



UNIVERSITY OF MUMBAI'S



**GARWARE INSTITUTE OF CAREER EDUCATION &
DEVELOPMENT**

**Syllabus for the
Bachelor in Animation**

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 Animation
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

INTRODUCTION

A sequence of images creates an illusion of a moving object is termed as Animation. India is one of the most preferred outsourcing countries. We not only do outsourcing services, we are also a creator of original animation. Some of the popular original contents are Chota bheem, Little Krishna, Delhi Safari, Arjun, Road side Romeo etc. Animation is a combination of entertainment and technology. It is composed of design, drawing, layout and production of graphically rich multimedia clips. Time and space are important in animation. Those who excel in drawing and creativity can choose animation as their career. An animator's job is to analyze the script thoroughly and get into the skin of the character. Creating idea, storyboard, Character design, backgrounds, etc and using technical methodology to create stunning visuals short movies is the ideal steps in making a successful animation feature.

Program Overview

The aim of this program is to make the students self reliant and equip them with the artistic approach, technical knowledge, mastering tools as well as the concepts of animation so they can make a mark in the global world of animation. 2D animations are superficial whereas 3D animations possess some depth. Our programme starts with art and design, They learn basic construction in drawing using Pencil & paper which is their canvas to produce frames that define a sequence which is then moved at different speed that create an illusion of movement. Then we introduce various software's & techniques to master the skills of animation.

Apart from drawing and character designing, 3D animators deal with modelling, rendering, texture and lighting.,this gives a depth to the animation. Virtual cameras do the job of focus, resize, zoom and elucidating the characters.

At this institute you will be exposed to the best faculty in the industry. There will be tie ups with domestic and international institutes so you will get to work on national and internal projects. You can participate in film festivals and competitions world over.

Objectives of the course

The objective of animation course is to prepare students for the field of visual arts and equip them with all the necessary tools that this field requires. Hollywood is a booming industry with various job openings in the full length animation movies, television, advertising etc. A full-length animation requires almost 500 animators to work on it. Apart from films and television, Animation services are now the top requirements in every other fields, like business, sales, engineering and education etc., Even fields like fashion designing, interior designing, medical, legal and insurance companies require animations for their presentations and models. This program focuses more on creating computer graphic artist who can perform at any level and any process.

Career Options

After completing a course in animation, there is an ocean of opportunity for the students to choose and work from. Students can have some flexibility to choose a career in television, film and video games. Some of the careers options are:

- *Pre production Artist / Storyboard artist / Matte Painting artist / Layout Artist / 2D animator/ 3D Modeller / Texturing Artist /Character animator / 3D vfx artist / Lighting Artist / Rendering Artist / Production Co ordinator /Short film maker / Editor /3D Printing.*

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	Previsualization - 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	Animation Preproduction	I+E	100	30	90	5
12	Character Design & Development	I+E	100	30	90	5
13	Backgrounds & Layout	I+E	100	30	90	5
14	Storyboard & Animatics	I+E	100	30	90	5
15	Classical Animation	I+E	100	30	90	5
	Total		500	150	450	25
	Semester 4					
16	Digital Art - Part 01	I+E	100	30	90	5
17	Digital 2D Part 01	I+E	100	30	90	5
18	Digital 2D Part 02	I+E	100	30	90	5
19	Fundamentals of 3D	I+E	100	30	90	5
20	3D Asset Development	I+E	100	60	120	8

	Total		500	180	480	28
	Semester 5					
21	Digital Art Part 02	I+E	100	30	90	5
22	Advanced Character Modeling	I+E	100	30	90	5
23	Fundamentals of Animation	I+E	100	30	90	5
24	Rigging	I+E	100	30	90	5
25	Character Animation	I+E	100	60	120	8
	Total		500	180	480	26
	Semester 6					
26	Technical Animation (Effects)	I+E	100	30	90	5
27	Lighting & Rendering	I+E	100	30	120	8
28	Compositing 01	I+E	100	30	30	3
29	Advanced CGI Compositing & Editing	I+E	100	30	30	3
30	Graduation Film	I	200	15	210	8
	Total		600	165	480	28
			3100	975	2970	163

Prof. Anil V. Karnik
I/c Director
GICED

Prof. Sanjay Deshmukh
Hon'ble Vice Chancellor.
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
Animation Preproduction	Digital Art - Part 01
Character Design & Development	Digital 2D Part 01
Backgrounds & Layout	Digital 2D Part 02
Storyboard & Animatic	Fundamentals of 3D
Classical Animation	3D Asset Development

YEAR 03

FIFTHSEMESTER	SIXTHSEMESTER
Digital Art Part 02	Technical Animation (Effects)
Advanced Character Modeling	Lighting & Rendering
Fundamentals of Animation	Compositing 01
Rigging	Advanced CGI Compositing & Editing
Character Animation	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
-----------------	---------------------------	------------------------------

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 – PHYSICAL FACTORS, SELECTION OF WRONG VARIETY OF LANGUAGE.	2
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	<p>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</p> <p>ALL CLUES TOGETHER IS BODY LANGUAGE.</p>	2
UNIT 9	<p>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.</p>	2
UNIT 10	<p>IMPORTANCE OF COMMUNICATION IN ORGANISATIONS</p> <p>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.</p>	2
UNIT 11	<p>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.</p>	2
UNIT 12	<p>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</p> <p>MEETINGS, PURPOSE, PROCEDURE, INSTRUCTION, DICTATION, ASSIGNMENTS.</p>	2
UNIT 13	<p>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.,</p> <p>PURPOSE, PROCEDURE, CHAIRMANSHIP, PARTICIPATION, PHYSICAL ARRANGEMENTS.</p>	2
UNIT 14	<p>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,</p> <p>TYPES OF DISCUSSION GROUPS, REGULATING SPEECH, CONDUCTING SEMINARS.</p>	2
UNIT 15	<p>ORGANIZING CONFERENCES</p> <p>EVALUATING ORAL PRESENTATIONS</p>	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 EXERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • WRITING TECHNICAL PROPOSALS: • LETTER WRITING • BLOG WRITING • WRITING FILM REVIEWS • PREPARING BUSINESS PROPOSALS • EXERCISES 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
------------------	---	------------------------------

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, PORTTAIT, 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 – PRIMARIY COLORS, SECONDERY COLORS AND TREASURY COLORS_ THEORY OF COLOR RELATIONSHIP/HARMONY: MONOCHROMATIC, ANALOGOUS, DIAD,TRIAD, TETRAD, COMPLIMENTARY, SPLIT COMPLIMENTARY, ACHROMATIC AND POLYCHROMATIC THEORIES OF SUCCESSIVE AND SIMULTANEOUS CONTRAST, ADDITIVE AND SUBTRACTIVE COLORS.	4
UNIT 9	COLOR THEORY – PART 01 – COMPLEMENTRY COLORS, SEASON COLORS (SPRING, SUMMMUR & 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 ESTABLISED 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 – PART04: 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	4

	INFORMATION VISUAL SPACE AND TIME, VISUAL OBJECTS, WORDS AND MEANINGS, VISUAL AND VERBAL NARRATIVES, CREATIVE METASEEING.	
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](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
------------------	--	---------------------------

UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	<p>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.</p>	2
UNIT 2	<p>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.</p>	2
UNIT 3	<p>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.</p>	2
UNIT 4	<p>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.</p>	2
UNIT 5	<p>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 AND END USERS IN THE PROTOTYPE PHASE WILL BE EXECUTED. IN THIS STEP, THE DESIGN THINKERS ARE SUPPOSED TO BE COLLABORATIVE AND AGILE.</p>	2
UNIT 6	<p>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</p>	2

	<p>DURING THE LEARNING PHASE OF PROJECTS PREVIOUSLY UNDERTAKEN WITH THE SAME OR SIMILAR CLIENT.</p> <p>SECONDARY RESEARCH: IT IS THE INFORMATION OBTAINED FROM GENERAL SECONDARY SOURCES SUCH AS CONSUMER MARKET RESEARCH REPORTS.</p>	
UNIT 7	<p>IDEA GENERATION BASIC DESIGN DIRECTIONS, QUESTIONS AND ANSWERS THEMES OF THINKING, INSPIRATIONS AND REFERENCES, PICTURE COLLECTION BRAINSTORMING: VALUE, INCLUSION, SKETCHING, DOODLING</p>	2
UNIT 8	<p>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.</p>	4
UNIT 9	<p>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.</p>	4
UNIT 10	<p>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.</p> <p>PERSONIFICATION PERSONIFICATION HELPS US UNDERSTAND OUR EXPERIENCES WITH NON-HUMAN THINGS, AGAIN BOTH TANGIBLE AND INTANGIBLE, THROUGH HUMAN CHARACTERISTICS. THEY GIVE THE EXAMPLE, "INFLATION HAS OUTWITTED THE BEST ECONOMIC MINDS IN THE COUNTRY".</p>	4
UNIT 11	<p>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.</p>	2
UNIT 12	<p>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</p>	2

	REALLY MAKE AN IMPACT.	
UNIT 13	<p>SHAPE</p> <p>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.</p>	2
UNIT 14	<p>TYPE FACES</p> <p>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.</p>	4
UNIT 15	<p>PROTOTYPING - DEVELOPING DESIGNS</p> <p>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.</p> <p>TYPES OF PROTOTYPE</p> <p>LOW-FIDELITY PROTOTYPING</p> <p>LOW-FIDELITY PROTOTYPING INVOLVES THE USE OF BASIC MODELS OR EXAMPLES OF THE PRODUCT BEING TESTED.</p> <p>HIGH-FIDELITY PROTOTYPING</p> <p>HIGH-FIDELITY PROTOTYPES ARE PROTOTYPES THAT LOOK AND OPERATE CLOSER TO THE FINISHED PRODUCT.</p>	4
UNIT 17	<p>IMPLEMENTATION</p> <p>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 THIS KIND OF FLEXIBILITY HELPS YOU TO ADAPT TO THE WAY YOUR CUSTOMERS CHANGE.</p>	4
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,</p>	4

	PROTOTYPE, TEST, AND IMPLEMENT.	
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</p> <p>RHETORIC IS AN ART OF SHAPING SOCIETY, CHANGING THE COURSE OF INDIVIDUALS AND COMMUNITIES, AND SETTING PATTERNS FOR NEW ACTION”</p> <p>” ... ARISTOTLE’S REMARKS ON THE RISE OF RHETORIC AS AN ART OF PERSUASION HAVE RELEVANCE TO THE ART OF DESIGN.”</p> <p>“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.”</p> <p>“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.”</p> <p>“<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</i></p>	4

	LIFE.”	
UNIT 22	<p>INTRODUCTION TO SERVICE DESIGN A METHOD FOR DESIGNING EXPERIENCES THAT REACH PEOPLE THROUGH MANY DIFFERENT TOUCH POINTS AND THAT HAPPEN OVERTIME.</p> <p>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.digitalllearning.macfound.org/>

RSACE 1:4	VISUAL & VERBAL STORY TELLING	TEACHING HOURS
------------------	--	-----------------------

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
------------------	------------------------------------	--------------------------

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,INTERESTING 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 DATES.	4

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 FUNDEMENTALS, THE CRETIVE 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 EXCERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • SINGLE SHORT FILM • PROCESS FILM • VISUAL CONTINUITY FILM • OBSERVATON 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
------------------	---------------------------	---------------------------

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, ANALYSIS OF COMPOUND SENTENCES.	4
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 INCORPORATED 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 EXERCISE	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 EDITIONNEW 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
------------------	---	-----------------------

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	4

	<p>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.</p>	
UNIT 6	<p>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.</p>	4
UNIT 7	<p>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.</p>	4
UNIT 8	<p>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.</p>	4
UNIT 9	<p>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 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.</p>	4
UNIT 10	<p>WHAT ARE COMPONENTS OF PERSONALITY – THE COMPONENTS OF PERSONALITY ARE HABITS, ATTITUDES, INTEREST, VALUES, PRINCIPLES AND INTELLECTUAL CAPACITY</p>	2
UNIT 11	<p>STEPS TO IMPROVE YOUR PERSONALITY – BE A BETTER LISTENER, READ MORE AND EXPAND YOUR INTEREST, BE A GOOD CONVERSATIONALIST</p>	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=ZLWUWGLSL68IASWV-4R BUR6S4&HL=EN&SA=X&VED=0AHUKEWJR4-FC8DRSAHXERO8KHEPTCGW4CHDOAQG7MAY#V=ONEPAGE&Q=PERSONALITY%20DEVELOPMENT%20MEANING&F=FALSE](https://books.google.co.in/books?id=2OBX1DRWHGSC&pg=PA1&lpg=PA1&dq=pers onality+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.essentiallifekills.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/P RESENTATION_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 TOPHOTOGRAPHY	TEACHING HOURS
------------------	-----------------------------------	-----------------------

UNITS	COVERAGE OF MODULE	Time (Leatures)
UNIT 1	<p>HISTORY OF PHOTOGRAPHY</p> <p>"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.</p>	2
UNIT 2	<p>PHOTOGRAPHY THE TRADITIONAL METHOD</p> <p>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.</p>	2
UNIT 3	<p>OBSERVATON OF LIGHT SENSITIVE MATERIALS.</p> <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>	2
UNIT 4	<p>OBSERVATON 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 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 COMMERCIALY AVAILABLE AND REASONABLY PRICED DIGITAL CAMERA.</p>	2
UNIT 8	<p>CHRONOLOGY OF PHTOGRAPHY PROCESSS</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> <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>	2
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</p>	2

