. India is one of the most preferred out source destination for the Hollywood production companies. The Indian's studios has made a significant contribution for the blockbuster VFX films like Jungle book, Avatar, Life of Pie, Doctor Strange, and many more. VFX helps to recreates interesting phenomena in the world of movies like natural disasters, bomb blasts, flying objects, super heroes, volcanoes etc. The VFX is usually done at the last stage that is the postproduction in editing but it is planned at the preproduction and production stage under the guidance of the director and VFX supervisor after the story is finalized.

Program Overview

The course duration is of 3 years aiming to help students learn not only the theory but also the Artistic & professional skills that will help the students later in life. VFX can be embedded in live action depicted through techniques such as matte painting, rear and front screen projection, Digital sets, miniature of forced perspective sets, computer graphic objects, characters, environments, and compositing. Our courses are designed in such a manner that we cover each of these techniques with real practical examples.

The course also includes fundamentals of film making, chromo shoot, 3D modeling and creating photorealistic lighting,dynamics effects; particles like fire, cloth, explosions and smoke realistic

The students will learn how to develop VFX in tandem with characters and story. The students have to understand, story telling, cinematography, and seamless integration of CGI plus Live action.

In addition to the best of the faculty in the industry, they get opportunity to attend workshops and seminar conducted by the industry veterans. There will be tie ups with domestic and international studios so students will get opportunity work on domestic and international projects as soon as they complete the course. They can also participate in film festivals and competitions world over.

Objective of the course

Making seamless and photorealistic renders is the prime objective of this course. The aim of this 3 year course is also to equip the students with skills that will help them find employment in the global market. However, adding VFX can be a humongous task and involves a lot of people for rendering a perfect shot. Therefore artists should be able to have full control over their images. VFX is not only used for science fiction or fantasy film but is also used in period drama. Upon completing the graduation, the passed out students can work in:

- TV channels/ Production houses
- VFX studios
- Gaming Industry
- Media and Advertising
- Also as an independent freelancer.

Career options

Upon graduation from this academy there are a number of options are open for students. Some of them are listed below:

- Storyboard artist / VFX artist / Motion graphic artists. / Color key artist / Asset Development / Architectural Modeling / Roto Artist / Paint Artist / Junior compositor / Compositing artist / Match move artist / Matchmation Artist / Short film maker / Editor

EXAMINATION PATTERN

Paper	Subject	Paper type	Marks Assigned	Theory Hours/ Eqvt.	Practical hour	Credits
	Semester 1					
1	Communication - 01	I+E	100	45	60	5
2	Pre-visualization - Art & Design	I+E	100	30	120	6
3	Design Thinking & Pre Production	I+E	100	30	120	6
4	Visual & Verbal Story telling	I+E	100	30	90	5
5	Fundamentals of Film Making	I+E	100	45	120	7
	Total		500	180	510	29
	Semester 2					
6	Communication - 02	I+E	100	30	90	5
7	Character Development & Behavioral Science.	I+E	100	30	90	5
8	Introduction to Photography	I+E	100	30	90	5
9	Motion graphics	I+E	100	30	90	5
10	Project Submission	I	100	0	210	7
	Total		500	120	570	27
	Semester 3					
11	Visual Development (VFX Pre production)	I+E	100	30	90	5
12	Digital Art - Part 01	I+E	100	30	90	5
13	Digital Art - Part 02	I+E	100	30	90	5
14	Motion Graphics	I+E	100	30	90	5
15	Planning & Chroma Shoot	I+E	100	30	90	5
	Total		500	150	450	25

	Semester 4					
16	Fundamentals of 3D	I+E	100	30	90	5
17	3D Asset Development	I+E	100	60	120	8
18	3D VFX – Part 01 (Dynamics & Particles)	I+E	100	30	90	5
19	Set Extension	I+E	100	30	90	5
20	Cinematography Introduction	I+E	100	15	90	4
	Total		500	165	480	27
	Semester 5					
21	Camera Tracking	I+E	100	30	90	5
22	Match Move & Match Motion	I+E	100	30	90	5
23	3D VFX (Fluid effects) Part-2	I+E	100	30	120	6
24	Advanced Lighting & Rendering	I+E	100	30	90	5
25	Compositing Concepts	I+E	100	30	90	5
	Total		500	150	480	26
	Semester 6					
26	Compositing - 01	I+E	100	30	90	5
27	Advanced Compositing	I+E	100	30	90	5
28	Roto /Paint & Comp	I+E	100	15	120	5
29	DI Digital Intermediate (Colour Correction)	I+E	100	30	90	5
30	Graduation Film	I	200	15	210	8
	Total		600	120	600	28
			3100	885	3090	162

Prof. Anil V. Karnik
I/c Director

Prof. Sanjay Deshmukh
Hon'ble Vice Chancellor

GICED

University of Mumbai

Distribution of Topics Semester wise

YEAR 01

FIRSTSEMESTER	SECONDSEMESTER
Communication - 01	Communication - 02
Pre-Visualization Art & Design	Character development& Behavioral science
Design Thinking& Pre Production	Introduction to Photography
Visual & Verbal Story telling	Motion graphics
Fundamentals of Film Making	Project submission Year-01

YEAR 02

THIRDSEMESTER	FOURTHSEMESTER
Visual Development (VFX Pre production)	Fundamentals of 3D
Digital Art - Part 01	3D Asset Development Part 01
Digital Art - Part 02	3D VFX – Part 01 (Dynamics & Particles)
Motion Graphics	Set Extension
Planning & Chroma Shoot	Cinematography Introduction

YEAR 03

FIFTHSEMESTER	SIXTHSEMESTER
Camera Tracking	Compositing - 01
Match Move & Match Mation	Advanced Compositing (nuke)
3D VFX (Fluid effects)	Roto /Paint & Comp
Advanced Lighting & Rendering	DI Digital Intermediate (CC)
Compositing Concepts	Graduation Film

Year 01

(is common for ANIMATION & VISUAL EFFECTS COURSES)

INTRODUCTION

If you are embarking on a creative path in your career, it is vitally important that you understand how to communicate using a visual language—that is, without the use of words. The process of first developing ideas and then realizing them as a finished piece of work is possibly the most challenging aspect of your work as a designer. The fear of failure at this point in the project can be so great that it can prevent you from succeeding. But never fear—many tried-and tested-techniques are available that can streamline this process and release your mind from the shackles of creative blocks. Drawing is the best way to develop a strong, confident visual language. All good designers draw in some way or another. Not all of them are professional drafts people. They may not use drawings as a technique in their finished work, but you can be sure that they all use drawing somewhere within their creative process. In other words, you don't need to be really good at drawing, but you do need to be prepared to give it a go and explore it as a means of developing what's referred to as an "artist's eye." With an artist's eye you will learn to see and represent the world visually, without the use of words. It's a place where shapes, colours, textures, and light become your words. The fundamentals of photography and the story telling will help you express your visualization through camera and will be able to bind audience through your storytelling.

Objectives of Semester 01

If you want to choose any of the 5 courses, then you need to be creative and passionate. This Semester will make you think creatively and the various activities and workshops designed to improve your creative thinking. It helps to think from the right side of the brain. Also, the art classes will give confidence about your drawing skills. You will learn and practice skills like choosing the drawing materials, creating a lighting look, exaggerating the perspective and creating contrast, depth and shading of the object. Artistic knowledge and talent is an added advantage in any of the creative field. The fundamentals of photography classes will help you to understand the visual

language, visual art, composition and lighting and to end with in this semester the most important skill story telling, though it may be concept you are explaining to an ad agency or a feature film script to producer. How do you keep them interested in the subject? It is through the Art of Story telling, we teach you this skills with various interesting methods and workshops.

RSACE1:1	COMMUNICATION - 01	TEACHING HOURS 45
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	WHAT IS COMMUNICATION? THOUGH THERE ARE NUMBER OF MEANS OF COMMUNICATION WHY LANGUAGE IS THE ONLY WIDELY USED INSTRUMENT? USING LANGUAGE AS A TOOL TO COMMUNICATION.	2
UNIT 2	WHAT IS SYSTEM OF COMMUNICATION? HOW IT IS COMMONLY OWNED, ACCEPTED AND RECOGNIZED BY THE MEMBERS OF THE COMMUNITY? WHAT IS PROCESS OF INFORMATION? HOW COMMUNICATION IS AN ESSENTIALLY A SOCIAL AFFAIR. WHAT IS ESSENTIAL FOR COMMUNICATION?	2
UNIT 3	DEVELOPING COMMUNICATION SKILLS: TANGIBLE (E.G. PHYSICAL SETTINGS)AND NON TANGIBLE (INTELLECTUAL, EMOTIONAL, PSYCHOLOGICAL) FACTORS INVOLVED IN COMMUNICATION .	2
UNIT 4	LINGUISTIC COMMUNICATION: WE ARE CONCERNED WITH LINGUISTIC COMMUNICATION: THAT IS THE TERM COMMUNICATE IS TO SHARE, IT IS NOT JUST MERE TRANSMISSION OF MEANING FROM ONE PERSON TO ANOTHER THROUGH SYMBOLS. SUMMARISED AS: THE PARTICIPANTS (SPEAKER & LISTENER) CHANNEL OR MEDIUM OF COMMUNICATION SETTING AND TOPIC OF COMMUNICATION MESSAGE FORM	2
UNIT 5	COMMUNICATION AS A NETWORK OF INTERACTION -PARTIES- MEDIA- MODE- FUNCTION. VARIOUS COMPONENTS OF COMMUNICATION , THE PROCESS OF INITIATION IN COMMUNICATION, FACTORS WHICH IMPACT COMMUNICATION, CHOICE OF CHANNEL OF COMMUNICATION (SOCIAL-PHYSICAL FACTOR)	2
UNIT 6	BARRIERS IN COMMUNICATION: THESE BARRIERS OBSTRUCT AND PREVENT THE ACHIEVEMENT OF THE DESIRED RESULTS. SOME OF THESE ARE: ABSENCE OF A FRAME OF REFERENCE; POOR RETENTION (ESPECIALLY FACE TO FACE COMMUNICATION), INATTENTION OF THE RECEIVER, SEMANTIC DIFFICULTIES, VAGUENESS OF THE OBJECTIVE TO BE ACHIEVED, MISINTERPRETATION OF THE MESSAGE, PSYCHO –	2

	PHYSICAL FACTORS, SELECTION OF WRONG VARIETY OF LANGUAGE.	
UNIT 7	IMPORTANCE OF COMMUNICATION: DEVELOPMENT OF IMPORTANT ,EFFICIENT TECHNIQUES OF COMMUNICATION, MAINTAINING THE EFFICIENT SYSTEM OF COMMUNICATION, THE DOMINANT ROLE OF ENGLISH IN THE PROFESSIONAL WORLD, RESEARCHES ON THE AREA, GATHERING AND MARSHALING OF DATA , COMMUNICATION TO MAINTAIN THE TEMPO OF GROWTH.	2
UNIT 8	NON VERBAL COMMUNICATION: ALL EXTERNAL STIMULI OTHER THAN SPOKEN OR WRITTEN WORDS AND INCLUDING BODY MOTION, CHARACTERISTICS OF APPEARANCE, CHARACTERISTICS OF VOICE AND USE OF SPACE AND DISTANCING-. FACIAL EXPRESSIONS: EYE CONTACT ,ADVANTAGES &DISADVANTAGES OF EYE CONTACT, SPACE DISTANCING ALL CLUES TOGETHER IS BODY LANGUAGE .	2
UNIT 9	LETTER WRITING: IT IS AN ESSENTIAL SKILL, DESPITE THE PREVALENCE OF EMAILS AND TEXT MESSAGES, EVERYONE HAS TO WRITE LETTERS AT SOME POINT: VARIOUS TYPES OF LETTERS(LETTERS OF COMPLAINT, JOB APPLICATIONS, THANK YOU LETTERS, LETTERS REQUESTING CHANGES OR MAKING SUGGESTIONS, OFFICIAL/BUSINESS LETTERS, GOVERNMENT LETTERS, ETC.	2
UNIT 10	IMPORTANCE OF COMMUNICATION IN ORGANISATIONS DEVELOPMENT AND MAINTAINANCE OF COMMUNICATION PATTERN(INSTRUCT, SPEAK, DIRECT, CONVEY)HOW COMMUNICATION PLAY AN SIGNIFICANT ROLE IN THE RUNNING AND GROWTH OF ORGANIZATION. STATE OF CONSTANT TOUCH WITH OTHERS-GET MORE OF HORIZONTAL AND VERTICAL MOVEMENT OF COMMUNICATION, THE COMMONALITY OF INTEREST TOWARDS THE ACHIEVEMENT OF ORGANIZATIONAL GOALS.	2
UNIT 11	FUNCTIONS OF COMMUNICATION IN A ORGANIZATION: INTERNAL (WITHIN THE ORGANIZATION): TO GENERATE AND DISSEMINATE INFORMATION, TO DIRECT AND INSTRUCT EMPLOYEES, TO MAINTAIN AND IMPROVE MORALE AND TO CULTIVATE A SENSE OF BELONGING. EXTERNAL(OUTSIDE THE ORGANIZATION): TO SELL AND OBTAIN GOODS AND SERVICES, TO LIAISE WITH OTHER ORGANISATIONS AND TO INCREASE GOODWILL.	2
UNIT 12	ORAL COMMUNICATION: FACE TO FACE CONVERSATION- PROVIDES IDEAL CONDITIONS FOR CLOSE RANGE CONTINUOUS FEEDBACK. DYADIC COMMUNICATION DEMANDS ARTISTRY, HOW ONE COULD ACHIEVE STANDARD IN DYADIC COMMUNICATION, FORMS OF DYADIC COMMUNICATION, HELPFUL HINTS,TELEPHONIC CONVERSATION, INTERVIEWS MEETINGS, PURPOSE, PROCEDURE, INSTRUCTION, DICTATION, ASSIGNMENTS.	2
UNIT 13	MEETINGS: THE GROUP MAY BE ASSIGNED A SPECIFIC TIME-BOUND TASK OR MEET AT PERIODIC INTERVALS, THE PURPOSE OF MEETING, TYPES OF PARTICIPANTS, AND COMMUNICATION PATTERN, DIFFERENT TYPES OF GROUP DISCUSSIONS: MEETINGS, SEMINARS, CONFERENCES, SYMPOSIUM, PANEL DISCUSSION AND CONVENTION ETC., PURPOSE, PROCEDURE, CHAIRMANSHIP, PARTICIPATION, PHYSICAL ARRANGEMENTS.	2

UNIT 14	SEMINARS AND CONFERENCES: WHY THERE'S A DEMAND FOR ORGANIZATIONAL SEMINARS? HOW THIS IS THE BEST WAY TO BE DONE IN GROUP, NOT BY INDIVIDUAL, TYPES OF DISCUSSION GROUPS, REGULATING SPEECH, CONDUCTING SEMINARS.	2
UNIT 15	ORGANIZING CONFERENCES EVALUATING ORAL PRESENTATIONS	2
UNIT 17	GROUP DISCUSSION : FACE TO FACE INTERACTION, DECISION MAKING THROUGH EXCHANGE OF INFORMATION, OBSERVATION IN CHARACTER OF INTERACTION, ACTIVE PARTICIPATION ANALISATION. PROBLEMS FACED IN GROUPS: LACK OF DIVERSITY OF OPINION, THE NUMBER OF PARTICIPANTS THAT WILL MAKE THE GROUP DISCUSSION USEFUL, STRATEGY OF ACTION, PARTICIPANT FAIR CHANGE TO OTHERS TO SPEAK AND EXPRESS THEIR OPINION. GROUP DYNAMICS PURPOSES ORGANIZATION	2
UNIT 18	AUDIO VISUAL AIDS : TYPES OF VISUAL AIDS AND THEIR USE, BASIC PRINCIPLES & GUIDELINES BLACK BOARDS, OVERHEAD PROJECTOR, FILMSTRIP AND SLIDE PROJECTOR, MOVIE FILM PROJECTOR, VIDEO TAPE RECORDER, AUDIO TAPE RECORDER,	2
UNIT 19	FORMAL REPORTS – DEFINITION: REPORTS ARE MAJOR FORM OF PROFESSIONAL COMMUNICATION. VARIOUS USES OF REPORTS, EXTENSIVELY USED IN ORGANIZATION-TO PROMOTE AND NURTURING THE HEALTH OF AN ORGANIZATION AND ITS GROWTH. MASTERING THE CRAFT OF WRITING , LEARNING THE SCIENTIFIC PROCESS OF INVESTIGATION,, ANALYSIS AND PRESENTATION.	2
UNIT 20	THE USE OF WRITTEN ENGLISH: WHAT IS CREATIVE WRITING, PROFESSIONAL WRITING, SUBJECT ORIENTED WRITING TECHNICAL WRITING.	2
UNIT 21	STANDARD FORMAT IN WRITING STYLE SENTENCE STRUCTURE AND LENGTH, STANDARD FORMAT IN WRITING,, FEATURES OF WRITING COMMUNICATION, PARAGRAPH STRUCTURE AND LENGTH, FINAL DRAFT	2
UNIT 22	FORMAL BUSINESS COMMUNICATION TECHNICAL PROPOSAL – DEFINITION KEY FACTORS TYPES STRUCTURE	2
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • WRITING TECHNICAL PROPOSALS: • LETTER WRITING • BLOG WRITING • WRITING FILM REVIEWS • PREPARING BUSINESS PROPOSALS • EXCERCISES ON VARIOUS FORMATS AND THUMB RULE IN COMMUNICATION. 	60 HRS

READING BOOKS:

1. DEVELOPING COMMUNICATION SKILLS
2. ART OF PUBLIC SPEAKING: DALE CARNEGIE J.BERG ESENWEIN
3. ADAIR, JOHN. EFFECTIVE COMMUNICATION LONDON: PAN MACMILLAN LTD., 2003.
4. AJMANI, J. C. GOOD ENGLISH: GETTING IT RIGHT NEW DELHI: RUPA PUBLICATIONS, 2012.
5. AMOS, JULIEANN. HANDLING TOUGH JOB INTERVIEWS MUMBAI: JAICO PUBLISHING, 2004.
6. BONET, DIANA THE BUSINESS OF LISTENING: THIRD EDITION NEW DELHI: VIVA BOOKS, 2004.
7. BOVEE, COURTLAND L, JOHN V. THILL & BARBARA E. SCHATZMAN.
8. BUSINESS COMMUNICATION TODAY: TENTH EDITION. NEW JERSEY: PRENTICE HALL, 201
9. BROWN, MICHELE & GYLES BRANDRETH. HOW TO INTERVIEW AND BE INTERVIEWED LONDON: SHELDON PRESS, 1994.

REFERENCE LINKS:

10. [HTTP://WWW.MAXIMUMADVANTAGE.COM/ADVANTAGES-OF-EFFECTIVE-COMMUNICATION.HTML](http://www.maximumadvantage.com/advantages-of-effective-communication.html)
11. [HTTP://NETWORKETIQUETTE.NET/](http://networketiquette.net/)
12. [HTTPS://PUBLIC.WSU.EDU/~BRIANS/ERRORS/](https://public.wsu.edu/~brians/errors/)
13. [HTTP://USERS3.EV1.NET/~PAMTHOMPSON/BODY LANGUAGE.HTM](http://users3.ev1.net/~pamthompson/body_language.htm)
14. [HTTP://WWW.ALBION.COM/NETIQUETTE/CORERULES.HTML](http://www.albion.com/netiquette/corerules.html)
15. [HTTP://WWW.BBC.CO.UK/WORLDSERVICE/LEARNINGENGLISH/RADIO/SPECIALS/1535_QUESTIONANSWER/PAGE15.SHTML](http://www.bbc.co.uk/worldservice/learningenglish/radio/specials/1535_questionanswer/page15.shtml)
16. [HTTP://WWW.COLOSTATE.EDU/DEPTS/SPEECH/RCCS/THEORY44.HTML](http://www.colostate.edu/depts/speech/rccs/theory44.html)
17. [HTTP://WWW.DAILYWRITINGTIPS.COM/](http://www.dailywritingtips.com/)

RSACE 1:2	PRE VISUALIZATION ART & DESIGN	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	IMPORTANCE OF ART AS A SUBJECT. HISTORY OF ART, FROM CAVE DRAWINGS TO LANGUAGE & STORY TELLING	2
UNIT 2	WHO CAN BE AN ARTIST? DYNAMICS SENSE, DEMO OF EXPRESSIONS, IMPORTANT NOTES FOR AN ARTIST,	2
UNIT 3	ART APPRICIATION – INDIA & GLOBAL	2
UNIT 4	FUNDAMENTALS OF DRAWING - EXPLORING LINES AND EFFECTS	2

UNIT 5	ANDREW LOOMIS FIGURE DRAWING, IMPORTANCE OF ANATOMY STUDY, LIVE STUDY, PORTRAIT, RAPID SKETCHING	2
UNIT 6	KEN HULTGREN – THE ART OF ANIMAL DRAWING, ANIMAL STUDY, TIME SKETCHES, MOVEMENT STUDY	2
UNIT 7	NATURE DRAWING : BIRD LIFE STUDY, OUTDOOR SKETCHING, TOON DRAWING, DOODLING,	2
UNIT 8	COLOR THEORY – PART 01 – PRIMARY COLORS, SECONDARY COLORS AND TERTIARY COLORS_ THEORY OF COLOR RELATIONSHIP/HARMONY: MONOCHROMATIC, ANALOGOUS, DIAD, TRIAD, TETRAD, COMPLEMENTARY, SPLIT COMPLEMENTARY, ACHROMATIC AND POLYCHROMATIC THEORIES OF SUCCESSIVE AND SIMULTANEOUS CONTRAST, ADDITIVE AND SUBTRACTIVE COLORS.	4
UNIT 9	COLOR THEORY – PART 01 – COMPLEMENTARY COLORS, SEASON COLORS (SPRING, SUMMER & FALL)	2
UNIT 10	COLOR THEORY – PART 02 – MOOD BOARDS, PANTONE COLORS, SPOT COLORS, ETC.	2
UNIT 11	COLOR THEORY- PART 03 –TO UNDERSTAND THE RELATIONSHIP BETWEEN VALUE, HUE, CHROMA SHOW & DISCERN, INCREMENTAL DIFFERENCES IN VALUE GRADATION AND MATCH COLOR VALUES GRADATION AND MATCH COLOR VALUES TO AN ESTABLISHED GRAY SCALE.	4
UNIT 12	COLOR THEORY_ PART 04 - PHYSICS OF COLOR: COLOR SYSTEMS , THE COLOR WHEEL: MUNSELL, GOETHE, RUNGE, ITTEN.	2
UNIT 13	COLOR THEORY-PART 05 -THEORIES OF SUCCESSIVE AND SIMULTANEOUS CONTRAST, ADDITIVE AND SUBTRACTIVE COLORS.	2
UNIT 14	FUNDAMENTAL OF DRAWING–PART 02 -PERSPECTIVE DRAWINGS, PRINCIPLES OF PERSPECTIVE, ONE-POINT, TWO-POINT AND THREE POINT PERSPECTIVE , PERSPECTIVE AS APPLIED TO OBJECTS, FURNITURE, INTERIOR AND EXTERIOR OF THE BUILDINGS ETC.	4
UNIT 15	FUNDAMENTALS OF DRAWING –PART -03 -STUDY OF OBJECTS FROM SURROUNDING, TO STUDY THE FORM, SURFACE, INTRODUCTION OF LIGHT AND SHADOW ON OBJECTS AND AN ASSESSMENT AND REPRESENTATION OF AN IMPACT OF LIGHT ON SIMPLE FORM AND OBJECTS- CHANGE IN MOOD, SURFACE QUALITY, DENSITY, DRAMA AND IMPACT	4
UNIT 17	FUNDAMENTALS OF DRAWING – PART 04 : DRAWING FROM NATURE- OUTDOOR STUDY OF PLANTS AND TREES	2
UNIT 18	COLOR COMPOSITION-PRACTICAL UNDERSTANDING OF MIXING COLORS, HANDLING PAINT AND ARTIST MATERIAL- TO CREATE COLOR COMPOSITIONS USING DIFFERENT COLOR.	4

UNIT 19	COLOR COMPOSITION - SPECIAL EFFECTS OF COLOR (GOUACHE, WATERCOLOUR, PASTELS)	2
UNIT 20	COLOR EXPRESSION - COLOR AND NATURE, COLOR PSYCHOLOGY, SYMBOLISM, EXPRESSION-COLOR BASICS- (PHYSICS OF LIGHT, ADDITIVE COLOR RELASHIPS, PIGMENTS .	2
UNIT 21	VISUAL THINKING : VISUAL QUAIRIES, WHAT WE CAN EASILY SEE, STRUCTURING 2 DIMNETIONAL SPACE, USAGE OF COLOR, GETTING THE INFORMATION VISUAL SPACE AND TIME, VISUAL OBJECTS, WORDS AND MEANINGS, VISUAL AND VERBAL NARRATIVES, CREATIVE METASEEING.	4
UNIT 22	FUNDEMENTALS OF DESIGN – INTRODUCTION TO VISUAL ELEMENTS OF DESIGN, THEIR CHARATERISTIC BEHAVIOUS AND VISUAL ATTITUDES, TO DISCUSS THE EXAMPLES OF ASTHETIC REPRESENTATION OF VISUAL ELEMENTS. TO DISCUSS THE PROBLEM OF ORGANISATION OF AN OBJECTS AND GROUP OF OBJECTS OF ART AND DESIGN. INTODUCTION TO CONCEPT OF FORM FUNCTION AND BUEATY.	4
UNIT 23	FUNDEMENTALS OF DESIGN – PART 02 – THEORITICAL INTRODUCTION TO GESTALTS LAW OF PERCEPTION, PHENOMENOLGY AND FUNDEMENTALS OF DESIGN, TO DISCUSS THE PROBLEM FOR SIMPLIFICATION OF FORMS AND GUIDING PRINCIPLES AND LAYOUT DIVISION OF SPACE AND GRIDS.	4
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • DIFFERENT LINE PRACTICE • HATCHING EXERCISE • DOODLING • PERSPECTIVE DRAWING • OUTDOOR STUDY • LIFE STUDY • LIVE SKETCHES (POTRAIT & FULL FIGURE) • STORY BOARD • COLOR THEORY WORKSHOP • MOVEMENT STUDY 	120 HRS

REFERENCE BOOK :

- ART & FEAR : AUTHOR DAVID BAYLES
- DRAWING ON THE RIGH SIDE OF THE BRAIN :
- THE ILLUSION OF LIFE : BY FRANK THOMAS, OLLIE JOHNSTON.

REFERENCE LINKS :

- <HTTP://WWW.BARTELART.COM/ARTED/WHYDRAW.HTML>DRAWING ON THE RIGH SIDE OF THE BRAIN

- [HTTPS://EDUCATIONINJAPAN.WORDPRESS.COM/EDUCATION-SYSTEM-IN-JAPAN-GENERAL/THOUGHTS-ON-ART-EDUCATION-THE-IMPORTANCE-OF-LEARNING-TO-DRAW/](https://educationinjapan.wordpress.com/education-system-in-japan-general/thoughts-on-art-education-the-importance-of-learning-to-draw/)

RSACE 1:3	DESIGN THINKING & PRE PRODUCITON	TEACHING HOURS
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	THE DESIGN PROCESS IT IS DIFFICULT FOR INEXPERIENCED DIGITAL MEDIA DESIGNERS TO START A PROJECT AND DIVE STRAIGHT INTO THE SOFTWARE WITHOUT DEVELOPING A REALLY CLEAR IDEA OF WHAT IT IS THEY ARE INTENDING TO CREATE. UNDERSTANDING OF DESIGN PROCESS.	2
UNIT 2	STAGE ONE – DEFINE THE DESIGN STRUCTURE SHOULD BE ARRIVED AT AFTER A HEALTHY AND DEBATING DISCUSSION BETWEEN, DESIGNERS, MARKETERS, BUSINESS HEADS, AND COPYWRITERS. THE OUTPUT SHALL CLEARLY DRAW A GUIDELINE AS TO WHAT THE CONCEPT, DESIGN, COLOR, IMAGERY, AND CONTENT COMBINATION SHALL BE.	2
UNIT 3	STAGE TWO – IDEATE BRAINSTORM A RANGE OF CRAZY, CREATIVE IDEAS THAT ADDRESS THE UNMET USER NEEDS IDENTIFIED IN THE DEFINE PHASE. GIVE YOURSELF AND YOUR TEAM TOTAL FREEDOM; NO IDEA IS TOO FAR-FETCHED AND QUANTITY SUPERSEDES QUALITY.	2
UNIT 4	STAGE THREE – RESEARCH, DO NOT JUST SETTLE WITH THE GENERIC INFORMATION OR BRIEF GIVEN BY THE CLIENT. DRILL DOWN FURTHER TO UNDERSTAND THE PRODUCT/SERVICE AND TRY TO ACHIEVE CLEAR AND CONCLUSIVE INFORMATION ABOUT THE DESIGN OBJECTIVE, CUSTOMER PREFERENCES, COMPETITORS' DESIGN OUTLOOK, PRIMARY FEATURES, KEY VALUE PROPOSITION, AND SO ON.	2
UNIT 5	TESTING THIS PHASE IS ALSO CALLED AS ' EXECUTE '. THIS IS THE PHASE WHERE THE FINAL SOLUTION IS TESTED ON A FULL SCALE BASIS. THE IDEA THAT SEEMS THE BEST ACCORDING TO THE FEEDBACK OF THE CUSTOMERS	2

	AND END USERS IN THE PROTOTYPE PHASE WILL BE EXECUTED. IN THIS STEP, THE DESIGN THINKERS ARE SUPPOSED TO BE COLLABORATIVE AND AGILE .	
UNIT 6	RESEARCH – PART 02 ONCE THE BRIEF HAS BEEN DEFINED AND AGREED, A DESIGNER STARTS TO SEARCH FOR INFORMATION THAT CAN BE FED INTO THE CREATIVE PROCESS AT THE IDEATION STAGE. THIS RESEARCH CAN BE EITHER QUANTITATIVE WITH HARD STATISTICAL FACTS ABOUT THE SIZE AND COMPOSITION OF TARGET USER GROUPS, OR QUALITATIVE WITH INFORMATION ABOUT WHAT THAT USER GROUP BUYS OR CONSUMES AND WHAT THEIR LIFESTYLE IS LIKE PRIMARY RESEARCH: A PRIMARY SOURCE OF RESEARCH IS THE FEEDBACK GENERATED DURING THE LEARNING PHASE OF PROJECTS PREVIOUSLY UNDERTAKEN WITH THE SAME OR SIMILAR CLIENT. SECONDARY RESEARCH: IT IS THE INFORMATION OBTAINED FROM GENERAL SECONDARY SOURCES SUCH AS CONSUMER MARKET RESEARCH REPORTS.	2
UNIT 7	IDEA GENERATION BASIC DESIGN DIRECTIONS, QUESTIONS AND ANSWERS THEMES OF THINKING, INSPIRATIONS AND REFERENCES, PICTURE COLLECTION BRAINSTORMING: VALUE, INCLUSION, SKETCHING, DOODLING	2
UNIT 8	REFINEMENT 01 - THINKING IN IMAGES FIRSTLY, IT IS IMPORTANT TO ACKNOWLEDGE THAT DESIGN THINKING IS NOT ABOUT GRAPHIC DESIGN ONLY HOWEVER, DESIGNERS ARE OFTEN USED TO COMMUNICATING THEIR THINKING VISUALLY AND DRAWINGS, SKETCHES, PROTOTYPES, ETC. ARE OFTEN USED TO CONVEY THE IDEAS CREATED WITHIN A DESIGN THINKING PROCESS. IN FACT, IDEAS WHICH ARE HARD TO EXPRESS EASILY IN WORDS ARE OFTEN GIVEN SHAPE IN THE FORM OF VISUAL METAPHORS. DESIGN THINKING THUS EASILY INCORPORATES ABSTRACT THOUGHT PROCESSES – SOMETHING THAT SCIENTIFIC THINKING MAY FIND MORE CHALLENGING TO ACCOMMODATE.	4
UNIT 9	APPROPRIATION THE APPROPRIATION OF PRE-EXISTING OBJECTS AND IMAGES HAS BEEN USED EXTENSIVELY IN MODERN ART AND DESIGN. PABLO PICASSO USED OBJECTS WHICH WERE NOT PREVIOUSLY ART, SUCH AS NEWSPAPER CLIPPINGS (NOTABLY IN HIS WORK GUITAR, NEWSPAPER, GLASS AND BOTTLE IN 1913). THESE WORKS PLACED THE OBJECTS IN NEW CONTEXTS WITHOUT TRANSFORMING THE ORIGINAL CONCEPT.	4
UNIT 10	HUMOR CREATIVE THINKING IS AN INTEGRAL INGREDIENT IN THE DESIGN PROCESS. THUS USING CREATIVE THINKING AS THE BRIDGE ONE CAN BE LED TO SEE AN INTERRELATION BETWEEN THE HUMOR THINKING AND DESIGN THINKING. PERSONIFICATION PERSONIFICATION HELPS US UNDERSTAND OUR EXPERIENCES WITH NON-HUMAN THINGS, AGAIN BOTH TANGIBLE AND INTANGIBLE,	4

	THROUGH HUMAN CHARACTERISTICS. THEY GIVE THE EXAMPLE, "INFLATION HAS OUTWITTED THE BEST ECONOMIC MINDS IN THE COUNTRY".	
UNIT 11	VISUAL METAPHORS A VISUAL METAPHOR IS AN IMAGE THAT CONNOTES SOMETHING OVER AND ABOVE ITS DENOTATIVE ASPECT. IT CARRIES AN IDEA THAT RESONATES WITH READERS OR AUDIENCES ON MANY LEVELS.	2
UNIT 12	REFINEMENT 01 – USAGE OF COLOR COLOUR IS A CENTRAL COMPONENT OF DESIGN, AND IT IMPACTS ENORMOUSLY ON THE AUDIENCE'S READING OF AN IMAGE. COLOURS HAVE MEANING, MOOD, AND CULTURAL ASSOCIATIONS. A GOOD DESIGNER CAN USE COLOUR TO MAKE HIS OR HER DESIGNS ATTRACTIVE, BUT A GREAT ONE KNOWS HOW TO CHANNEL THE VARIOUS LAYERS OF COLOUR TO MAKE THE DESIGNS STAND OUT AND REALLY MAKE AN IMPACT.	2
UNIT 13	SHAPE THROUGH COMPOSITION, A DESIGN CAN BE PLAYFUL, SERIOUS, HUMOROUS, OR MOVING. YOU'LL EXPLORE THE CONCEPT OF TWO-DIMENSIONAL SHAPE, A FOUNDATION PRINCIPLE IN DESIGN. AND HOW SHAPES ARE DEFINED IN VARIOUS PLATFORMS AND INDUSTRY.	2
UNIT 14	TYPE FACES YOU'LL EXPLORE THE TYPE TOOL, LEARNING HOW TO CREATE TEXT BOXES, RESIZE TYPE, WRAP TEXT AROUND IMAGES, CREATE VERTICAL COLUMNS OR FILL SHAPES WITH TEXT, ADJUST LEADING AND KERNING, AND MAKE YOUR TYPE FOLLOW PATHS. JUST WATCH IT GO! YOU'LL ALSO LEARN TO USE STYLES TO HELP AUTOMATE YOUR TEXT FORMATTING IN LARGE DOCUMENTS. IN THE EXERCISE, YOU'LL DESIGN THE TYPE FOR A BUS AD.	4
UNIT 15	PROTOTYPING - DEVELOPING DESIGNS PROTOTYPES ARE OFTEN USED IN THE FINAL, TESTING PHASE IN A DESIGN THINKING PROCESS IN ORDER TO DETERMINE HOW USERS BEHAVE WITH THE PROTOTYPE, TO REVEAL NEW SOLUTIONS TO PROBLEMS, OR TO FIND OUT WHETHER OR NOT THE IMPLEMENTED SOLUTIONS HAVE BEEN SUCCESSFUL. TYPES OF PROTOTYPE LOW-FIDELITY PROTOTYPING LOW-FIDELITY PROTOTYPING INVOLVES THE USE OF BASIC MODELS OR EXAMPLES OF THE PRODUCT BEING TESTED. HIGH-FIDELITY PROTOTYPING HIGH-FIDELITY PROTOTYPES ARE PROTOTYPES THAT LOOK AND OPERATE CLOSER TO THE FINISHED PRODUCT.	4
UNIT 17	IMPLEMENTATION TRADITIONAL MEDIA HAS SKIPPED OVER SOMETHING VERY IMPORTANT FOR QUITE SOME TIME: ENGAGING THEIR CUSTOMERS. INSTEAD OF JUST BRINGING SOMETHING TO MARKET BECAUSE SOMEBODY IN THE NEWSROOM OR IN ADVERTISING THOUGHT IT WOULD BE A GREAT IDEA, THE DESIGN PROCESS FORCES YOU TO TAKE INTO ACCOUNT YOUR CUSTOMERS' NEEDS AND EMPATHIZE WITH THEM BEFORE STARTING ANY FULL FLEDGED PRODUCT. IT'S NOT EASY, BUT	4

	THIS KIND OF FLEXIBILITY HELPS YOU TO ADAPT TO THE WAY YOUR CUSTOMERS CHANGE.	
UNIT 18	<p>DEFINING AND VISUALIZING CHALLENGES</p> <p>DESIGN THINKING IS AN IDEOLOGY SUPPORTED BY AN ACCOMPANYING PROCESS. A COMPLETE DEFINITION REQUIRES AN UNDERSTANDING OF BOTH.</p> <p>DEFINITION: THE DESIGN-THINKING IDEOLOGY ASSERTS THAT A HANDS-ON, USER-CENTRIC APPROACH TO PROBLEM SOLVING CAN LEAD TO INNOVATION, AND INNOVATION CAN LEAD TO DIFFERENTIATION AND A COMPETITIVE ADVANTAGE.</p> <p>HOW — THE PROCESS</p> <p>THE DESIGN-THINKING FRAMEWORK FOLLOWS AN OVERALL FLOW OF 1) UNDERSTAND, 2) EXPLORE, AND 3) MATERIALIZE. WITHIN THESE LARGER BUCKETS FALL THE 6 PHASES: EMPATHIZE, DEFINE, IDEATE, PROTOTYPE, TEST, AND IMPLEMENT.</p>	4
UNIT 19	<p>WHY — THE ADVANTAGE</p> <p>WHY SHOULD WE INTRODUCE A NEW WAY TO THINK ABOUT PRODUCT DEVELOPMENT? THERE ARE NUMEROUS REASONS TO ENGAGE IN DESIGN THINKING, ENOUGH TO MERIT A STANDALONE ARTICLE, BUT IN SUMMARY, DESIGN THINKING ACHIEVES ALL THESE ADVANTAGES AT THE SAME TIME:</p> <ul style="list-style-type: none"> • IT IS A USER-CENTERED PROCESS THAT STARTS WITH USER DATA, CREATES DESIGN ARTIFACTS THAT ADDRESS REAL AND NOT IMAGINARY USER NEEDS, AND THEN TESTS THOSE ARTIFACTS WITH REAL USERS. • IT LEVERAGES COLLECTIVE EXPERTISE AND ESTABLISHES A SHARED LANGUAGE AND BUY-IN AMONGST YOUR TEAM. • IT ENCOURAGES INNOVATION BY EXPLORING MULTIPLE AVENUES FOR THE SAME PROBLEM. 	2
UNIT 20	<p>FLEXIBILITY</p> <p>EACH PHASE IS MEANT TO BE ITERATIVE AND CYCLICAL AS OPPOSED TO A STRICTLY LINEAR PROCESS, AS DEPICTED BELOW. IT IS COMMON TO RETURN TO THE TWO UNDERSTANDING PHASES, EMPATHIZE AND DEFINE, AFTER AN INITIAL PROTOTYPE IS BUILT AND TESTED. THIS IS BECAUSE IT IS NOT UNTIL WIRE-FRAMES ARE PROTOTYPED AND YOUR IDEAS COME TO LIFE THAT YOU ARE ABLE TO GET A TRUE REPRESENTATION OF YOUR DESIGN. FOR THE FIRST TIME, YOU CAN ACCURATELY ASSESS IF YOUR SOLUTION REALLY WORKS. AT THIS POINT, LOOPING BACK TO YOUR USER RESEARCH IS IMMENSELY HELPFUL. WHAT ELSE DO YOU NEED TO KNOW ABOUT THE USER IN ORDER TO MAKE DECISIONS OR TO PRIORITIZE DEVELOPMENT ORDER? WHAT NEW USE CASES HAVE ARISEN FROM THE PROTOTYPE THAT YOU DIDN'T PREVIOUSLY RESEARCH?</p>	4

UNIT 21	<p>DESIGN RHETORIC RHETORIC IS AN ART OF SHAPING SOCIETY, CHANGING THE COURSE OF INDIVIDUALS AND COMMUNITIES, AND SETTING PATTERNS FOR NEW ACTION” ” ... ARISTOTLE’S REMARKS ON THE RISE OF RHETORIC AS AN ART OF PERSUASION HAVE RELEVANCE TO THE ART OF DESIGN.” “HOWEVER, IF <i>TECHNOLOGY</i> IS IN SOME FUNDAMENTAL SENSE CONCERNED WITH THE PROBABLE RATHER THAN THE NECESSARY – WITH THE CONTINGENCIES OF PRACTICAL USE AND ACTION, RATHER THAN THE CERTAINITIES OF SCIENTIFIC PRINCIPLE – THEN IT <i>BECOMES RHETORICAL</i> IN A STARTLING FASHION.” “IN THIS SENSE, <i>TECHNOLOGY IS PART OF THE BROADER ART OF DESIGN</i>, AN ART OF THOUGHT AND COMMUNICATION THAT CAN INDUCE IN OTHERS A WIDE RANGE OF BELIEFS ABOUT PRACTICAL LIFE FOR THE INDIVIDUAL AND FOR THE GROUPS.” “<i>DESIGN IS AN ART OF THOUGHT DIRECTED TO PRACTICAL ACTION THROUGH THE PERSUASIVENESS OF OBJECTS AND, THEREFORE, DESIGN INVOLVES THE VIVID EXPRESSION OF COMPETING IDEAS ABOUT SOCIAL LIFE.</i>”</p>	4
UNIT 22	<p>INTRODUCTION TO SERVICE DESIGN A METHOD FOR DESIGNING EXPERIENCES THAT REACH PEOPLE THROUGH MANY DIFFERENT TOUCH POINTS AND THAT HAPPEN OVERTIME. SERVICE DESIGN CAN BE BOTH TANGIBLE AND INTANGIBLE. IT CAN INVOLVE ARTIFACTS AND OTHER THINGS INCLUDING COMMUNICATION, ENVIRONMENT AND BEHAVIORS. WHICHEVER FORM IT TAKES IT MUST BE CONSISTENT, EASY TO USE, AND HAVE STRATEGIC ALLIANCE. WITH DESIGN RESEARCH, DESIGNS ARE MORE MEANINGFUL AND EFFECTIVE BECAUSE THEY ARE GROUNDED IN A REAL-WORLD CONTEXT. THE GOAL OF THIS COURSE IS TO INTRODUCE THE PROCESS OF DESIGN RESEARCH AND TO HELP DESIGNERS UNDERSTAND HOW CRITICAL IT IS TO BEING ABLE TO DEVELOP GREAT DESIGNS.</p>	4
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • BEST OUT OF WASTE • THERMOCOL MODELLING • CLAY MODELLING • VARIOUS BRAIN STROMING EXCERCISES • MODEL OUT OF METAL STRINGS • SOAP CARVING 	120 HRS

REFERENCE BOOK :

- CHANGE BY DESIGN: HOW DESIGN THINKING TRANSFORMS – BY TIM BROWN
- ART OF INNOVATION: LESSONS IN CREATIVITY FROM IDEO, AMERICA'S LEADING DESIGNER – BY JONATHAN LITTMAN
- DESIGN THINKING: UNDERSTANDING HOW DESIGNERS THINK AND WORK- BY NIGEL CROSS
- HOW DESIGNERS THINK - BOOK BY BRYAN LAWSON

REFERENCE LINKS :

- [HTTP://WWW.SCIENCEDIRECT.COM/SCIENCE/ARTICLE/PII/S1877042811029648](http://www.sciencedirect.com/science/article/pii/S1877042811029648)
- [HTTP://EDORIGAMI.WIKISPACES.COM/BLOOM%27S+DIGITAL+TAXONOMY](http://edorigami.wikispaces.com/Bloom%27s+Digital+Taxonomy)

Jenkins, H., Clinton, K., Purushotma, R., Robinson, A. J., & Weigel, M. (2006). *Confronting the challenges of participatory culture: Media education for the 21st century*. MacArthur Foundation. Retrieved December 20, 2011 from <http://www.digitallearning.macfound.org/>

RSACE 1:4	VISUAL & VERBAL STORY TELLING	TEACHING HOURS
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	CAN YOU TELL A STORY – INTRODUCTION TO STORY TELLING. TO BEGIN WITH A SMALL STORY TELLING WORKSHOP (SELF INTRODUCTION IN A CREATIVE WAY) STORY TELLING - NARRATION & PITCHING	2
UNIT 2	THE ART OF OBSERVATION – AND WRITE 5 DIFFERENT CHARCTERS YOU COME ACROSS. (THE CHARACTER INTRODUCTION, THE CHARACTERIZATION, AND OULOOK)	2
UNIT 3	SPONTANEOUS CONVERSATIONS, WATCHING MOVIE AND NARRATING A SCENE, DEBATE DISCUSSION AMONG THE STUDENTS ROLE OF DRAMA IN STORY TELLING	2
UNIT 4	STORY TELLING THROUGH CAMERA : SIMPLE IMPROVISATION AND THEME BASED ON WHAT PEOPLE SEE COMMONLY AROUND SURROUNDING AREAS	2
UNIT 5	HOW TO CREATE DIFFERENT SOUNDS AND MOVEMENTS TO MAKE YOUR STORY INTERESTING.	2
UNIT 6	EXPRESSING VOCALLY BY USING SIMPLE INTONATIONS AND INFLECTION, VOWELS, CONSONANTS, SYLLABLES AND GIBBERISH SOUNDS	2
UNIT 7	LISTENING AND TELLING STORIES TO EACH OTHER; CREATING SOUNDS FIRST ONLY WITH CONSONANTS THEN ONLY WITH VOWELS AND FINALL WITH BOTH.	2
UNIT 8	STORY TELLING THROUGH USE OF SOUND & MUSIC :MIMICKING SOUNDS OF ANIMALS,OF VENDORS, MACHANICAL AND TRAFFIC SOUNDS AND THE NATURAL ELEMENTS.	2
UNIT 9	HOW TO NARRATE STORIES COMMONLY ASSOCIATED WITH DIFFERENT REGIONS IN OUR COUNTRY.	2
UNIT 10	STORY TELLING IN CINEMA : HOW TO VISUALLY NARRATE A INCIDENT WHICH YOU HAVE EXPERIENCE IN YOUR LIFE.	2

UNIT 11	OUTDOOR ACTIVITY – BRINGING IN THE SOUNDS HEARD IN THE ENVIRONMENT.	2
UNIT 12	THE ENACTMENT – HOW TO MOVE LIKE AN ANIMAL, SOUND LIKE AN ANIMAL AND HOW TO CREATE A STORIES USING THESE SOUNDS AND MOVEMENTS.	2
UNIT 13	DEVELOPING SENSORY ABILITY – UNDERSTANDING BASIC FUNCTIONING OF DIFFERENT BODY PARTS AND USING THESE AS COMMUNICATING TOOLS.	2
UNIT 14	USING OUR OWN BODY PARTS LIKE HAIR, CHEEKS, ELBOW, KNUCKLES AND LIPS TO PRODUCE DIFFERENT SOUNDS THROUGH CLAPPING TAPPING AND STAMPING.	2
UNIT 15	FINDING THE STORIES FROM DIFFERENT MEDIUMS AND NARRATE A STORY, COUNT THE NUMBER OF CHARACTERS, AND ENACT THEM.	2
UNIT 17	STORY TELLING AND STRUTURED ARTICULATION – WHAT KINDS OF STORIES INTEREST YOU? DO YOU LIKE NARRATING STORIES OR DO YOU LIKE LISTNING TO THEM? WHAT ATTRACTS YOU MOST ABOUT THE STORY TELLING.	2
UNIT 18	STORY TELLING THROUGH EDITING HOW CAN YOU MAKE TELLING A STORY INTERESING, CAN YOU FEEL YOUR VOICE MOVING UP AND DOWN GOING SOMETIMES HIGH AND SOMETIMES LOW?	2
UNIT 19	VERBAL EXPRESSION, ENABLING SIMPLE USE OF INTONATION AND INFLECTION IN SPEECH.	2
UNIT 20	DESCIRBING OUT OF ROUTINE ACTIVITIES AND EXPERIENCES IN ORDER TO CREATE STORIES.	2
UNIT 22	INVENTING GAMES FOR STORY BUILDING SUCH AS BEGGINNING A DESCRIPTION OF AN INCIDENT WITH PHRASE SUCH AS “DO YOU KNOW WHAT HAPPEN ON THAT DAY...?”	2
UNIT 23	DEVELOPING THE STUDENT’S IMAGINATION BY CREATING AN INCIDENT THROUGH USING A PHRASE SUCH AS WHAT WOULD HAPPEN IF I WERE TO HAVE WINGS / IF WE HAD TO COMMUNICATE ONLY THOUGH GESTURES / IF IN HAD TO LIVE UNDER WATER....ETC THEY COULD ENACT WHAT THEY IMAGINE.	2
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • STORY TELLING WORKSHOP • STORY TELLING USING ONLY VISUALS • STORY TELLING USING ONLY SOUNDS 	90 HRS

READING REFERENCE :

- THE ART OF STORYTELLING: EASY STEPS TO PRESENTING AN UNFORGETTABLE STORY
- THE STORY FACTOR: INSPIRATION, INFLUENCE, AND PERSUASION THROUGH THE ART OF STORYTELLING
- THE LEADER'S GUIDE TO STORYTELLING: MASTERING THE ART AND DISCIPLINE OF BUSINESS NARRATIVE (J-B US NON-FRANCHISE LEADERSHIP)

RSACE 1:5	FUNDEMENTALS OF FILM MAKING	TEACHING HOURS 45
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	INTRODUCTION TO CINEMA : THE HISTORY OF INDIAN CINEMA AND WORLD CINEMA, THE FILM MAKING FUNDEMENTALS, WHAT IS A ROLE OF A FILM MAKER, THE FILM INDUSTRY IN INDIA, THE ART AND SCIENCE OF FILM MAKING, THE TECHNOLOGY AND EQUIPMENTS	2
UNIT 2	INTRODUCTION TO SCRIPT DEVELOPMENT:HOW TO WRITE A GOOD SCRIPT, INSPIRATION TO A STORY,RESEARCH, COMMERCIAL STORY TELLING,HOW TO WORK ON A PROJECT,TIME MANAGEMENT,	4
UNIT 3	SCRIPT WRITING PART-2:RESEARCH MATERIAL FOR SCRIPT DEVELOPMENT,INTERESING JOURNALS; INSPIRATIONAL MUSIC: HOW TO LET YOUR MIND FREE, READY TO STRIKE IDEAS WHEN THEY HIT;SURF INTERNET; RESEARCH BY STUDING THE TIME PERIOD; CHARACTERS, CUSTOMS, FAHIONS, TECHNOLOGIES, VALUES OF THE WORLD.	4
UNIT 4	SETTING UP SPACE: HOW TO MAKE YOUR SELF ORGANISED, FIND A QUIET PLACE, AMBIENCE WHICH WILL MAKE YOU INSPIRE, AVOID NEEDLESS DISTRACTION, WRITING IS A ART OF FOCUS, BE PREPARED WITH NOTE PAD; DEVELOPING A PREMISE: THE SET IS TO DEVELOP STORY STRUCTURE FOR THE MOVIE. FICTION OR NON FICTION;GENRE;FORMAT;PLOT TYPE.	4
UNIT 5	SCRIPT DEVELOPMENT: PART 3:WORKING WITH THE WRITER,;STORY STRUCTURE;	2
UNIT 6	PREPRODUCTION: BREAKING DOWN THE SRCIPT; DETERMINING THE BUDGET; SECURING THE FINANCING, SCOUTING LOCATIONS, CASTING; HIRING THE CREW; SECURING EQUIPMENT; SCHEDULING THE SHOOT	4

	DATES.	
UNIT 7	SETTING UP AN OFFICE; ESTABLISH HOME BASE WHERE PRODUCTION EFFORTS CAN BE COORDINATED. RESOURCES FOR THE SET UP; LEGAL CONSULTATIONS;	4
UNIT 8	BUDGETING: CHOOSE A BUSINESS FORMULA; PLAN; FORM A COMPANY; GETTING THE APPROPRIATE QUOTE FOR EQUIPMENTS, LOCATIONS, PERSONNEL, CAST AND CREW, SHAPE THE BUDGET; WORKING WITH THE LINE PRODUCER; TIPS TO KEEP BUDGET LOW.	4
UNIT 9	SCHEDULING: LINING THE SCRIPT; SCENE BREAKDOWN SHEETS; DETERMINE THE NUMBER OF SHOOTING DAYS; MAKING THE DAILY SCHEDULE; FINALIZING THE SCHEDULE; PRODUCTION PROCESS	4
UNIT 10	LOCATIONS: INTRODUCTION TO LOCATION DESIGN, FINDING LOCATION; SECURING A LOCATION COMMUNITY RELATIONS; FILM COMMISSIONS ; DURING PRODUCTION ;	2
UNIT 11	FILM PRODUCTION FUNDAMENTALS: PRODUCTION DESIGN: INTRODUCTION TO PRODUCTION DESIGN; PROPS; WARDROBE; BUILDING SETS; SET DRESSING; CREATING A TIME PERIOD. A DAY ON SETS; ORGANIZATION SHOTS	2
UNIT 12	DIRECTOR'S ROLE: DIRECTING DURING PRE-PRODUCTION, DURING PRODUCTION, ACTIVITIES, BREAK DOWN THE SCRIPT TO DETERMINE STORY AND CHARACTER, STORY BOARD EACH CHARACTER ANGLE, WORKS WITH ACTORS TO HELP THEM TO UNDERSTAND THEIR CHARACTERS. DETERMINING THE COVERAGE: BLOCK THE ENTIRE SCENE FOR THE CAST AND CREW,. REHEARSAL-BLOCK SCENE WITH EACH ACTOR. WORK WITH DEPARTMENT HEADS SO THEY HAVE A CLEAR UNDERSTAND OF THE VISION	4
UNIT 13	CINEMOTOGRAPHY: INTRODUCTION: WORKING WITH DOP, SHOOTING STYLES, THE CAMERA, CHOOSING LENS, FIVE RINGS OF POWER, LENS CARE, CAMERA SETTINGS, WORKING WITH THE FRAME, RULES OF COMPOSITION, SHOT TYPES, WORKING WITH A PRODUCTION MONITOR, LIGHTING, GETTING THE FILM LOOK, SHOOTING THE SCENE, KEEPING ORGANISED.	4
UNIT 14	THE DIRECTOR OF PHOTOGRAPHY: HIRING THE DIRECTOR OF PHOTOGRAPHY; CRAFTING THE LOOK;	4
UNIT 15	CAMERA: THE CAMERA: THE CAMERA IS THE EXTENSION OF THE AUDIENCE; CHOOSING THE LENSES, THE FIVE RINGS OF LENS, FOCUS, FOCAL LENGTH, EXPOSURE, WHITE BALANCE.	4
UNIT 17	WORKING WITH THE PRODUCTION MONITOR: EXPOSURE ON THE SET, WORKING WITH PRODUCTION CREW & CAST,	2

UNIT 18	LIGHTING: THE QUALITY OF LIGHTS, LIGHT METER, THREE POINTS LIGHT, WORKING WITH SHADOWS, LIGHTING SCENE	2
UNIT 19	LIGHTING OUTSIDE: OVERHEAD AND REFLECTORS, PROPER CONTRAST, LOW BUDGET OPTIONS	2
UNIT 20	AUDIO RECORDINGS: INTRODUCTION TO AUDIO RECORDING; PREPPING AUDIO;ROLE OF THE SOUND TEAM ON THE SET BEFORE ACTION; RECORDING TO THE CAMERA,SYNC SOUND;WIRELESS MICROPHONE SYSTEMS.AMBIENT SOUND;WORKING WITH EXTRAS. TIPS FOR RECORDING GOOD ON-SET AUDIO.	4
UNIT 21	INTRODUCTION TO EDITING: THE EDITING FUNDAMENTALS, THE CREATIVE EDITING, THE SOFTWARES USED FOR EDITING, ANALOG AND DIGITAL EDITING, THE EDITOR'S ROLE IN A FILM. PRINCIPLES OF EDITING.	2
UNIT 22	INTRODUCTION TO SOUND: THE RE RECORDING PROCESS, FOLEY, THE SOUND DESIGN. VARIOUS TECHNOLOGY AND CREATIVE PROCESS INVOLVED IN SOUND DESIGN.	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • SINGLE SHORT FILM • PROCESS FILM • VISUAL CONTINUITY FILM • OBSERVATION FILM • SHORT FILM (2 TO 3 MINUTES) 	120 HRS

READING BOOKS

- 1.THE COMPLETE FILM PRODUCTION HANDBOOK BY EVE LIGHT HONTHANER, 2001, FOCAL PRESS.
- 2.CONTRACTS FOR THE FILM AND TELEVISION INDUSTRY BY MARK LITWAK, 1994, SILMAN-JAMES
- 3.THE POWER FILMMAKING KIT-JASON J.TOMARIC
- 4.THE FILMMAKER'S HANDBOOK: A COMPREHENSIVE GUIDE FOR THE DIGITAL AGE (2013 EDITION) BY STEVEN ASCHER AND EDWARD PINCUS
- 5.DIRECTING: FILM TECHNIQUES & AESTHETICS (FIFTH EDITION, 2013) BY MICHAEL RABINGER AND MICK HURBIS-CHERRIER

READING LINKS :

<http://guides.lib.berkeley.edu/c.php?g=4407&p=15594>

SECOND SEMESTER

INTRODUCTION

In this semester the focus is given more on personality Development and project management, you will learn in-depth information about personalities. You will gain a better understanding about those around you and also more about who you are and how you got to be that way.

This course starts with a basic introduction of personality, It then goes on to look at theories of personality development, and the main influences on personality development. You will also delve into looking at basic personality traits, including values, beliefs, and nature versus nurture. You will learn to improve your communication skills and how you can use that information in career choices and to make changes. You will also learn fundamentals of film making and motion graphics in this semester, which will help you to make meaningful corporate videos and excellent presentations and how to put all the information together to use it to your personal or career advantage.

With this course you can literally stop wondering about why you or someone you know behaves a particular way. It is essentials because in the media and entertainment industry you may have to work with celebrity to labours. It is important for you to understand each one's personality to work efficiently and effectively.

This semester is especially helpful for those who are striving to learn more about who they are, which direction their life should take, to learn more about others around them, overall it help you to work professionally, with right attitude and as a good human being.