	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	
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 WORKFLOW.</p>	2
UNIT 19	<p>NATURAL AND AVAILABLE LIGHT</p> <p>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.</p>	2
UNIT 20	<p>ARTIFICIAL LIGHT-FLASH</p> <p>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.</p> <p><i>LEARN HOW TO TAKE BETTER PHOTOS</i></p>	2

	<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. 	
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
------------------	------------------------	-----------------------

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 ANIMAITION • 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
-------------------	---	------------------------------

	PROJECT / PORTFOLIO SUBMISSION DETAILS	TIME ALLOTTED
	<p>SUBMISSION GUIDLINE :</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. 	4
	<p>THE FINAL PROJECT PROVIDES THE STUDENT WITH THE TIME TO DEVELOP ANY ONE FO THE FOLLOWING DEPENDS UPON THE SPECILIZATION 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 / SREEN WRITING.</p> <ul style="list-style-type: none"> • FINALIZING THE WRITING 2-5 MINS FILM • PRE PRODUCTION & PLANNING, BUDGETING ETC. • FINALISING LOCATIONS AND ATORS, REHEARSALS • SHOOTING & EDITING • ADDITIONAL EDITING & SOUND WORK WITH BASIC MIXING (2 TRACKS) 	10

YEAR – 02

THIRD SEMESTER

RSACE 3.11	ANIMATION PREPRODUCTION	TEACHING HOURS 30
-------------------	--------------------------------	------------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	WHAT IS PRE PRODUCTION? – IT ENTAILS ALL PLANNING PRIOR TO PRODUCTION & MAIN CONCEPTS ARE TURNED INTO A STORY. IT IS WHERE IDEAS ARE STREAMLINED, SHAPED AND REFINED PRIOR TO THE PRODUCTION PROCESS. RESERCH PROCESS, COLLECTING REFERENCES IN THE FORM OR IMAGES AND VIDEO DETAILS CREATE A ROADMAP FOR THE PROJECT AND DEVELOPING INPUTS FOR THE PRODUCTION PROCESS.	2
UNIT 2	STEPS IN PRE PRODUCTION – IDEA & CONCEPT DESIGN - THIS IS THE INITIAL STEP THAT WILL SERVE AS THE IMPETUS FOR CREATING AN ANIMATED FILM. WHETHER IT IS A SHORT FILM, A FULL-LENGTH ANIMATED FILM OR PART OF LIVE ACTION-SHOTS,IT ALL BEGINS WITH THE IDEA, CONCEPT DESIGN. IT SIMPLY REFERS TO THE GENERAL UNIFYING IDEA OR THEME THAT PROVIDES THE GENERAL DIRECTION.	2
UNIT 3	SCRIPTING - THE SCRIPT IS JUST A WRITTEN DESCRIPTION OF THE ANIMATION AND CONTAINS INFORMATION ABOUT EACH SCENE. SOME OF THE IMPORTANT INFORMATION WRITTEN IN A SCRIPT INCLUDES THE DIALOGUE, SET DESIGN, CHARACTER DESCRIPTIONS, CHARACTER ACTIONS, AND CAMERA POSITIONS, ETC. THE SCRIPT IS BASICALLY A BLUE PRINT FOR THE WHOLE ANIMATION. THIS STEP IS IMPORTANT BECAUSE IT GIVES AN OVERVIEW OF WHAT THE ENTIRE ANIMATION IS GOING TO BE AND ALLOWS THE STORYBOARD ARTIST TO PRODUCE A CLEAR AND CONCISE STORYBAORD.	4
UNIT 4	BACKGROUNDS & LAYOUTS –LAYOUT TAKES ALL THE UPSTREAM ASSETS SUCH AS BACKGROUND AND PROPS FROM ART DEPARTMENT, CHARACTERS FROM CHARACTER DESIGNERS, STORYBOARDS FROM THE STORY DEPARTMENT AND THEY PUT THEM TOGETHER AND LAY THEM OUT ACCORDING TO WHAT THE SEQUENCE AND SHOTS CALL FOR ACCORDING TO THE SCRIPT AND STORYBOARD.	2
UNIT 5	VOICE RECORDING – FIRST TEMPERORY “SCRATCH” VOICES ARE RECORDED BY ARTIST AS PER THE FINAL SCRIPT. LATER WHEN THE	2

	<p>STORY & DIALOUGE ARE FINLIZED, PROFESSIONAL ACTORS ARE INVOLVED IN RECORDING THE CHARACTER VOICES, READING THE SCRIPT AND IMPROVISING. ACTORS MUST RECORD LINES SEVERAL DIFFERENT WAYS AND THE BEST READING IS EVENTUALLY ANIMATED. SOMETIMES SCRATCH VOICES ARE SO GOOD, THEY ARE NOT REPLACED.</p>	
UNIT 6	<p>EXPOSURE SHEETS - EXPOSURE SHEETS ARE USED BY THE ANIMATOR TO KEEP TRACK OF ALL THE DRAWINGS THAT THEY'RE GOING TO BE ANIMATING, THE TIMING OF EACH DRAWING, THE ORDER THEY GO IN WHEN SHOOTING AS WELL AS THE LEVELING – PRODUCTION NUMBER – SCENE NUMBER – SCENE FOOTAGE OR SCENE LENGTH – DESCRIPTION, ANIMATOR – NUMBER OF DRAWINGS</p>	2
UNIT 7	<p>CHARACTER DESIGNING : CHARACTER DESIGN COVERS ALL REALMS OF STORYTELLING, WHETHER IN THE FORM OF A SHORT FILM, SINGLE SHOT, MUSIC ALBUM, GAME, ETC; IN WHATEVER FORMAT YOU CHOOSE TO TELL YOUR STORY, YOUR CHARACTERS HAVE TO BE BELIEVABLE. THE CHARACTER DESIGN AND DEVELOPMENT (TURN AROUNDS, MODEL SHEET, EXPRESSIONS, ETC) ARE ESSIENTIAL TO TAKE IT TO THE PRODUCTION. THE ARTIST HAVE TO BE FAMILIARISE THEMSELVES IN GREAT DETAIL WITH THE REAL IN ORDER TO IMAGINE THE UNREAL.</p>	2
UNIT 8	<p>LAYOUT: ESSENTIALLY A LAYOUT ARTISTS TAKES THE STORYBOARDS AND TRANSLATES EACH SCENE INTO A USABLE SET OF DRAWINGS FOR THE ANIMATORS. IN THE OLD PAPER AND PENCIL DAYS THEY WOULD BE KEPT IN A FOLDER AND PASSED ONTO THE ANIMATORS AND BACKGROUND ARTISTS, NOW THEY'D BE STORED DIGITALLY IN MOST CASES IN SHARED FOLDERS.</p> <p><u>ELEMENTS OF A LAYOUT</u></p> <p>THE FIELD GUIDE AND CAMERA GUIDE, DOPE SHEETS, THE CHARACTER POSES, THE CLEANED UP BACKGROUND, THE OVERLAYS OR UNDERLAYS, AND EFFECTS ELEMENTS. EVERY ELEMENT SHOULD BE LABELED</p>	2
UNIT 9	<p>STORYBOARDING -ONCE THE STORY AND CONCEPT ART IS ESTABLISHED, THE STORYLINE IS FINALIZED USING STORYBOARDS. HOW TO CONVERT YOUR SCRIPT OR IDEA INTO A WORKING STORYBOARD WITH ILLUSTRATIONS, SERIES OF BRAINSTORMING ACTIVITIES MIGHT BE CONDUCTED TO COME OUT WITH A STORYBOARD. THE STORY BOARD WILL DEFINE THE CAMERA ANGLES AND THE VISUAL CONTINUTY. THE CAMERA ANGLES AND MOVEMENTS SHOULD ENHANCE THE STORY TELLING ASPECTS ON THE SCREEN.</p>	2
UNIT 10	<p>ANIMATION TIMING- AFTER THE STORYBOARD HAS BEEN SOLIDIFIED ON BOARDS THE NEXT STEP IS TO TIME THEM. SO FAR WE HAVE ESTABLISHED THE LOOK OF THE SHOW BUT WE DON'T KNOW HOW LONG IT WILL TAKE FOR AN ACTION IN EVERY SCENE TO TAKE PLACE. ON ANIMATED PROJECT THE SHOW IS PRE EDITED DOWN TO THE EXACT FRAME BEFORE THE PRODUCTION STAGE OFFICIALLY BEGINS. SINCE THE ANIMATING PROCESS IS EXTRA ORDINARILY TIME CONSUMING AND EXPENSIVE IT IS IMPORTANT TO FIGURE OUT THE DETAILS OF WHAT IS REQUIRED FOR EACH SCENE PRIOR TO IT ENTERING THE PRODUCTION STREAM.</p>	2

UNIT 11	ANIMATICS - THIS IS THE FINAL STAGE OF PRE-PRODUCTION IN WHICH THE COMPLEX ANIMATION SEQUENCES AND VFX-HEAVY SCENES ARE VISUALIZED INSIMPLIFIED FORMS OR MOCK-UPS KNOWN AS ANIMATICS. THE INTEGRATION OF VISUALS, ROUGH VOICE OVER AND THE MUSIC WILL GIVE A FAIR IDEA FOR THE PRODUCER AND DIRECTOR ABOUT THE ENTIRE FILM.	2
UNIT 12	<p>PROJECT PLANNING - ONLY AFTER THE STORY IS FINLIZEDAN ESTIMATED TIMELINE IS GIVEN FOR THE PROJECT, ALSO BASED ON THE TIME LINE AND THE MANPOWER THE COSTING IS WORKED OUT. WE KNOW OF ANIMATION COMPANIES THAT WILL QUOTE A FIXED PRICE PER RUNNING MINUTE/SECOND OF ANIMATION.</p> <p>VIDEO RESOLUTION: FIX THE VIDEO RESOLUTIONS, A HIGH-DEFINITION FOOTAGE INCREASES THE REQUIRED LEVEL OF DETAIL IN THE MODELS AND MATERIALS AND INCREASES RENDERING TIMES.</p> <p>SCENE COMPLEXITY: HOW MANY ANIMATED OBJECTS ARE IN THE SCENE? ARE THERE CHARACTERS OR OTHER ORGANIC SUBJECTS THAT WILL BE FEATURED? HOWMANY DIFFERENT SCENES ARE THERE IN THE ANIMATION?</p> <p>COMPOSITING: WILL THE ANIMATION BE INTEGRATED WITH LIVE ACTION (VIDEO) FOOTAGE?</p> <p>CAD MODELS : DO ACCURATE CAD MODELS EXIST THAT COULD BE LEVERAGED IN THE ANIMATION?</p> <p>AUDIO: DO YOU ALREADY HAVE A PRERECORDED NARRATION OR RIGHTS TO MUSIC THAT YOU WOULD LIKE TO USE, OR WILL WE BE RESPONSIBLE FOR THE AUDIO PORTION AS WELL?</p>	2
UNIT 13	POST PRODUCTION PLANNING : MUSIC & FOLAY, EDITING & FINAL OUTPUT FORMATS	2
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	(1)OUTDOOR SKETCHING – LANDSCAPE, PERSPECTIVE DRAWING, OBJECT STUDY AND STILL LIFE. (2) CREATE A STORY BOARD FOR A 1 MINUTE STORY SEQUENCE – WITH DIALOGUE AND ACTION NOTE (3) CREAE AN ANIMATICS OF THE STORY BOARD WITH ROUGH SOUND AND VOICE OVER.	90 HRS

REFERENCE BOOKS

- ANIMATION FROM PENCIL TO PIXEL
- FORCE CHARACTER DESIGN FROM LIFE DRAWINGS
- HOW TO MAKE ANIMATION FILMS – BY TONY WHITE

REFERENCE LINKS

<https://www.slideshare.net/Veetildigital/pre-productionpost-process-in-3d-animation>
<http://www.awn.com/animationworld/producing-animation-storyboarding>

<http://www.awn.com/animationworld/producing-animation-development-process>
<http://www.digitalbrew.com/pre-production-production-post-production-defined/>
<http://www.rmca.edu/academics/3d-animation-pre-production>
<https://www.ryankingslien.com/blog/animated-movies-steps-in-pre-production>
http://www.freelance-animation.com/HTML/Animation_Process.html
<http://media-freaks.com/the-process-of-3d-animation/>
<https://www.slideshare.net/dmadzel/gridway-digital-the-3-d-animation-process-and-workflow>
<http://pixar-animation.weebly.com/pixars-animation-process.html>
http://pellacini.di.uniroma1.it/teaching/projects10/lectures/01_pipeline.pdf