Objective :

The objective of thissemester is bring about personality development with regard to the different behavioural dimensions that have far reaching significance in the direction of organisational effectiveness. This semester helps students to improve their management skills. The students will have a better grip over the understanding of project management, working as a team, working within the team, leadership skills. This semester will help them to acquire the skills and ability to grapple with complex changes in the environment, technology and processes.

RSACE 1:6	COMMUNICATION - 02	TEACHING HOURS
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	PUBLIC SPEAKING: ACQUIRING CONFIDENCE BEFORE AN AUDIENCE: CAUSE OF SELF-CONSCIOUSNESS, THE STRESS OF UNUSUAL EXCITEMENT, OVER COMING STAGE FEAR.	2
UNIT 2	THE SIN OF MONOTONY , WHY IS MONOTONY ONE OF THE WORST AS WELL AS ONE OF THE MOST COMMON FAULT OF THE SPEAKERS: HOW TO GET BACK IN NATURE WITH THE POWER OF VARIETY.	2
UNIT 3	EFFICIENCY THROUGH EMPHASIS AND SUBORDINATION , : BE ABSORBED TO YOUR SUBJECT, ANTICIPATE THE PLUNGE WITH ACCELERATION. EFFICIENCY THROUGH CHANGE OF PITCH, EFFICIENCY THROUGH CHANGE OF PACE, PAUSE AND POWER, EFFICIENCY THROUGH INFLECTION.	4
UNIT 4	PUBLIC SPEAKING : VOICE MODULATION: VOICE CHARM, DISTINCTNESS AND PRECISION OF UTTERANCE, MULTIPLY POWER OF SPEECH BY INCREASING THE TOOLS: LEARN TO GIVE YOU A CONCEPTION OF THESE INSTRUMENTS, AND PRACTICAL HELP IN LEARNING TO USE THEM.	4
UNIT 5	FACING THE AUDIENCE: WHAT EFFECTS DOES THE CONFIDENCE ON THE PART OF SPEAKER HAVE ON THE AUDIENCE, SUCCESS OR FAILURE LIES IN THE MENTAL ATTITUDE EVEN THAN MENTAL CAPACITY- ACQUIRE THE CONFIDENT ATTITUDE.	4
UNIT 6	PRINCIPLES OF PUBLIC SPEAKING: HOW DO THE PRACTICAL PRINCIPLES ARE ADOPTED BY THE SPEAKERS AND ACTORS-EITHER NATURALLY OR UNCONSCIOUSLY- LEARNING TO BE NATURAL AND IMPROVING ON YOUR GIFTS UNTIL YOU APPROACH THE IDEAL LEVEL.	4
UNIT 7	THE ART OF LISTENING -ADVANTAGES OF ACTIVE LISTENING, HOW TO DEVELOP YOUR LISTENING SKILLS, ELEMENTS OF LISTENING, LISTENING BUILDS BETTER FOUNDATION FOR PERSONAL & PROFESSIONAL SUCCESS, IT REQUIRE INTENSE CONCENTRATION AND GOOD DEAL OF MENTAL ENERGY.	4
UNIT 8	HOW TO ACHIEVE HIGHLY EFFECTIVE LISTENING SKILLS: EVALUATE: YOU JUDGE WHAT SOMEONE IS SAYING AND AGREE OR DISAGREE. PROBE: YOU ASK QUESTIONS FROM YOUR OWN FRAME OF REFERENCE. ADVISE: YOU GIVE COUNSEL, ADVICE, AND SOLUTIONS TO PROBLEMS. INTERPRET: YOU ANALYZE OTHERS' MOTIVES AND BEHAVIORS BASED ON YOUR OWN EXPERIENCES.	4
UNIT 9	ENGLISH GRAMMER: ANALYSIS OF SYSTEM AND STRUCTURE OF LANGUAGE. INTRODUCTION TO TENSES, ACTIVE AND PASSIVE VOICE, SENTENCES: SIMPLE, COMPOUND, COMPLEX, ANALYSIS OF COMPLEX SENTENCES,	4

	ANALYSIS OF COMPOUND SENTENCES.	
UNIT 10	ENGLISH GRAMMER: TRANSFORMATION OF SENTENCES :SENTENCES CONTAINING ADVERBS,, INTERCHANGE OF DEGREE OF COMPARISON, INTERCHANGE OF ACTIVE AND PASSIVE VOICE, INTERCHANGE OF AFFIRMATIVE AND NEGATIVE SENTENCES, INTERCHANGE OF INTERROGATIVE AND ASSERTIVE SENTENCES.	4
UNIT 11	ENGLISH GRAMMER : SIMILES: A SIMILE IS A FIGURE OF SPEECH THAT COMPARES TWO THINGS OR PERSONS WHICH ARE NOT SIMILAR. METAPHOR: A FIGURE OF SPEECH IN WHICH A WORD OR PHRASE IS APPLIED TO AN OBJECT TO WHICH IT IS NOT LITERALLY APPLICABLE.	4
UNIT 12	IDIOMS: EVERY LANGUAGE HAS ITS OWN COLLECTION OF WISE SAYINGS-THEY TRANSFER UNDERLYING IDEAS-THESE ARE CALLED "IDIOMS" A GROUP OF WORDS ESTABLISHED BY USAGE AS HAVING A MEANING NOT DEDUCIBLE FROM THOSE OF THE INDIVIDUAL WORDS.	2
UNIT 13	PUNCTUATIONS: EXERCISES ON PUNCTUATIONS, PUNCTUATION WORKSHEETS, WHEN TO USE SEMICOLON, COLON, PARENTHESIS, CORRECT USE OF HYPHENS.	2
UNIT 14	HOW TO BUILD YOUR VOCABULARY: ANTONYMS, SYNONYMS, WORD POWER EXERCISES, VOCABULARY BUILDING EXERCISE, WORD ORIGIN ,ANTHROPOLOGY: STUDY OF COMPARATIVE STUDY OF CULTURES AND ITS DEVELOPMENT.	2
UNIT 15	LETTER WRITING II:: BUSINESS LETTERS, ORGANIZATIONAL LETTERS, LETTER OF INTERNATIONAL CORRESPONDENCE.	2
UNIT 17	WRITTEN COMMUNICATION AND SOCIAL MEDIA: EVOLUTION OF BRAND COMMUNICATION, HOW MEDIA COMMUNICATION EVOLVED OVER THE YEARS, TRADITIONAL MEDIA OUTLETS-TELEVISION, RADIO, PRINT ARE ONE WAY COMMUNICATION. HOW PLATFORMS LINE ONLINE DISCUSSIONS OFFER FEEDBACK AND USE TO IMPROVE THEIR PRODUCTS AND SERVICES. SOCIAL MEDIA FALLS INTO TRANSACTIONAL MODEL.	4
UNIT 18	COMMUNICATION IN ORGANIZATION II : SOCIAL MEDIA MARKETING COMMUNICATION: BLOG WRITING: HOW TO CREATE A BLOG, HOW TO CHOOSE THE RIGHT TYPE OF BLOG, ARE YOU PASSIONATE BLOGGER-EXERCISES, TYPES OF BLOG.- HOW TO NAIL YOUR BLOG POST- PASSION ,KNOWLEDGE AND EXPERIENCE KEY TO BLOGGING.	4
UNIT 19	BUSINESS CORRESPONDENCE : STRUCTURE OF BUSINESS LETTERS: LEARNING OBJECTIVES, STRUCTURE: BUSINESS LETTER, THE TONE OF THE LETTER WRITING: FOR SHORTNESS, SIMPLICITY ,STRENGTH, CLARITY.THINGS TO AVOID, THINGS TO AVOID, RECOMMENDATIONS.	2
UNIT 20	BUSINESS LETTERS: FORM OF BUSINESS LETTERS BLOCK FORM, THE SEMI BLOCK FORM, SIMPLIFIED LETTER OR NOMA'S LETTER COMPLETE BLOCK FORM, HANGING INDENTED FORM, SELF EXAMINATION QUESTION PAPERS.	2
UNIT 21	BUSINESS LETTERS: OFFICERS AND QUOTATIONS(REPLIES TO INQUIRIES): OBJECTIVES, STRUCTURE, POINTS TO REMEMBER	2

UNIT 22	LETTERS-GRANTING AND REFUSING REQUESTS: IT SHOULD NOT BE WRITTEN IN ROUTINE AND DULL FASHION-ENCLOSURES-CATALOGUES, PAMPHLETS ETC -STATING THE ACTION TAKEN, MAKING SPECIFIC REFERENCE TO THE ENCLOSURES, MOTIVATING ACTION OR BUILDING GOODWILL.	2
UNIT 23	MAKING THE OFFER: OBJECTIVE: OPEN UP NEW BUSINESS CONNECTIONS OF TO PLACE ON A FIRM, FIRM BASE ON ALREADY EXISTING FEEBLE CONNECTION. , CODE OF HONESTY, CONFIDENCE THROUGH THE MEDIUM OF CORRESPONDENCE.	2
UNIT 24	FIRM OFFER – FIRM OFFER OR AN OFFER WITHOUT ENGAGEMENT, THIS OFFER IS MADE SUBJECT TO THE STOCK BEING UNSOLD.SOME TYPICAL OPENING SENTENCES AND SOME TYPICAL CLOSING SENTENCES. MODEL LETTERS, EXERCISES	2
UNIT 25	ORDERS: LEARNING OBJECTIVES: TO UNDERSTAND THE MEANING OF ORDERS AND ITS EXECUTION, TO UNDERSTAND THE CANCELLATION OF THE ORDER AND WHEN IT HAS BEEN OCCURRED, AND HOW TO WRITE A ORDER LETTER? MODEL LETTERS, AND EXERCISES	2
UNIT 26	INTRODUCTION TO GIVING A ORDER LETTER, GENERAL HINTS: GENERAL HINTS FOR DRAFTING AN ORDER, CONFIRMATION /ACKNOWLEDGMENT OF THE RECEIPT OF ORDER, LETTERS ADVISING THE EXECUTION OF ORDERS, LETTER ADDRESSING INABILITY TO EXECUTE ORDER, ACKNOWLEDGMENT OF RECEIPT OF GOODS AND MAKING PAYMENT, CANCELLATION OF THE ORDER.	4
UNIT 27	COMPLAINTS AND ADJUSTMENTS : OBJECTIVES: TO UNDERSTAND COMPLAINTS, ADJUSTMENT AND ITS CATEGORIES, TO WRITE A MODEL LETTER FOR COMPLAINTS AND ADJUSTMENTS HAVE PROVIDED, HOW TO STRUCTURE THE LETTERS: NATURE OF COMPLAINT, REPLY TO LETTERS OF COMPLAINTS, MODEL LETTERS	4
UNIT 28	TRADE REFERENCES OR STATUS INQUIRES: OBJECTIVES OF THE LETTER: TO UNDERSTAND THE TRADE REFERENCE FOR WHICH HERE HAVE GIVEN IMPORTANT POINTS REGARDING THE PROSPECTIVE CUSTOMER, TO KNOW THE POINTS TO BE INCORPORATED AND TO REMEMBER WHILE DRAFTING REPLIES TO STATUS INQUIRES.TO WRITE THE MODEL LETTERS FOR SELF ASSESSMENT. STRUCTURE OF THE LETTER: POINTS TO BE INCORPORARATED IN A STATUS INQUIRY LETTERS, RIGHTS AND RESPONSIBILITIES OF THOSE GIVING CREDIT INFORMATION, POINTS TO REMEMBER WHILE DRAFTING REPLIES TO STATUS INQUIRIES , MODEL LETTERS.	4
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • PUBLIC SPEAKING, WRITTEN COMMUNICATION, SOCIAL MEDIA, CORRESPONDENCE • PROFESSIONALISM, TEAM BUILDING & LEADERSHIP DRAMATIC, NON DRAMATIC, STORY, PLOT, SUB-PLOT, 3 ACT STRUCTURE • WRITING - FROM CONCEPT TO SCENE • PREPARING FOR END-OF-TERM PROJECT 	90 HRS

READING BOOKS:

1. DEVELOPING COMMUNICATION SKILLS
2. ART OF PUBLIC SPEAKING: DALE CARNEGIE J.BERG ESENWEIN
3. ADAIR, JOHN. EFFECTIVE COMMUNICATION LONDON: PAN MACMILLAN LTD., 2003.
4. AJMANI, J. C. GOOD ENGLISH: GETTING IT RIGHT NEW DELHI: RUPA PUBLICATIONS, 2012.
5. AMOS, JULIEANN. HANDLING TOUGH JOB INTERVIEWS MUMBAI: JAICO PUBLISHING, 2004.
6. BONET, DIANA THE BUSINESS OF LISTENING: THIRD EDITION NEW DELHI: VIVA BOOKS, 2004.
7. BOVEE, COURTLAND L, JOHN V. THILL & BARBARA E. SCHATZMAN.
8. BUSINESS COMMUNICATION TODAY: TENTH EDITION. NEW JERSEY: PRENTICE HALL, 201
9. BROWN, MICHELE & GYLES BRANDRETH. HOW TO INTERVIEW AND BE INTERVIEWED LONDON: SHELDON PRESS, 1994.

REFERENCE LINKS:

10. [HTTP://WWW.MAXIMUMADVANTAGE.COM/ADVANTAGES-OF-EFFECTIVE-COMMUNICATION.HTML](http://www.maximumadvantage.com/advantages-of-effective-communication.html)
11. [HTTP://NETWORKETIQUETTE.NET/](http://networketiquette.net/)
12. [HTTPS://PUBLIC.WSU.EDU/~BRIANS/ERRORS/](https://public.wsu.edu/~brians/errors/)
13. [HTTP://USERS3.EV1.NET/~PAMTHOMPSON/BODY LANGUAGE.HTM](http://users3.ev1.net/~pamthompson/body_language.htm)
14. [HTTP://WWW.ALBION.COM/NETIQUETTE/CORERULES.HTML](http://www.albion.com/netiquette/corerules.html)
15. [HTTP://WWW.BBC.CO.UK/WORLDSERVICE/LEARNINGENGLISH/RADIO/SPECIALS/1535_QUESTIONANSWER/PAGE15.SHTML](http://www.bbc.co.uk/worldservice/learningenglish/radio/specials/1535_questionanswer/page15.shtml)
16. [HTTP://WWW.COLOSTATE.EDU/DEPTS/SPEECH/RCCS/THEORY44.HTML](http://www.colostate.edu/depts/speech/rccs/theory44.html)
17. [HTTP://WWW.DAILYWRITINGTIPS.COM/](http://www.dailywritingtips.com/)

RSACE 1:7	CHARACTER DEVELOPMENT & BEHAVIORAL SCIENCE	TEACHING HOURS
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	DEVELOPING ONESELF - GETTING ONE'S DESIGN -DEALING WITH ISSUES, COMPLAINTS, ANGER, LOW SELF-ESTEEM, UNWORKABILITY	4
UNIT 2	LEARNING TO BE & LEARNING TO BE WITH OTHER PEOPLE (UNESCO)- PEOPLE WITH GREAT COMMUNICATION SKILLS TEND TO HAVE A BETTER AND IMPRESSIVE PERSONALITY - EFFECTIVE COMMUNICATION SKILLS STRENGTHEN THE BOND AMONG INDIVIDUALS	2

UNIT 3	HOW TO IMPROVE ONE'S PERSONALITY WITH THE HELP OF GOOD COMMUNICATION? – BE A BETTER LISTENER – READ MORE AND EXPAND YOUR INTERESTS	2
UNIT 4	STUDY OF HUMAN BEHAVIOUR - PSYCHOLOGY & BEHAVIOURAL SCIENCE IN TODAY'S WORLD - BEHAVIOURAL DEVELOPMENT GROOMS AN INDIVIDUAL AND HELPS HIM MAKE A MARK OF HIS/HER OWN - PERSONALITY DEVELOPMENT GOES A LONG WAY IN REDUCING STRESS AND CONFLICTS.	2
UNIT 5	PRONOUNCIATION OF WORDS AND PERSONALITY DEVELOPMENT - SPEECH AND PERSONALITY DEVELOPMENT ARE ONE OF THE MOST IMPORTANT ASPECTS OF AN INDIVIDUAL ESPECIALLY DURING HIS/HER FORMATIVE YEARS. DEVELOPING AND ENHANCING OUR COMMUNICATION AND SPEECH HELPS US TO BE BETTER PRESENTERS OF OUR IDEAS. AT THE SAME TIME, PERSONALITY DEVELOPMENT IS A MEANS AND A METHOD THAT HELPS US TO DEVELOP OUR PERSONALITY SUCH THAT WE CAN BECOME BETTER, SMARTER AND BRIGHTER INDIVIDUALS.	4
UNIT 6	HOW TO OVERCOME SHYNESS AND GAIN MORE CONFIDENCE FOR COMMUNICATION - BEING SHY OR FEELING ANXIETY IS NOT A DISEASE OR SIGN OF ANY DISABILITY. IT IS ONLY THAT PERHAPS YOU TEND TO TAKE YOUR STRENGTHS FOR GRANTED AND FOCUS TOO MUCH ON YOUR WEAKNESSES. THE SECOND GOOD NEWS IS THAT THERE IS ABSOLUTELY NO NEED TO UNDERGO A MAJOR CHANGE. ALL YOU NEED IS SOME TWEAKING BY MAKING SOME IMPORTANT AND USEFUL ADDITIONS TO YOUR THINKING, STYLE, HABITS AND APPEARANCES.	4
UNIT 7	HOW CAN YOU IMPROVE YOUR PERSONALITY AT YOUR WORKPLACE - PERSONALITY DEVELOPMENT PLAYS AN IMPERATIVE ROLE AT WORKPLACE AS IT DECIDES THE WAY AN INDIVIDUAL INTERACTS WITH HIS FELLOW WORKERS AND RESPONDS TO VARIOUS SITUATIONS - PERSONALITY DEVELOPMENT CLASSES AT THE WORKPLACE EXTRACT THE BEST OUT OF INDIVIDUALS AND ENCOURAGE THEM TO DELIVER THEIR LEVEL BEST.	4
UNIT 8	MOTIVATION AND TECHNIQUE FOR A POSITIVE LIFE - START WITH WRITING DOWN YOUR ACCOMPLISHMENT FEELINGS. BY THIS, IT MEANS THAT IT'S IMPORTANT FOR ALL OF US TO WRITE DOWN WHAT WE WANT TO ACHIEVE, BECAUSE AS THEY SAY WHEN IN WRITING ITS EASIER FOR ANYONE TO FOLLOW IT OR STRIVE TO ATTAIN IT. IN TERMS OF PHYSICAL ACTIVITIES OR OTHERS, WRITING DOWN OUR GOAL MAKES ONE CLEAR AND FOCUSED. THESE FEELING CAN BE SUMMED UP AS FEELING HEALTHIER, MAKING A PRODUCTIVE DAY AND FEELING HAPPIER AND PUSHING ONESELF. THIS ALWAYS WORKS.	4
UNIT 9	STAGES OF MOTIVATION : THE FIRST TYPE OF MOTIVATION IS BASED ON AN EMOTIONAL FEELING. THE EMOTION THAT WE ARE REFERRING TO COULD BE OF A POSITIVE OR NEGATIVE NATURE. IT IS SOMETHING WHICH KICK-STARTS OUR DESIRE. WHEN YOU READ SOMEONE'S SUCCESS STORY OR SOMETHING THAT YOU ARE PASSIONATE ABOUT IT FUELS YOUR MIND. ALSO THERE ARE TIMES WHEN PEOPLE GET	4

	SUDDENLY MOTIVATED ON HEARING SOME BAD NEWS. BOTH THE POSITIVE AND NEGATIVE TYPES ARE VERY TEMPORARY. THE INITIAL BURST OF ENERGY VANISHES AND IS NOT SUSTAINED BY THE INSPIRATION OR WAKE UP CALL.	
UNIT 10	WHAT ARE COMPONENTS OF PERSONALITY – THE COMPONENTS OF PERSONALITY ARE HABITS, ATTITUDES, INTEREST, VALUES, PRINCIPLES AND INTELLECTUAL CAPACITY	2
UNIT 11	STEPS TO IMPROVE YOUR PERSONALITY – BE A BETTER LISTENER, READ MORE AND EXPAND YOUR INTEREST, BE A GOOD CONVERSATIONALIST	2
UNIT 12	STUDY OF CHARACTERS FROM EPICS, LITERATURE & CINEMA	2
UNIT 13	IMPORTANCE OF CHARACTER IN PERSONALITY DEVELOPMENT - CHARACTER REFERS TO THE SUM OF AN INDIVIDUAL'S QUALITIES AND CHARACTERISTICS WHICH DIFFERENTIATE HIM/HER FROM OTHERS. AN INDIVIDUAL'S CHARACTER IS ACTUALLY AN AMALGAMATION OF HIS/HER QUALITIES WHICH MAKES HIM UNIQUE AND HELPS HIM STAND APART FROM THE REST.	4
UNIT 14	WRITING AND PERSONALITY DEVELOPMENT - MANY PEOPLE MAY NOT AGREE TO THIS BUT WRITING IS ALSO ONE OF THE MOST IMPORTANT PARTS OF YOUR PERSONALITY AND HENCE MORE AND MORE SCHOOLS, UNIVERSITIES AND INSTITUTES ARE NOW INTRODUCING WRITING IN THEIR PERSONALITY DEVELOPMENT COURSES AND/OR WORKSHOPS. WHAT YOU WRITE ALWAYS GIVES A GLIMPSE OF WHAT YOU THINK AND WHAT YOU FEEL AND THIS IS WHAT REFLECTS YOUR PERSONALITY AND YOUR INNER BEING. HENCE DEVELOPING YOUR WRITING SKILLS IS ALSO AN INTEGRAL PART OF PERSONALITY DEVELOPMENT.	4
UNIT 15	SOFTSKILLS AND PERSONALITY DEVELOPMENT - SOFT SKILLS ARE ESSENTIALLY PEOPLE SKILLS-- THE NON-TECHNICAL, INTANGIBLE, PERSONALITY-SPECIFIC SKILLS THAT DETERMINE ONE'S STRENGTHS AS A LEADER, SPEAKER, LISTENER, NEGOTIATOR, AND CONFLICT MEDIATOR.	2
UNIT 17	HOW DOES BODY LANGUAGE AFFECT THE DEVELOPMENT OF THE PERSONALITY? - FOR ACHIEVING EFFECTIVE PERSONALITY, PROPER BODY LANGUAGE IS REQUIRED. BODY LANGUAGE IS A NON-VERBAL COMMUNICATION WHICH IS EXPRESSED THROUGH FACIAL EXPRESSIONS, GESTURES, POSTURE, AND BODY MOVEMENTS. THESE GESTURES AND POSTURES SAY A LOT ABOUT OUR PERSONALITY.	4
UNIT 18	COMMUNICATION AND EFFECTIVE LISTENING SKILLS – LISTENING SKILLS ARE MORE POWERFUL THAN COMMUNICATION SKILLS – LISTENING WITH EMPATHY – GIVING OPPORTUNITY TO OTHERS TO SPEAK OUT	2

UNIT 19	COMMUNICATION AS POWER FOR HUMAN BEING – IT IS NOT WHAT YOU SAY BUT HOW YOU SAY MAKES A DIFFERENCE – COMMUNICATION IS CONSIDERED TO BE ONE OF THE HYGIENE FACTORS FOR LIFE – COMMUNICATION IS THE BIGGEST PROPERTY OF HUMAN BEING WITH POWER IN IT.	2
UNIT 20	COMMUNICATION TECHNIQUES – DEFINE ACRONYMS – REDUCE JARGONS – LEVEL OBJECTIONS – USE HUMOUR – AECDOTES AND STORIES – ASK FOR FEEDBACK – INCREASE YOUR VOCABULARY – ELIMINATE AUDIBLE PAUSES – ENUNCIATE CLEARLY – PRACTICE PRONOUNCNG WORDS PROPERLY – EXERCISE TOUNGE, JAWS AND LIPS – MAKE EYE CONTACT - GESTURES	4
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • DEVELOPING ONESELF - GETTING ONE'S DESIGN -DEALING WITH ISSUES, COMPLAINTS, ANGER, LOW SELF-ESTEEM, UNWORKABILITY • LEARNING TO BE SOCIAL & LEARNING TO BE WITH OTHER PEOPLE,STUDY OF HUMAN BEHAVIOUR - PSYCHOLOGY & BEHAVIOURAL SCIENCE • STUDY OF CHARACTERS FROM EPICS, LITERATURE & CINEMA • CREATING & BUILDING CHARACTERS 	120 HRS

REFERENCE LINKS :

- [HTTPS://WWW.UNIVERSALCLASS.COM/ARTICLES/SELF-HELP/THE-PROCESS-OF-PERSONALITY-DEVELOPMENT.HTM](https://www.universalclass.com/articles/self-help/the-process-of-personality-development.htm)
- [HTTPS://WWW.UNIVERSALCLASS.COM/ARTICLES/SELF-HELP/THE-FACTORS-OF-PERSONALITY-TRAITS.HTM](https://www.universalclass.com/articles/self-help/the-factors-of-personality-traits.htm)
- [HTTPS://WWW.UNIVERSALCLASS.COM/ARTICLES/BUSINESS/COMMUNICATION-STUDIES/UNDERSTANDING-THE-SELF-FOR-BETTER-COMMUNICATION.HTM](https://www.universalclass.com/articles/business/communication-studies/understanding-the-self-for-better-communication.htm)
- [HTTPS://WWW.UNIVERSALCLASS.COM/ARTICLES/SELF-HELP/THE-ROLE-OF-NONVERBAL-COMMUNICATION-IN-EFFECTIVE-COMMUNICATION.HTM](https://www.universalclass.com/articles/self-help/the-role-of-nonverbal-communication-in-effective-communication.htm)
- - [HTTP://WWW.PERSONALITYDEVELOPMENT.ORG/WP-CONTENT/UPLOADS/2011/12/IMAGE21.PNG](http://www.personalitydevelopment.org/wp-content/uploads/2011/12/image21.png)
- [HTTPS://BOOKS.GOOGLE.CO.IN/BOOKS?ID=2OBX1DRWHGSC&PG=PA1&LPG=PA1&DQ=PERS ONALITY+DEVELOPMENT+MEANING&SOURCE=BL&OTS=MFGEPVW0AY&SIG=ZLWUWGLSL 68IASWV-4R_BUR6S4&HL=EN&SA=X&VED=0AHUKEWJR4-FC8DRSAHXERO8KHEPTCGW4CHDOAQG7MAY#V=ONEPAGE&Q=PERSONALITY%20DEVELOP MENT%20MEANING&F=FALSE](https://books.google.co.in/books?id=2OBX1DRWHGSC&pg=PA1&lpg=PA1&dq=PERSONALITY+DEVELOPMENT+MEANING&source=bl&ots=MFGEPVW0AY&sig=ZLWUWGLSL68IASWV-4R_BUR6S4&hl=en&sa=X&ved=0AHUKEWJR4-FC8DRSAHXERO8KHEPTCGW4CHDOAQG7MAY#v=ONEPAGE&q=PERSONALITY%20DEVELOPMENT%20MEANING&f=false)
- [HTTP://WWW.MANAGEMENTSTUDYGUIDE.COM/IMPORTANCE-OF-CHARACTER-IN-PERSONALITY-DEVELOPMENT.HTM](http://www.managementstudyguide.com/importance-of-character-in-personality-development.htm)
- [HTTP://WWW.ESSENTIALLIFESKILLS.NET/IMPROVEYOURPERSONALITY.HTML](http://www.essentiallifeskills.net/improveyourpersonality.html)

- [HTTP://WWW.GLOBALTALENT.CO.IN/UPLOADS/DOWNLOADS/COMMUNICATION-SKILLS--PERSONALITY-DEVELOPMENT.PDF](http://www.globaltalent.co.in/uploads/downloads/communication-skills--personality-development.pdf)
- [HTTPS://WWW.AIAA.ORG/UPLOADEDFILES/EDUCATION AND CAREERS/CAREER CENTER/PRESENTATION ARCHIVES/2005/101-WAYS-TO-IMPROVE-YOUR-COMMUNICATION-SKILLS-2005.PDF](https://www.aiaa.org/uploadedfiles/education_and_careers/career_center/presentation_archives/2005/101-ways-to-improve-your-communication-skills-2005.pdf)

RSACE 1:8	INTRODUCTION TO PHOTOGRAPHY	TEACHING HOURS
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	HISTORY OF PHOTOGRAPHY "PHOTOGRAPHY" IS DERIVED FROM THE GREEK WORDS PHOTOS ("LIGHT") AND GRAPHEIN ("TO DRAW"). THE WORD WAS FIRST USED BY THE SCIENTIST SIR JOHN F.W. HERSCHEL IN 1839. IT IS A METHOD OF RECORDING IMAGES BY THE ACTION OF LIGHT, OR RELATED RADIATION, ON A SENSITIVE MATERIAL.	2
UNIT 2	PHOTOGRAPHY THE TRADITIONAL METHOD TRADITIONAL PHOTOGRAPHIC PROCESS CONSISTS OF THREE MAIN PHASES, EXPOSING, DEVELOPING & PRINTING. A LIGHT SOURCE FALLING ON A SUBJECT GETS REFLECTED. IT IS SENT THROUGH A LENS SYSTEM TO FORM A IMAGE ON A LIGHT SENSITIVE FILM. THE LATENT IMAGE IS THEN DEVELOPED TO A VISIBLE IMAGE, FURTHER CHEMICAL DEVELOPMENT IS STOPPED, EXISTING IMAGE IS FIXED AND THEN WASHED TO GIVE A NEGATIVE IMAGE. IN PRINTING PROCESS NEGATIVE IMAGE IS PLACED BETWEEN A LIGHT SOURCE AND A LIGHT SENSITIVE PAPER TO CREATE A POSITIVE LATENT IMAGE WHICH IS LATER DEVELOPED AND FIXED IN A MORE OR LESS SIMILAR PROCESS LIKE THE NEGATIVE.	2
UNIT 3	OBSERVATON OF LIGHT SENSITIVE MATERIALS.	2

	<p>ANOTHER IMPORTANT EVOLUTION IN PHOTOGRAPHY IS THE INTEREST OF HUMAN RACE TO STUDY ABOUT LIGHT SENSITIVE MATERIALS. MORE THAN 2,000 YEARS THE ANCIENT PHOENICIANS (THE FIRST CIVILIZED NATION IN THE WORLD) KNEW THAT A CERTAIN SNAIL LEFT A YELLOW SLIME THAT TURNED PURPLE BECAUSE OF ITS EXPOSURE TO SUNLIGHT.</p>	
UNIT 4	<p>OBSERVATION OF COLOR.</p> <p>COLOR AS SUCH DOES NOT EXIST IN THE WORLD; IT EXISTS ONLY IN THE EYE AND BRAIN OF THE BEHOLDER. OBJECTS REFLECT MANY DIFFERENT WAVELENGTHS OF LIGHT WAVES, BUT THESE LIGHT WAVES THEMSELVES HAVE NO COLOR. DIFFERENT WAVELENGTHS INDUCE DIFFERENT TYPES OF CONES. THE RESULT OF THIS REACTION IS VISUALIZED AS COLOR IN OUR BRAIN. THERE ARE THREE DIFFERENT TYPES OF CONES IN OUR EYE WHICH RESPOND TO THREE MAIN AREAS OF ELECTRO MAGNETIC SPECTRUM, RED, GREEN AND BLUE.</p>	2
UNIT 5	<p>DIFFERENT TYPES OF CAMERAS</p> <p><i>INSTANT COLOR FILM WAS INTRODUCED BY POLAROID IN 1963. LIKE POLAROID'S CONTEMPORARY INSTANT BLACK-AND-WHITE FILM, THEIR FIRST COLOR PRODUCT WAS A NEGATIVE-POSITIVE PEEL-APART PROCESS WHICH PRODUCED A UNIQUE PRINT ON PAPER. THE NEGATIVE COULD NOT BE RE-USED AND WAS DISCARDED. DIGITAL CAMERAS DIFFER FROM THEIR ANALOG PREDECESSORS PRIMARILY IN THAT THEY DO NOT USE FILM, BUT CAPTURE AND SAVE PHOTOGRAPHS ON DIGITAL MEMORY CARDS OR INTERNAL STORAGE INSTEAD. THEIR LOW OPERATING COSTS HAVE RELEGATED CHEMICAL CAMERAS TO NICHE MARKETS</i></p>	2
UNIT 6	<p>PHOTOGRAPHIC PRINTS</p> <p>TRADITIONALLY, LINEN RAG PAPERS WERE USED AS THE BASE FOR MAKING PHOTOGRAPHIC PRINTS. PRINTS ON FIBER-BASE PAPER COATED WITH A GELATIN EMULSION ARE QUITE STABLE WHEN PROPERLY PROCESSED. THEIR STABILITY IS ENHANCED IF THE PRINT IS TONED WITH EITHER SEPIA (BROWN TONE) OR SELENIUM (LIGHT, SILVERY TONE).</p> <p>THE NEXT INNOVATION IN PHOTOGRAPHIC PAPERS WAS RESIN-COATING, OR WATER-RESISTANT PAPER. THE IDEA IS TO USE NORMALLINEN FIBER-BASE PAPER AND COAT IT WITH A PLASTIC (POLYETHYLENE) MATERIAL, MAKING THE PAPER WATER-RESISTANT. THE EMULSION IS PLACED ON A PLASTIC COVERED BASE PAPER. THE PROBLEM WITH RESIN-COATED PAPERS IS THAT THE IMAGE RIDES ON THE PLASTIC COATING, AND IS SUSCEPTIBLE TO FADING.</p>	2
UNIT 7	<p>FILM VS DIGITAL</p> <p>COLOR FILM HAS NOW BEEN RELEGATED TO A NICHE MARKET BY INEXPENSIVE MULTI-MEGAPIXEL DIGITAL CAMERAS AND THE</p>	2

	<p>CONVENIENCE OF MAKING NON-PHOTOGRAPHIC COLOR PRINTS AT HOME. FILM CONTINUES TO BE THE PREFERENCE OF SOME PHOTOGRAPHERS BECAUSE OF ITS HIGH IMAGE QUALITY (WHEN USED WITH A HIGH-QUALITY CAMERA AND LENS) AND ITS DISTINCTIVE "LOOK." IN MEDIUM AND LARGE FORMATS, ITS EFFECTIVE PIXEL COUNT HAS NOT YET (AS OF 2010) BEEN EQUALED BY ANY COMMERCIALLY AVAILABLE AND REASONABLY PRICED DIGITAL CAMERA.</p>	
UNIT 8	<p>CHRONOLOGY OF PHOTOGRAPHY PROCESSES</p> <p>PHOTOGRAPHY WAS ONE OF THE MOST IMPORTANT INVENTIONS OF THE NINETEENTH CENTURY. THE MEN AND WOMEN WHO WORKED WITH PHOTOGRAPHIC MATERIALS FACED MANY CHALLENGES. SOLVING ONE PROBLEM OFTEN CREATED ANOTHER. ONE PROCESS REPLACED ANOTHER AS PHOTOGRAPHY BECAME CHEAPER, EASIER, SAFER AND MORE DURABLE. HOWEVER, SEVERAL PROCESSES WERE OFTEN POPULAR AT THE SAME TIME, MUCH LIKE FILM AND DIGITAL PICTURES ARE BOTH POPULAR TODAY.</p>	2
UNIT 9	<p>INTRODUCTION TO DIGITAL PHOTOGRAPHY</p> <p>DIGITAL CAMERAS HAVE A LENS, APERTURE, AND SHUTTER, BUT THEY DO NOT USE FILM. INSTEAD, DIGITAL CAMERAS USE A SOLID-STATE DEVICE CALLED AN IMAGE SENSOR.</p> <p>ALTHOUGH THE IMAGE QUALITY IS NOT AS GOOD AS CONVENTIONAL PHOTOGRAPHS, DIGITAL IMAGES ARE CONVENIENT BECAUSE THEY DO NOT REQUIRE CHEMICALS OR PAPER TO PROCESS. THEY CAN BE DISPLAYED ON A WEB PAGE, SENT VIA E-MAIL, STORED ON A COMPUTER HARD DRIVE OR A COMPACT DISC, AND PRINTED ON A PAGE.</p>	2
UNIT 10	<p>EYE OF THE PHOTOGRAPHER</p> <p>EYE OF THE PHOTOGRAPHER, THIS SUBJECT TRAIN YOU TO ASK YOURSELF THREE FUNDAMENTAL QUESTIONS AS YOU DEVELOP THE PERFECT COMPOSITION THROUGH YOUR VIEWFINDER. LEARN TO EFFECTIVELY CAPTURE EXPRESSIVE MOMENTS WITH ACCURACY AND ART AS YOU DEVELOP A KEEN SENSE OF EFFECTIVE PHOTOGRAPHIC STORYTELLING.</p>	2
UNIT 11	<p>TYPES OF CAMERAS</p> <p>CAMERAS, WE WILL STUDY A COMPREHENSIVE HISTORY OF CAMERAS. FROM PINHOLES TO POINT-AND-SHOOTS, YOU'LL DEVELOP A BROAD BACKGROUND UNDERSTANDING OF CAMERA HISTORY, ENDING WITH AN ANALYSIS OF THE OPTIONS AVAILABLE TO YOU TODAY.</p>	2
UNIT 12	<p>LENSES AND FILTERS</p>	2

	<p>IN LESSON 1.3: LENSES AND FILTERS, WE’LL LOOK MORE CLOSELY AT THE TWO ESSENTIAL ELEMENTS IN ANY PHOTOGRAPH WORKFLOW AS WE EXPLORE CAMERA FUNCTION VIA LENSES AND FILTERS. WE’LL START BY DISCUSSING BASICS SUCH AS CAMERA AND LENS COMBINATION OPTIONS, DIAPHRAGM AND APERTURE, THEN MOVE ON TO MASTER F-STOPS AND FOCAL STRENGTH.</p>	
UNIT 13	<p>HOW TO USE YOUR CAMERA</p> <p>IN LESSON 1.4: HOW TO USE YOUR CAMERA, WE’RE GOING TO ADD TWO MORE TECHNIQUES TO YOUR GROWING ARSENAL OF CREATIVE CONTROLS. BEGINNING WITH A COMPREHENSIVE REVIEW OF YOUR CAMERA’S VIEWING SYSTEM, BY THE END OF THIS LESSON YOU’LL HAVE MASTERED TECHNIQUES FOR ADJUSTING BOTH DEPTH OF FIELD AND SHUTTER SPEED.</p>	2
UNIT 14	<p>DEVELOPING YOUR EYE</p> <p>IN LESSON 2.1: DEVELOPING YOUR EYE, WE WILL BEGIN TO HARNESS YOUR NATURAL ABILITY TO CREATE BEAUTIFUL IMAGES AS WE CHANNEL THE MOST EFFECTIVE PHOTOGRAPHIC TECHNIQUES OF VISUAL ORGANIZATION AND STORYTELLING. LEARN TO EMPHASIZE YOUR MESSAGE THROUGH EFFECTIVE SUBJECT PLACEMENT AS WE ARRANGE ALL ELEMENTS OF YOUR IMAGE CAREFULLY WITHIN YOUR COMPOSITION</p>	2
UNIT 15	<p>IMAGE CAPTURE</p> <p>IN LESSON 2.2: IMAGE CAPTURE, WE BEGIN TO EXPLORE THE MECHANICS BEHIND HOW IMAGES ARE RECORDED DIGITALLY, INCLUDING A BRIEF BIT OF CONTEXT REGARDING HOW THEY’RE CAPTURED ON ACTUAL FILM. AT THIS POINT, YOU SHOULD BE WELL VERSED IN DIGITAL IMAGE SENSORS AND WILL BEGIN TO ADDITIONALLY UNDERSTAND THE INTRICACIES OF FILM EXPOSURE AS WELL.</p>	2
UNIT 17	<p>EXPOSURE</p> <p>EXPOSURE, WE WILL HELP YOU EXPLORE YOUR PERSONAL JUDGMENT REGARDING CORRECT, AESTHETICALLY PLEASING EXPOSURE. WE’LL START BY EXPLORING THE ROLE YOUR EQUIPMENT PLAYS IN EXPOSURE DETERMINATION THEN MOVE ON TO MASTER THE 5 BASIC EXPOSURE MODES AS WE CONTINUE TO HELP YOU ACHIEVE THAT PERFECT, WELL-LIT SHOT.</p>	2
UNIT 18	<p>WORKFLOW AND IMAGE EDITING</p> <p>WORKFLOW AND IMAGE EDITING, WE’RE GOING TO COVER THE WORKFLOW AND IMAGE EDITING THAT YOU’LL BE DOING IN POST-PRODUCTION, THE PHASE OF WORK THAT BEGINS WITH THE CAMERA AND THE CAPTURE OF IMAGES IN RAW, JPEG OR TIFF FORMATS. FROM BACKING UP FILES TO DELIVERING PROOFS, BY THE END OF THIS LESSON YOU’LL HAVE MASTERED A SEAMLESS, EFFECTIVE PERSONAL</p>	2

	WORKFLOW.	
UNIT 19	NATURAL AND AVAILABLE LIGHT NATURAL AND AVAILABLE LIGHT, WE WILL DISCUSS WHAT IT'S LIKE TO WORK WITH BOTH NATURAL AND ARTIFICIAL LIGHT. WHEN COVERING AVAILABLE LIGHT PHOTOGRAPHY, YOU'LL LEARN TO EFFECTIVELY CAPITALIZE ON AND USE THE LIGHT THAT ALREADY EXISTS IN A SCENE. BY THE END OF THIS LESSON, YOU LEARN TO ACTUALLY SEE LIGHT ON A DAILY BASIS THROUGH THE EYES OF AN EVER-DILIGENT PHOTOGRAPHER.	2
UNIT 20	ARTIFICIAL LIGHT-FLASH ARTIFICIAL LIGHT-FLASH, WE'LL BEGIN BY EXAMINING THE VARIOUS TYPES OF FLASH UNITS AND HOW THEY WORK, AND THEN WE'LL TEACH YOU HOW TO USE APPROPRIATE FLASH LIGHTING TO ITS BEST ADVANTAGE. FROM POP-UP FLASH TO WIRELESS, BY THE END OF THIS LESSON YOU'LL BE ABLE TO ACHIEVE THE PERFECT ARTIFICIAL LIGHTING SCENARIO TO CAPTURE WHATEVER MOOD YOU'RE HOPING TO ACHIEVE IN YOUR FUTURE SHOTS. <i>LEARN HOW TO TAKE BETTER PHOTOS</i> <ul style="list-style-type: none"> • ANYTIME – ALL NYIP COURSES ARE ONLINE, SO YOU DECIDE WHEN CLASS IS IN SESSION. START WHEN YOU'RE READY AND STUDY IN YOUR FREE TIME. • ANYWHERE – LOG ON AND WORK ON YOUR COURSE FROM ANY INTERNET-CONNECTED DEVICE – COMPUTERS, TABLETS, AND SMARTPHONES, NO MATTER WHERE YOU ARE IN THE WORLD. • AT YOUR OWN PACE – WITH NO DEADLINES OR DUE DATES, YOU ARE IN CONTROL OF HOW QUICKLY YOU PROGRESS THROUGH THIS COURSE. 	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • PORTRAIT SHOOT • EXPERIMENTATION WITH SHUTTER SPEED • EXPERIMENTATION WITH APPRETURE • DIFFERENT LIGHT (DAY LIGHT, FLASH LIGHT, NIGHT LIGHT) • EXPERIMENTATION WITH ISO 	90 HRS

REFERENCE BOOK& LINKS:

[2. Understanding Exposure, 3rd Edition: How to Shoot Great Photographs with Any Camera by Bryan Peterson](#)

[3. The Photographer's Eye: Composition and Design for Better Digital Photos by Michael Freeman](#)

[4. Extraordinary Everyday Photography: Awaken Your Vision to Create Stunning Images Wherever You Are by Brenda Tharp and Jed Manwarin by Jim Miotke](#)

[5. BetterPhoto Basics: The Absolute Beginner's Guide to Taking Photos Like a Pro by Jim Miotke](#)

[6. The Art of Photography: An Approach to Personal Expression by Bruce Barnbaum](#)

[7. David Busch's Mastering Digital SLR Photography by David D. Busch](#)

RSACE 1:9	MOTION GRAPHICS	TEACHING HOURS
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	WHAT IS MOTION GRAPHICS – INTRODUCTION – THE RULES OF DESIGN – DESIGN IS ALL ABOUT VISUAL COMMUNICATION WHICH IS STRONGER THAN WORDS ALONE. THERE ARE RULES REGRADING COLOR, TYPOGRAPHY AND COMPOSITION. MOTION DESIGNERS ALSO USE MOTION AND SOUND TO COMMUNICATE IDEAS	2
UNIT 2	THE DESIGN PROCESS – PREPERATION – JOT DOWN THE IDEAS AND SKETCHES THAT COME TO YOUR MIND – UNDERSTANDING BRIEF IS IMPORTANT- IT CAN INCLUDE INFORMATION ABOUT TARGET AUDIENCE , PREFFERED COLOR SCHEMES, FONTS, LOGOS, PROGRAM INFORMATION BEOFRE YOU GIVE VISUAL REPRESENTATION	2
UNIT 3	– VISUAL RESEARCH – TECHNICAL RESEARCH – EXPERIMENTATION - SKETCHBOOKS	2
UNIT 4	DEVELOPMENT – MOODBOARDS – STORYBOARDS – WHY DO WE USE STORYBOARDS – SOFTWARE – PAL DIMENSIONS – NTSC DIMENSIONS	2
UNIT 5	PHOTOGRAPHING ARTWORK – CREATING YOUR OWN COMPOSITE IMAGES – POST PRODUCTION	2
UNIT 6	TESTING – AUDIENCE TESTING – TECHNICAL TESTING DELIVERY, TIME MANAGEMENT - SCHEDULING	2
UNIT 7	WHAT IS COMPOSITION – ELEMENTS OF COMPOSITION INCLUDE SPACE, SHAPE, LINE , SIZE, DEPTH, MOTION, COLOR, TEXTURE	2
UNIT 8	FUNDEMENTALS OF ADOBE AFTER EFFECTS, THE INTERFACE, THE WORKSPACE, TOOLS AND EDIT PARAMENTER	4
UNIT 9	TITLE GRAPHICS AND EFFECTS IN AFTER EFFECTS, THE VARIOUS TECHNIQUES AND TIPS TO CREATE STUNNING MOTION GRAPHICS EFFECTS	4
UNIT 10	ARRANGEMENTS OF COMPOSITION – FRAMING, STAGING	2
UNIT 11	USE OF GRIDS – SCREEN DIVISION – THE RULE OF THIRDS- DIVINE PROPORTION - BREAKING THE GRID – PERSPECTIVE GRIDS	2

UNIT 12	PRINCIPLES OF COMPOSITION – UNITY – LIMITATIONS – HARMONY – REPETITION – VARIETY - DIRECTION - GROUPING	2
UNIT 13	GESTALT THEORY – CONTINUITY, BALANCE , SYMMETRY , HIERARCHY , CONTRAST, MOVEMENT	2
UNIT 14	FUNDEMENTALS OF EDITING IN ADOBE PREMIER, THE INTERFACE, THE WORKSPACE, TOOLS AND EDIT PARAMENTER	2
UNIT 15	TITLE GRAPHICS AND EFFECTS IN AFTER EFFECTS, THE VARIOUS TECHNIQUES AND TIPS FOR EDITING.	2
UNIT 16	COLOR – COLOR PERCEPTION – COLOR AND MEANING – THE ARTISTS COLOR MODEL – COLOR THEORY	2
UNIT 17	HUE,SATURATION & BRIGHTNESS - COLOR AND TEMPERATURE – COLOR MANAGEMENT	2
UNIT 18	EDITING – THE PRINCIPLES OF EDITING – EDITING APPLICATIONS – TOOLS	2
UNIT 19	TECHNICAL – VIDEO FORMATS – ASPECT RATIOS – WIDESCREEN	2
UNIT 20	DIGITAL VIDEO PLATFORMS – CHANNELS – TRANSPERENCY – MASKS	2
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • TITLE GRAPHICS • TITLE ANIMAION • INFO GRAPHIC PRESENTATION • KEYING & COMPOSITION 	90 HRS

READING REFERENCE

- DESIGN ESSENTIALS FOR THE MOTION MEDIA ARTISTS BY ANGIE TAYLOR
- ADOBE AFTER EFFECTS IN CLASSROOM
- ADOBE PREMIER IN CLASSROOM

RSACE 1:10	PROJECT SUBMISSION (1ST YEAR)	TEACHING HOURS 20
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	PROJECT / PORTFOLIO SUBMISSION DETAILS	TIME ALLOTTED
	SUBMISSION GUIDLINE : <ul style="list-style-type: none"> • PROJECT TITLE • DURATION OF THE PROJECT • PROJECT LEADER AND LIST OF TEAM MEMBER • CONTACT DETAILS OF THE MAIN TEAM. • SUMMARY OF PROJECT • INTRODUCTION. • THE RESEARCH AND APPROACHES. • FINAL SUBMISSION. • OUTCOMES / FINDINGS / EVALUATION. • CONCLUSION • ACKNOWLEDGEMENTS. 	4
	<p>THE FINAL PROJECT PROVIDES THE STUDENT WITH THE TIME TO DEVELOP ANY ONE OF THE FOLLOWING DEPENDS UPON THE SPECIALIZATION THEY CHOOSE FROM 2ND YEAR.</p> <p>(1) ART PORTFOLIO – IF A STUDENT CHOOSES ANIMATION FROM 2ND YEAR.</p> <p>(2) MOTION GRAPHICS DEMOREEL – IF A STUDENT CHOOSES VISUAL EFFECT FROM 2ND YEAR.</p> <p>(3) SHORT FILM – IF HIS / HER ELECTIVE SUBJECT IS FILM ART / FILM PRODUCTION / SCREEN WRITING.</p> <ul style="list-style-type: none"> • FINALIZING THE WRITING 2-5 MINS FILM • PRE PRODUCTION & PLANNING, BUDGETING ETC. • FINALISING LOCATIONS AND ACTORS, REHEARSALS • SHOOTING & EDITING • ADDITIONAL EDITING & SOUND WORK WITH BASIC MIXING (2 TRACKS) 	10

YEAR 02

INTRODUCTION

This semester you would get introduced to quite a few software and develop an understanding on how VFX industry works. Imagination is one of the key skills of a visual artist and you would be made to exercise that. The VFX industry requires creativity, innovation and refreshing ideas and you have to be prepared for that. Basically visual effects is when an imagery is created or manipulated with the use of computer generated 3D models, miniature and painting, that can be integrated seamlessly in the live action video. An art form that is created using various techniques of graphic software that uses virtual canvas and virtual painting. The advantage of VFX is one can bring their imaginative environment or characters in to life. You would learn how such characters, gaming props and costumes are created or how a character sketch is developed. Visual effects is about creating the art forms that can take one in virtual reality that one can connect to. The industry has seen tremendous growth for the past 2 decades in term of technology and innovation. Therefore, VFX is also used in 80% of the films (domestic & International) where it's difficult to shoot certain scenes or getting to the location is more expensive than to create an artificial one.

Objectives for semester 03

The objective for this semester is to introduce you to the real work of VFX industry. Here you start with software like Photoshop & After Effects. You learn the different tools and techniques used in these programs and work on some advanced and creative tutorials that allow you to develop a grip over it. Visual development is the subject where you will be taught how to develop a concept or how to convert your imagination to a great visual story. The understanding of character building and environment development through various fun activities and educational exercises.

You also learn how to plan a green screen shoot and how the scenes are shot. How much work goes behind creating that conceptualized locations or effects.

RSACE 4:11	VISUAL DEVELOPMENT (VFX PRE PRODUCTION)	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	INTRODUCTION TO VISUAL DEVELOPMENT. WHAT IS A ROLE OF A VISUAL ARTIST AND WHAT IS HIS/HER WORK PROFILE? WHAT ARE THE BASICS OF VISUAL DEVELOPMENT? VISUAL DEVELOPMENT ARTISTS WORK WITH CREATIVE DEPARTMENTS TO DEVELOP BACKGROUNDS, COLORS, LIGHTING, ENVIRONMENTS, AND PROPS FOR FILMS, ANIMATED PIECES AND MORE. THEY USE ANIMATION, ILLUSTRATION, DRAWING, AND DESIGN SKILLS TO CREATE VISUALS THAT CONVEY IDEAS ABOUT HOW THEY ENVISION THE look IN THE FINAL OUTCOME	2
UNIT 2	HISTORY OF VISUAL DEVELOPMENT. WHAT WERE THE EARLY STAGES OF VISUAL DEVELOPMENT? THE ARTIST WHO PIONEERED IN THE FIELD. MILESTONES IN THE FIELD VISUAL DEVELOPMENT.	2
UNIT 3	HOW TO DEVELOP A CONCEPT? HOW TO GATHER THE SET OF REFERENCES IN ORDER TO DEVELOP A CONCEPT? HOW TO CREATE A PIPELINE FOR THE PROJECT? WHAT IS THE IMPORTANCE OF CONCEPT IN VISUAL DEVELOPMENT?	2
UNIT 4	HOW TO CREATE MOOD AND TONE FOR A VISUAL DEVELOPMENT? THE IMPORTANCE OF SELECTING A COLOUR PALETTE AND ITS UTILIZATION. HOW TO USE LIGHTING TO MAKE A VISUALLY APPEALING THE WORK?	2
UNIT 5	HOW TO SET TONE FOR VARIOUS SCENES, SETTINGS, LANDSCAPES AND BUILDING? HOW TO DEVELOP A COLOUR SCRIPT?	2
UNIT 6	HOW TO MAKE A MIND MAP? HOW TO BRAINSTORM FOR A CHARACTER, ENVIRONMENT OR PROP? WHAT IS THE IMPORTANCE OF MAKING A MIND MAP AND WHAT ALL DETAILS SHOULD BE INCLUDED?	2
UNIT 7	HOW TO STRENGTHEN ONES IMAGINATION? WHAT IS THE IMPORTANCE OF OBSERVATION? HOW TO COMBINE IMAGINATION AND OBSERVATION TO CREATE SURREAL VISUALS? WHAT SHOULD BE THE LEVEL OF INTERACTIVITY?	2
UNIT 8	HOW TO CREATE AN ENVIRONMENT? THE THINGS TO KEEP IN MIND WHILE CREATING ENVIRONMENT. HOW TO MAKE IMPACTFUL VISUALLY DEVELOPED ENVIRONMENT?	2
UNIT 9	HOW TO CREATE A CHARCTER? HOW TO ADD DEPTH TO THE CHARACTER IN MAKING? WHAT IS A SHALLOW CHARACTER? WHAT IS MEANT BY A GENERIC CHARACTER?	2
UNIT 10	HOW TO BUILD PERSONALITY OF A CHARACTER? WHEN TO EXAGGERATE THE CHARACTERISTICS OF A CHARACTER? FEATURES USED TO ENHANCE THE PERSONALITY OF A CHARACTER.	2

UNIT 11	HOW TO CREATE CLOTHINGS FOR CHARACTERS AND PROPS FOR THE ENVIRONMENT? HOW DETAILED SHOULD THE CLOTHING AND PROPS BE FOR A CONCEPT DEVELOPMENT? HOW IMPORTANT ARE THESE ELEMENTS?	4
UNIT 12	HOW TO CONDUCT A PROPER ANALYSIS FOR A CHARACTER OR ENVIRONMENT? WHAT IS THE IMPORTANCE OF GIVING DETAILS TO THE CONCEPTS?	2
UNIT 13	WHAT MEDIUMS CAN BE USED IN ORDER TO DEVELOP A PROPER CONCEPT? MULTI-MEDIA DESIGNING USED TO CREATE YOUR VISUALS. HOW TO INCORPORATE PAINTINGS, PHOTOGRAPHS, SCULPTURES, ETC TO COMMUNICATE THE VISUALS EFFECTIVELY.	2
UNIT 14	HOW TO CREATE A CHARACTER OR ENVIRONMENT FOR A MOVIE? HOW MUCH IMPORTANCE IS TO BE GIVEN TO CHARACTER? HOW MUCH DETAILED AN ENVIRONMENT SHOULD BE? HOW MUCH IMPORTANCE TO BE GIVEN TO CHARACTERS? HOW SIGNIFICANT THE ENVIRONMENT BE?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	<ol style="list-style-type: none"> 1. DEVELOP A CONCEPT. GATHER SOME REFERENCES SUCH AS PHOTOGRAPH OR A SKETCH. 2. CREATE A MIND MAP OF AN ENVIRONMENT. 3. BUILD A PROPER PERSONALITY OF A CHARACTER AND DESIGN THE CLOTHING OR PROPS THE CHARACTER. 4. SELECT COUPLE OF BLOCKBUSTER VFX FILMS AND WRITE UP A VFX FILM ANALYSIS. 	90 HRS

REFERENCE BOOKS

1. VISUAL EFFECTS IN A DIGITAL WORLD BY KAREN E. GOULEKAS
2. VFX FUNDAMENTALS: VISUAL SPECIAL EFFECTS USING FUSION 8.0 BY WALLACE JACKSON
3. [DIGITAL] VISUAL EFFECTS AND COMPOSITING BY MARTIN WATT AND ERWIN COUMANS

REFERENCE LINKS

1. [HTTP://CHRISOATLEY.COM/UPCOMING2015/](http://CHRISOATLEY.COM/UPCOMING2015/)
2. [HTTPS://THEWALTDISNEYCOMPANY.COM/EMPLOYEE-PROFILE-SPOTLIGHT-ON-A-VISUAL-DEVELOPMENT-ARTIST-2/](https://THEWALTDISNEYCOMPANY.COM/EMPLOYEE-PROFILE-SPOTLIGHT-ON-A-VISUAL-DEVELOPMENT-ARTIST-2/)
3. [HTTP://WWW.ARTOFVFX.COM/ESCAPE-PLAN-CHRIS-WELLS-VFX-SUPERVISOR-HYDRAULX/](http://WWW.ARTOFVFX.COM/ESCAPE-PLAN-CHRIS-WELLS-VFX-SUPERVISOR-HYDRAULX/)
4. [HTTP://CONCEPTARTWORLD.COM/ARTISTS/INTERVIEW-WITH-VISUAL-DEVELOPMENT-ARTIST-LANDIS-FIELDS/](http://CONCEPTARTWORLD.COM/ARTISTS/INTERVIEW-WITH-VISUAL-DEVELOPMENT-ARTIST-LANDIS-FIELDS/)