RSACE 3.12	CHARACTER DESIGN & DEVELOPMENT	TEACHING HOURS 30
-------------------	---	------------------------------

UNITS	COVERAGE MODULES	TIME (LECTURES)
UNIT 1	<p>INTRODUCTION TO CHARACTER DESIGN – AS ANIMATION MOVES AWAY FROM THE TRADITIONAL ROOTS TOWARDS EVER GREATER TECHNICAL SOPHISTICATION, ONE THING REMAINS CONSTANT: THE NEED FOR UNIQUE AND INTERESTING CHARACTERS FOR ANIMATORS TO BRING TO LIFE. WITH AN EMPHASIS PUT VERY STRONGLY ON DRAWING, YOU WILL BE GUIDED THROUGH THE FUNDAMENTALS OF CHARACTER DESIGN. THE MOST IMPORTANT THING ABOUT "CHARACTERS" IS KNOWING</p> <ul style="list-style-type: none"> • THE WHO'S AND WHAT'S OF YOUR CHARACTER. • ALL THE INFORMATION ABOUT YOUR CHARACTER WILL BE DERIVED OUT OF YOUR STORY. 	2
UNIT 2	<p>THUS CREATING A GOOD CHARACTER IMPLIES THAT YOU MUST DESIGN THAT CHARACTER IN SUCH A WAY THAT PEOPLE WILL LOVE AND RELATE TO IT ON A VERY INTIMATE LEVEL. IT'S ALL ABOUT THE PERSONALITY THAT YOU EMPOWER YOUR CHARACTER WITH, AND THAT UNIQUE PERSONALITY CAN DERIVE FROM THE WAY IT LOOKS, TALKS, WALKS, THINKS, ETC. CHARACTER DESIGN CREATES LOVABLE OR MEMORABLE CHARACTERS, WHETHER THEY ARE GOOD OR BAD, CUTE OR WEIRD, HAPPY OR SAD.</p> <p>TAKING INTO ACCOUNT THAT A CHARACTER MUST BE DESIGNED AND NOT MAGICALLY SUMMONED INTO EXISTENCE, THERE ARE A FEW BASIC PRINCIPLES OR GUIDELINES WHICH ONE CAN USE AS THE BASE FOR CREATING A SUCCESSFUL CHARACTER.</p> <p>FUNCTION – STYLE – PERSONALITY - EXAMPLES</p>	2
UNIT 3	<p>THE CHARACTER DESIGNING PROCESS CAN BE DIVIDED AS FOLLOWS:</p> <ol style="list-style-type: none"> 1. ATTRIBUTES AND PROPORTIONS 2. EXPRESSIONS 	2

	<p>3. MODEL SHEET 4. POSES AND GESTURES 5. COLORS</p>	
UNIT 4	<p>THE CHARACTER DEVELOPMENT</p> <ol style="list-style-type: none"> 1. VISUAL DEVELOPMENT 2. MODELING 3. LOOK DEVELOPMENT 4. ATTITUDE POSSES 5. CHARACTER EXPRESSIONS 	2
UNIT 5	<p>THE MOST EXCITING AND MOVING STORY WON'T WORK IF THE CHARACTERS ARE SHALLOW AND DULL. THEREFORE THE CHARACTER CREATION SHOULD BE DONE VERY THOROUGHLY AND THE PROJECT SCHEDULE SHOULD PROVIDE A GENEROUS TIMEFRAME FOR THIS PHASE. EACH CHARACTER HAS TO BE CAREFULLY MODELED AND RESEARCHED. THE CHARACTER HAS TO BE INTRIGUING, CONVINCING AND BELIEVABLE. YOU SHOULD KNOW WHAT YOU ARE WRITING ABOUT AND GET AS MUCH INFORMATION AS NECESSARY ABOUT A CERTAIN CONTEXT WHICH IS REQUIRED FOR THE CHARACTER DESIGN IN ORDER TO GET AUTHENTIC CHARACTERS.</p>	2
UNIT 6	<p>EMOTIONAL BONDING - CHARACTERS ARE THE HEART AND SOUL OF THE STORY. THEREFORE IT IS ESSENTIAL TO EVOKE EMPATHY, SYMPATHY OR INTEREST FOR/IN THE PROTAGONIST RIGHT FROM THE START AND ENABLE THE AUDIENCE TO CONNECT WITH HIM OR HER. AS IN REAL LIFE, FIRST IMPRESSIONS ARE NOT TO BE UNDERESTIMATED: "CHARACTERS, LIKE PEOPLE, MAKE GOOD OR BAD FIRST IMPRESSIONS. WHEN CHARACTERS FIRST SHOW UP IN A STORY, WE START TO LIKE THEM – OR DISLIKE THEM – RIGHT AWAY". BY INTRODUCING A CHARACTER TO THE AUDIENCE THE CREATOR SHOULD THEREFORE TRY TO GIVE AN INTRIGUING FIRST IMPRESSION OF THE 'HERO', WHICH DOESN'T MEAN THAT THE AUDIENCE NECESSARILY HAS TO LIKE HIM.</p>	2
UNIT 7	<p>DEFINING A CHARACTER– WHEN TRYING TO UNDERSTAND CHARACTERS, CHARACTERS ARE WOVEN WITH UNIQUE PERSONALITY TRAITS, AS THE WRITER/ANIMATION EXPERT-DWIGHT V. SWAINPOINTED OUT THAT CHARACTERS "ARE LIKE TAPESTRIES; EACH IS WOVEN OF MANY THREADS. BUT SOME THREADS ARE MORE VIVID AND VISIBLE THAN OTHERS, LIKE STRANDS OF RED THROUGH A GRAY FABRIC". THIS COMPARISON EMPHASIZES THE IMPORTANCE OF DIVERSITY AND COMPLEXITY AS WELL AS THE SIGNIFICANCE OF OBVIOUS AND MORE SUBTLE QUALITIES AS PARTS OF GOOD CHARACTER DESIGN.</p>	
UNIT 8	<p>DEEPENING THE CHARACTER – THE CREATION OF A BACKGROUND AND CHARACTER BIBLE WILL GIVE A DEEP INSIGHT OF THE CHARACTER – HOW TO COMMUNICATE THE BACKGROUND – MOTIVE, GOALS AND NEED OF THE CHARACTER AND DEFINING THE BEHAVIOURAL PATTERN OF THE CHARACTER.</p>	2
UNIT 9	<p>VISUALIZATION OF THE CHARACTERS - THEIR BODY LANGUAGE (POSTURE AND GESTURE), FACIAL EXPRESSION, CLOTHING, HAIR-STYLE, MAKE-UP OR ITEMS THEY USUALLY CARRY WITH THEM CAN GIVE US HINTS ABOUT WHO THEY ARE, WHAT THEY ARE LIKE AND WHICH LIFESTYLE THEY PREFER. SINCE PHYSICAL APPEARANCE HAS OBVIOUS</p>	4

	POWERS TO INFLUENCE HOW PEOPLE THINK ABOUT THEMSELVES AND OTHERS AND USUALLY CAN BE SEEN AS THE BASIS FOR THE FIRST IMPRESSION WE GET ABOUT SOMEONE WE MEET FOR THE FIRST TIME, THE VISUALIZATION OF A CHARACTER IS A CRUCIAL ASPECT OF CHARACTER DEVELOPMENT.	
UNIT 10	CONCEPT ARTISTS – IT IS OFTEN REFERED TO AS VISUAL DEVELOPMENT IS THE INITIAL DESIGN USE TO DEVELOP THE LOOK AND FEEL OF A PROJECT. THE PROJECT CAN BE ANYTHING FROM ANIMATED FILMS TO VIDEO GAMES. VISUAL DEVELOPMENT ARTISTS WILL USE THE STORY AND CHARACTERS TO BUILD A BASIC CONCEPT THAT IS USED AS A GUIDELINE FOR THE ENTIRE PROJECT. THE CONCEPT ART WILL DEPICT A SCENE IN THE STORY.	2
UNIT 11	CHARACTER DEVELOPMENT - THIS IS BASICALLY WHEN AN IDEA FOR A STORY IS CREATED AND THE CHARACTERS ARE MADE RESEARCH AND BRAINSTORMING IS DONE TO REALLY GET IN TOUCH WITH THE CHARACTERS. THE CHARACTER DEVELOPMENT IS PURELY DEPENDS UPON THE PROJECT BUDGET AND THE DETAILING REQUIRED WITH IN THE TIMELINE AND BUDGET. THIS WAY THE STORY DEVELOPS IN A MORE NATURAL AND REALISTIC WAY. INFACOT GOOD PROGRESSIVE DEVELOPMENT CAN MAKE IT EASIER TO SEE THE GROWTH IN THE CHARACTERS AND PLOTS.	4
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	(1) LIFE STUDY – POTRAIT, FULL FIGURE, MOVEMENT STUDY AND OUTDOOR RAPID SKETCHES. (2)DESIGN A CHARACTER WITH (CHARACTER BIBLE, EXPRESSION CHART, ATTITUDE POSSES, TURNAROUND AND MOUTH CHART.	90 HRS

REFERENCE BOOKS

- ANIMATION FROM PENCIL TO PIXEL
- FORCE CHARACTER DESIGN FROM LIFE DRAWINGS
- HOW TO MAKE ANIMATION FILMS – BY TONY WHITE

REFERENCE LINKS

<http://storyofanimation.blogspot.in/p/concept-art.html>

<http://www.dsource.in/course/character-design-animation/attributes-and-proportions>

<https://www.disneyanimation.com/careers/opportunities/developing-appealing-characters>

<http://artistryingames.com/concept-art-concept-art-important/>

RSACE 3.13	BACKGROUNDS & LAYOUTS	TEACHING HOURS 30
-------------------	----------------------------------	------------------------------

UNITS	COVERAGE MODULES	TIME (LECTURES)
UNIT 1	<p>LAYOUTS - THE APPROVED STORYBOARDS ARE SENT TO THE LAYOUT DEPARTMENT. THE ARTISTIC TEAM OF THE LAYOUT DEPARTMENT IS THE ONE THAT COLLABORATE CLOSELY WITH THE DIRECTOR IN FINALIZING THE SCENES, COSTUMES AND APPEARANCE OF THE CHARACTERS.</p>	2
UNIT 2	<p>IMPORTING THE REFERENCES - THE FIRST STEP IN DRAWING THE BACKGROUND AND POSING IS TO IMPORT YOUR REFERENCES FROM DIGITAL OR PAPER FORMAT.</p> <p>IMPORTING THE STORYBOARD - THE LAYOUT AND POSING PROCESS IS BASED ON THE STORYBOARD. IN ORDER TO START LAYOUT AND POSING, YOU NEED TO IMPORT YOUR STORYBOARD INTO THE SCENE FROM DIGITAL OR PAPER FORMAT.</p> <ul style="list-style-type: none"> • A DIGITAL STORYBOARD CAN BE CREATED USING TOON BOOM STORYBOARD AND IMPORTED TO TOON BOOM ANIMATE. • A PAPER STORYBOARD CAN BE SCANNED USING THIRD PARTY SOFTWARE AND IMPORTED INTO ANIMATE AS A BITMAP IMAGE. 	2
UNIT 3	<p>INTRODUCTION TO TOONBOOM HARMONY–</p> <p>OVERVIEW OF HARMONY, OPENING A SCENE, STAGING INTERFACE, STAGE TOOLBARS, VIEWS, ETC.</p> <p>THE LOCATION DESIGN CAN BE DESIGNED DIRECTLY IN TOON BOOM ANIMATE OR DONE ON PAPER AND SCANNED IN.</p> <p>IMPORTING AN ANIMATIC - IF YOU HAVE AN ANIMATIC AVAILABLE, YOU MAY DECIDE TO IMPORT IT. THE ANIMATIC WILL GIVE YOU THE CORRECT TIMING TO EXPOSE YOUR ANIMATION POSES.</p>	2
UNIT 4	<p>SETTING THE CAMERA–ONE OF THE IMPORTANT PROCESS IN LAYOUT IS DEFINING THE CAMERA ANGLES. IT IS VERY IMPORTANT TO SET THE CAMERA FRAME BEFORE ADDING ANY MORE ELEMENTS SO THAT YOU CAN CORRECTLY PLACE THE CHARACTERS, BACKGROUNDS AND PROPS.</p> <p>STEPS IN SETTING UP YOUR CAMERA POSITION,</p> <p>IN ORDER TO SET THE CAMERA, YOU MUST ADD A CAMERA LAYER TO YOUR SCENE IF IT IS NOT ALREADY PRESENT.</p>	2