RSACE 4.12	DIGITAL ART - PART 01 (PHOTOSHOP)	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	GETTING TO KNOW THE WORK AREA: STARTING TO WORK IN ADOBE PHOTOSHOP, USING THE TOOLS, USING THE OPTIONS BAR AND OTHER PANELS, UNDOING ACTIONS IN PHOTOSHOP, CUSTOMIZING THE WORKSPACE, FINDING RESOURCES FOR USING PHOTOSHOP, CHECKING FOR UPDATES, TOOLS PANEL OVERVIEW	2
UNIT 2	BASIC PHOTO CORRECTIONS: STRATEGY FOR RETOUCHING, RESOLUTION AND IMAGE SIZE, GETTING STARTED, ADJUSTING THE COLOR IN CAMERA RAW, STRAIGHTENING AND CROPPING THE IMAGE IN PHOTOSHOP, REPLACING COLORS IN AN IMAGE,	4
UNIT 3	WORKING WITH SELECTIONS: HOW TO USE THE QUICK SELECTION TOOL, AND MOVE A SELECTED AREA, HOW MANIPULATE SELECTIONS, USING THE MAGIC WAND TOOL, SELECTING WITH THE LASSO TOOLS, ROTATING A SELECTION, SELECTING WITH THE MAGNETIC LASSO TOOL, CROPPING AN IMAGE AND ERASING WITHIN A SELECTION, REFINING THE EDGE OF A SELECTION	4
UNIT 4	PHOTO RESTORATION : ADJUSTING SATURATION WITH THE SPONGE TOOL, REPAIRING AREAS WITH THE CLONE STAMP TOOL, USING THE SPOT HEALING BRUSH TOOL, USING CONTENT-AWARE FILL, APPLYING THE UNSHARP MASK FILTER, SAVING THE IMAGE FOR FOUR-COLOR PRINTING	4
UNIT 5	LAYER BASICS: USING THE LAYERS PANEL, REARRANGING LAYERS, APPLYING A GRADIENT TO A LAYER, APPLYING A LAYER STYLE, FLATTENING AND SAVING FILES	2
UNIT 6	CORRECTING AND ENHANCING DIGITAL PHOTOGRAPHS: ABOUT CAMERA RAW FILES, PROCESSING FILES IN CAMERA RAW, MERGING EXPOSURES AND APPLYING ADVANCED COLOR CORRECTION, CORRECTING DIGITAL PHOTOGRAPHS IN PHOTOSHOP, CORRECTING IMAGE DISTORTION, ADDING DEPTH OF FIELD	4
UNIT 7	MASKS AND CHANNELS: CREATING A MASK, REFINING A MASK, CREATING A QUICK MASK, MANIPULATING AN IMAGE WITH PUPPET WARP, WORKING WITH CHANNELS.	4
UNIT 8	DIGITAL PORTFOLIO – LEARNING DIGITAL AND TECHNICAL SKILLS TO CREATE A DIGITAL PORTFOLIO WITH INTERACTIVE MEDIA SUITABLE FOR DISTRIBUTION INCLUDING CURRENT DELIVERY MEDIA AND A PORTFOLIO WEBSITE – EQUIPPING WITH KNOWLEDGE IN FUNDAMENTALS OF VISUAL DESIGN AND WORK WITH INDUSTRY STANDARD AUTHORING SOFTWARE PROGRAMS	2

RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • 10X10 INCHES- SYMMETRY DESIGN USING BASIC PRINCIPLES OF COLOUR (PRIMARY, SECONDARY OR TERTIARY COLOURS) • DIGITAL PHOTO RESTORATION (DUST REMOVAL, COLORING, SCRATCH REMOVAL ETC) • DOUBLE EXPOSURE EXERCISE • VECTOR DRAWINGS • DIGITAL PAINTING 	90 HRS

REFERENCE BOOK :

ADOBE PHOTOSHOP CS6 CLASSROOM IN A BOOK – BY BRIE GYNCILD

PHOSHOP CC VISUAL QUICK START GUIDE – BY ELAINE WEINMANN AND PETER LAUREKAS

REFERENCE LINKS

[HTTP://WWW.DIGITALARTSONLINE.CO.UK/FEATURES/ILLUSTRATION/86-BEST-PHOTOSHOP-TUTORIALS-UPDATED/](http://www.digitalartsonline.co.uk/features/illustration/86-best-photoshop-tutorials-updated/)

[HTTPS://WWW.PHOTOSHOPTUTORIALS.WS/](https://www.photoshoptutorials.ws/)

[HTTP://WWW.PHOTOSHOPESSENTIALS.COM/](http://www.photoshopesentials.com/)

5. Photoshop Masking Techniques Everyone Should Know

RSACE 4:13	DIGITAL ART 02 (PHOTOSHOP)	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	VECTOR DRAWING TECHNIQUES. Learning about bitmap images and vector graphics. How to create paths and use them to with artwork? How to use pen tool in order to create a vector image.	2
UNIT 2	VECTOR DRAWING TECHNIQUES. Creating vector objects for the background. How to work with defined custom shapes? Importing a Smart Object.	2
UNIT 3	ADVANCED LAYERING. How to clip a layer to a shape? How to set up a vanishing point grid? How to place the imported art work? Adding the art work in perspective. How to add a layer style?	2
UNIT 4	ADVANCED LAYERING. Placing the side panel art work and adding more art work in perspective. How to add adjustment layer? Working with layer comps and managing layers. How to flattening a layered image? Merging layers and layer groups. How to work with stamping layers?	2
UNIT 5	RETOUCHING AND RESTORATION OF AN IMAGE. What type of adjustments can help enhance an image? Repairing an image with adjustments, focus and toning tool. How to use retouching and healing tools? How to refine the edges?	2
UNIT 6	HOW TO CREATE COMPOSITIONS IN PHOTOSHOP? What are the few parameters that should be kept in mind while making a composition? What are some advanced techniques to create effective compositions? How to use texture effect to enhance the image?	2
UNIT 7	ADVANCED COMPOSITING. How to assemble a montage of images? How to apply filters? Hand-colouring elements on a layer. How to apply Smart filters? How to add drop shadows and a border?	2
UNIT 8	ADVANCED COMPOSITING. Matching colour schemes across image. How to automate a multistep task in order to work smartly? How to stitch a panorama?	1
UNIT 9	WHAT IS MEANT BY FILTERS AND DISTORTIONS? How to make corrections with layer filters? How to apply filters for special occasions? How to distort with liquefy command work?	1
UNIT 10	FILTERS AND DISTORTIONS. What are the different types that can be used to enhance the image? How to apply the unsharp mask filter?	2
UNIT 11	THE USAGE OF LIGHT TO ENHANCE AN IMAGE. How to balance lighting properly when compositing elements? How to create glow and lighting effect? How to use light effects to bring sparkle or change the luminosity of an image? How to add or remove shadows?	2

UNIT 12	WHAT ARE PHOTOSHOP ACTIONS? How to manage actions? How to use it to personalise your work flow? What are the advantages and disadvantages of action?	2
UNIT 13	PAINTING WITH THE MIXER BRUSH. How to select brush setting? How does the mixing colours work? How to create a custom brush preset? How to mix colours with a photograph?	2
UNIT 14	WORKING WITH 3D IMAGES. How to create a 3D shape from a layer? How to manipulate 3D objects? Using the 3D panel to adjust lighting and surface texture.	2
UNIT 15	WORKING WITH 3D IMAGES. How to merge two dimensional layers onto 3D layers? How to import 3D file? Merging 3D layers to share the same 3D space. How to add a spot light? How to paint on a 3D object? Using Repousse to create 3D text. Learning how to create 3D postcard.	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. MAKE A VECTOR IMAGE. 2. MAKE A DIGITAL PAINTING 3. MATTE PAINTING COMPOSITION USING AT LEAST 4 OR 5 IMAGES.	90 HRS

REFERENCE BOOKS

1. ADOBE PHOTOSHOP CC FOR PHOTOGRAPHER BY MARTIN EVENINGS
2. PHOTOSHOP CC: THE MISSING MANUAL BY LESA SNIDER
3. PHOTOSHOP CC BIBLE BY LISA DANAE, BRAD DAYLEY

REFERENCE LINKS

[HTTP://ABDUZEEDO.COM/AWESOME-MAGNETO-DIGITAL-PAINTING-CASE-STUDY-ERIC-VASQUEZ](http://ABDUZEEDO.COM/AWESOME-MAGNETO-DIGITAL-PAINTING-CASE-STUDY-ERIC-VASQUEZ)

[HTTPS://PAINTABLE.CC/LUNA-CASE-STUDY/](https://PAINTABLE.CC/LUNA-CASE-STUDY/)

[HTTPS://WWW.RESEARCHGATE.NET/PUBLICATION/237021035_MULTISPECTRAL_IMAGING_FOR_DIGITAL_PAINTING_ANALYSIS_A_GAUGUIN_CASE_STUDY](https://WWW.RESEARCHGATE.NET/PUBLICATION/237021035_MULTISPECTRAL_IMAGING_FOR_DIGITAL_PAINTING_ANALYSIS_A_GAUGUIN_CASE_STUDY)

[HTTPS://VFXFORFILM.WORDPRESS.COM/2013/01/03/MATTEPAINTING/](https://VFXFORFILM.WORDPRESS.COM/2013/01/03/MATTEPAINTING/)

[HTTPS://WWW.FXGUIDE.COM/FEATURED/CINEMATICS-CASE-STUDY-MASS-EFFECT-3/](https://WWW.FXGUIDE.COM/FEATURED/CINEMATICS-CASE-STUDY-MASS-EFFECT-3/)

RSACE 4:14	MOTION GRAPHICS - 02	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	ADOBE AFTER EFFECTS. A basic introduction to the software. Who created the After Effects? What is the software mostly used for? What are the key factors of software?	2
UNIT 2	HOW TO SET UP A PROJECT IN AFTER EFFECTS? What is meant by After effects interface, work area, timeline? What is the importance of various transition effects? How to set up a project and to import/export files? What are edit parameters, menus and tools in after effects?	2
UNIT 3	VIDEO EDITING AND AFTER EFFECTS. How do you add special effects to the videos? What is the difference between After Effects and Premier? How does audio editing work in after effects?	2
UNIT 4	MOTION GRAPHICS AND AFTER EFFECTS. Who s a motion graphic designer? What is motion media? What is stop motion animation?	2
UNIT 5	3D COMPOSITING AND LAYERING. What are the various properties of layers? The different options in hiding and un-hiding layers. The different options in editing the parameters.	2
UNIT 6	MASKING AND MATTES. How to do masking? How can a scene be polished by adding some effects? How to modify a layer's alpha channel? What is Matte? Mattes generation and approach.	2
UNIT 7	WHAT IS MEANT BY COLOR CORRECTION? What is colour scheme ? How to work with colours? The build-in effects for colour correction. What is colour mapping? What are the colour problems and how to resolve it?	2
UNIT 8	ANIMATION AND KEY FRAMES. What is title animation? How to create and edit text? What are text controls? What are the other style features that can be used to enhance the characters? What are the types of texts available in After Effects? What are the differences between text layers and other layers?	2
UNIT 9	TIME CONTROL IN AFTER EFFECTS. What is time stretching? What is time remapping? What is Strobe? How to animate the value of Frame rate slider? How to apply the Time Difference effect to locate colour difference? What is Time Displacement?	2
UNIT 10	TRACKING AND STABILIZING. What is Motion tacking? The different ways to execute motion tracking. What are the Various applications that can be used for motion tracking?	2
UNIT 11	KEYING AND WIRE REMOVAL. What is a Chrome key and Matte key? How to use a keyed layer? How does Wire removal work? How to conduct a chrome shoot? How to add light wrap to keyed footage?	2
UNIT 12	ROTOSCOPY. What is rotoscoping? What are the Rotoscoping techniques? The importance of rotoscoping in the entertainment industry. How is it used to manipulate the classic footages?	2

UNIT 13	USE OF LIGHTS IN AFTER EFFECTS. How to give proper light effects to the video? Why is it important to properly light a video? How to create 3D light rays? How to create advanced light rays? How to work on lens flares?	2
UNIT 14	WHAT IS 3D CAMERA TRACKING? How to fly a camera around in after effects and land on frame video? What is the difference between rotation and orientation? What is camera stabilizing?	2
UNIT 15	HOW TO PUT TOGETHER A REALISTIC COMPOSITE? How to animate characters into real-world scenes? How to create a smokey type effect?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. TAKE ANY VIDEO AND ADD DIFFERENT EFFECTS TO IT USING THE VAST EFFECT LIBRARY. 2. USING LAYERING AND MATTE EDIT A VIDEO. 3. COLOUR CORRECT THE VIDEO GIVEN. 4. USE DIFFERENT LAYER FROM A MATTE PAINTING AND PUT UP A REALISTIC COMPOSITE WITH CAMERA MOVEMENT.	90 HRS

REFERENCE BOOKS

1. ADOBE AFTER EFFECTS CC CLASSROOM IN A BOOK BY ADOBE CREATIVE TEAM
2. THE AFTER EFFECTS ILLUSIONIST BY CHAD PERKINS
3. CREATING MOTION GRAPHICS WITH AFTER EFFECTS BY TRISH & CHRIS MEYER

REFERENCE LINKS

1. [HTTP://WWW.CREATIVEBLOQ.COM/AFTER-EFFECTS/TUTORIALS-1232661/6](http://WWW.CREATIVEBLOQ.COM/AFTER-EFFECTS/TUTORIALS-1232661/6)
2. [HTTP://WWW.CREATIVEBLOQ.COM/AFTER-EFFECTS/TUTORIALS-1232661/6](http://WWW.CREATIVEBLOQ.COM/AFTER-EFFECTS/TUTORIALS-1232661/6)
3. [HTTPS://WWW.LYNDA.COM/AFTER-EFFECTS-TUTORIALS/WHAT-AFTER-EFFECTS-VIDEO/122431/138883-4.HTML](https://WWW.LYNDA.COM/AFTER-EFFECTS-TUTORIALS/WHAT-AFTER-EFFECTS-VIDEO/122431/138883-4.HTML)
4. [HTTP://CONTENT.VIDEOBLOCKS.COM/TIPSTRICKS/ADOBE/ADOBE-AFTER-EFFECTS/11-ESSENTIAL-CHROMA-KEY-AFTER-EFFECTS-TUTORIALS/](http://CONTENT.VIDEOBLOCKS.COM/TIPSTRICKS/ADOBE/ADOBE-AFTER-EFFECTS/11-ESSENTIAL-CHROMA-KEY-AFTER-EFFECTS-TUTORIALS/)
5. [HTTPS://WWW.PREMIUMBEAT.COM/BLOG/15-AFTER-EFFECTS-TUTORIALS-EVERY-MOTION-DESIGNER-NEEDS-TO-WATCH/](https://WWW.PREMIUMBEAT.COM/BLOG/15-AFTER-EFFECTS-TUTORIALS-EVERY-MOTION-DESIGNER-NEEDS-TO-WATCH/)
6. [HTTPS://WWW.ROCKETSTOCK.COM/BLOG/HOW-TO-REALISTICALLY-REPLACE-DIGITAL-SCREENS-IN-MOCHA-AND-AFTER-EFFECTS/](https://WWW.ROCKETSTOCK.COM/BLOG/HOW-TO-REALISTICALLY-REPLACE-DIGITAL-SCREENS-IN-MOCHA-AND-AFTER-EFFECTS/)
7. [HTTPS://HELPX.ADOBE.COM/AFTER-EFFECTS/USING/KEYING.HTML](https://HELPX.ADOBE.COM/AFTER-EFFECTS/USING/KEYING.HTML)

RSACE 4:15	PLANNING & CHROMA SHOOT	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	THE PROCESS OF PLANNING VISUAL EFFECTS. WHAT IS SEAMLESS VFX? WHY IS IT ESSENTIAL TO PLAN THE SHOOT ACCORDING TO VISUAL EFFECT SHOTS? HOW TO PLAN COST EFFECTIVE SHOOT? WHAT IS PRE-VISUALIZATION?	2
UNIT 2	WHAT IS CHROMA KEY? WHAT IS CHROMA RANGE? WHAT IS COLOUR SEPARATION OVERLAY? THE USAGE AND TYPES OF GREEN SCREEN. WHAT IS GAFFER TAPE AND WHERE IS IT USED?	2
UNIT 3	HISTORY OF CHROMA KEY. WHAT IS TRAVELLING MATTE TECHNIQUE OR OPTICAL PRINTING? THE EXPERIMENTATION OF BACKGROUND COLOURS. WHEN WAS GREEN OR BLUE SCREEN FIRST USED? WHAT CGI? WHAT IS BAYER PATTERN?	2
UNIT 4	WHY THE SELECTION OF BACKGROUND COLOUR IS IMPORTANT ? THE CONSIDERATION OF COLOURS OF THE ELEMENTS WHILE SHOOTING ON GREEN SCREEN. WHAT COLOURS SHOULD BE AVOIDED? WHEN DO YOU INTENTIONALLY USE THE SAME COLOURED ELEMENTS?	2
UNIT 5	THE GREEN SCREEN INTENSIVE. WHY THE SELECTION OF GREEN SCREEN PAINT IMPORTANT? HOW TO BUILD AND PAINT A GREEN SCREEN? THE REQUIREMENT OF COLOUR SAMPLING.	2
UNIT 6	THE IMPORTANCE OF CONTROLLED LIGHTING. HOW TO LIGHT GREEN SCREEN PROPERLY? WHY IS IT IMPORTANT TO MATCH LIGHTING? HOW TO MATCH LIGHTING AND SHADOWS OF THE FORE-GROUND AND BACKGROUND? HOW TO CAST OR EXTRACT SHADOW?	2
UNIT 7	THE IMPORTANCE OF CONTROLLED LIGHTING. HOW TO MATCH LIGHTING FOR OUTDOOR SHOTS? WHAT IS LIGHT SCATTERING? WHAT IS MEANT BY LIGHT SPILL? WHY THE DIRECTIONS OF LIGHT SHOULD MATCH?	2
UNIT 8	THE POSITIONING OF CAMERA. WHY SHOULD CAMERA BE 'LOCKED OFF' IN A POSITION? THE IMPORTANCE CAMERA MATCHING AND HOW IT SHOULD BE TAKEN CARE OFF. WHAT IS CAMERA MAPPING? MATCHING THE DEPTH OF FIELD.	2
UNIT 9	THE USAGE OF BLOCKING, TRACKERS AND MARKERS. HOW DOES TRACKER WORK? WHAT IS 2D TRACKING? HOW TO PLACE TRACKING MARKERS? WHAT IS PLANER TRACKING AND MATTE TRACKING? HOW TO PLACE BODY AND FACIAL TRACKERS?	2
UNIT 10	HOW DOES ROTOSCOPING WORK? WHAT IS ALPHA CHANNEL? WHAT IS THE PURPOSE OF ROTOSCOPING IN VFX? WHAT ARE THE TOOLS REQUIRED TO BEGIN ROTOSCOPING?	2
UNIT 11	WHAT IS MATCH MOVING? HOW TO SHOOT FOR MATCH MOVING? WHAT IS INVERSE MATCH MOVING? WHY IS ESSENTIAL TO MATCH DIRECTION. QUALITY AND RATIO?	2

UNIT 12	HOW DOES MOTION CONTROLLING WORK? WHAT IS MOTION CAPTURING? WHAT IS IN-SHOT MOTION CAPTURE? WHAT IS MOTION CAPTURE PRIMER?	2
UNIT 13	THE INTERACTIONS BETWEEN FOREGROUND AND BACKGROUND. HOW TO CREATE VIRTUAL PROPS? HOW TO REMOVE OBJECTS? HOW TO CREATE PHOTO-REAL ANIMALS, CREATURES, DIGITAL CROWD, FIRE, WATER? WHAT IS CROWD REPLICATION?	4
UNIT 14	WHAT IS MEANT BY COMPOSITING? WHAT IS NODE-BASED COMPOSITING? WHAT IS COMPOSITING PRIMER? WHAT IS WARPING AND WHERE IS IT USED? WHAT IS GARBAGE MATTING? WHAT IS COMPOSITING WITHOUT MATTE?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. ELIMINATE THE GREEN SCREEN FROM THE GIVEN FOOTAGE. 2. GIVE PROPER LIGHTING IN THE GIVEN FOOTAGE. 3. CONDUCT A CHROMA SHOOT. (A) PLAIN CHROMA SHOOT (B) WITH TRACKER MARKER AND (C) WITH HALF SETS AND PROPS.	90 HRS

REFERENCE BOOKS

1. THE GREEN SCREEN HANDBOOK: REAL-WORLD PRODUCTION TECHNIQUES BY JEFF FOSTER
2. GREENSCREEN MADE EASY:KEYING AND COMPOSITING TECHNIQUES FOR INDIE FILMMAKERS BY JEREMY HANKE & MICHELE YAMAZAKI

REFERENCE LINK

1. [HTTP://WWW.DECCANCHRONICLE.COM/150511/ENTERTAINMENT-BOLLYWOOD/ARTICLE/PLANNING-VFX-MIND-MAKES-YOUR-FILM-LOOK-GOOD-ANISH-MULANI](http://WWW.DECCANCHRONICLE.COM/150511/ENTERTAINMENT-BOLLYWOOD/ARTICLE/PLANNING-VFX-MIND-MAKES-YOUR-FILM-LOOK-GOOD-ANISH-MULANI)
2. [HTTP://NEILOSEMAN.COM/?P=3199](http://NEILOSEMAN.COM/?P=3199)
3. [HTTP://BCT.ME/TUTORIALS/VFX-SUPERVISION-1/](http://BCT.ME/TUTORIALS/VFX-SUPERVISION-1/)
4. [HTTP://EFFECTSCORNER.BLOGSPOT.IN/2008/05/DESIGNING-VISUAL-EFFECT-SHOTS.HTML#.WOZSKMFHWUK](http://EFFECTSCORNER.BLOGSPOT.IN/2008/05/DESIGNING-VISUAL-EFFECT-SHOTS.HTML#.WOZSKMFHWUK)

FORTH SEMESTER

INTRODUCTION

This semester has a broad overview of 3D concepts and the techniques that apply to all types of 3D artwork, character designs, product shots, animation and visual effects. The industry of three dimensional animation is remarkable and growing exponentially. You see the usage of 3D animation in commercial movies, infomercials, commercial ads, daily soaps, etc. It's an amazing journey the industry has been through. The Matte paintings or the imaginative artwork used to be created by, painting images on glass and be part of a film but today it is completely computerized. There are numerous 3D software packages that are available today and develop ability to give life to your imagination. We use these technologies to take our films to the next level and job of a proper compilation of the work is of a director and cinematographer. Understanding cinematography is very important and useful for a live-action and virtual/CG filmmaking. Hence learning the key concepts and techniques of composition and camera movement is essential. It is also important to develop the organisational skills involved in camera operation or light/sound recording. You will also understand the technical requirements such as focal-length lenses and depth of field and how to utilise this knowledge in a creative and narrative sense.

Objectives of Semester 04

You will start with navigating in 3D space and how to manipulate the existing objects, reviews geometry and modelling. You will also learn how to apply colour and textures to the surfaces and basic theory of rendering. You will understand the importance of connecting objects through hierarchies. Develop skills like sculpting in 3D, creating patch based surfaces, etc. You will be introduced to matte painting and set extensions. The various techniques that can be used to combine a matte-painted image with a live action footage. Understanding the origin of the industry and the practices. Then we will be also looking into cinematography and what are the main tasks of a cinematographer. Develop the postproduction skills to further enhance the visual aesthetics of your content and learn about the history of the cinematography.

RSACE4:16	FUNDAMENTALS OF 3D	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	WHAT IS VISUAL EFFECTS? WHAT IS MEANT BY DIGITAL CREATIVE ENVIRONMENT? WHAT IS THE HISTORY OF DEVELOPMENT OF THE TECHNOLOGY AND WHAT ARE THE VISUAL MILESTONES? THE PROGRESS OF VFX MOVIES IN 2000S.	2
UNIT 2	INTRODUCTION 3D - THE MAYA INTERFACE : NAVIGATING IN MAYA, MAYA LAYOUT, BUILDING A DECORATIVE BOX, MAPPING THE BOX'S REFERENCE PLANES WITH HYPERSHADE, ORGANIZING WORKFLOW WITH LAYER EDITOR, MODELING THE DECORATIVE BOX, EDITING THE DECORATIVE BOX, CONTINUING THE DECORATIVE BOX, FINISHING THE DECORATIVE BOX.	4
UNIT 3	THE CONCEPTS OF MODELLING. HOW TO CREATE SPACE, OBJECTS AND STRUCTURES IN MODELLING? HOW TO MOVE THE OBJECTS AROUND? HOW TO ADD VERTICES, EDGES AND FACETS IN ORDER TO CREATE THE OBJECT? WHAT ARE THE DIFFERENT FILE FORMATS THAT SHOULD BE USED?	2
UNIT 4	WHAT ARE THE DIFFERENT APPROACHES TO MODELLING? HOW TO ORGANISE AND SET UP A PROJECT? WHO ARE MODELLERS? THE TYPES OF MODELLERS.	2
UNIT 5	THE TECHNIQUES OF MODELLING. UNDERSTANDING THE CURVED LINES, GEOMETRIC PRIMITIVES, SWEEPING, FREE-FORM OBJECTS. WHAT IS MEANT BY BOX MODELLING AND PROCEDURAL MODELLING? WHAT IS IMAGE-BASED MODELLING OR PHOTO-REALISM?	2
UNIT 6	WHAT IS ANIMATION? WHAT ARE THE DIFFERENT TECHNIQUES OF ANIMATION? THE INITIAL ANIMATION FILMS. WHAT DOES THE TERM TRADITIONAL ANIMATION MEAN? THE EXPANSION OF ANIMATION INDUSTRY AND USAGE OF ANIMATION BY VARIOUS COUNTRIES TO MAKE FILMS.	2
UNIT 7	UNDERSTANDING THE CONCEPTS OF RENDERING WHAT IS THE PROCESS OF RENDERING? WHAT ARE THE STEPS OF PROCESS OF RENDERING? THE USE OF LIGHT AND CAMERA WHEN RENDERING. HOW TO ASSIGN MATERIALS AND COLOUR TO THE MODEL?	2
UNIT 8	UNDERSTANDING THE CONCEPTS OF RENDERING. WHAT IS THE SIGNIFICANCE OF HIDDEN SURFACE REMOVAL, Z-BUFFER, RAY TRACING, GLOBAL ILLUMINATION AND RADIOSITY? WHAT IS MEANT BY IMAGE-BASED LIGHTING? WHAT IS NON-PHOTOREALISTIC RENDERING? WHAT IS HARDWARE RENDERING? WHAT FILE FORMATS SHOULD BE USED FOR RENDERED IMAGE?	2

UNIT 9	THE IMPORTANCE OF CAMERA. WHAT ARE THE DIFFERENT TYPES OF CAMERAS? WHAT IS MEANT BY THE PYRAMID OF VISION? WHAT ARE THE DIFFERENT TYPES OF CAMERA SHOTS? THE TYPES OF CAMERA LENSES. WHAT IS CAMERA ANIMATION?	2
UNIT 10	THE USAGE OF LIGHTING. WHAT ARE THE DIFFERENT TYPES OF LIGHT SOURCES AND HOW USE THEM? THE LIGHTING STRATEGIES AND MOOD. THE BASIC COMPONENTS OF A LIGHT SOURCE. HOW TO LIGHT A SCENE? THE BASIC POSITIONS OF LIGHT SOURCES.	2
UNIT 11	THE COMPUTER ANIMATION TECHNIQUES. WHAT IS MEANT BY KEYFRAME? WHAT IS KEYFRAME INTERPOLATION AND PARAMETER CURVES? WHAT IS FORWARD KINEMATICS AND MODELLING ANIMATION?	2
UNIT 12	THE COMPUTER ANIMATION TECHNIQUES. WHAT IS CAMERA ANIMATION OR LIGHT ANIMATION OR HIERARCHICAL CHARACTER ANIMATION? WHAT IS TWO AND THREE DIMENSIONAL INTEGRATION? THE FILE FORMATS USED FOR ANIMATION.	2
UNIT 13	INTRODUCTION TO COMPUTER GRAPHICS AND 3D. WHAT IS MEANT BY DIGITAL ART? WHAT IS COMPUTER GRAPHICS? WHAT ARE THE STAGES OF PRODUCTION? THE CG PRODUCTION WORKFLOW.	2
UNIT 14	INTRODUCTION TO COMPUTER GRAPHICS AND 3D. WHAT ARE THE CORE CONCEPTS OF COMPUTER GRAPHICS? WHAT ARE THE BASIC FILM CONCEPTS? WHAT IS MEANT BY INTERACTIVE COMPUTER GRAPHICS?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. MODEL A PROP 2. CREATE A SET OF CHAIRS AND TABLE 3. MAKE A SIMPLE RIG. 4. MAKE A GLASS OBJECT USING SHADER.	90 HRS

REFERENCE BOOKS

1. 3D ART ESSENTIALS: THE FUNDAMENTAL OF 3D MODELING AND TEXTURING BY AMI CHOPINE
2. CHARACTER ANIMATION FUNDAMENTALS: DEVELOPING SKILLS FOR 2D AND 3D BY STEVE ROBERTS.
3. INTRODUCING AUTODESK MAYA
4. THE ART OF 3D COMPUTER AND EFFECTS .