	<p>HOW TO ADD A CAMERA IN TOONBOOM:</p> <ul style="list-style-type: none"> • MENU OPTIONS <p>THE CAMERA WILL OFTEN BE ANIMATED. IF YOU PLAN TO NOT ONLY DRAW A CAMERA MOVE, BUT ALSO TO CREATE IT, HOW TO ADD AND ATTACH A PEG TO THE CAMERA.</p> <p>STEPS TO ADD A NEW PEG IN THE TIMELINE VIEW:</p> <ol style="list-style-type: none"> 1. HOW TO SELECT THE CAMERA LAYER IN THE TIMELINE VIEW, 2. HOW TO ADD PEG BUTTON IN THE TIMELINE VIEW LAYER TOOLBAR <p>HOW TO SET AND POSITION YOUR CAMERA AND ALSO POSITION OTHER ELEMENTS, CHARACTERS, AND BACKGROUND. HOW TO POSITION THE CAMERA WHILE REFERRING TO THE STORYBOARD OR ANIMATIC. DEPENDING ON HOW YOU SELECT AND MOVE THE CAMERA IT CAN BE STATIC OR ANIMATED.</p>	
UNIT 5	<p>STATIC CAMERA HOW TO POSITION YOUR CAMERA WITHOUT ANIMATING IT:</p> <ol style="list-style-type: none"> 1. HOW TO SELECT TRANSFORM IN THE TOOLS TOOLBAR, DISABLE THE ANIMATE MODE AND SELECT THE TRANSFORM TOOL. 2. HOW IN THE TIMELINE VIEW, SELECT THE CAMERA PEG. 3. HOW TO POSITION THE CAMERA, IN THE TOP OR SIDE VIEW, <p>ANIMATED CAMERA STEPS TO POSITION YOUR CAMERA AND ANIMATE IT:</p> <ol style="list-style-type: none"> 1. DIFFERENT SET OF TOOLS IN THE TOOLS BAR 2. HOW TO SET CAMERA PEG. 3. HOW TO GO TO THE FIRST FRAME WHERE THE CAMERA WILL START MOVING IN THE TIMELINE VIEW. 4. HOW TO POSITION THE CAMERA- TOP OR SIDE VIEW IN THE CAMERA 5. HOW TO GO TO THE LAST FRAME WHERE THE CAMERA WILL MOVE, IN THE TIMELINE VIEW. 6. HOW TO SET AS MOTION KEYFRAME- IN THE TIMELINE VIEW, AND MAKE SURE THE FIRST KEYFRAME IS MOTION KEYFRAME. 	2
UNIT 6	<p>SKETCHING THE LAYOUT AND POSING - NOW THAT THE REFERENCES AND THE CAMERA HAVE BEEN SET, YOU CAN START DRAWING YOUR BACKGROUND LAYOUT AND POSING.</p> <p>CREATE A ROUGH SKETCH OF THE SCENE BACKGROUND AND EACH CHARACTER POSE; BASE THESE ON THE LOCATION DESIGN AND THE</p>	2

	<p>STORYBOARD. IF THE STORYBOARD HAS THREE DIFFERENT CHARACTER POSES, DRAW EACH POSE AT THE CORRECT SCALE AND POSITION REFERRING TO THE OFFICIAL CHARACTER MODEL.</p> <ol style="list-style-type: none"> 1. HOW TO SELECT CELL IN THE TIMELINE OR XSHEET VIEW, SELECT THE CELL IN WHICH YOU WANT TO DRAW. 2. DIFFERENT SETS OF TOOLS 3. PURPOSE OF GRIDS. 4. COLOUR SELECTION 5. HOW TO BEGIN TO SKETCH YOUR DRAWING IN THE CAMERA OR DRAWING VIEW. 6. HOW AND WHEN TO ENABLE ONION SKIN 	
UNIT 7	<p>INDICATING THE CAMERA POSITIONS - TO SHOW CHANGES IN CAMERA POSITION, OR IF YOU HAVE A POSITION INDICATOR OTHER THAN THE TOON BOOM ANIMATE CAMERA FRAME, YOU CAN DRAW A SAMPLE SHOWING THE ACTUAL MOVES. THIS CAN BE STORED IN THE LIBRARY AND REUSED FOR ALL OF YOUR SCENES.</p>	2
UNIT 8	<p>DRAWING THE CAMERA FRAME SAMPLE –</p> <p>STEPS TO DRAW A CAMERA FRAME:</p> <ol style="list-style-type: none"> 1. HOW TO ENABLE THE SAFE AREA OPTION. 2. HOW TO ADD NEW DRAWING LAYER IN THE TIMELINE OR XSHEET VIEW 3. HOW TO SELECT THE CELL IN WHICH YOU WANT TO DRAW IN THE TIMELINE OR XSHEET VIEW 4. HOW TO CREATE A PALETTE FOR THE CAMERA FRAME IN THE COLOUR VIEW. 5. HOW TO SELECT THE APPROPRIATE TOOL FOR THE SELECTION. 6. HOW TO TRACE OVER THE CAMERA FRAME IN THE CAMERA VIEW. YOU CAN ALSO TRACE OVER THE SAFE TV FRAME. 7. HOW TO TRACE THE CAMERA FRAME CENTRE. 	2
UNIT 9	<p>THE FUNDAMENTAL CONCEPTS OF LAYOUT MADE CLEAR FOR THE STUDENTS. MANY ANSWERS TO HOW, WHAT, WHO AND WHY LAYOUT IS CREATED ARE COVERED BY USING VARIATIONS OF ANIMATION STUDIO TECHNIQUES AND GUIDELINES.</p> <p>WHAT IS PERSPECTIVE - PERSPECTIVE IS A THEORY OF DRAWING, WHICH ALLOWS THE ARTIST A WAY TO GRAPHICALLY DEPICT THREE-DIMENSIONAL OBJECTS ON PAPER OR OTHER MEDIA, AS THEY EXIST IN SPACE. THE RULES OF PERSPECTIVE ARE MANY, BUT ARE BASED ON THE ASSUMPTION THAT A SINGLE EYE, FROM A FIXED POINT OF VIEW, IS LOOKING AT THE SUBJECT BEING DRAWN.</p>	2
UNIT 10	<p>EYE LEVEL -THE LEVEL AT WHICH YOU ARE STANDING AND LOOKING AT AN OBJECT IS KNOWN AS THE EYE LEVEL. A BABY WILL SEE EVERYTHING FROM THE FLOOR UPWARD. A SIX-FOOT ADULT WILL SEE THE SAME ROOM FROM A HIGHER POINT OF VIEW. A BIRD LOOKING DOWN ON A CITY STREET WILL HAVE A MUCH GREATER EYE LEVEL.</p>	2
UNIT 11	<p>POINT OF VIEW (P.O.V.): CAN BE DESCRIBED AS WHAT YOU SEE FROM WHERE YOU ARE LOOKING.</p> <p>STATION POINT: THIS IS THE POINT FROM WHICH THE VIEWER IS</p>	2

	<p>LOOKING FROM.</p> <p>LINE OF SIGHT: WITHOUT GOING IN TO UNNECESSARY DETAIL, THINK OF THE LINE OF SIGHT AS WHAT CAN BE SEEN FROM YOUR POINT OF VIEW.</p> <p>PICTURE PLANE: THIS IS SIMILAR TO THE FIELD OF VISION. HOWEVER, THE IMAGES WE ARE LOOKING AT HAVE BEEN CROPPED OR ADJUSTED SO THAT ONLY A SMALL PORTION CAN BE SEEN. LOOK THROUGH THE VIEWFINDER OF ANY STILL CAMERA TO FIND THAT ONLY A PORTION OF THE WORLD CAN BE SEEN AT ANY ONE TIME. BY MOVING CLOSER OR FARTHER AWAY, MORE OR LESS OF THE VIEW CAN BE SEEN THROUGH THE VIEWFINDER.</p>	
UNIT 12	<p>FIELD OF VISION: SIMILAR TO THE PICTURE PLANE, THE FIELD OF VISION IS ALL THAT CAN BE SEEN FROM THE VIEWERS EYES WHILE STANDING AT A STATIONARY POINT.</p> <p>CONVERGENCE: IS THE POINT IN WHICH ALL LINES MEET AT ONE POINT IN SPACE. IT IS LIKE THE ROW OF SUBWAY SUPPORT BEAMS OR A SUBWAY TRACK THAT EXTENDS FAR OFF INTO THE DISTANCE. ALL THE LINES APPEAR TO MEET TOGETHER AT THE ONE DISTANCE VANISHING POINT.</p>	2
UNIT 13	<p>DIMINUTION: THIS IS THE ACT OF DECREASING OR REDUCING SOME THINGS AS THEY ARE PLACED IN PERSPECTIVE.</p> <p>VANISHING POINT (VP): THIS IS A POINT WHERE THE EDGES OF AN OBJECT ALL SEEM TO LINE UP IN THE DISTANCE.</p> <p>FORM & STRUCTURE</p> <p>EVERY OBJECT THAT EXISTS IN SPACE HAS FORM. EVERYTHING FROM BUGS TO BUILDINGS, MOUNTAINS TO MOTORBIKES, OCEANLINERS TO APPLES, HAS FORM.</p> <p>IN ORDER TO DRAW ANY OBJECT THAT HAS THE ILLUSION OF REAL FORM ON PAPER, A SENSE OF DEPTH MUST BE ADDED TO THE OBJECTS APPEARANCE. SINCE THE PIECE OF PAPER IS FLAT AND TWO-DIMENSIONAL, THE ARTIST MUST UNDERSTAND WHAT THE INTERNAL STRUCTURE IS THAT MAKES UP THAT OBJECT AND APPLY PERSPECTIVE TO CREATE BELIEVABLE THREE-DIMENSIONAL FORMS.</p>	2
UNIT 14	<p>FORESHORTENING: FORESHORTENING IS TAKING AN OBJECT AND PLACING IT IN TWO- OR MORE-POINT PERSPECTIVE WHILE BRINGING A PART OF THE OBJECT CLOSE TO THE VIEWERS EYE.</p> <p>GROUND LINE: THE GROUND LINE IS NOT ALWAYS THE SAME AS THE HORIZON LINE. THERE ARE CONFLICTING DEFINITIONS OF WHAT THIS ACTUALLY IS, OR IS NOT, BUT IT TENDS TO BE DESCRIBED AS THE FLOW OR LAY OF THE DISTANT ENVIRONMENT EDGE.</p>	2
UNIT 15	<p>PERSPECTIVE GRID OR GROUND PLANE: WITH THE VANISHING</p>	2

	POINTS ESTABLISHED ON THE HORIZON LINE, LINES CAN BE DRAWN ON THE GROUND, BACK TO THESE POINTS TO SHOW THE CONTOURS OF THE ENVIRONMENT. IN ANIMATION, THIS IS A VERY CRUCIAL STAGE OF BACKGROUND AND CHARACTER LAYOUT SETUP TO ENSURE THE CHARACTERS STAY SOLIDLY ON THE GROUND.	
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	(1) OUTDOORS LANDSCAPE STUDY. (2) PERSPECTIVE SKETCHES (ONE POINT, TWO POINT AND THREE POINT SKETCHES) (3) CHOOSE A MASTER BACKGROUND FROM ANY ONE OF THE ANIMATION FILMS AND CREATE VARIOUS LAYOUTS FOR DIFFERENT SCENES AND SEQUENCES.	90 HRS

REFERENCE BOOKS

- LAYOUT AND COMPOSITION - BY ED GHERTNER
- SETTING THE SCENE : THE ART AND EVOLUTION OF ANIMATION LAYOUT – by FRASER MACLENE
- ANIMATE TO HARMONY: THE INDEPENDENT ANIMATOR'S GUIDE TO TOON BOOM BOOK

REFERENCE LINKS

<http://badgerart.blogspot.in/2012/09/what-is-layout-anyway.html>

<https://www.toonboom.com/resources/tips-and-tricks/layout-and-posing>

<http://www.awn.com/animationworld/animation-layout-getting-perspective>

RSACE 3.14	STORYBOARD & ANIMATICS	TEACHING HOURS 30
-------------------	-----------------------------------	--------------------------

UNITS	COVERAGE MODULES	TIME (LECTURES)
UNIT 1	WHAT IS STORYBOARDING? – THEY ARE THE HAND DRAWN VERSION OF THE MOVIE AND SERVE AS THE BLUEPRINT FOR THE ACTION AND DIALOUGE. EACH STORYBOARD ARTISTS RECEIVE SCRIPT PAGES OF A MAP OF THE CHARACTERS EMOTIONAL CHANGES THAT NEED TO BE SEEN THROUGH ACTIONS.	2
UNIT 2	UNDERSTANING THE SCRIPT BASICS – IT IS IMPORTANT FOR EVERY STORY BOARD ARTIST TO BE ABLE TO IDENTIFY THE ELEMENT OF A SCRIPT AND TO BE ABLE TO INTERPRET THE WRITTEN WORDS. EVEY SCRIPT HAS 5 FUNDEMENTALS ELEMENTS : SLUGLINE, ACTION, CHARACTER, DIALOGUE AND WRYL EACH OF THESE COMPONENTS PROVIDES ESSENTIAL INFORMATION FOR A STORY BOARD ARTIST TO DEFINE THE CAMERA ANGLES.	2
UNIT 3	UNDERSTANING THE SCRIPT BREAK DOWN : THE STORY BOARD	4