REFERENCE LINK

1. [HTTP://WWW.OOCITIES.ORG/THREEDINDIA/FILES/3DBOOK.PDF](http://WWW.OOCITIES.ORG/THREEDINDIA/FILES/3DBOOK.PDF)
2. [HTTP://WWW.INSTRUCTABLES.COM/ID/INTRO-TO-3D-MODELING/](http://WWW.INSTRUCTABLES.COM/ID/INTRO-TO-3D-MODELING/)
3. [HTTP://WWW.PEACHPIT.COM/ARTICLES/ARTICLE.ASPX?P=30594](http://WWW.PEACHPIT.COM/ARTICLES/ARTICLE.ASPX?P=30594)

RSACE4:17	3D ASSET DEVELOPMENT 01	TEACHING HOURS 60
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	WHAT IS POLYGONAL MODELLING? WHY IS IT IMPORTANT TO HAVE SPATIAL AWARENESS? HOW TO BEGIN WITH THE POLYGONAL MODELLING? HOW TO PLAN YOUR MODEL? WHAT ARE THE BASICS OF POLYGON MODELLING? WHAT ARE THE DIFFERENT POLY EDITING TOOLS?	2
UNIT 2	THE POLYGONAL MODELLING. HOW TO TRANSFORM OBJECTS? WHAT IS MEANT BY PIVOTING AND ALIGNING? UNDERSTANDING 2D SPLINES AND SHAPE. HOW TO EXTRUDE AND BEVEL ?	2
UNIT 3	THE POLYGONAL MODELLING. UNDERSTANDING LOFT AND TERRAIN, MORPH, SCATTER, CONFORM, CONNECT COMPOUND OBJECTS, BLOBMESH, BOOLEAN, PROBOOLEAN AND PROCUTTER COMPOUND OBJECT.	4
UNIT 4	THE POLYGONAL MODELLING. HOW TO WORK WITH REFERENCES? HOW TO BUILD SIMPLE SCENES? HOW TO BUILD COMPLEX SCENES USING REFERENCES? HOW TO USE ASSET TRACKING? HOW TO DEFORM SURFACES AND USE MESH MODIFIERS?	4
UNIT 5	MODELLING WITH NURBS. WHAT IS MEANT BY NURBS? BRIEF HISTORY OF NURBS. WHAT ARE THE CONTROL POINTS AND HOW ARE THE USED TO DETERMINE THE SHAPE OF THE CURVE? WHAT IS KNOT VECTOR?	4
UNIT 6	MODELLING WITH NURBS. WHAT ARE THE OBJECT PROPERTIES OF NURBS MODEL? WHAT ARE THE MODELLING CONCEPTS RELATED TO NURBS?	4
UNIT 7	MODELLING WITH NURBS. HOW TO CREATE A NURBS OBJECT? HOW TO MANIPULATE NURBS OBJECTS? HOW TO EDIT NURBS SURFACES? HOW TO CREATE ARCS? HOW TO CREATE A FLAT SURFACE INSIDE A CURVE?	6
UNIT 8	MODELLING WITH NURBS. HOW TO USE NURBS SURFACE TO CREATE POLYGONS? HOW TO CONVERT NURBS MODEL TO POLYGONS? HOW TO STITCH THE SURFACES? WHAT IS THE USE OF SCULPT SURFACE TOOL? HOW TO USE ARTISAN TO SCULPT NURBS?	6
UNIT 9	WHAT ARE THE DEFORMERS? HOW TO MODEL AN OBJECT USING DEFORMERS? HOW TO CREATE LATTICE OF DEFORMER? HOW TO ANIMATE USING LATTICE? WHAT IS MEANT BY SUBDIVISION SURFACES? HOW TO CREATE A STARFISH USING THIS TECHNIQUE? HOW TO BUILD A TEA-KETTLE?	6
UNIT 10	HOW TO BUILD ORGANIC MODELS? HOW TO A WAGON USING REFERENCE PLANES? THE PROCESS OF WAGON MODELLING: MODELLING THE SIDE PANEL, MODELLING THE WAGON BODY, INSERTING THE HANDLE BAR, MODELLING THE WHEELS, MODELLING THE WOOD RAILINGS, ADDING EXTRA DETAILS.	6

UNIT 11	WHAT IS INORGANIC MODELLING? WHAT ARE THE CHARACTER MODEL BASICS? HOW TO CREATE A CHARACTER USING REFERENCES? HOW TO WORK FROM DESIGNS?	6
UNIT 12	CHARACTER MODELLING. THE IMPORTANCE OF USING SYMMETRY IN MODELLING. THE PROCESS OF CHARACTER MODELLING: MAKING THE EYE AND LIPS, MODELLING THE HEAD OF THE CHARACTER, MODELLING THE HANDS AND LEGS OF THE CHARACTER, MODELLING THE TORSO OF THE CHARACTER. STITCHING THE CHARACTER TOGETHER.	6
UNIT 13	TEXTURING A CHARACTER. WHAT TYPES OF MAPPING PREPARATION IS REQUIRED? THE PROCESS OF TEXTURING A CHARACTER: PREPARING A SCENE, DIFFUSE MAP BAKING, NORMAL MAP BAKING, OCCLUSION MAP BAKING, PREPARING UV SNAPSHOTS, TEXTURE COMBINING, FLAMING PEAR, ADDING SKINTONE, ADDING CLOTHING DETAILS, WORKING ON EYES AND TEETH AND FIXING TEXTURE SEAMS AND ADDING DETAIL.	6
UNIT 14	MAYA SHADING AND TEXTURING. WHAT IS SHADING? WHAT IS SHADER? WHAT ARE THE DIFFERENT TYPES OF SHADER? WHAT ARE THE ATTRIBUTES OF A SHADER? WHAT IS RAY TRACING AND PHOTON MAPPING?	6
UNIT 15	WHAT IS TEXTURING? THE DIFFERENT TYPES OF TEXTURES AND SURFACES. WHAT IS MEANT BY HYPERSHADE? THE BASIC MATERIAL TYPES THAT ARE USED IN TEXTURING AN OBJECT. UNDERSTANDING THE MATERIAL SETTINGS AND THE ATTRIBUTES. WHAT IS TEXTURE MAPPING AND UV MAPPING? WHAT IS PHOTOREAL MAPPING? HOW TO CREATE SEAMLESS REPEATING PATTERNS? HOW TO MAINTAIN THE RESOLUTION OF THE TEXTURE?	6
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	(1)SUBMIT A - CHARACTER / CREATURE / CYBORGE – (ONLY FACE OF FULL BODY) (2) SUBMIT AN OBJECT, CHARACTER OR A SET - WITH PROPERLY TEXTURE.	90 HRS

REFERENCE BOOKS

1. INTRODUCING AUTODESK MAYA 2014 BASIC GUIDE BY DARIUSH DERAKSHANI
2. AUTODESK MAYA 2017 BASIC GUIDE BY KELLY MURDOCK
3. AUTODESK MAYA 2013 ESSENTIALS BY PAUL NAAS

REFERENCE LINK

1. [HTTPS://WWW.UDEMY.COM/AUTODESK-MAYA-THE-BASICS-FOR-BEGINNERS/](https://www.udemy.com/autodesk-maya-the-basics-for-beginners/)
2. [HTTPS://DESIGNMOD0.COM/MAYA-TUTORIALS/](https://designmodo.com/maya-tutorials/)
3. [HTTPS://KNOWLEDGE.AUTODESK.COM/SUPPORT/MAYA/LEARN-EXPLORE/CAAS/CLOUDHELP/CLOUDHELP/2016/ENU/MAYA/FILES/GUID-DC60577E-1A09-4D51-BD6E-6400F4F5EFD7-HTML](https://knowledge.autodesk.com/support/maya/learn-explore/caas/cloudhelp/cloudhelp/2016/enu/maya/files/guid-dc60577e-1a09-4d51-bd6e-6400f4f5efd7-htm.html)

RSACE4:18	3D VFX - PART 01 (DYNAMICS & PARTICLES)	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	INTRODUCING LIGHTING .WHAT ARE THE DIFFERENT TYPES OF LIGHTS? WHAT ARE THE BASIC LIGHTING CONCEPTS? HOW DOES LIGHT IN MAYA WORK? WHAT ARE THE LIGHT SOURCES? WHAT ARE THE PROPERTIES OF LIGHTS?	2
UNIT 2	USING BASIC LIGHTS AND LIGHTING TECHNIQUES . HOW TO LINK LIGHTS? HOW TO ADD SHADOWS TO THE SCENE? UNDERSTANDING THE TERM RAY-TRACING.	2
UNIT 3	USING BASIC LIGHTS AND LIGHTING TECHNIQUES . WHAT IS MENTAL RAY LIGHTING? HOW TO CREATE DIFFERENT LIGHTING EFFECTS BY USING MENTAL RAY? HOW TO CREATE PHYSICAL SUN AND SKY USING MENTAL RAY?	2
UNIT 4	USING BASIC LIGHTS AND LIGHTING TECHNIQUES . WHAT IS LIGHT TRACING? HOW TO SETUP V-RAY LIGHT? HOW TO CREATE STUDIO LIGHTING IN 3D? HOW TO CREATE BASIC EXTERIOR LIGHTING?	2
UNIT 5	WORKING WITH CAMERA IN 3D . HOW TO CREATE VIRTUAL CAMERA EFFECTS? HOW TO MATCH VIRTUAL CAMERAS TO REAL ONES? ADJUSTING CAMERAS ACCORDING TO IMAGE PLANE. HOW TO CREATE CAMERA MOTION BLUR? WHAT IS CAMERA DEPTH OF FIELD? WHAT IS CAMERA TRACKING?	2
UNIT 6	WHAT IS RENDERING AND HOW DOES IT WORK IN MAYA? HOW TO SETUP RENDERING? HOW TO SETUP AN EXACT WORKFLOW? WHAT ARE THE TERMINOLOGIES THAT ARE USED? WHAT IS THE IMPORTANCE OF IMAGE SIZE AND ASPECT? WHAT FILE FORMAT SHOULD BE USED FOR RENDERING?	2
UNIT 7	RENDERING IN MAYA . WHAT ARE THE MAIN FEATURES OF A RENDERING? WHAT ARE THE TECHNIQUES USED? HOW DOES SAMPLING AND FILTERING WORK? WHAT IS OPTIMIZATION?	2
UNIT 8	RENDERING IN MAYA . WHAT IS BATCH RENDERING OR NETWORK RENDERING? WHAT IS FRAME BUFFETS, SPHERICAL AND PANORAMIC RENDER? WHAT IS STYLISED RENDERS?	2
UNIT 9	RENDERING IN MAYA . HOW TO RENDER LAYERS? WHAT IS FINAL GATHER? HOW DOES AMBIENT OCCLUSION WORK? WHAT IS HDRI?	2
UNIT 10	MAYA DYNAMICS AND EFFECTS: AN OVERVIEW OF DYNAMIC AND MAYA NUCLEUS . WHAT IS THE DIFFERENCE BETWEEN RIGID AND SOFT DYNAMIC BODIES? HOW TO ANIMATE AN OBJECT WITH DYNAMICS?	2
UNIT 11	MAYA DYNAMICS AND EFFECTS . WHAT IS N-PARTICLE DYNAMICS? HOW TO EMIT N-PARTICLES DYNAMICS? HOW TO ANIMATE A PARTICLE EFFECT? THE INTRODUCTION OF PAIN EFFECTS AND TOON SHADING.	2

UNIT 12	HOW TO CREATE 3D EFFECTS IN MAYA? HOW TO CREATE GLOWS AND HALOS? HOW TO CREATE THE EFFECT OF LENS FLARES AND PARTICLE SYSTEM? THE EFFECTS OF FOG AND ATMOSPHERIC EFFECTS. HOW TO CREATE THE EFFECT OF MOTION BLUR?	2
UNIT 13	THE SIMULATION AND EFFECTS. HOW TO THE EFFECT OF BIND SPACE WARP, GRAVITY, WIND DISPLACE FORCE OBJECT? THE EFFECT OF FFD SPACE WARP, WAVE RIPPLE, BOMB AND CREATING PARTICLES SYSTEM THROUGH PARRAY.	2
UNIT 14	SIMULATION AND EFFECTS. UNDERSTANDING PARTICLE FLOW USER INTERFACE. HOW DOES PARTICLE FLOW WORK? HOW DOES HAIR AND FUR MODIFIER WORK? THE EFFECT FOR CLOTH AND GARMENT MAKER MODIFIER.	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. PROVIDE PROPER LIGHTING TO THE GIVEN MODEL. 2. INTEGRATE A 3D ELEMENT INTO REAL PHOTOGRAPH AND MATCH THE LIGHTING. 3. CREATE 5 DIFFERENT EFFECTS USING DYNAMICS & PARTICLE EFFECTS – FIRE, SMOKE, WATER, BUILDING COLLAPSE, GLASS BREAKING.	90 HRS

REFERENCE BOOKS

1. ADVANCED MAYA TEXTURING AND LIGHTING BY LEE LANIER
2. MASTERING AUTODESK MAYA 2011 BY ERIC KELLER
3. BODY LANGUAGE ADVANCED 3D CHARACTER RIGGING BY KELLY, MURDOCK & ERIC ALLEN

REFERENCE LINK

1. [HTTP://WWW.HONGKIAT.COM/BLOG/100-MAYA-3D-TUTORIALS-BEGINNERS-INTERMEDIATE-ADVANCED-USERS/](http://WWW.HONGKIAT.COM/BLOG/100-MAYA-3D-TUTORIALS-BEGINNERS-INTERMEDIATE-ADVANCED-USERS/)
2. [HTTPS://AUTODESK-MAYA.WONDERHOWTO.COM/HOW-TO/WORK-ADVANCED-RIG-FOR-CHARACTER-ANIMATION-MAYA-265332/](https://AUTODESK-MAYA.WONDERHOWTO.COM/HOW-TO/WORK-ADVANCED-RIG-FOR-CHARACTER-ANIMATION-MAYA-265332/)
3. [HTTPS://RENDERMAN.PIXAR.COM/VIEW/RENDERMAN4MAYA](https://RENDERMAN.PIXAR.COM/VIEW/RENDERMAN4MAYA)

RSACE 4:19	SET EXTENSION	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	WHAT IS MEANT BY DIGITAL SET EXTENSION? THE IMPORTANT ASPECTS OF SET EXTENSIONS. WHAT ARE THE FACTORS THAT SHOULD BE KEPT IN MIND WHILE WORKING IN SET EXTENSION?	2
UNIT 2	WHAT IS USE OF KEYING? HOW TO KEY A GREEN SCREEN FOOTAGE? WHAT ARE THE DIFFERENT TECHNIQUES OF KEYING? WHAT IS KEY LIGHTING? HOW TO APPLY KEYLIGHT EFFECT?	2
UNIT 3	THE USES OF KEYING. WHAT IS MEANT BY AMPLITUDE SHIFT KEYING? WHAT IS COLOUR KEYS, LUMINANCE KEY AND DIFFERENCE KEYS? HOW TO SHOOT AND ACQUIRE FOOTAGE FOR KEYING?	2
UNIT 4	WHAT IS SET DRESSING? ADDING THE SET DRESSING TO THE COMPOSITION. WHO IS A SET DESIGNER AND WHAT DO THEY DO? HOW TO COMBINE THE FOOTAGE TO THE SET EXTENSION?	2
UNIT 5	MOTION TRACKING THE BACKGROUND. HOW TO COMBINE MULTIPLE TRACKS? HOW TO ADD PARENTING ADDITIONAL LAYERS? TRACKING THE FOREGROUND ELEMENTS.	2
UNIT 6	THE EFFECTS OF LIGHTING ON SET EXTENSION. HOW TO ADD FAKE LIGHT TO THE SCENE? HOW TO MERGE THE LIGHTING OF REAL FOOTAGE AND EXTENSION? HOW TO HANDLE SHADOWS? WHAT IS DROP SHADOWS?	2
UNIT 7	LAYERING REFLECTIONS. HOW TO ADD FAKE REFLECTIONS TO THE EXTENSION? CREATING THE DEPTH OF FIELD IN ORDER TO CREATE PROPER REFLECTIONS. HOW TO LAYER BACKGROUND AND FOREGROUND REFLECTIONS? HOW TO ADD A REVERSED REFLECTION?	2
UNIT 8	WHAT IS MEANT BY CONCEPT SKETCH AND CAMERA MATCHING? HOW TO RENDER 3D BACKGROUNDS? WHAT IS DEPT OF FIELD AND HOW TO MATCH IT WITH CAMERA ANGLES?	2
UNIT 9	PAINTING THE SET EXTENSION. WHAT IS COLOUR GRADING? THE IMPORTANCE OF LIGHTING IN SET EXTENSION. HOW TO BUILD CUSTOM GLOW OR MAKE A GLINT? WHAT ARE MATTE PAINTING ASSETS?	2
UNIT 10	SET EXTENSION AND AFTER EFFECTS. HOW TO CREATE A NEW COMPOSITION? HOW TO APPLY KEYLIGHT TO YOUR VIDEO CLIP? HOW TO USE SCREEN COLOUR EYEDROPPER TOOL?	2
UNIT 11	SET EXTENSION AND AFTER EFFECTS. HOW TO STITCH THE VIEW FROM FINAL RESULTS TO SCREEN MATTE? HOW TO TWEAK THE 'CLIP BLACK' AND 'CLIP WHITE' SETTINGS? WHAT IS MEANT BY SCREEN SHRINK?	2
UNIT 12	SET EXTENSION AND NUKE. HOW TO USE SOLVED CAMERA FOR THE PLATE SHOT? INTRODUCING THE MODEL BUILDER NODE AND USING THE EDIT MODE IN THE MODEL BUILDER. HOW TO LAYOUT UVS?	2

	HOW TO EXPORT THE GEOMETRY OUT AND BACK FOR CREATING THE UVS?	
UNIT13	SET EXTENSION AND NUKE. HOW TO SET UP OUR SCANLINE RENDER? HOW TO MATCH THE LIGHT OR UTILIZE THE MOTION BLURS IN NUKE? HOW TO RECONSTRUCT THE ELEMENTS USING ROTO TECHNIQUES? HOW TO SET UP CAMERA PROJECTIONS FOR THE SIGN REPLACEMENTS?	2
UNIT14	COMPOSITING AN ANIMATED SET EXTENSION IN NUKE. HOW TO ADD ANIMATION TO THE CLOUDS? HOW DOES GRADING, SHARPENING, REMOVING THE HIGHLIGHTS WORK? HOW TO SET UP A 3D PROJECTION?	2
UNIT15	WHAT IS MATTE PAINTING? HOW TO CREATE A REALISTIC MATTE PAINTING BACKGROUND? WHAT IS MATTE PAINTING ENVIRONMENT? MATT PAINTINGS IN SOME MAJOR MOTIONS PICTURES. WHAT IS FORE GROUND MATTE PAINTING? HOW TO CONDUCT TWEAKING THE FORE GROUND MATTE PAINTING?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. ADD FAKE LIGHT TO THE SCENE. 2. MAKE A REALISTIC MATTE PAINTING. 3. EXTEND THE GIVEN SCENE 1. 4. EXTEND THE GIVEN SCENE 2.	90 HRS

REFERENCE BOOKS

1. THE DIGITAL MATTE PAINTING HANDBOOK BY DAVID B. MATTINGLY
2. THE INVISIBLE ART: THE LEGENDS OF MOVIE MATTE PAINTING BY MARK VAZ & CRAIG BARRON
3. BODY LANGUAGE ADVANCED 3D CHARACTER RIGGING BY KELLY, MURDOCK & ERIC ALLEN

REFERENCE LINK

1. [HTTPS://VFXFORFILM.WORDPRESS.COM/2013/01/03/MATTEPAINTING/](https://vfxforfilm.wordpress.com/2013/01/03/mattepainting/)
2. [HTTPS://WWW.THEGNOMONWORKSHOP.COM/TUTORIALS/SET-EXTENSION-AND-LIGHTING-EFFECTS](https://www.thegnomonworkshop.com/tutorials/set-extension-and-lighting-effects)
3. [HTTPS://AMANDAFULLWOODMA.WORDPRESS.COM/TAG/SET-EXTENSION/](https://amandafullwoodma.wordpress.com/tag/set-extension/)

RSACE4:20	CINEMATOGRAPHY INTRODUCTION	TEACHING HOURS 15
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	INTRODUCTION TO CINEMATOGRAPHY. WHAT IS THE ROLE OF A CINEMATOGRAPHER? HISTORY OF CINEMATOGRAPHY. WHAT ARE THE BASIC PRINCIPLES OF CINEMATOGRAPHY? WHAT ARE THE ELEMENTS OF CINEMATOGRAPHY?	1
UNIT 2	WHAT IS THE ROLE OF A CINEMATOGRAPHER? WHAT ARE THE ABILITIES AND SKILLS A CINEMATOGRAPHER SHOULD HAVE?	1
UNIT 3	UNDERSTANDING CAMERA. WHAT ARE THE DIFFERENT TYPES OF MOTION PICTURE CAMERA? THE CAMERA TECHNIQUES AND OPERATIONS USED IN CINEMATOGRAPHY. WHAT IS MEANT BY THE TERMS ANALOGUE AND DIGITAL? WHAT IS THE IMPORTANCE COMPOSITION, FILING THE FRAME AND POINT OF VIEW?	1
UNIT 4	UNDERSTANDING CAMERA. WHAT IS COMPOSITION WITH AND COMPOSITIONAL BALANCE? WHAT IS MEANT BY RULE OF THIRDS AND 180 DEGREE RULE? WHAT IS A SHOT? WHAT ARE THE TYPES OF SHOTS AND WHAT ARE THEIR USES? UNDERSTANDING SOME BASIC CAMERA ANGLES.	1
UNIT 5	CAPTURING MOVING PICTURES. HOW PROPERLY CONVEYED MOTION CAN BRING ALIVE A SCENE. WHAT ARE THE CONCEPTS OF FRAMING? THE IMPORTANT TERMINOLOGIES OF THE FILM SHOOTING PROCESS.	1
UNIT 6	THE FIVE IMPORTANT 'C'S OF CINEMATOGRAPHY. WHAT IS THE IMPORTANCE OF VISUAL STORY-TELLING IN CINEMATOGRAPHY?	1
UNIT 7	WHY IS ASPECT RATIO AND FRAMING IMPORTANT? HOW IS IT USED TO CREATE DIFFERENT AESTHETIC EFFECTS? WHAT IS MEANT BY ACADEMY RATIO AND WIDE SCREEN RATIO? WHAT IS ANAMORPHIC PROCESS?	1
UNIT 8	CAMERA MOVEMENTS. WHAT IS MEANT BY CAMERA MOVEMENTS? HOW TO IDENTIFY BASIC CAMERA MOVES? WHAT ARE THE DIFFERENT TYPES OF CAMERA MOVEMENTS? WHAT IS STEADICAM AND STATIC CAMERA? WHAT IS PANNING AND ZOOMING SHOT?	1
UNIT 9	CAMERA MOVEMENTS: WHAT IS THE USE AND ADVANTAGE OF TRACKS AND TROLLEY? WHAT IS CRANE SHOT AND WHEN TO USE? WHAT IS TRACKING SHOT? WHAT ARE ITS ADVANTAGES AND DISADVANTAGES?	1
UNIT 10	INTRODUCTION TO LENSES. THE BASIC TECHNICAL KNOWLEDGE ABOUT THE USAGE OF THE LENSES. WHAT ARE THE DIFFERENT TYPES OF LENSES? WHAT IS THE USE OF FILTERS?	1
UNIT 11	WHAT IS MEANT BY LENS DISTORTION AND ABERRATIONS? THE IMPORTANCE OF SELECTING PROPER LENSES. WHAT IS MEANT BY TWIN LENS REFLEX AND SINGLE LENS REFLEX?	1

UNIT 12	WHAT IS EXPOSURE? WHAT ARE THE CORE CONCEPTS OF EXPOSURE? WHAT IS MANUAL EXPOSURE? UNDERSTANDING THE TRIANGLE OF EXPOSURE. WHAT IS DEPTH OF FIELD AND WHAT ARE THE DIFFERENT TYPES OF FOCUSES? THE FACTORS THAT DETERMINE THE DEPTH OF FIELD? WHAT IS HYPER FOCAL DISTANCE? WHAT IS EXPOSURE METERING?	1
UNIT 13	THE IMPORTANCE OF LIGHTING IN CINEMATOGRAPHY. THE QUALITY OF LIGHTING REQUIRED FOR A SHOT. WHAT IS THE DIRECTION OF THE LIGHTING? HOW TO CONTROL THE LIGHTING IN ORDER TO GET DESIRED RESULT? WHAT IS INVERSE SQUARE LAW OF LIGHTS?	1
UNIT 14	THE IMPORTANCE OF LIGHTING IN CINEMATOGRAPHY. WHAT IS MEANT BY CONVENTIONAL, SOFT, DIFFUSED, BOUNCE, HARD OR CREATIVE LIGHTING? THE DIFFERENCE BETWEEN INDOOR/OUTDOOR AND DAY EFFECT/ NIGHT EFFECT?	1
UNIT 15	THE IMPORTANCE OF LIGHTING IN CINEMATOGRAPHY. WHAT ARE THE DIFFERENT KINDS OF LIGHTS? HOW TO CONTROL LIGHT INTENSITY? HOW TO CREATE EMOTIONAL IMPACT USING LIGHT? WHAT IS A REFLECTOR AND WHAT IS ITS ROLE?	1
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. CLICK AT LEAST 5 PHOTOGRAPH THAT CONVEYS A VISUAL STORY. 2. ANALYZE THE GIVEN PHOTOGRAPH. 3. CLICK 7 PHOTOGRAPH THAT DESCRIBES THE TRAFFIC SIGNAL. 4. CONVEY A STORY THROUGH A SHORT VIDEO.	90 HRS

REFERENCE BOOKS

1. FILMING THE FANTASTIC: A GUIDE TO VISUAL EFFECTS CINEMATOGRAPHY BY MARK SAWICKI
2. PAINTING WITH LIGHTS BY JOHN ALTON
3. CINEMATOGRAPHY: THEORY AND PRACTICE: IMAGE MAKING FOR CINEMATOGRAPHY AND DIRECTORS BY BLAIN BROWN
4. REFLECTIONS: TWENTY-ONE CINEMATOGRAPHERS AT WORK BY BENJAMIN BERGERY

REFERENCE LINK

1. [HTTP://WWW.ELEMENTSOFCINEMA.COM/CINEMATOGRAPHY/CINEMATOGRAPHY-BASICS/](http://WWW.ELEMENTSOFCINEMA.COM/CINEMATOGRAPHY/CINEMATOGRAPHY-BASICS/)
2. [HTTP://FILMMAKERSFANS.COM/5-BASIC-CAMERA-MOVEMENT-TECHNIQUES-THAT-EVERY-CINEMATOGRAPHER-KNOW/](http://FILMMAKERSFANS.COM/5-BASIC-CAMERA-MOVEMENT-TECHNIQUES-THAT-EVERY-CINEMATOGRAPHER-KNOW/)
3. [HTTP://WWW.ELEMENTSOFCINEMA.COM/CINEMATOGRAPHY/HUMAN-EYE.HTML](http://WWW.ELEMENTSOFCINEMA.COM/CINEMATOGRAPHY/HUMAN-EYE.HTML)

YEAR 03

INTRODUCTION

The scope of cinematography is much broader than just shooting the scenes. It also involves shooting a scene considering the visual effects that would be worked on post production. How the visual effects are accommodated in the scenes is a task that a cinematographer has to look into. Giving visual effects to the film is a major task and involves lot of working departments. Some of these departments are motion tracking, match move & match motion, dynamics & particles, advanced lighting & rendering and compositing concepts. Dynamics are an extremely powerful feature in any 3D application. It allows effects like smoke, fire or complex cloth simulations and dynamics is vital for creating realistic motion. In order to decorate your film with such effects you need handles like match moving, motion tracking and match motion. Match move behaviour analyzes the movement of a source object, then applies that movement data to a destination object. Camera tracking is a process which involves taking a video that has been filmed with a real live camera and tracking its motion so that 3D elements can be added to it. It is also very important to understand lighting and its proper usage. The lighting effect is the effect that would bring the visual effects closer to reality. The visual effects is major part of the industry today and this topics are the core of it.

Objectives :

This semester you will understand the concepts like camera tracking, match move & match motion, the effects created by dynamics and particles, lighting and rendering, and compositing concepts. You will learn the different types of motion tracking behaviours and types of dynamic effects. You will get chance to check the software used for visual effects. Learn about different elements of the topics and how you can use the knowledge practically. You have already learnt how to operate After Effects and now you will get a chance to see how the software is used in the industry.