	ARTIST SHOULD BE ABLE TO UNDERSTAND HOW TO BREAK THE SCRIPT OR SCREENPLAY INTO VISUALS. IT WILL HELP HIM TO VISUALIZE AND UNDERSTAND EACH ELEMENT IN THE SCENE EG : INTERIOR, EXTERIOR, DAY OR NIGHT, CAST, CHARACTER POSITION, PROPS POSITON, TRANSITION, EFFECTS, TIMIING ETC.	
UNIT 4	<p>STORYBOARDING (THUMBNAIL)</p> <ul style="list-style-type: none"> • STORYBOARDS ARE PICTURES WHICH SHOW WHAT YOUR MOVIE WILL LOOK LIKE. • THUMBNAIL STORYBOARDS ARE THE FIRST SKETCHES OF THE STORYBOARDS FOR A SCENE. USUALLY, THESE QUICK SKETCHES ARE NO BIGGER THAN YOUR THUMBNAIL. <p>STORYBOARDS ARE IMPORTANT AS: MAKE DECISIONS AND CONTINUITY</p> <p>HOW TO DRAW THUMBNAIL STORYBOARD – POSITION OF THE HEADS – BODY OPTIONAL – CAMERA ANGLE – THE LENS IS THE THING – RECOMMENDED FRAME SIZE</p> <p>STORYBOARDING – ADVANCE STORYBOARDS – VOCABULARY OF STORYBOARDS – CAMERA AND CHARACTER MOVEMENTS – LENS DISTORTION</p>	4
UNIT 5	IMPORTANT ASPECTS TO CONSIDER : ASPECT RATIO , CONTINUITY, VISUAL LOGIC , DIFFERENCE OF OPINION, THE CAMERA ANGLE, LINE OF ACTION, THE FRAMING AND ANGLES, DIFFERENT CUTS, ETC.	2
UNIT 6	ANIMATICS – THEY ARE ANI MATED STORYBOARDS. THEY ARE USED FOR VARIOUS PURPOSES DEPENDING ON THE MEDIUM FOR WHICH THEY ARE BEING PRODUCED. ANIMATICS ARE USED EVERYDAY IN THE ADVERTISEMENT INDUSTRY TO TEST COMMERCIAL. THEY ARE USED TO PREVIEW SCENES OF LIVE ACTION FILMS BEFORE THEY ARE SHOT. YOU WILL ALSO FIND ANIMATICS IN THE PRE PRODUCTION STAGES OF ANIMATION AND IN THE VIDEO GAME INDUSTRY.	2
UNIT 7	<p>ANIMATIC PRODUCTION – USUALLY ANIMATICS WAS SOMETHING TO DO ON THE PAPER. HOWEVER, RECENTLY ANIMATIC CLIENTS CHOSE TO TEST THEIR COMMERCIAL OR FILM USING PHOTOS AND VIDEOS. ANIMATION BASED AROUND PHOTO IS CALLED AS PHOTOMATIC. AN ANIMATIC BASED AROUND RE-PURPOSED VIDEO IS CALLED VIDEO MATIC OR RIPO MATIC.THE PROCESS OF ANIMATIC –</p> <p>ANIMATICS ALLOW AGENCIES AND BRANDS TO TEST THEIR IDEAS WITH FOCUS GROUPS BEFORE PUTTING THEM INTO PRODUCTION. WITH TESTING, YOU’LL LEARN WHETHER OR NOT YOU SHOULD PROCEED WITH THE IDEA, AND YOU CAN ALSO TEST AND IMPLEMENT CHANGES THAT MAKE THE MESSAGE MORE EFFECTIVE. HERE’S WHAT YOU NEED TO KNOW ABOUT HOW TO MAKE AN ANIMATIC.</p>	2
UNIT 8	STEP 1 - THE FIRST STEP IN CREATING AN ANIMATIC IS THE CREATIVE BRIEF CALL WITH THE ANIMATICS ARTIST. GENERALLY, A PRODUCER, DIRECTOR, DESIGNER, AND ILLUSTRATORS FROM THE COMPANY WILL	2

	<p>BE ON THIS CALL—THESE PEOPLE WILL SUPERVISE THE PROCESS. YOU’LL DISCUSS THE CONCEPT, CHARACTERS, WARDROBE, BACKGROUNDS, PRODUCT, DEMO SEQUENCES, AND MORE. AFTER THE BRIEF, THE STORY BOARD ARTIST WILL SHARE A DIRECTOR’S BOARD. DIRECTOR’S BOARDS ARE TYPICALLY ROUGH BLACK-AND-WHITE FRAMES PRESENTED IN A STORYBOARD FORMAT TO HELP THE ANIMATICS ARTIST TO ALIGN ON STORY FLOW AND ANGLES.</p>	
UNIT 9	<p>STEP 2 - THE SECOND STAGE OF PRODUCING AN ANIMATIC FOCUSES ON THE LOOK OF THE ARTWORK ITSELF (INSTEAD OF THE MOVEMENT OF THE STORY OR CHARACTERS). THE ARTWORK WILL AFFECT THE STORYLINE AS WELL AS THE VIEWER’S UNDERSTANDING OF THE MESSAGE. AT THIS STAGE, DEPENDING ON THE STYLE OF ART CHOSEN, THE ANIMATICS ARTIST MAY PRESENT VARIOUS DELIVERABLES:</p> <ul style="list-style-type: none"> • 2D ILLUSTRATED STORYBOARDS. • 3D CHARACTERS AND BACKGROUNDS. 	2
UNIT 10	<p>STEP 3 – ANIMATION - IN THE ANIMATION STAGE, THE ANIMATIC ARTIST BRINGS THE ARTWORK TO LIFE IN FULLY REALIZED ANIMATION, WITH FULL AUDIO AND EDITORIAL TREATMENT. THE ARTIST CONTINUES SHOWING FULL EDITS AND ADDRESSING AGENCY AND BRAND COMMENTS ON AUDIO, ANIMATION, AND EDITORIAL AT EVERY STAGE UNTIL THE FINAL SHIP DATE. IF YOU’RE WORKING WITH A 3D ANIMATIC, CAMERA MOVEMENT, ANGLES, CHARACTERS, AND ENVIRONMENTS CAN ALL BE ADJUSTED EASILY, AS ALL ELEMENTS LIVE IN 3D.</p> <ul style="list-style-type: none"> • IN AFTER EFFECTS. • WITH FLASH ANIMATION. • USING 3D ANIMATION. 	4
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	<ol style="list-style-type: none"> 1. CHOOSE A SCRIPT – ANIMATION OR LIVE ACTION AND CREATE THUMBNAIL STORY BOARD 2. SELECT ONE OF THE ANIMATED FILMS AND STUDY THE SHOT DIVISION AND WRITE THE LOGING BEHIND THE SHOT DIVISION 3. CREATE A STORY BOARD FOR A SEQUENCE IN ANY OF THE RELEASED ANIMATED FILMS OR LIVE ACTION FILMS. AND COMPARE YOUR STORY BOARD WITH FINAL MOVIE. 	90 HRS

REFERENCE BOOKS

- STORY BOARDING ESSENTIAL – BY DAVID HARLAND ROUSSEAU AND BENJAMIN REID
- THE STORYBOARD ARTIST : A GUIDE TO FREELANCING IN FILM, TV AND ADVERTISING.

REFERENCE LINKS

- <http://animatedstoryboards.com/producing-an-animatic/>
<http://www.aboutanimatics.com/production.html>
http://www.connect.ecuad.ca/~mrose/resources/storyboard_notes.htm

RSACE 3.15	CLASSIC ANIMATION	TEACHING HOURS 30
-------------------	--------------------------	------------------------------

UNITS	COVERAGE MODULES	TIME (LECTURES)
UNIT 1	WHAT IS CLASSIC ANIMATION? - TRADITIONAL ANIMATION, (OR CLASSICAL ANIMATION, CEL ANIMATION, OR HAND-DRAWN ANIMATION) IS AN ANIMATION TECHNIQUE WHERE EACH FRAME IS DRAWN BY HAND. THE TECHNIQUE WAS THE DOMINANT FORM OF ANIMATION IN CINEMA UNTIL THE ADVENT OF COMPUTER ANIMATION - 2D ANIMATION FIGURES ARE CREATED OR EDITED ON THE COMPUTER USING 2D BITMAP GRAPHICS OR CREATED AND EDITED USING 2D VECTOR GRAPHICS. THIS INCLUDES AUTOMATED COMPUTERIZED VERSIONS OF TRADITIONAL ANIMATION TECHNIQUES, INTERPOLATED MORPHING, UNION SKINNING AND INTERPOLATED ROTOSCOPING.	4
UNIT 2	ANIMATING STEP BY STEP: ATTITUDE AND DYNAMICS, IN-BETWEENS, ADDING MOUTHS, STAGING AND CAMERA ANGLES, WORKING WITH CHARACTERS, CLEAN-UP, DRAWING TERMINOLOGY, POV, HORIZONTAL, PERSPECTIVE, VANISHING POINT, FORESHORTENING, PLANE, DRAWING UPON LIFE.	4
UNIT 3	2D ANIMATION OVERVIEW: SCRIPT, STORYBOARD, SOUNDTRACK, TRACK BREAKDOWN, DESIGNS, ANIMATIC (LEICA REEL), LAYOUTS, DOPESHEETS AND PRODUCTION FOLDERS, PENCIL TESTS, POSE TESTS, CLEAN-UP, INK AND PAINT, BACKGROUNDS, CHECKING, FINAL SHOOT/COMPOSITE, FINAL EDIT AND DUB, TOOLS, LIGHT BOX, PEG HOLES AND PEG BARS, FIELD SIZES, GUIDES, LIMITATIONS, TV CUT-OFF, SAFETY TITLING	2
UNIT 4	2D ANIMATION BASICS: KEYS, IN-BETWEENS, AND TIMING, CHARTS AND IN-BETWEEN COUNTING, STRAIGHT-AHEAD ANIMATION, SLOWING-IN AND SLOWING-OUT, WORKING IN THIRDS, HOW TO IN-BETWEEN, PATHS OF ACTION, SUPERIMPOSITIONS, MULTIPLE SUPERIMPOSITIONS, DOPE (EXPOSURE) SHEETS AND PRODUCTION FOLDERS,	4
UNIT 5	CREATING 3D MOVEMENT: BLOCKING OUT, KEY POSES, IN - BETWEENS, FINETUNING, TIMING, TIMELINES, F - CURVES,	2

	CONSTANT TESTING, TRADITIONAL PRINCIPLES OF MOVEMENT, THE VALUE OF CARICATURE VS. MOTION CAPTURE, SLIDERS AND LIP SYNC	
UNIT 6	THE ESSENTIALS FOR ANIMATORS : THE DOPESHEET, FRAME LINES, ANIMATOR'S NOTES, AUDIO BREAKDOWN, ANIMATION LAYERS, SHOOTING OR CAMERA INSTRUCTIONS, RULES FOR DOPESHEETS, THE PRODUCTION FOLDER, SPECIAL INSTRUCTIONS, MATERIAL USED FROM OTHER SCENES, MATERIAL USED IN OTHER SCENES, ATTACHED DOPESHEET, FLIPPING AND PEG BARS, USING PEG BARS, TOP PEGS VS. BOTTOM PEGS, BOTTOM PEGS FLIPPING, TOP PEGS FLIPPING, WHOLE SCENE FLIPPING	4
UNIT 7	STUDENTS WILL STUDY ANIMATION USING THE FOLLOWING PERSPECTIVES: HISTORICAL, AESTHETIC, TECHNOLOGICAL, CULTURAL, AND SOCIAL. THIS COURSE WILL COVER CLASSIC FILM ANIMATION FROM AROUND THE WORLD. THERE IS THE OBVIOUS GLOBAL CONNECTION THAT COMES FROM THE STUDY OF ANIMATION HISTORY AROUND THE WORLD.	2
UNIT 8	ESSENTIAL QUESTIONS: 1. HOW CAN AN ANIMATOR CONTROL THE SPEED / TIMING OF AN ANIMATION? 2. WHY IS IT IMPORTANT TO SKETCH OUT DESIGNS BEFORE ANIMATING? 3. HOW DO THE PRINCIPLES OF ART AND DESIGN FIT INTO ANIMATION? 4. WHO ARE THE IMPORTANT FIGURES IN THE HISTORY OF ANIMATION?	4
UNIT 9	TYPES OF CLASSIC ANIMATION : CARTOON (CEL) ANIMATION / STOP MOTION ANIMATION , DIRECT (CAMERA LESS, SCRATCH) ANIMATION, CUT -OUT ANIMATION, PROGRESSIVE (PAINTED) ANIMATION, PIXILLATION, LIGHTNING DOODLES (PIKA PIKA) AND EXPERIMENTAL ANIMATION.	4
RSA CE	PRACTICAL EXERCISE	PRACTICAL HOURS
	<ol style="list-style-type: none"> 1. LINE OF ACTION SKETCHES 2. OUTDOOR MOMENT STUDY (HUMAN AND ANIMALS) 3. ALL 12 PRINCIPLES OF ANIMATION – HAND DRAW ASSIGNMENTS. 4. 2D TRADITIONAL ANIMATION (50 KEY DRAWINGS (OR) 5 SECONDS ANIMATION) 5. KEYFRAME, IN BETWEEN & CLEAN UP DRAWINGS (50 DRAWINGS) 6. RESEARCH ONE OF THE EXPERIMENTAL ANIMATION AND SUBMIT YOUR OWN VERSION. 	90 HRS

REFERENCE BOOK :

ANIMATION FROM PENCIL TO PIXELS – BY TONY WHITE
ANIMATOR'S SURVIVAL KIT – BY RICHARD WILLIAMS

REFERENCE LINKS

[HTTP://ONEFRAME-CREATINGCLASSICANIMATION.BLOGSPOT.IN/2007/10/WHAT-IS-CLASSIC-ANIMATION.HTML](http://oneframe-creatingclassicanimation.blogspot.in/2007/10/what-is-classic-animation.html)

[HTTP://WWW.TRADITIONALANIMATION.COM/](http://www.traditionalanimation.com/)

[HTTP://WWW.PROARCH3D.COM/TRADITIONAL-ANIMATION-2D-ANIMATION-PROCESS/](http://www.proarch3d.com/traditional-animation-2d-animation-process/)

RSACE 3.16	DIGITAL ART PART 01	TEACHING HOURS 30
-------------------	----------------------------	------------------------------

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	4
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	4
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 PRTFOLIO 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 INDUTSRY	2

	STANDARD AUTHORING SOFTWARE PROGRAMS	
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/)

RSACE 3:17	DIGITAL 2D PART 01 (TOON BOOM)	TEACHING HOURS 30
-------------------	---------------------------------------	--------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	INTRODUCTION TO DIGITAL ANIMATION : ANIMATION IS USED TO DESCRIBE THE PROCESS OF SEQUENCING DRAWINGS, COMPUTER GENERATED ARTWORK, OR PHOTOGRAPHS OF MODELS TO CREATE ILLUSION OF THE MOVING IMAGE	2
UNIT 2	HISTORY OF ANIMATION. THE GRADUAL DEVELOPMENT OF ANIMATION REALLY GAINED MOMENTUM DURING THE NINETEENTH AND THE TWENTITH CENTURIES – TRADITIONAL ANIMATION. TRADITIONAL STOP FRAME ANIMATION STARTED IN EARLY 1900S. IT WAS CREATED BY PHOTOGRAPHING A SERIES OF DRAWN IMAGES THAT WERE THEN TRANSFERRED TO FILM AND PLAYED BACK TO GIVE THE OPTICAL ILLUSION OF A MOVING IMAGE -	4
UNIT 3	COMPUTER ANIMATION – IT IS AMUCH YOUNGER ART FORM AND HAS NOT YET DEVELOPED AS FAR AS TRADITIONAL ANIMATION. THE TENDENCY OF UNTRAINED COMPUTER ANIMATORS IS TO RELY ON THE COMPUTER’S IMMENSE CAPABILITIES TO EXACTLY REPLICATE REAL WORLD PHYSICS – STOP FRAME ANIMATION – CELL ANIMATION –	2

	ROTOSCOPING -	
UNIT 4	ANIMATION TYPES – KEYFRAMES – TWEENING – INTERPOLATION – VELOCITY – MOTION PATH STRAIGHT AHEAD ANIMATION- POSE TO POSE ANIMATION – COMPUTER GENERATED ANIMATION. THE LAWS OF PHYSICS – MASS – GRAVITY – WEIGHT – DIRECTIONAL FORCE – DAMPING FORCE – ACCELERATION – DECELERATION - RESISTANCE	2
UNIT 5	THE RULES OF ANIMATION – TIMING – SQUASH AND STRETCH – EXAGGERATION – STAGING – ANTICIPATION MOTIVATION – SECONDARY ACTION – OVERLAP – FOLLOW THROUGH – BALANCE – RYTHM – CAMERA MOVEMENT APPLYING THE RULES – MY ANIMATION PROCESS – TEXT ANIMATION – SOUND EFFECTS – PANNING AND ZOOMING – TIME REMAPPING	2
UNIT 6	TOON BOOM – WHAT IT IS USED FOR IN ANIMATION – FEATURES AND TOOLS OF TOON BOOM STARTING YOUR PROJECT:LAUNCHING TOON BOOM STUDIO, CREATING AND OPENING A PROJECT, ORGANISING YOUR WORK, USER INTERFACE LANGUAGE, ADDING TEMPLATE COPYRIGHT, SETTING THE LOCATION, PLANNING YOUR PROJECT	4
UNIT 7	DRAWING AND DESIGN: DRAWING BASIC, DRAWING IN THE DRAWING OR CAMERA VIEW, RELATIVE SIZE OF CHARACTER AND PROPS, SKETCHING, TRACING, ERASING, PAN VIEW, WORKING WITH TEXT, MORE DRAWING TOOLS.	2
UNIT 8	HOW TO PAINT IN TOON BOOM – COLOR DISPLAY MODES – USING THE PAINTING TOOLS – CLOSING GAPS – SELECTING A COLOR IN DRAWING – EDITING GRADIENTS, TEXTURES AND PALLETS	2
UNIT 9	HOW TO IMPORT BITMAP IMAGES – IMAGES WITH KEYING – MULTILAYERED PSD , AI AND PDF FILES – ADOBE FLASH – SCANNING AND CAPTURING IMAGES	2
UNIT 10	EXPOSURE AND LENGTH OF A DRAWING – YOU WILL LEARN HOW TO USE ‘SET EXPOSURE’ COMMAND TO ADJUST AND TWEAK THE TIMING OF ANIMATION SEQUENCE – YOU WILL LEARN HOW TO CUT AND IMPORT YOUR ANIMATED IMAGES.	2
UNIT 11	LAYER AND TIMING: UNDERSTANDING THE TIME LINE AND EXPOSURE SHEET, LAYERS AND COLUMNS, FILLING EXPOSURE, MANAGING DRAWINGS, BONES: ABOUT THE SKELETON EFFECTS, CHOOSING YOUR CHARACTER, ADDING THE SKELETON, ANIMATING THE SKELETON.	2
UNIT 12	SOUND AND LIP SYNC: IMPORTING SOUND FILE, SOUND DISPLAY, SOUND PLAYBACK, EDITING A SOUND., LIP SYNC SCENE SETUP: IMPORTING THE SCENE ELEMENTS, POSITIONING THE SCENE ELEMENTS, CLONING AND DUPLICATING ELEMENTS, SETTING THE CAMERA.	2
UNIT 13	ANIMATING DIGITALLY USING TRADITIONAL TECHNIQUES – FEATURES LIKE THE ONION SKIN, THE LIGHT TABLE, THE STATIC LIGHT TABLE , REPOSTION OF DRAWING TOOLS	2
UNIT 14	YOU WILL LEARN HOW TO SUMMON THE FORCES OF NATURE AND SEIZE CONTROL OF THEM WITH ALL NEW RAIN, FOG, SNOW, HAIL, VOLCANO AND CLOUD EFFECTS – SHAKE, RATTLE AND ROLL WITH GROUND TREMBLING EFFECT – SOFTEN EDGES AND CREATE AN ILLUSION OF DEPTH WITH THE NEW BLUR EFFECT – CREATE A DRAMATIC ATMOSPHERE BY CASTING SHADOWS – MASK, CUT AND	2

	SHAVE ANYTHING USING THE CLIPPING EFFECT – MAKE THE SUN RISE OR SET PLUS ANIMATE ANY COLOR TRANSITION USING COLOR TRANSFORM EFFECT.	
UNIT 15	YOU WILL LEARN HOW TO EXPORT DRAWING TO PDF – EXPORT MOVIE – EXPORT TO YOUTUBE AND FACEBOOK – EXPORT SNAPSHOT	2
UNIT 16	EFFECTS ANIMATION -THIS COURSE IS AN INTRODUCTION TO THE PRINCIPLES OF EFFECTS ANIMATION IN BOTH TWO-DIMENSIONAL AND THREE-DIMENSIONAL PROJECTS, HAND DRAWN AND CG. TOPICS WILL INCLUDE WATER, FIRE, SMOKE, SHADOWS AND OTHER NATURAL PHENOMENA.	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	(1)10 SECONDS 2D ANIMATION (2) DIALOGUE AND LIP SYNC OF TWO CHARACTER INTERACTION. (3) 12 PRINCIPLES OF ANIMATION ASSIGNMENT – DIGITAL VERSION.	90 HRS

REFERENCE BOOK :

- TOON BOOM STUDIO
- DESIGN ESSENTIALS FOR MOTION MEDIA ARTISTS

REFERENCE LINKS

[HTTPS://WWW.TOONBOOM.COM/RESOURCES/VIDEO-TUTORIALS/TOON-BOOM-ANIMATE](https://www.toonboom.com/resources/video-tutorials/toon-boom-animate)

[HTTPS://WWW.DIGITALTUTORS.COM/SOFTWARE/TOON-BOOM-HARMONY-TUTORIALS](https://www.digitaltutors.com/software/toon-boom-harmony-tutorials)

[HTTPS://WWW.LYNDA.COM/TOON-BOOM-TRAINING-TUTORIALS/1482-0.HTML](https://www.lynda.com/toon-boom-training-tutorials/1482-0.html)

RSACE 3:18	DIGITAL 2D PART 02 (FLASH)	TEACHING HOURS 30
-------------------	-----------------------------------	--------------------------

UNITS	COVERAGE OF MODULE	TIME (LECTURES)
UNIT 1	INTRODUCTION : THE OVERALL PROCESS OF CREATING A 2D ANIMATION IS DIVIDED INTO THREE PARTS: PRE-PRODUCTION, PRODUCTION, AND POST-PRODUCTION. ADOBE FLASH CAN BE USED FOR PRE PRODUCTION AND PRODUCTION. DIFFERENCE BETWEEN TOONBOOM AND FLASH.	2
UNIT 2	GETTING ACQUAINTED: STARTING FLASH AND OPENING A FILE, GETTING TO KNOW THE WORKSPACE, WORKING WITH THE LIBRARY PANEL, UNDERSTANDING THE TIMELINE, ORGANIZING LAYERS IN A TIMELINE, USING THE PROPERTIES INSPECTOR, USING THE TOOLS PANEL, UNDOING STEPS IN FLASH, PREVIEWING YOUR MOVIE, PUBLISHING YOUR MOVIE, SAVING YOUR MOVIE, FINDING RESOURCES FOR USING FLASH, CHECKING FOR UPDATES.	2

UNIT 3	UNDERSTANDING FRAME RATES IN FLASH ANIMATION – LEARN WHY IT IS IMPORTANT TO THINK ABOUT THE FRAME RATE WHEN WORKING WITH ANIMATIONS.	2
UNIT 4	ANIMATION TIMELINE AND KEY FRAMES – USE TIME LINE AND KEY FRAMES AND LAYERS IN YOUR ANIMATION PROJECTS TO BEST EFFECT.	2
UNIT 5	ANIMATING FRAME BY FRAME – VIEW MULTIPLE FRAMES OF A FRAME BY FRAME ANIMATION USING THE ONION SKIN TOOLS.	2
UNIT 6	EXPLORING MOTION TWEENS – CREATE MOVEMENT WITH FLASH AS WELL AS MINIMIZE FILE SIZE USING MOTION TWEENS. MANIPULATING MOTION TWEENS – LEARN ABOUT MOVING, SPLITTING, JOINING AND REVERSING MOTION TWEENS IN FLASH AND MORE.	2
UNIT 7	WORKING WITH GRAPHICS: UNDERSTANDING STROKES AND FILLS, CREATING SHAPES, MAKING SELECTIONS, EDITING SHAPES, USING GRADIENT AND BITMAP FILLS, MAKING PATTERNS AND DECORATIONS, CREATING CURVES, CREATING TRANSPARENCIES, CREATING AND EDITING TEXT	2
UNIT 8	USING MOTION PATHS IN ANIMATION – SEE HOW MANIPULATING MOTION PATHS CAN ACHIEVE SPECIAL RESULTS IN YOUR ANIMATIONS. USING THE MOTION EDITOR - CUSTOMIZE AND DUPLICATE ANIMATIONS EASILY SING THE MOTION EDITOR.	2
UNIT 9	ANIMATING WITH PRESET AND CUSTOM EASES – APPLY EASING TO MAKE TWEENS APPEAR MORE REALISTIC. ANIMATING WITH MOTION PRESETS – ADD ANIMATIONS EASILY AND CREATE A MOTION PRESET TO REUSE THROUGH OUT YOUR DOCUMENTS.	2
UNIT 10	CREATING AND EDITING SYMBOLS: IMPORTING ILLUSTRATOR FILES, ABOUT SYMBOLS, CREATING SYMBOLS, IMPORTING PHOTOSHOP FILES, EDITING AND MANAGING SYMBOLS, CHANGING THE SIZE AND POSITION OF INSTANCES, CHANGING THE COLOR EFFECT OF INSTANCES, UNDERSTANDING BLEND EFFECTS, APPLYING FILTERS FOR SPECIAL EFFECTS, POSITIONING IN 3D SPACE	2
UNIT 11	ADDING ANIMATION: ABOUT ANIMATION, UNDERSTANDING THE PROJECT FILE, ANIMATING POSITION, CHANGING THE PACING AND TIMING, ANIMATING TRANSPARENCY, ANIMATING FILTERS, ANIMATING TRANSFORMATIONS, CHANGING THE PATH OF THE MOTION, SWAPPING TWEEN TARGETS, CREATING NESTED ANIMATIONS, USING THE MOTION EDITOR, EASING, ANIMATING 3D MOTION, PREVIEWING THE ANIMATION	2
UNIT 12	ARTICULATED MOTION AND MORPHING: ARTICULATED MOTION WITH INVERSE KINEMATICS, CONSTRAINING JOINTS, INVERSE KINEMATICS WITH SHAPES, ARMATURE OPTIONS, MORPHING WITH SHAPE TWEENS, USING SHAPE HINTS, SIMULATING PHYSICS WITH INVERSE KINEMATICS	2
UNIT 13	USING ACTION SCRIPT 3 FOR ANIMATION – USE ACTION SCRIPT TO ADD ANIMATION TO A DOCUMENT EITHER BY REFERENCING AN EXISTING MOTION TWEEN OR BY COPYING THE ANIMATION FROM A TWEEN SPAN TO ACTION SCRIPT 3 CODE.	2
UNIT 14	WORKING WITH SOUND AND VIDEO: UNDERSTANDING THE PROJECT FILE, USING SOUNDS, UNDERSTANDING FLASH VIDEO, USING ADOBE	2

	MEDIA ENCODER, UNDERSTANDING ENCODING OPTIONS, PLAYBACK OF EXTERNAL VIDEO, WORKING WITH VIDEO AND TRANSPARENCY, USING CUE POINTS, EMBEDDING FLASH VIDEO	
UNIT 15	LOADING AND CONTROLLING FLASH CONTENT: LOADING EXTERNAL CONTENT, REMOVING EXTERNAL CONTENT, CONTROLLING MOVIE CLIPS, CREATING MASKS	2
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	(1)CREATE A CHARACTER WITH FLASH RIG SETUP (2) ANIMATION USING MOTION TWEENING (3) PREPARE MOUTH CHART AND EXPRESSION CHART SYMBOLS (3) FLASH BACKGROUND.	90 HRS

REFERENCE BOOK :

- ADOBE FLASH PROFESSIONAL CS6 – CLASSROOM IN BOOK.