RSACE 4:21	CAMERA TRACKING	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	WHAT IS MEANT BY MOTION TRACKING? WHAT IS TRACKING MOVEMENT? WHAT ARE THE FUNDAMENTAL STEPS OFF CAMERA TRACKING? WHAT ARE THE DIFFERENT KINDS OF MOTION TRACKING? HOW TO LOCK AN IMAGE TO ANOTHER MOVING IMAGE?	2
UNIT 2	UNDERSTANDING MOTION TRACKING. WHAT ARE THE DIFFERENT TRACKING FEATURES? HOW TO IDENTIFY THE TRACKING FEATURES? WHAT IS THE WORKFLOW TO MOTION TRACKING? WHAT IS MEANT BY MASK TRACKER OR FACE TRACKER? WHAT IS WARP STABILIZER VFX AND WHAT ARE ITS USES? HOW DOES THE SOFTWARE DETERMINE OBJECT'S ACTUAL POSITION AND MOTION IN 3D SPACE?	2
UNIT 3	THE ORIGIN OF 3D TRACKING TECHNOLOGIES. WHY WAS THE TECHNIQUE DEVELOPED? HOW DID THE PROCESS OF TRACKING START? THE 3D TRACKING TOOLS THAT BECAME A MILESTONE FOR THE ART OF TRACKING.	2
UNIT 4	WHAT ARE THE TYPES OF MOTION TRACKING BEHAVIOUR? ANALYZE THE MOTION, MATCH MOVE, STABILIZE, UNSTABILIZE AND TRACK POINTS. WHAT IS POINT TRACKING AND 3D TRACKER?	2
UNIT 5	HOW DOES THE POINT TRACKER WORK? HOW TO USE THE POINT TRACKER? WHAT IS SINGLE POINT TRACKING? WHAT ARE THE DIFFERENT TYPES POINT TRACKERS AND HOW THEY WORK?	2
UNIT 6	HOW TO USE AFTER EFFECTS 3D TRACKING? WHEN TO USE 3D TRACKING? HOW DOES THE TOOL WORK? HOW DOES IT PROCESS THE FOOTAGE? WHY IS IT ONE OF THE BEST OPTION IN AFTER EFFECTS?	2
UNIT 7	TRACKING TO REPLACE BACKGROUND ELEMENTS. HOW TO LOCK ON TARGET TRACKING?	2
UNIT 8	ANALYZING FOOTAGE AND EXTRACTING CAMERA MOTION. HOW TO EXTRACT THE CAMERA MOTION FROM THE FOOTAGE? HOW TO USE THE TRACK PANEL?	2
UNIT 9	WHAT IS A SOLVED CAMERA? HOW TO ATTACH CONTENT INTO A SCENE CONTAINING A SOLVED CAMERA? CREATING TRACK POINTS TO USE THE ATTACH POINT.	2
UNIT 10	BASIC SCREEN REPLACEMENTS. WHAT IS PERSPECTIVE PIN TRACKING? WHAT IS PARALLEL CORNER PIN TRACKING? HOW TO USE LAYER PANEL? HOW TO ATTACH THESE POINTS?	2
UNIT 11	BASIC SCREEN REPLACEMENTS. WHAT IS MEANT BY TRICKY SCREEN REPLACEMENTS? ADVANCED SCREEN REPLACEMENT IN AFTER EFFECTS. HOW DOES SCREEN REPLACEMENT WORK IN MOCHA?	2
UNIT 12	ADDING ELEMENTS TO A SCENE. HOW DOES THE 3D TRACKER WORK? HOW TO ADD ELEMENTS TO A 3D TRACK? HOW TO RESIZE OR MOVE THE TARGET TO ATTACH CONTENT TO DIFFERENT LOCATION?	2

UNIT 13	ADDING ELEMENTS TO A SCENE. WHAT IS TRACKING? INTRODUCTION TO C4D. HOW DOES ENVIRONMENT REFLECTION WORK? HOW TO GENERATE REFLECTION MAP?	2
UNIT 14	ADDING ELEMENTS TO A SCENE. HOW TO TRACK ELEMENTS TO BACKGROUND AND LIGHTING? HOW TO TWEAK THE MATERIALS? HOW TO CREATE TEXT AND TRACK TO THE MOTION PICTURE? WHAT IS MULTI-PASS RENDERING? WHAT IS PRE-RENDERING AND COMPOSITING?	2
UNIT 15	ADVANCED TRACKING. THE BASICS OF MOCHA AND HOW TO CONDUCT ADVANCED TRACKING ON IT. UNDERSTANDING AFTER EFFECTS BASICS AND HOW DOES THE ADVANCE TRACKING WORK ON IT. HOW TO EXPORT TO AFTER EFFECTS? HOW TO ADJUST IN AFTER EFFECTS?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. USING PIN TRACKING ATTACH THE POINTS. 2. USING ANY SOFTWARE ATTACH THE MODEL TO THE FOOTAGE. 3. ANALYZE THE GIVEN FOOTAGE AND EXTRACT THE CAMERA MOTION. 4. SUBMIT ASSIGNMENTS ON CAMERA TRACK	90 HRS

REFERENCE BOOKS

1. MATCHMOVING: THE INVISIBLE ART OF CAMERA TRACKING BY TIM DOBBERT
2. REAL TIME CAMERA TRACKING FOR AUGMENTED REALITY APPLICATION BY HAROLD WUEST
3. VIDEO TRACKING: THEORY AND PRACTICE BY EMILIO MAGGIO AND ANDREA CAVALLARO

REFERENCE LINK

1. [HTTPS://WWW.PREMIUMBEAT.COM/BLOG/MOTION-TRACKING-IN-AFTER-EFFECTS-6-WAYS-TO-TRACK-YOUR-FOOTAGE/](https://www.premiumbeat.com/blog/motion-tracking-in-after-effects-6-ways-to-track-your-footage/)
2. [HTTPS://BLOG.POND5.COM/11977-MOTION-TRACKING-IN-AFTER-EFFECTS-HOW-TO-USE-THE-POINT-TRACKER/](https://blog.pond5.com/11977-motion-tracking-in-after-effects-how-to-use-the-point-tracker/)
3. [HTTPS://BLOG.POND5.COM/12559-MOTION-TRACKING-IN-AFTER-EFFECTS-THE-3D-CAMERA-TRACKER/](https://blog.pond5.com/12559-motion-tracking-in-after-effects-the-3d-camera-tracker/)

RSACE 4:22	MATCH MOVE & MATCH MOTION	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	WHAT IS MATCH MOVE? HOW TO CHECK MATCH MOVING? WHAT ARE THE DIFFERENT FORMS OF MATCH MOVING? WHAT IS THREE DIMENSIONAL MATCH MOVING?	2
UNIT 2	WHAT ARE THE BASICS OF MATCH MOVING? HOW DOES A TYPICAL MATCH MOVE WORK? HOW TO CONVERT 3D TO 2D AND THEN BACK AGAIN? WHAT IS THE PROCESS OF MATCH MOVING?	2
UNIT 3	THE BASICS OF MATCH MOVE. THE PROCESS OF MATCH MOVING IN THE PRODUCTION PIPELINE. THE PERSPECTIVES OF MATCHING TUTORIALS. MATCH MOVING TOWARDS MOVING PICTURES.	2
UNIT 4	WHAT ARE THE MATCH MOVING SOFTWARES? HOW TO USE MATCH MOVE PROGRAMS? WHAT IS MEANT BY PHOTOGRAMMETRY? HOW TO MATCH MOVE PROGRAMS USE PHOTOGRAMMETRY? LAYING DOWN YOUR FIRST TRACKS.	2
UNIT 5	HOW DOES 2D TRACKING WORK? WHAT IS THE PROCESS OF 2D TRACKING? SOME OF THE 2D TRACKING TUTORIALS? HOW TO CONVERT 2D TO 3D?	2
UNIT 6	WHAT IS MEANT BY 3D CALIBRATION? WHAT IS A 'GOOD' CALIBRATION? HOW TO CALIBRATE YOUR CAMERAS? HOW TO EVALUATE THE SOLUTIONS? WHAT IS CALIBRATIONS AND CAMERA MOVES? HOW TO SET UP A COORDINATE SYSTEM?	2
UNIT 7	WHAT IS AUTOMATIC TRACKING? WHAT IS TRACKING ON AUTOPILOT? HOW TO EDIT AUTOMATIC TRACKS? HOW TO USE MASK? WHAT ARE THE BENEFITS OF AUTOMATIC TRACKING? WHAT IS THE PROCESS OF AUTOMATIC TRACKING?	2
UNIT 8	WHAT IS THE USE OF CAMERAS? HOW FILM CAMERAS WORK? HOW DOES THE LENSES, FILM BACKS AND CCDS WORK? WHAT FORMAT TO USE? WHAT IS LENS DISTORTION? WHAT IS DIGITIZATION?	2
UNIT 9	WHAT IS SET FITTING? WHAT IS MEANT BY THE TERM FITTING THE CAMERA? HOW TO CHECK THE MATCH MOVE? HOW DOES THE FITTING OF THE SET WORK? THE SET-FITTING TUTORIALS.	2
UNIT 10	SET FITTING. HOW TO ALTER THE COORDINATE SYSTEM IN ORDER TO FIT THE SET? HOW TO DELIVER THE SCENE PROPERLY? HOW DOES THIS WORK IN REAL WORLD?	2
UNIT 11	BEING ON SET. HOW TO GET THE RIGHT INFORMATION? HOW TO GET THE RIGHT CAMERA INFORMATION? HOW TO MARK UP THE SET? HOW TO WORK WITH OTHERS ON SET? HOW TO BUILD A MATCH MOVE KIT?	2
UNIT 12	WHAT IS MATCH MOTION? WHAT ARE THE SOME BASIC TECHNIQUE TO MATCH THE MOTION? HOW TO BRING THE MAKING MODEL CHANGES? HOW TO WORK WITH THE IMPERFECT DATA?	2

UNIT 13	THE PROCESS OF MATCH MOTION. THE MATCH MOTION TUTORIALS. HOW TO TRACK THE OBJECT WITH MATCH MOTION SOFTWARE? HOW TO DEVELOP PROPER GRIP ON MATCH MOTION?	2
UNIT 14	TROUBLESHOOTING AND ADVANCED TECHNIQUES. WHAT IS EFFECTIVE TROUBLE SHOOTING? WHAT IS TROUBLE SHOOTING CHECKLIST? HOW TO DIAGNOSE THE PROBLEM?	2
UNIT 15	TROUBLESHOOTING AND ADVANCED TECHNIQUES. WHAT ARE SOME ADVANCED TOOLS AND TRICKS OF MATCH MOVING? HOW DOES BUILDING ON THE MATCH MOVE WORK?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. CREATE A 1ST PERSON INTERIOR WALK THROUGH OF A ROOM. 2. CREATE A MATCH MOVE SCENE. 3. SPOT THE MATCH-MOVE EFFECT IN THE GIVEN FOOTAGE.	90 HRS

***NOTE :** THE ABOVE SUBJECT MATCH MOVE THERE ARE MANY SOFTWARES USED IN THE INDUSTRY -
LIKE -3D EQUALIZER, BLENDER, MAYA, NUKE, SYNTHESIES, PF TRACK, BOUJOU, MOCHA. THE
TOPICS GIVEN ARE CONCEPTS. THE SOFTWARE NEEDS TO BE TAUGHT TO COVER THE ABOVE TOPICS.*

REFERENCE BOOKS

1. THE ART AND TECHNIQUE OF MATCHMOVING: SOLUTIONS FOR THE VFX ARTIST BY ERICA HORNING

REFERENCE LINK

1. [HTTP://WWW.CREATIVEBLOQ.COM/3D/HOW-FIX-IMPOSSIBLE-MATCHMOVE-71515920](http://WWW.CREATIVEBLOQ.COM/3D/HOW-FIX-IMPOSSIBLE-MATCHMOVE-71515920)
2. [HTTPS://CGI.TUTSPLUS.COM/ARTICLES/26-TRACKING-AND-MATCHMOVING-TUTORIALS--AE-7394](https://CGI.TUTSPLUS.COM/ARTICLES/26-TRACKING-AND-MATCHMOVING-TUTORIALS--AE-7394)
3. [HTTP://WWW.CREATIVEBLOQ.COM/3D/HOW-FIX-IMPOSSIBLE-MATCHMOVE-71515920](http://WWW.CREATIVEBLOQ.COM/3D/HOW-FIX-IMPOSSIBLE-MATCHMOVE-71515920)
4. [HTTPS://WWW.LYNDA.COM/MATCHMOVER-TUTORIALS/SOLVING-CAMERA/155283/162754-4.HTML](https://WWW.LYNDA.COM/MATCHMOVER-TUTORIALS/SOLVING-CAMERA/155283/162754-4.HTML)

RSACE 4:23	3D VFX (DYNAMICS & PARTICLES)	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	INTRODUCTION TO PARTICLES. HOW TO CREATE PARTICLE? HOW TO MAKE PARTICLE COLLIDE WITH CLOTH SURFACE? HOW TO USE PARTICLE TO SIMULATE LIQUIDS?	2
UNIT 2	INTRODUCTION TO PARTICLES. HOW TO EMIT PARTICLES USING A TEXTURE? HOW TO EMIT PARTICLES USING WIND? HOW TO ADD SHADE TO THE PARTICLES?	2
UNIT 3	INTRODUCTION TO PARTICLES. HOW TO USE HARDWARE RENDERING TO CREATE FLAME EFFECTS, PARTICLES AND FIELDS? HOW DOES THE RENDERING PARTICLES WORK IN MENTAL RAY?	2
UNIT 4	DYNAMICS EFFECTS. HOW TO CREATE CLOTH OBJECTS? CREATING CLOTH AND PARTICLES INTERACTIONS. WHAT IS RIGID BODY DYNAMICS? WHAT IS PARTICLES INSTANCING?	2
UNIT 5	DYNAMICS EFFECTS. HOW TO CREATE FLYING DEBRIS USING PARTICLES INSTANCING? WHAT IS MEANT BY THE TERM PARTICLE EXPRESSIONS? ANIMATING INSTANCES USING PARTICLES EXPRESSION? HOW TO CREATE SMOKE TRAILS?	2
UNIT 6	MAYA DYNAMICS AND EFFECTS. AN OVERVIEW OF DYNAMICS AND MAYA NUCLEUS. WHAT IS THE DIFFERENCE BETWEEN RIGID DYNAMICS AND SOFT DYNAMICS BODIES?	2
UNIT 7	MAYA DYNAMICS AND EFFECTS. ANIMATING WITH DYNAMICS: THE POOL TABLE. WHAT IS PARTICLE DYNAMICS AND EMITTING PARTICLES? ANIMATING A PARTICLE EFFECT: LOCOMOTIVE STEAM.	2
UNIT 8	INTRODUCTION TO PAINT EFFECTS. WHAT IS TOON SHADING? WHAT NONPHOTOREALISTIC STYLES? WHAT RENDERING TECHNIQUES CAN BE USED? HOW TO CREATE COMPLEX TRANSITION USING MAYA TOON SHADER?	2
UNIT 9	MAYA FLUIDS. HOW TO USE FLUID CONTAINERS? HOW TO CREATE A REACTION? WHAT IS MEANT BY RENDERING FLUID CONTAINER? HOW TO CREATE FLUID AND PARTICLE INTERACTIONS? HOW TO CREATE AN OCEAN?	2
UNIT 10	HOW TO ADD FUR TO CHARACTERS? WHAT IS FUR DENSITY? HOW TO MAKE FLUFFY HAIR? HOW TO SET MATERIALS? HOW TO STYLE FUR? WHAT ARE THE DIFFERENT TYPES OF FUR MATERIALS? HOW TO USE MODO'S FUR TOOL?	2
UNIT 11	WORKING ON FUR OF THE CHARACTER. HOW TO RENDER FUR USING MENTAL RAY? ANIMATING USING DYNAMICS CURVES? HOW TO SET COLOUR FOR FUR? HOW TO CREATE REALISTIC FUR FOR THE CHARACTER? HOW TO SHADE AND RENDER	2

	FUR? WHAT IS MEANT BY HAIR AND FUR MODIFIER?	
UNIT 12	WORKING ON HAIR OF THE CHARACTER. WHAT IS HAIR GUIDE? HOW TO ADD HAIR TO THE CHARACTER? HOW TO STYLE HAIR FOR THE CHARACTERS? GROOMING LONG AND SHORT HAIR.	2
UNIT 14	WORKING ON HAIR OF THE CHARACTER. HOW TO WORK ON EYEBROWS AND EYELASH? HOW TO CREATE REALISTIC HAIR? HAIR FLOW AND SEGMENTATION. HOW DOES SHADING AND RENDERING WORK IN CONTEXT TO HAIR?	2
UNIT 15	WORKING ON THE CLOTHING PROPERTIES. HOW TO ADD CLOTHING ACCESSORIES TO THE CHARACTERS? HOW TO CREATE CLOTHS WITH REALISTIC CREASES AND FOLDS? HOW TO PLAN THE GARMENT?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. ADD A BLASTING EFFECT TO THE GIVEN FOOTAGE. 2. ADD SNOWFALL EFFECT TO THE GIVEN ENVIRONMENT. 3. BUILDING COLLAPSE SCENE USING DYNAMICS	90 HRS

REFERENCE BOOKS

1. MAYA VISUAL EFFECTS THE INNOVATOR'S GUIDE: AUTODESK OFFICIAL PRESS, 2 EDITION BY ERIC KELLER

REFERENCE LINK

1. [HTTPS://WWW.FXPHD.COM/DETAILS/?IDCOURSE=408](https://www.fxphd.com/details/?IDCOURSE=408)
2. [HTTPS://WWW.PLURALSIGHT.COM/BLOG/FILM-GAMES/UNDERSTANDING-ROSCOPING-PROCESS-EVERY-VFX-ARTIST-KNOW](https://www.pluralsight.com/blog/film-games/understanding-rotoscoping-process-every-vfx-artist-know)

RSACE 4:24	ADVANCED LIGHTING & RENDERING	TEACHING HOURS 15
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UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	LIGHTING WITH MENTAL RAY. WHAT ARE THE SHADOW-CASTING LIGHTS? WHAT ARE THE DIFFERENT TYPES OF SHADOWS? WHAT IS SHADOWMAP CAMERA? HOW TO REUSE THE SHADOWS?	2
UNIT 2	LIGHTING WITH MENTAL RAY. WHAT IN MEANT BY INDIRECT LIGHTING? WHAT IS GLOBAL ILLUMINATION? WHAT IS INDIRECT ILLUMINATION? UNDERSTANDING FINAL GATHERING, IMAGE-BASED LIGHTING, PHYSICAL SUN AND SKY, MENTAL RAY AREA LIGHTS, LIGHT SHADERS.	2
UNIT 3	UNDERSTANDING THE COMPUTER-GENERATED LIGHTING. HOW CREATE DEPTH MAP AND RAY TRACED SHADOWS? HOW TO SOFTEN OR SHAPE THE SHADOWS? LEARNING TO APPLY PHYSICAL AND PORTAL SHADERS	2
UNIT 4	UNDERSTANDING THE COMPUTER-GENERATED LIGHTING. HOW TO APPLY DEPTH OF FIELD WITH THE BOKEH SHADER? USING LIGHTING WITH CAUSTIC SETTINGS. HOW TO SPLIT A SCENE IN RENDER LAYERS? HOW TO COMPARE RENDER PASSES AND RENDER LAYERS?	4
UNIT 5	MENTAL RAY SHADING TECHNIQUES. WHAT ARE THE BASIC MENTAL RAY SHADERS? UNDERSTANDING MENTAL RAY FOR MAYA NODES. WHAT ARE THE MENTAL RAY SHADER CONNECTIONS? HOW TO ADD A CONTOUR TO A SCENE?	2
UNIT 6	MENTAL RAY SHADING TECHNIQUES. WHAT ARE AMBIENT OCCLUSION CONCEPTS? BAKING TO TEXTURES AND VERTICES. HOW TO CONNECT A TEXTURE AS A VECTOR DISPLACEMENT MAP? HOW TO CREATE FUR SHADING AND SHADOWS USING THE MENTAL RAY?	2
UNIT 7	MENTAL RAY SHADING TECHNIQUES. HOW TO CREATE LIGHT FOG USING MENTAL RAY FOR MAYA SAMPLE WORKFLOW? HOW DOES HIGH QUALITY TEXTURE FILTERING WITH ELLIPTICAL FILTERING WORK?	2
UNIT 8	MENTAL RAY SHADING TECHNIQUES. USING MENTAL RAY FOR MAYA REFLECTIONS. HOW TO MODIFY A MASK CHANNEL? HOW TO RENDER COLOUR PER VERTEX IN MENTAL RAY?	2
UNIT 9	INTRODUCTION TO N-PARTICLES. HOW TO CREATE N-PARTICLES? HOW TO MAKE N-PARTICLES COLLIDE WITH N-CLOTH SURFACES? HOW TO USE N-PARTICLES TO STIMULATE LIQUIDS?	2
UNIT 10	N-PARTICLES AND TEXTURING. HOW TO EMIT N-PARTICLESUSING A TEXTURE AND WIND? UNDERSTANDING SHADING N-PARTICLES. HOW TO USE HARDWARE RENDERING TO CREATE FLAME EFFECTS? WHAT IS THE RELATIONSHIP BETWEEN N-PARTICLES AND FIELDS? HOW TO RENDER PARTICLES WITH MENTAL RAY?	4
UNIT 11	UNDERSTANDING DYNAMIC EFFECTS. HOW TO CREATE N-CLOTH OBJECTS? THE INTERACTION BETWEEN CREATING N-CLOTH AND N-	2

	PARTICLES. WHAT IS RIGID BODY DYNAMICS?	
UNIT 12	THE CONCEPT OF DYNAMIC EFFECTS. HOW TO CREATE FLYING DEBRIS? HOW TO USE N-PARTICLES INSTANCING? ANIMATING INSTANCES USING N-PARTICLE EXPRESSIONS. HOW TO CREATE SMOKE TRAILS?	2
UNIT 13	RENDERING FOR COMPOSITING. HOW TO RENDER LAYERS? WHAT RENDER PASSES? HOW DOES RENDER PASS CONTRIBUTION MAPS WORKS? SETTING UP A RENDER WITH MENTAL RAY. UNDERSTANDING MENTAL RAY QUALITY SETTINGS.	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. THREE POINT LIGHTING 2. LIGHT THE GIVEN SCENE (3D ENVIRONMENT) 3. ASSIGNMENT ON THE AREA LIGHT, SPOT LIGHT, DIRECTION LIGHT, POINT LIGHT, ETC . 4. PHOTOREALISTIC LIGHTING – INTEGRATE A 3D ELEMENT IN REAL SHOOT AND MATCH THE LIGHTING OF THE SCENE.	90 HRS

REFERENCE BOOKS

1. DIGITAL LIGHTING AND RENDERING (VOICES THAT MATTER) BY JEREMY BIRN
2. ADVANCED LIGHTING AND MATERIALS WITH SHADERS BY KELLY DEMSKI AND EMMANUEL VIALE
3. GPU PRO 6: ADVANCED RENDERING TECHNIQUES BY WOLFGANG ENGEL

REFERENCE LINK

1. [HTTPS://CMIVFX.COM/PRODUCTS/410-CINEMA-4D-ADVANCED-LIGHTING-AND-RENDERING](https://cmivfx.com/products/410-cinema-4d-advanced-lighting-and-rendering)
2. [HTTPS://WWW.SCRIBD.COM/DOCUMENT/41971223/ADVANCED-LIGHTING-IN-TURTLE](https://www.scribd.com/document/41971223/Advanced-Lighting-in-Turtle)
3. [HTTPS://KNOWLEDGE.AUTODESK.COM/SUPPORT/3DS-MAX/LEARN-EXPLORE/CAAS/CLOUDHELP/CLOUDHELP/2017/ENU/3DSMAX/FILES/GUID-8D21416E-DF57-4D1F-B141-29C1D30612BF-htm.html](https://knowledge.autodesk.com/support/3ds-max/learn-explore/caas/cloudhelp/cloudhelp/2017/ENU/3dsmax/files/GUID-8D21416E-DF57-4D1F-B141-29C1D30612BF-htm.html)
4. [HTTP://WWW.RENDERPLUS.COM/WP2/WK/THE_ADVANCED_LIGHTING_TAB.HTM](http://www.renderplus.com/wp2/wk/the_advanced_lighting_tab.htm)

RSACE 4:25	COMPOSITING CONCEPTS	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	INTRODUCTION TO COMPOSITING CONCEPTS. WHAT IS STEREO COMPOSITING? WHAT IS THE USE OF MULTI-PASS CGI COMPOSITING? WHAT IS 3D COMPOSITING? UNDERSTANDING COMPOSITING USING ADOBE PHOTOSHOP. MAKING THE GOOD COMPOSITE.	2
UNIT 2	WHAT IS MEANT BY MATTES? WHAT IS LUMA KEY MATTES? UNDERSTANDING CHROMA KEY MATTES, DIFFERENCE MATTES, BUMP MATTES, KEYERS, COLOR DIFFERENCE MATTES, ADOBE AFTER EFFECTS MATTE.	2
UNIT 3	HOW TO REFINE MATTES? WHAT IS MATTE MONITOR? UNDERSTANDING GARBAGE MATTES, FILTERING THE MATTE, ADJUSTING THE MATTE SIZE.	2
UNIT 4	WHAT IS MEANT BY DESPILL? WHAT IS DESPIL OPERATION? WHAT ARE DESPIL ARTIFACTS? WHAT ARE THE DESPILL ALGORITHMS AND HOW TO REFINE THEM?	2
UNIT 5	UNDERSTANDING THE CONCEPT OF THE COMPOSITE. WHAT ARE THE COMPOSITING OPERATIONS? WHAT IS MEANT BY THE PROCESSED FOREGROUND METHOD? HOW TO USE ADD-MIX COMPOSITE? REFINING THE COMPOSITE AND STEREO COMPOSITING.	2
UNIT 6	HOW DOES CGI COMPOSITING WORK? WHAT IS THE DIFFERENCE BETWEEN PREMULTIPLY AND UNPREMULTIPLY? HOW DOES MULTI-PASS CGI COMPOSITING WORK? WHAT IS HDRI IMAGES? WHAT IS THE IMPORTANCE OF 3D COMPOSITING, A SHORT COURSE IN 3D, MATCH MOVING CAMERA PROJECTION, SET EXTENSION, 3D BACKGROUNDS?	2
UNIT 7	HOW TO USE BLEND OPERATIONS? WHAT ARE THE IMAGE BLENDING OPERATIONS? WHAT ARE THE DIFFERENT ADOBE PHOTOSHOP BLENDING MODES?	2
UNIT 8	USING COLOR CORRECTION. UNDERSTANDING THE COLOURS OF NATURE. WHAT IS BEHAVIOUR OF LIGHT? HOW TO MATCH THE LIGHT SPACE?	2
UNIT 9	WHAT ARE DIFFERENT CAMERA EFFECTS? HOW TO MATCH THE FOCUS? WHAT IS DEPTH OF FIELD? WHAT IS MEANT BY LENS FLARE? WHAT IS VEILING GLARE AND GRAIN?	2
UNIT 10	ANIMATION AND COMPOSITING. WHAT IS GEOMETRIC TRANSFORMATIONS? WHAT IS MEANT BY MOTION TRACKING? USING WARPS AND MORPHS.	2
UNIT 11	WHAT IS GAMMA? WHAT ARE THE EFFECTS OF GAMMA CHANGES ON IMAGES? WHAT ARE THE THREE GAMMAS OF A DISPLAY SYSTEM? HOW TO CREATE THE DIM SURROUND EFFECT? WHAT IS THE GAMMA OF VIDEO OR OF A FILM?	2

UNIT 12	COMPOSITING A VIDEO. HOW VIDEO WORKS? WHAT IS HIGH-DEFINITION VIDEO? WHAT IS MEANT BY TELECINE? HOW TO WORK WITH A VIDEO? HOW TO WORK WITH A VIDEO IN A FILM JOB? HOW TO WORK WITH FILM IN A VIDEO JOB? WORKING WITH CGI IN A VIDEO JOB.	2
UNIT 13	COMPOSITING A FILM. THE PROCESS OF FILM MAKING. UNDERSTANDING THE TERMS AND DEFINITIONS. WHAT ARE THE DIFFERENT FORMATS OF A FILM? WHAT IS MEANT BY THE TERM FILM SCANNERS? WHAT IS FILM RECORDERS? WHAT IS DIGITAL INTERMEDIATE?	2
UNIT 14	WHAT IS THE DIFFERENCE BETWEEN LOG AND LINEAR? UNDERSTANDING THE DYNAMIC RANGE IN THE REAL WORLD. WHAT IS THE BEHAVIOUR OF FILM? HOW TO REPRESENT FILM DATA IN LOG FORMAT? HOW TO DIGITALIZE THE FILM? WHAT IS MEANT BIT DEPTH AND BANDING?	2
UNIT 15	WHAT IS LOG IMAGES? HOW TO CONVERT LOG IMAGES? WORKING WITH LOG IMAGES.	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. CREATE A COMPOSITION USING 4 DIFFERENT ELEMENTS IN PHOTOSHOP. 2. WORK ON COLOUR CORRECTION OF THE FOOTAGE USING AFTER EFFECTS.	90 HRS

REFERENCE BOOKS

1. COMPOSITING VISUAL EFFECTS: ESSENTIALS FOR THE ASPIRING ARTIST BY STEVE WRIGHT
2. PHOTOSHOP COMPOSITING SECRETS BY MATT KLOSKOWSKI
3. DIGITAL COMPOSITING IN DEPTH BY DOUG KELLY

REFERENCE LINK

1. [HTTP://WWW.QVOLABS.COM/DIGITAL_IMAGES_COLORSPACE_LOG_VS_LINEAR.HTML](http://www.qvolabs.com/digital_images_colorspace_log_vs_linear.html)
2. [HTTPS://WWW.LYNDA.COM/AFTER-EFFECTS-TUTORIALS/DEPTH-COMPOSITING-2D-3D-ANIMATION/140918/165643-4.HTML](https://www.lynda.com/after-effects-tutorials/depth-compositing-2d-3d-animation/140918/165643-4.html)
3. [HTTPS://COMPOSITINGMENTOR.COM/TAG/DESPILL/](https://compositingmentor.com/tag/despill/)

SIXTH SEMESTER

INTRODUCTION

Visual Effects is a vast pool of knowledge and information and requires unlimited imagination. The tools in terms of software and plug-ins are there so that you can create an artwork that you have had imagined. Your weapons in the industry are your grip on software and your creativity. The skills and techniques like Rotoscoping, Paint, Compositing and Digital Intermediate are quite an important element. Rotoscoping is a technique used by an artist to trace over the motion picture footage, frame by frame, to separate characters or to create matte. Paint is used to erase the wires used during the shoot of the action sequence and as well to remove the markers, de-aging etc. If you succeed to turn your imagination to reality then you are ready to tackle the world. It is interesting to learn how the industry works and what ethical lines it follows. It is very intriguing to study the scope of the industry and exponential growth. You should also be able to prove that you are ready to enter the booming industry. By the end of this you should be able to create an artwork that is an accumulation of all the knowledge you have gained through the years.

Objectives of Semester 06

This semester you will be studying the topics like advanced Compositing, Roto, paint, Color correction and industry practices. You have already worked on After Effects so this year we will be taking a step further. This year you will be developing the skills in After Effects that are specifically used the most in the industry. You will be able to have a proper grip over the software and use/manipulate the photos/videos as per your will. Develop the understanding how After Effects, Nuke and many other VFX software are used to create stunning visual effects. You will be introduced to the software called Nuke which is mostly used for compositing.