REFERENCE LINKS

[HTTP://WWW.JOHNATHAN-ANDREWS-ACADEMY.ORG/CERTIFICATION-IN-DIGITAL-2D-ANIMATION/](http://www.johnathan-andrews-academy.org/certification-in-digital-2d-animation/)

[HTTP://WWW.ADOBE.COM/DEVNET/FLASH/LEARNING_GUIDE/ANIMATION.HTML](http://www.adobe.com/devnet/flash/learning_guide/animation.html)

RSACE 3:19	FUNDAMENTALS OF 3D	TEACHING HOURS 30
-------------------	---------------------------	--------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	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 2	INTRODUCTION TO 3D MODELLING & ANIMATION - MODELING CONCEPTS- SPACE, OBJECTS, AND STRUCTURES, BUILDING WITH NUMBERS, VERTICES, EDGES, AND FACETS, MOVING THINGS AROUND, FILE FORMATS ETC. MODELING PROMINENTLY USED IN GAMES, MOVIES, AND ON TELEVISION, 3D GRAPHICS ARE TOOLS OF CREATION USED TO ENHANCE HOW MATERIAL AND LIGHT COME TOGETHER TO MANIPULATE OBJECTS IN 3D SPACE. A GAME-CHANGER WRITTEN FOR THE NON-TECHNICAL MIND, ESSENTIAL SKILLS FOR 3D MODELING, RENDERING, AND ANIMATION EXAMINES THE COMPLEXITIES OF 3D COMPUTER-GENERATED ART, AND OUTLINES THE BASICS OF HOW THINGS WORK AND ARE USED IN 3D.	4
UNIT 3	CARTOON CHARACTER MODELLING & TEXTURING - MODELING TECHNIQUES- CURVED LINES, GEOMETRIC PRIMITIVES, SWEEPING, FREE- FORM OBJECTS, BASIC MODELING UTILITIES, REAL TIME POLYGONAL MODELSWORKING CLOSELY WITH THE ART DEPARTMENT, CREATE BASIC MODELS AND CARTOON CHARACTER	4

	USING THE TOOLS LEARNED, MODELERS TURN THE 2D CONCEPT ART AND TRADITIONALLY SCULPTED MAQUETTES INTO HIGH DETAIL, TOPOLOGICALLY SOUND 3D MODELS.	
UNIT 4	<p>INTRODUCTION TO MATERIALS, TEXTURES, SHADERS -</p> <p>SHADERS: SHADERS ARE SCRIPTS WHICH CONTAIN THE ALGORITHMS THAT TELL THE COMPUTER HOW TO RENDER EACH PIXEL.</p> <p>MATERIALS: MATERIALS DEFINE HOW A SURFACE IS TO BE RENDERED. THIS IS ACHIEVED BY SELECTING A SHADER FOR THE MATERIAL AND THEN SETTING THE PUBLIC PROPERTIES OF THE UNDERLYING SHADER.</p> <p>TEXTURES ARE PATTERNS THAT CAN BE USED TO CHANGE THE</p>	4
UNIT 5	<p>CAMERA, OBJECT & MOTION PATH ANIMATION – THE TECHNIQUE OF MOTION PATHS IS ESPECIALLY USEFUL FOR LAYING OUT COMPLEX CAMERA MOVES. CRANE SHOTS, UNDERWATER SHOTS AND FLYING CAMERAS IN PARTICULAR CONSISTING OF SEVERAL INDIVIDUAL MOVES – AS EXPLAINED EARLIER THE MOTION PATH TECHNIQUE WORKS BY ANIMATING AN OBJECT – CAMERA IN THIS CASE – ALONG A PATH DEFINED IN 3 DIMENSIONAL SPACES. THE PATHS ARE DRAWN WITH A SIMPLE CURVE MODELLING TOOL AND EDITED JUST AS ANY OBJECT IN 3 DIMENSIONAL SPACE WOULD BE EDITED.</p>	2
UNIT 6	<p>BASIC OBJECT ANIMATION - OBJECT ANIMATION IS A FORM OF STOP MOTION ANIMATION THAT INVOLVES THE ANIMATED MOVEMENTS OF ANY NON-DRAWN OBJECTS SUCH AS TOYS, BLOCKS, DOLLS, ETC. WHICH ARE NOT FULLY MALLEABLE, SUCH AS CLAY OR WAX, AND NOT DESIGNED TO LOOK LIKE A RECOGNIZABLE HUMAN OR ANIMAL CHARACTER.</p>	2
UNIT 7	<p>LIGHTING- LIGHTING STRATEGIES AND MOOD, TYPES OF LIGHT SOURCES, BASIC COMPONENTS OF A LIGHT SOURCE, LIGHTING THE SCENE, BASIC POSITIONS OF LIGHT SOURCES</p>	2
UNIT 8	<p>RENDERING CONCEPTS- LIGHTS, CAMERA, AND MATERIALS, COLOR MODELS, STEPS IN THE RENDERING PROCESS, HIDDEN SURFACE REMOVAL, Z-BUFFER, RAY TRACING, GLOBAL ILLUMINATION AND RADIOSITY, IMAGE- BASED LIGHTING, NON- PHOTOREALISTIC RENDERING, HARDWARE RENDERING, FILE FORMATS FOR RENDERED IMAGES</p>	2
UNIT 9	<p>WORKING WITH AUDIO - SOUND IS JUST AS CRUCIAL AN ASPECT TO YOUR ANIMATION AS YOUR VISUALS. WHETHER YOU'RE LOOKING TO CREATE A SCORE, AMBIENT NOISE, DIALOG, OR A COMPLETE SOUNDTRACK, YOU'LL NEED SOUND FOR YOUR PIECE. THIS NUTS-AND-BOLTS GUIDE TO SOUND DESIGN FOR ANIMATION WILL EXPLAIN THE THEORY AND WORKINGS BEHIND SOUND FOR IMAGE, AND PROVIDE AN OVERVIEW OF THE SYSTEMS AND PRODUCTIONPATH TO HELP YOU CREATE YOUR SOUNDTRACK.</p>	2
UNIT 10	<p>LIP SYNCHRONIZATION - ACCURATE LIP-SYNCHING IS AN IMPORTANT STEP TOWARDS MAKING A CONVINCING ANIMATED CHARACTER. TO LIP-SYNCH AN ELEMENT YOU WILL FIRST NEED TO HAVE A SOUND AND A DRAWING ELEMENT CONTAINING THE ACCORDING MOUTH SHAPES.</p>	2
UNIT 11	<p>HUMAN ANATOMY STUDY - IT IS THE BASIC STRUCTURE OF ANY BASIC LIVING CREATURE AND THEREFORE IT WILL ONLY MOVE IN</p>	2

	ACCORDANCE TO THE HINGES OR THE ROTATORS THAT ARE PUT IN PLACE TO ALLOW THE FREEDOM OF MOVEMENT WITHIN THE CONFINES OF GRAVITY.SKELETAL MUSCLE AND THEY ARE LIKE GIANT RUBBER BANDS WITH THE ELASTIC BANDS RUNNING IN WHAT EVER DIRECTION THEY NEED TO CONTRACT IN.	
UNIT 12	RIGGING AND POSING -A CHARACTER RIG IS ESSENTIALLY A DIGITAL SKELETON BOUND TO THE 3D MESH. LIKE A REAL SKELETON, A RIG IS MADE UP OF JOINTS AND BONES, EACH OF WHICH ACT AS A "HANDLE" THAT ANIMATORS CAN USE TO BEND THE CHARACTER INTO A DESIRED POSE.A CHARACTER RIG CAN RANGE FROM SIMPLE AND ELEGANT TO STAGGERINGLY COMPLEX.	2
RSACE	PRACTICAL EXCERCISE	PRACTICAL HOURS
	(4) SUBMIT A INORGANIC MODEL (5) OBJECT ANIMATION – 20 SECONDS (6) SIMPLE PRODUCT MODEL WITH SHADING, TEXTURING AND WITH 3 POINT LIGHTING.	90 HRS

REFERENCE BOOK :

- INTRODUCING AUTODESK MAYA
- THE ART OF 3D COMPUTER AND EFFECTS .

REFERENCE LINKS

[HTTP://WWW.JIMMC.IN/3D-ANIMATION-VFX-COURSES.PHP](http://www.jimmc.in/3d-animation-vfx-courses.php)

[HTTPS://WWW.CITYU.EDU.HK/UG/201516/COURSE/SM3147.PDF](https://www.cityu.edu.hk/ug/201516/course/sm3147.pdf)

[HTTPS://BOOKS.GOOGLE.CO.IN/BOOKS?ID=5G-5IYASSK8C&PG=PA315&LPG=PA315&DQ=CAMERA,+OBJECT+%26+MOTION+PATH+ANIMATION&SOURCE=BL&OTS=69ZRV9MC47&SIG=KP_U-9OQDUQCEPOHHIG308ECY_U&HL=EN&SA=X&VED=0AHUKEWJSOOTG7-NSAHUIQY8KHRLIBHE4CHDOAQGYMAA#V=ONEPAGE&Q=CAMERA%2C%20OBJECT%20%26%20MOTION%20PATH%20ANIMATION&F=FALSE](https://books.google.co.in/books?id=5G-5IYASSK8C&pg=PA315&lpg=PA315&dq=camera,+object+%26+motion+path+animation&source=bl&ots=69ZRV9MC47&sig=KP_U-9OQDUQCEPOHHIG308ECY_U&hl=en&sa=x&ved=0AHUKEWJSOOTG7-NSAHUIQY8KHRLIBHE4CHDOAQGYMAA#v=onepage&q=camera%2c%20object%20%26%20motion%20path%20animation&f=false)

[HTTPS://WWW.CODEMENTOR.IO/UNITY3D/TUTORIAL/AN-INTRODUCTION-TO-MATERIALS--STANDARD-SHADER-IN-UNITY](https://www.codementor.io/unity3d/tutorial/an-introduction-to-materials--standard-shader-in-unity)

RSACE 3:20	3D Asset Development	TEACHING HOURS 30
-------------------	-----------------------------	--------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	WHAT IS ASSET DEVELOPMENT - THE CREATIVE CONTINUITY THROUGH-THE ANIMATION PRODUCTION IS MAINTAINED BECAUSE OF ASSET MANAGEMENT SYSTEM. CREATING A DIGITAL ASSET LIKE CHARACTER MODELS, PROPS, ENVIRONMENT & SET MODELING WITH PROPER TEXTURING AND RIGGING. THESE ASSETS ARE USED AS REFERENCIN METHOD DURING ANIMATION PRODUCTION. THIS ALLOWS PRODUCTION TEAK TO TEST AND CONFIRM THE ASSET INTEGRATION AND MANAGE THE SUCCESSFUL TRANSFER OF MATERIALS FOR THE PRODUCTION.	2