RSACE 4:26	COMPOSITING 01	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	ADVANCED ADOBE AFTER EFFECTS. HOW TO USE KEYING IN AFTER EFFECTS? WHAT IS MOTION TRACKING? HOW DOES THE NON LINEAR EDITING IN AFTER EFFECTS WORK?	2
UNIT 2	COMPOSITING AND LAYERING IN THE AFTER EFFECTS. HOW TO USE BRIDGE AND WHAT IS IT'S ROLE IN AFTER EFFECTS?	2
UNIT 3	LAYERING IN AFTER EFFECTS. WHAT IS THE SIMILARITY BETWEEN LAYERING IN AFTER EFFECTS, PREMIERE PRO AND PHOTOSHOP?	2
UNIT 4	WHAT IS MEANT BY MASKING? WHAT ARE THE SEGMENTS AND VERTICES IN MASK MATTE?	2
UNIT 5	USING THE COLOUR CORRECTION. WHAT IS THE DIFFERENCE BETWEEN COLOUR CORRECTION AND COLOUR GRADING?	2
UNIT 6	DISTORTION OF OBJECTS WITH PUPPET TOOLS. HOW TO USE PUPPET TOOLS? HOW TO ADD DEFORM PINS? HOW TO DEFINE AREAS OF OVERLAP? WHAT IS OVERLAPPING ACTION? HOW TO STIFFEN AN AREA? HOW TO ANIMATE PIN POSITIONS?	2
UNIT 7	ROTO BRUSH TOOL. HOW TO CREATE A SEGMENTATION BOUNDARY? WHAT IS FINE-TUNE THE MATTE? UNDERSTANDING THE TRANSITION FROM THE FULL CLIP TO THE FOREGROUND. HOW TO CREATE A LOGO USING ROTOSCOPING? OW TO ANIMATE TEXT? HOW TO ADD A BACKGROUND IMAGE IN AFTER EFFECTS? HOW TO ADD AUDIO IN AFTER EFFECTS?	2
UNIT 8	HOW TO PERFORM COLOR CORRECTION? HOW TO ADJUST COLOUR BALANCE? HOW TO REPLACE THE BACKGROUND IN AFTER EFFECTS? HOW TO REMOVE UNWANTED ELEMENTS USING AFTER EFFECTS? HOW TO CORRECT A RANGE OF COLORS? GETTING WARM COLORS WITH THE PHOTO FILTER EFFECT.	2
UNIT 9	HOW TO BUILD 3D OBJECTS? WORKING WITH A NULL OBJECT. HOW TO WORK WITH 3D TEXT? CREATING A BACKDROP FOR 3D ANIMATION. NESTING A 3D COMPOSITION AND ADDING A CAMERA.	2
UNIT 10	USING 3D FEATURES. HOW TO ANIMATE 3D OBJECTS? HOW TO ADD REFLECTIONS TO 3D OBJECTS? ANIMATING A CAMERA AND ADJUSTING LAYER TIMING. HOW TO USE 3D LIGHTS? HOW TO ADD EFFECTS IN AFTER EFFECTS? ADDITION OF MOTION BLUR.	2
UNIT 11	ADVANCED EDITING TECHNIQUES. HOW TO USE MOTION STABILIZATION? USING SINGLE-POINT MOTION TRACKING. HOW TO USE MULTIPOINT TRACKING? HOW TO CREATE A PARTICLE SIMULATION? RETIMING PLAYBACK USING THE TIMEWARP EFFECT.	2
UNIT 12	RENDERING AND OUTPUTTING. CREATING TEMPLATES FOR THE RENDERING PROCESS. HOW TO CREATE TEMPLATES FOR OUTPUT MODULES? EXPORTING TO DIFFERENT OUTPUT MEDIA.	2

RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. KEYING AND MATTE EXTRACTION IN AFTER EFFECTS 2. LEARN SOME ADVANCED EFFECTS IN AFTER EFFECTS TECHNIQUES 3. ROTOSCOPY TRICKS AND TECHNIQUES USED IN THE INDUSTRY 4. DIFFERENT PAINT TECHNIQUES USED IN THE INDUSTRY.	90 HRS

REFERENCE BOOKS

1. AFTER EFFECTS IN PRODUCTION 2ND EDITION BY TRISHA MEYER
2. CREATING MOTION GRAPHICS WITH AFTER EFFECTS: ESSENTIAL AND ADVANCED TECHNIQUES BY TRISH MEYER
3. AFTER EFFECTS APPRENTICE BY CHRIS AND TRISH MEYER

REFERENCE LINK

1. [HTTPS://KNOWLEDGE.AUTODESK.COM/SUPPORT/MAYA/LEARN-EXPLORE/CAAS/CLOUDHELP/CLOUDHELP/2015/ENU/MAYA/FILES/NONLINEAR-ANIMATION-WHAT-IS-NONLINEAR-ANIMATION-HTML.HTML](https://knowledge.autodesk.com/support/maya/learn-explore/caas/cloudhelp/cloudhelp/2015/ENU/MAYA/FILES/NONLINEAR-ANIMATION-WHAT-IS-NONLINEAR-ANIMATION-HTML.HTML)

RSACE 4:27	ADVANCED COMPOSITING	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT 1	GETTING STARTED WITH NUKE. WHAT ARE THE DIFFERENT COMPONENTS OF THE GRAPHIC USER INTERFACE? UNDERSTANDING THE USE OF NODES, THE VIEWER, FRAMECYCLER.	2
UNIT 2	WHAT IS KEYING? INTRODUCING NUKE’S KEYING NODES.HOW TO USE HUEKEYER? WHAT IS IMAGE BASED KEYS? WHAT IS THE ROLE OF KEYLIGHT IN ANIMATION? COMBINING KEYSER NODES USING THE TREE.	2
UNIT 3	COMPOSITING HIGH-RESOLUTION STEREO IMAGES. HOW TO USE THE PROJECT SETTINGS PANEL? HOW TO SET UP A HIGH-RESOLUTION STEREO SCRIPT? COMPOSITING A STEREO PROJECT. HOW TO RENDER AND VIEW STEREO TREES?	2
UNIT 4	WHAT IS THE NUKE 3D ENGINE? HOW TO SETUP 3D SCENE? MOVING IMAGES WITH A 3D SCENE. WHAT IS RECONCILE 3D?HOW TO TRANSFORM 3D DATA INTO 2D DATA?	2
UNIT 5	THE IMPORTANCE OF CAMERA TRACKING IN COMPOSITING. HOW TO CALCULATE REFLECTION MOVEMENT USING CAMERA TRACKING? HOW DOES 3D TRACKING WORK IN NUKE? LOADING A PRE-GENERATED CAMERATRACKER NODE. HOW TO ALIGNING THE SCENES? HOW TO CREATE THE REFLECTION?	2
UNIT 6	WHAT IS CAMERA PROJECTION? BUILDING A CAMERA PROJECTION SCENE. HOW TO TWEAK THE GEOMETRY?HOW TO ANIMATE THE CAMERA? WHAT IS MEANT BY TWEAKING THE TEXTURE? USING A SPHERICAL TRANSFORM TO REPLACE SKY. COMPOSITING OUTSIDE THE SCANLINE RENDER NODE.	2
UNIT 7	CUSTOMIZING NUKE WITH GIZMOS. WHAT ARE THE SAFETY AREAS? HOW TO BUILD THE GIZMO’S TREE? HOW TO CREATE A USER KNOBS? HOW TO SCRIPT WITH A LITTLE TCL? HOW TO TEST THE GIZMO’ TREE- WRAPPING IN GROUPS? MANIPULATING THE NUKE SCRIPT IN A TEXT EDITOR. HOW TO TURN A GROUP INTO A GIZMO? HOW TO USE THE VIEWER INPUT PROCESS?	2
UNIT 8	CUSTOMIZING NUKE WITH PYTHON. WHAT ARE THE BASICS OF PYTHON SCRIPTING? HOW TO CREATE A BUTTON WITH PYTHON? HOW TO ADD A HOT KEY?HOW TO MAKE CUSTOMIZATION STICK WITH MENU?	2
UNIT 9	TOUR THE INTERFACE WITH A BASIC COMPOSITE. HOW TO WORK WITH PROCESS TREES? HOW TO CREATE A SIMPLE PROCESS TREE? HOW TO MERGE IMAGES? INSERTING AND MANIPULATING NODES IN THE TREE. HOW TO CHANGING PROPERTIES AND RENDER THEM? WHAT IS MEANT BY DELVING DEEPER INTO THE MERGE NODE? CREATING ANIMATION WITH KEYFRAMES.	2

UNIT 10	COMPOSITING CGI WITH BIGGER NODE TREES. WORKING WITH CHANNELS. HOW TO WORK WITH CONTACT SHEETS?USING THE BOUNDING BOX TO SPEED UP PROCESSING. HOW TO USE LINKING PROPERTIES WITH EXPRESSIONS ? SLAPPING THINGS TOGETHER AND WORKING ON FOREGROUND OVER BACKGROUND.	2
UNIT 11	COMPOSITING CGI WITH BIGGER NODE TREES. HOW TO BUILD THE BEAUTY PASS? WHAT IS THE SHUFFLECOPY NODE? MANIPULATING PASSES AND ADDING OTHER CGI IMAGES. HOW TO PLACE CGI OVER LIVE BACKGROUND? HOW TO USE THE MASK INPUT?	2
UNIT 12	COLOR CORRECTION AND COMPOSITION. UNDERSTANDING NUKE'S APPROACH TO COLOR. HOW TO MANIPULATE COLOR? HOW TO BUILD BLOCKS? USING AN I/O GRAPH TO VISUALIZE COLOR OPERATIONS. HOW TO CREATE CURVES WITH COLOR LOOKUP? MATCHING COLOR WITH THE GRADE NODE.	2
UNIT 13	WHAT IS 2D TRACKING? WHAT ARE THE BASICS OF TRACKER NODE?WHAT IS MEANT BY STABILIZING A SHOT? WHAT ARE THE FOUR POINTS OF TRACKING?	2
UNIT 14	UNDERSTANDING ROTOPAINT AND COMPOSITING. INTRODUCING ROTOPAINT'S INTERFACE.WHAT IS MEANT BY THE TERM CURVE EDITOR? WHAT IS SPLIT-SCREENING AND HOW TO TWIN IT WITH ROTO? HOW TO COMBINE PAINT? HOW TO USE ROTO IN ANIMATION? WHAT IS THE USE OF THE DOPE SHEET?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. CREATE A SIMPLE COMPOSITING. 2. MULTI LAYER COMPOSITING – MINIMUM 200 FRAMES. 3. WORK ON REAL FILM FOOTAGES.	90 HRS

REFERENCE BOOKS

1. NUKE 101: PROFESSIONAL COMPOSITING AND VISUAL EFFECTS BY RON GANBAR
2. DIGITAL COMPOSITING WITH NUKE BY LEE LANIER
3. THE ART AND SCIENCE OF DIGITAL COMPOSITING BY RON BRINKMAN

REFERENCE LINK

1. [HTTPS://WWW.DIGITALTUTORS.COM/SOFTWARE/NUKE-COMPOSITING-TUTORIALS](https://www.digitaltutors.com/software/nuke-compositing-tutorials)
2. [HTTPS://WWW.PINTEREST.COM/NATHANTILLET/NUKE-TUTORIALS-ARTICLES/](https://www.pinterest.com/nathantillet/nuke-tutorials-articles/)
3. [HTTPS://WWW.FXGUIDE.COM/FEATURED/THE-ART-OF-DEEP-COMPOSITING/](https://www.fxguide.com/featured/the-art-of-deep-compositing/)

RSACE 4:28	ROTO / PAINT & COMP	TEACHING HOURS 15
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT1	WHAT IS ROTOSCOPING? WHAT IS THE HISTORY OF ROTOSCOPING? WHAT ARE THE DIFFERENT TECHNIQUESUSED? WHAT ARE THE DIFFERENT TOOLS USED?	1
UNIT 2	WHAT ARE THE DIFFERENT TOOLS OF ROTOSCOPING AND HOW TO USE THEM? HOW TO CREATE A SEGMENTATION BOUNDARY? HOW TO FINE TUNE THE MATTE? CREATING A TRANSITION FROM THE FULL CLIP TO THE FOREGROUND.	1
UNIT 3	USING THE DIFFERENT TOOLS OF ROTOSCOPING. LEARNING HOW TO CREATE A LOGO USING ROTOSCOPING. HOW TO ANIMATE TEXT? HOW TO ADD A BACKGROUND IMAGE? HOW TO ADD AUDIO TO THE FOOTAGE?	1
UNIT 4	INTRODUCTION TO ROTO-PAINT. WHAT IS ROTOPAINT? WHAT IS ROTOPAINT'S INTERFACE? WHAT IS MEANT BY THE TERM THE CURVE EDITOR AND HOW TO USE IT?	1
UNIT 5	UNDERSTANDING ROTO-PAINT. HOW DOES SPILT SCREENING TWINS WITH ROTO WORK? HOW TO COMBINE PAINT? WHAT IS THE RELATIONSHIP BETWEEN ROTO AND ANIMATION? HOW TO USE DOPE SHEET?	1
UNIT 6	ROTO BRUSH AND REFINE EDGE EFFECT FEATURES.WHAT IS MEANT BY INVERT FOREGROUND AND BACKGROUND?UNDERSTANDING THE DIFFERENT TYPES OF BRUSHES: SMOOTH, FEATHER, CHOKE, REDUCE AND CHATTER.	1
UNIT 7	ROTO BRUSH AND REFINE EDGE EFFECT FEATURES. WHAT IS MOTION BLUR? HOW TO DECONTAMINATE THE EDGE COLORS? HOW TO INCREASE DECONTAMINATION RADIUS?	1
UNIT 8	DISSECTING A ROTO. USING SIMPLE SHAPES TO CREATE SIMPLE AND COMPLEX ROTOSCOPING. HOW TO IDENTIFY SOFT AND HARD OBJECTS? HOW TO APPROACH EDGE CONSISTENCY, MOTION BLUR AND OUT OF FOCUS ELEMENTS?	1
UNIT 9	BUILDING A DEPTH MAP USING ROTOSCOPY. ROTOSCOPING THE STILL OBJECTS. WHAT ARE DIFFERENT CAMERA MOVEMENTS? HOW TO TACKLE PERSPECTIVE CHANGES AND LENS DISTORTATION? WHAT ARE THE RIGHT TOOLS TO BE USED TO ROTO SUCH FOOTAGES?	2

UNIT 10	HOW TO ENHANCE THE BACKGROUND? HOW TO CLEANUP THE BACKGROUND? HOW TO CREATE CLEANPLATES? HOW TO CONDUCT SIMPLE WIRE REMOVAL AND MOTION TRACKING?	1
UNIT 11	UNDERSTANDING THE WIRE REMOVAL AND CLEANPLATES. HOW TO HANDLE WIRE REMOVAL THROUGH SEMI-TRANSPARENT FABRIC, MOTION BLUR AND HAIR? HOW TO CREATE A SMOOTH CLEANPLATE FROM NOISY FOOTAGE?	2
UNIT 12	WHAT IS MEANT BY PROPAGATION? WHAT IS SEARCH RADIUS? WHAT IS MEANT BY MOTION THRESHOLD? UNDERSTANDING THE MOTION DAMPING.	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	1. ROTOSCOPY 50 FRAMES. 2. ROTOSCOPY INDUSTRY PRACTICES	90 HRS

REFERENCE BOOKS

1. ROTOSCOPING: TECHNIQUES AND TOOLS FOR THE ASPIRING ARTIST BY BENJAMIN BRATT

REFERENCE LINK

1. [HTTPS://WWW.FXGUIDE.COM/FEATURED/THE-ART-OF-ROTO-2011/](https://www.fxguide.com/featured/the-art-of-ROTO-2011/)
2. [HTTP://WWW.VIDEOJEEVES.COM/UNDERSTANDING-ROTOSCOPING/](http://www.videojeeves.com/understanding-rotoscoping/)
3. [HTTPS://WWW.LYNDA.COM/AFTER-EFFECTS-TUTORIALS/WHAT-ROTOSCOPING/114912/415716.HTML](https://www.lynda.com/after-effects-tutorials/what-rotoscoping/114912/415716.html)

RSACE 4:29	DIGITAL INTERMEDIATE	TEACHING HOURS 30
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UNITS	COVERAGE OF MODULE	Time (Lectures)
UNIT1	EVOLUTION OF DIGITAL INTERMEDIATE. WHAT IS THE PROCESS OF DIGITAL INTERMEDIATE? WHAT IS THE HISTORY OF DIGITAL INTERMEDIATE? WHO IS COLOURIST? WHAT ARE THE TECHNICAL TERMS USED FOR IT?	2
UNIT 2	WHAT ARE THE THREE STAGES OF DIGITAL INTERMEDIATE? INPUT: HOW DOES IT WORK DURING THE INPUT STAGE OR THE ACQUISITION? WHAT IS THE PROCESSED CAMERA NEGATIVE AND HOW IS IT USED IN SCANNING A HIGH RESOLUTION FILM SCANNER? HOW DOES THE SCANNER DIGITIZES EACH FRAME AND CONVERTS THE FILM IMAGES TO A SERIES OF DIGITAL FILES?	2
UNIT 3	THE THREE STAGES OF DIGITAL INTERMEDIATE. IMAGE PROCESSING: UNDERSTANDING THE CONFORMING, COLOUR CORRECTION, CREATION OF SPECIAL LOOKS, AND ADDITION OF SPECIAL EFFECTS.	2
UNIT 4	THE THREE STAGES OF DIGITAL INTERMEDIATE. OUTPUT: HOW THE EDITED DIGITAL FILES ARE USED TO RENDER A DIGITAL MASTER? WHICH IS RECORDED OUT TO FILM USING A FILM RECORDER OR USED TO RENDER A VARIETY OF ELECTRONIC FORMATS?	2
UNIT 5	WHAT ARE THE DIFFERENT TOOLS OF DIGITAL INTERMEDIATE? A COMPREHENSIVE OVERVIEW OF THE TOOLS. WHAT ARE THE DIFFERENT HARDWARE AND SOFTWARE USED IN THE PROCESS?	2
UNIT 6	THE PROCESS OF DIGITAL COLOUR CORRECTION. HOW TO FIX THE EXPOSURE PROBLEMS? WHAT ARE THE WHITE BALANCE PROBLEMS AND HOW TO FIX THEM? HOW TO REPAIR EXCESSIVE NOISE FROM AGGRESSIVE ISO SETTINGS? EXPANDING CONTRAST FROM LOG - OR FLAT- RECORDED IMAGES. HOW TO DEVELOP THE IMAGE FROM RAW RECORDINGS? SETTING THE INITIAL BLACK, WHITE AND GAMMA POINTS.	2
UNIT 7	THE PROCESS OF DIGITAL COLOUR GRADING. HOW TO CREATE A LOOK OR MOOD? HOW TO MANIPULATE INDIVIDUAL COLOURS AND OBJECTS IN A SCENE? UNDERSTANDING PAINTING, RETOUCHING, AND FIXING IMAGES. WHAT IS MEANT BY EMULATING LIGHTING? WHAT IS MEANT BY EMULATING CAMERA FILTERS AND LAB PROCESSING TECHNIQUES? WHAT IS LUT (LOOKUP TABLES)?	2
UNIT 8	VISUAL EFFECTS AND TRANSITIONS. UNDERSTANDING THE WORKFLOW OF DIGITAL POST-PRODUCTION. WHAT ARE THE TRADITIONAL OPTICAL EFFECTS AND HOW CAN IT BE COMPLETED DIGITALLY? HOW TO USE THE TRANSITIONS SUCH AS WIPES, FADES, AND DISSOLVES? HOW TO CROP, RESIZE OR REPOSITION AN IMAGE? WHAT IS THE USE OF FREEZE-FRAME? HOW TO PUTUP TITLES AND TEXT?	2

UNIT 9	DIGITAL RETOUCHING. WHAT IS MEANT BY DUST BUSTING? HOW DOES DUST BUSTING REMOVES THE DUST? HOW TO USE THE CLONED INFORMATION TO FIX DUST DEFECT ON THE AFFECTED FRAME? WHAT IS DIGITAL PAINT AND HOW IS IT USED FOR DIGITAL RETOUCHING?	2
UNIT 10	DIGITAL RETOUCHING. WHAT IS THE SIGNIFICANCE OF IMAGE SHARPENING? HOW TO SHARPEN SOFT IMAGES THAT HAVE RESULTED FROM DEGRATION OR POOR LIGHTING?	2
UNIT 11	DIGITAL RETOUCHING. WHAT IS MEANT BY GRAIN REDUCTION? WHY IS IT IMPORTANT TO REDUCE THE GRAIN? HOW TO REDUCE THE GRAIN TO SOFTEN THE IMAGE?	2
UNIT 12	DIGITAL MASTERING. THE DIGITAL MASTER IS A FINAL DIGITAL VERSION WITH ALL CHANGES APPLIED. HOW TO USE IT TO CREATE ALL DISTRIBUTION FORMATS?	2
UNIT13	VIDEO OUTPUT. WHAT IS FRAME RATE? WHAT IS MEANT BY COLOUR SPACE? WHAT IS THE IMPORTANCE OF ASPECT RATIO?	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	<ol style="list-style-type: none"> 1. USE THE FILM (2K FOOTAGE AND THE FINAL DPX FILE) FOR COLOR CORRECTION. 2. CREATE DIFFERENT MOODS. 3. RELIGHTING IN DI. 	90 HRS

REFERENCE BOOKS

1. MODERN POST: WORKFLOW AND TECHNIQUES FOR DIGITAL FILMMAKERS BY SCOTT ARUNDALE & TASHI TRIEU
2. DIGITAL INTERMEDIATES FOR FILM AND VIDEO BY JACK JAMES
3. THE ART AND TECHNIQUES OF DIGITAL COLOUR CORRECTION BY STEVE HULFISH
4. COLOR AND MASTERING FOR DIGITAL CINEMA BY GLENN KENNEL
5. UNDERSTANDING DIGITAL CINEMA: A PROFESSIONAL HANDBOOK BY CHARLES S. SWARTZ

REFERENCE LINK

[HTTP://WWW.JAMUURA.COM/BLOG/THINGS-FILMMAKERS-NEED-TO-KNOW-DI-OR-DIGITAL-INTERMEDIATE-EXPLAINED/](http://www.jamuura.com/blog/things-filmmakers-need-to-know-di-or-digital-intermediate-explained/)

[HTTP://WWW.EDITORSGUILD.COM/V2/MAGAZINE/NEWSLETTER/MAYJUN02/DIGITAL_INTERMEDIATE.HTML](http://www.editorsguild.com/v2/magazine/newsletter/mayjun02/digital_intermediate.html)

[HTTPS://WWW.SAFARIBOOKSONLINE.COM/LIBRARY/VIEW/THE-EDCF-GUIDE/9780240806631/013_9781136035852_CHAPTER5.HTML](https://www.safaribooksonline.com/library/view/the-edcf-guide/9780240806631/013_9781136035852_chapter5.html)

RSACE 4:30	GRADUATION FILM	PRACTICAL HOURS 210
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UNITS	DESCRIPTION	Hours
	<p><u>GRADUATION PROJECTS SUBMISSION GUIDELINE.</u></p> <ul style="list-style-type: none"> • PROJECT TITLE • DURATION OF THE PROJECT • PROJECT LEADER AND LIST OF TEAM MEMBER • CONTACT DETAILS OF THE MAIN TEAM. • SUMMARY OF PROJECT • INTRODUCTION. • THE RESEARCH AND APPROACHES. • FINAL SUBMISSION. • OUTCOMES / FINDINGS / EVALUATION. • CONCLUSION • ACKNOWLEDGEMENTS. 	
	<p><u>INTRODUCTION</u></p> <p>RSACE SHORT FILM DELIVERABLE ARE PLANNED IN LINE WITH THE INDUSTRY WORK FLOW. THE STUDENTS ARE TAUGHT INDUSTRY PRODUCTION PROCESS WORK FLOW VALIDATED BY SOME OF THE BEST VFX STUDIOS IN INDIA. EACH SEMESTER IS ALIGNED IN LINE WITH THE INDUSTRY PRODUCTION PRACTICES AND TO TOP IT UP THE FINAL GRADUATION FILM WILL MAKE THE STUDENTS UNDERSTAND THE REAL PRODUCTION NITIGRITIES, WORKING AS A TEAM, WORKING WITHIN THE TEAM, MEETING DEADLINE, FULFILLING THE EXPECTATION OF THE SUPERVISORS AND DELIVERING THE GRADUATION FILM WITHIN THE TIMELINE GIVEN.</p>	
	<p><u>VFX SHORT FILM EVALUATION</u></p> <p>FOR SHORT FILM,MINIMUM 6 MONTHS TIME WILL BE PROVIDED FOR A GROUP OF STUDENTS. MINIMUM 7 OR MAXIMUM 15 STUDENTS WILL BE WORKING ON A SHORT FILM. THE PRODUCTION SCHEDULE AND THE REVIEW MECHANISM WILL BE PROVIDED TO ONE OF THE STUDENTS IN CHARGE FOR ONE POINT CO-ORDINATION (LIKE PRODUCTION COORDINATOR IN THE INDUSTRY). RSACE FACUTY ANDINDUSTRY PROFESSIONALS WILL REVIEW THE PROJECT AT VARIOUS STAGES TO ENSURE THE DESIRE QUALITY IS ACHIEVED.</p>	
	<p><u>GRADUATION PROJECTS BRIEF</u></p> <p>THE FINAL GROUP PROJECT IS A GRADUATION FILM IT CAN BE A SINGLE SHOT / SHOT FILM / SEQUENCE OF VFX SHOTS.</p> <p>THE FORMAT: FULL HD VIDEO.</p>	

	<p>THE STUDENTS FROM BACHELOR'S IN VISUAL EFFECTS WILL FORM A GROUP (MINIMUM OF 5 MAXIMUM OF 7 IN A GROUP) AND WILL PLAN THE PROJECT FROM THE CONCEPT TO IDEATION AND WILL WRITE A SCRIPT, SHORT DIVISION AND VFX BREAKDOWN AND BRIEF. THE STUDENTS WILL HAVE TO WORK ON PRE-VISUALISATION AND GET APPROVAL FROM THE FACULTY MEMBER. THE PROJECT WILL BEGIN DURING THE BEGINNING OF THE 3RD YEAR AND THROUGH OUT THE YEAR THEY WILL HAVE TO WORK ON THE PROJECT ALONG WITH THEIR REGULAR CLASSES.</p> <p>THE PROJECT SHOULD INCLUDE MINIMUM OF 60% OF COMPUTER GRAPHIC AND 40% OF LIVE ACTION SHOOT.</p> <p>THE EXPENSES FOR THE FILMS MADE DURING THE COURSE SHOULD BE BORNE BY THE STUDENTS. EACH AND EVERY STUDENT SHOULD CONTRIBUTE TO MANAGE THE BUDGET.</p>	
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UNIVERSITY OF MUMBAI
GARWARE INSTITUTE OF CAREER EDUCATION & DEVELOPMENT

Ordinances, Regulations and Syllabus Relating to

Bachelor in Visual Effects

(THREE YEARS FULL-TIME COURSE)

MARKS	GRADE POINTS	GRADE
75 TO 100	7.5 TO 10.0	O
65 TO 74	6.5 TO 7.49	A
60 TO 64	6.0 TO 6.49	B
55 TO 59	5.5 TO 5.99	C
50 TO 54	5.0 TO 5.49	D
0 TO 49	0.0 TO 4.99	F (FAILS)

The performance grading shall be based on the aggregate performance of Internal Assessment and Semester End Examination.

The Semester Grade Point Average (SGPA) will be calculated in the following manner:

$SGPA = \sum CG / \sum C$ for a semester, where C is Credit Point and G is Grade Point for the Course/ Subject.

The Cumulative Grade Point Average (CGPA) will be calculated in the following manner :

$CGPA = \sum CG / \sum C$ for all semesters taken together.

R. _____ PASSING STANDARD FOR ALL COURSES :

Passing 50% in each subject /Course combined Progressive Evaluation (PE)/Internal Evaluation and Semester-End/Final Evaluation (FE) examination taken together. i.e. (Internal plus External Examination)

R. _____

- A. Carry forward of marks in case of learner who fails in the Internal Assessments and/ or Semester-end examination in one or more subjects (whichever component the learner has failed although passing is on total marks).
- B. A learner who PASSES in the Internal Examination but FAILS in the Semester-end Examination of the Course shall reappear for the Semester-End Examination of that Course. However his/her marks of internal examinations shall be carried over and he/she shall be entitled for grade obtained by him/her on passing.
- C. A learner who PASSES in the Semester-end Examination but FAILS in the Internal Assessment of the course shall reappear for the Internal Examination of that Course. However his/her marks of Semester-End Examination shall be carried over and he/she shall be entitled for grade obtained by him/her on passing

R. _____ ALLOWED TO KEEP TERMS (ATKT)

- A. A learner shall be allowed to keep term for Semester II irrespective of number of heads/courses of failure in the Semester I.
- B. A learner shall be allowed to keep term for Semester III wherever applicable if he/she passes each of Semester I and Semester II.

OR

- C. A learner shall be allowed to keep term for Semester III wherever applicable irrespective of number of heads/courses of failure in the Semester I & Semester II.
- D. A learner shall be allowed to keep term for Semester IV wherever applicable if he/she passes each of Semester I, Semester II and Semester III.

OR

E. A learner shall be allowed to keep term for Semester IV wherever applicable irrespective of number of heads/courses of failure in the Semester I, Semester II, and Semester III

F. A learner shall be allowed to keep term for Semester V wherever applicable if he/she passes each of Semester I, Semester II, Semester III and Semester IV.

OR

G. A learner shall be allowed to keep term for Semester V wherever applicable irrespective of number of heads/courses of failure in the Semester I, Semester II, Semester III, and Semester IV.

H. The result of Semester VI wherever applicable OR final semester shall be kept in abeyance until the learner passes each of Semester I, Semester II, Semester III, Semester IV, Semester V wherever applicable.

OR

I. A learner shall be allowed to keep term for Semester VI wherever applicable irrespective of number of heads/courses of failure in the Semester I, Semester II, Semester III, Semester IV and Semester V.