UNIT 2	MODELING CONCEPTS- SPACE, OBJECTS, AND STRUCTURES, BUILDING WITH NUMBERS, VERTICES, EDGES, AND FACETS, MOVING THINGS AROUND, FILE FORMATS FOR MODELING. CURVE MODELLING - CODE DRIVEN MODELLING – BLENDER. RATIONAL B SPLINE MODELLING – PRIMITIVE MODELING.	4
UNIT 3	BEGINNING POLYGONAL MODELING: PLANNING YOUR MODEL, POLYGON BASICS, POLY EDITING TOOLS, PUTTING THE TOOLS TO USE : MARKING A SIMPLE HAND, CREATING AREAS OF DETAILS ON A POLY MESH, MODELLING A CLASSIC STEAM LOCOMOTIVE, SUGGESTIONS FOR MODELLING POLYGONS.COMPONENTS OF POLYGONAL MODEL- FACES – EDGES - VERTICES	2
UNIT 4	MODELING WITH NURBS, SUBDIVISIONS, AND DEFORMERS: NURBS, USING NURBS SURFACING TO CREATE POLYGONS, CONVERTING A NURBS MODEL TO POLYGONS, EDITING NURBS SURFACES, PATCH MODELING: A LOCOMOTIVE DETAIL, USING ARTISAN TO SCULPT NURBS, MODELING WITH SIMPLE DEFORMERS, THE LATTICE DEFORMER, ANIMATING THROUGH A LATTICE, SUBDIVISION SURFACES, CREATING A STARFISH, BUILDING A TEAKETTLE	6
UNIT 5	PRACTICAL EXPERIENCE: BEGINNING THE WAGON PROJECT, USING REFERENCE PLANES, MODELING THE SIDE PANELS, MODELING THE WAGON BODY, INSERTING THE HANDLEBAR, MODELING THE WHEELS, MODELING THE WOOD RAILINGS, ADDING EXTRA DETAILS, BUILDING A DECORATIVE BOX	2
UNIT 6	MAYA SHADING AND TEXTURING: MAYA SHADING, SHADER TYPES, SHADER ATTRIBUTES, TEXTURING THE AXE, TEXTURES AND SURFACES, TEXTURING THE RED WAGON, PHOTOREAL MAPPING: THE DECORATIVE BOX.	2
UNIT 7	MENTAL RAY SHADING TECHNIQUES: SHADING CONCEPTS, CREATING BLURRED REFLECTIONS AND REFRACTIONS USING STANDARD MAYA SHADERS, BASIC MENTAL RAY SHADERS, CAR PAINT MATERIALS, THE MAYA MATERIAL, CONTROLLING EXPOSURE WITH TONE MAPPING, RENDERING CONTOURS	4
UNIT 8	TEXTURE MAPPING: UV TEXTURE LAYOUT, BUMP AND NORMAL MAPPING, DISPLACEMENT MAPPING, SUBSURFACE SCATTERING	2
UNIT 9	JUMPING IN HEAD FIRST WITH BOTH FEET. : YOU PUT THE U IN UI, PROJECT OVERVIEW, THE PRODUCTION PROCESS: PLANNING CREATING A PROJECT. , CREATING A PROJECT, THE PRODUCTION PROCESS : CREATING AND ANIMATION THE OBJECT, HIERARCHY AND MAYA OBJECT STRUCTURE, OUTPUTTING YOUR WORK: PLAYBLASTING.	2
UNIT 10	CREATIVE DEVELOPMENT AND THE DIGITAL PROCESS : THE PRODUCTION PROCESS OF COMPUTER ANIMATION, PRODUCTION TASKS, ANIMATICS STORY REELS AND PRE VISUALIZATION, MODELLING, ROUGH AND FINAL SCENE LAYOUT, RIGGING, TEXTURE PAINTING, CHARACTER ANIMATION, EFFECTS, ANIMATION AND TECHNICAL ANIMATION, REVIEW AND APPROVALS OF DAILIES, LIGHTING AND RENDERING, MEDIA ASSET MANAGEMENT AND TECHNICAL SUPPORT, ASSEMBLING A DEMO REEL.	4

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 BOOK :

- INTRODUCING AUTODESK MAYA
- THE ART OF 3D COMPUTER AND EFFECTS .

REFERENCE LINKS

[HTTPS://WWW.LIFEWIRE.COM/3D-MODEL-COMPONENTS-1952](https://www.lifewire.com/3d-model-components-1952)

[HTTPS://I.MATERIALISE.COM/BLOG/HOW-TO-GET-STARTED-WITH-3D-MODELING-AN-INTERVIEW-WITH-3D-MODELING-EXPERT-JONATHAN-WILLIAMSON/](https://i.materialise.com/blog/how-to-get-started-with-3d-modeling-an-interview-with-3d-modeling-expert-jonathan-williamson/)

[HTTP://WWW.QUIMNIN.INFO/ARTICLES/TYPES-OF-3D-MODELING/](http://www.quimnin.info/articles/types-of-3d-modeling/)

YEAR - 03

RSACE 3:21	DIGITAL ART 02 (PHOTOSHOP)	TEACHING HOURS 30
-------------------	---------------------------------------	------------------------------

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 SHARP? 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 ELECTIONS ON A LAYER. HOW TO APPLY SMART FILTERS? HOW TO ADD DROP SHADOWS AND A BORDER?	2
UNIT 8	ADVANCED COMPOSITING. MATCHING COLOUR SCHEMES A CROSS IMAGE. HOW TO AUTOMATE A MULTISTEP TASK IN ORDER WORK SMARTLY? HOW TO STITCH A PANORAMA?	2
UNIT 9	WHAT IS MEANT BY FILTERS AND DISTORTIONS? HOW TO MAKE CORRECTIONS WITH DAILY FILTERS? HOW TO APPLY FILTERS FOR SPECIAL OCCASIONS? HOW DISTORTING WITH LIQUEFY COMMAND WORK?	2
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>

<HTTPS://PAINTABLE.CC/LUNA-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://WWW.FXGUIDE.COM/FEATURED/CINEMATICS-CASE-STUDY-MASS-EFFECT-3/>

RSACE 3:22	ADVANCE CHARACTER MODELING	TEACHING HOURS 30
-------------------	-----------------------------------	------------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	CHARACTER MODELING –PART I - IN THIS ADVANCED CHARACTER MODELING CLASS STUDENTS WILL DEVELOP HIGH POLY MODELS WORKING BETWEEN BOTH MAYA AND ZBRUSH. DIGITAL SCULPTING AND TEXTURING WILL BE A KEY FOCUS OF THIS CLASS. STUDENTS WILL LEARN THE INTERFACE AND TOOLS IN ZBRUSH WHILE DESIGNING AND MODELING THEIR OWN CHARACTERS. BY THE END OF THIS COURSE STUDENTS WILL HAVE AN UNDERSTANDING OF THE INDUSTRY APPROACH TO DEVELOP CHARACTER MODELS AND BEGIN TO ASSESS IF THIS IS THE CREATIVE DIRECTION THEY WOULD LIKE TO EXPLORE FOR THEIR PORTFOLIOS.	4
UNIT 2	CHARACTER MODELLING –PART II -THIS COURSE EXPLORES MORE ADVANCED DESIGNS AND HUMAN ANATOMY IN THE DEVELOPMENT OF MALE AND FEMALE CHARACTER MODELS. STUDENTS WILL WORK WITH THE AVAILABLE TOOLS TO ADD REALISM TO THESE DESIGNS. TIME IS SPENT DEVELOPING LOW POLY MODELS THAT ARE WELL BUILT AND DYNAMIC. STUDENTS WILL WORK WITH PRE-DESIGNED CHARACTERS AND REAL LIFE REFERENCE MATERIAL TO ENSURE THAT THE MODELS ARE TO PROPORTION AND HAVE PROPER ANATOMY.	6
UNIT 3	INTRODUCING SCULPTURE - THIS COURSE TEACHES INTRODUCTORY SCULPTURE FOR MODELERS AND ANIMATORS. IN THIS COURSE, STUDENTS WILL TRANSFER THEIR KNOWLEDGE OF ANATOMY, DRAWING OF ANATOMICAL FEATURES, AND CHARACTER DESIGN IN DEVELOPING A 3 DIMENSIONAL SCULPTURE. THIS COURSE EXPLORES THE MATERIALS, TOOLS AND INDUSTRY PRODUCTION TECHNIQUES USED IN PRODUCING SCULPTURES CALLED MAQUETTES. THE END RESULT WILL BE A FINISHED PAINTED MAQUETTE OF THEIR PERSONAL DESIGN.	4
UNIT 4	ENVIRONMENTAL MODELING - THIS ADVANCED STUDIO COURSE EXPLORES THE DESIGN AND DEVELOPMENT OF 3D ENVIRONMENTAL MODELING AND DESIGN. STUDENTS WILL WORK WITH A PRE - DEVELOPED CONCEPT AND FOLLOW THE REQUIRED SPECIFICATIONS AND CONCEPT TO DEVELOP PROFESSIONAL ENVIRONMENTS AND THEN TRANSLATE THEIR RESEARCH INTO PRODUCING DYNAMIC ENVIRONMENTS. STUDENTS WILL ALSO LEARN TO CONSIDER STAGING, ATMOSPHERE AND ENVIRONMENTAL MOOD TO ENHANCE THE PROFESSIONAL LOOK OF THE ENVIRONMENT. TOPICAL COVERAGE INCLUDES EFFECTIVE ADVANCED ENVIRONMENT DESIGN, COMPOSITION, MATTE PAINTING (FUNDAMENTALS) ACTION AND STRATEGIES FOR CREATING A PROFESSIONAL DEMO PRESENTATION. THE FINAL GOAL OF THIS COURSE IS TO EXPLORE ENVIRONMENTAL DEMO REEL OPTIONS.	4

UNIT 5	TEXTURE AND LIGHTING - STUDENTS WILL BE INTRODUCED TO THE TEXTURING PROCESS IN ADOBE PHOTOSHOP AND EDITING TOOLS AND TECHNIQUES, IN CONJUNCTION WITH THE AUTODESK MAYA UV AND MATERIAL TOOLSET TO CREATE A WIDE VARIETY OF TEXTURES, RANGING FROM BASIC SURFACES SUCH AS WOOD AND FABRIC TO PHOTO-REALISTIC TEXTURES BASED ON PHOTOGRAPHS TO TECHNIQUES USED FOR TEXTURING GAME AND FILM ENVIRONMENTS. STUDENTS WILL ALSO BECOME FAMILIAR WITH WORKING WITH THE HYPERSHADE AND SHADER NETWORKS TO DEVELOP AESTHETICALLY PLEASING TEXTURES. THE UV TEXTURE EDITOR AND ITS TOOLS WILL BE A KEY COMPONENT TO THE DEVELOPMENT OF MATERIAL IN TEXTURING AND LIGHTING.	4
UNIT 6	CHARACTER DESIGN FOR ANIMATION - THIS COURSE EXPLORES THE DESIGN AND PRODUCTION OF CHARACTERS FOR THE ANIMATION AND VIDEO GAME INDUSTRY. STUDENTS WILL LEARN THE PRINCIPLES OF GOOD CHARACTER DESIGN, FROM RESEARCH TO FINAL DETAILING, WHILE FOCUSING ON CHARACTER DEVELOPMENT, STYLE AND PERSONALITY. STUDENTS WILL APPLY PRINCIPLES AND TECHNIQUES OF DESIGN AND ANATOMY TO ACHIEVE THE EXPRESSIVE, WELL-DEVELOPED, APPEALING CHARACTERS. BY THE END OF THIS COURSE, STUDENTS SHOULD BE ABLE TO WORK WITH A VARIETY OF STYLES, ARCHETYPES AND BODY STRUCTURES TO CONSTRUCT THEIR CHARACTERS.	4
UNIT 7	CHARACTER CONSTRUCTION – STUDENTS WERE EQUIPPED WITH FILM KNOWLEDGE, SOME EXAMPLE FILMS ON STOP MOTION ANIMATION LIKE PARANORMAN, FRANKENWEENIE, CORALINE AND THE PIRATES! BAND OF MISFITS ARE SOME OF THE REFERENCE FILMS THAT HAVE RELIED ON STOP-MOTION FIGURE CONSTRUCTION FOR THEIR SUCCESS. LEARNING ON IDEAL PREREQUISITE FOR UNDERSTANDING HOW TO MAKE STOP-MOTION ANIMATION FILMS. STUDENTS WILL DESIGN THEIR OWN STOP-MOTION FIGURE—SCULPT THE PARTS, BUILD A WIRE STRUCTURE, LEARN VARIOUS JOINTING METHODS AND DETAILED SCULPTING WITH POLYMER CLAYS. THE FIGURE WILL BE ASSEMBLED, PAINTED AND DRESSED.	4
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS
	<ul style="list-style-type: none"> • SKETCHING FROM REAL TIME CHARACTERS-LIFE SKETCHES,FIGURE DRAWINGS, ANOTOMY STUDY • 3D CHARACTER MODELING • CLAY MODELING, Z BRUSH SCULPTING • ENVIRONMENT MODELING • SHADING & TEXTURING (• BUILDING A STOPMOTION CHARACTER (WITH CLAY OR ANY OTHER MATERIAL) 	90

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)
4. [HTTP://WWW.CDICOLLEGE.CA/ONTARIO/PROGRAMS-AND-COURSES/ART-AND-DESIGN/3D-MODELING-ANIMATION-ART-AND-DESIGN/](http://www.cdicollege.ca/ontario/programs-and-courses/art-and-design/3d-modeling-animation-art-and-design/)

RSACE – 3:23	FUNDAMENTALS OF ANIMATION	TEACHING HOURS -30
---------------------	----------------------------------	-------------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	FUNDAMENTALS OF ANIMATION - IN THIS COURSE, STUDENTS WILL BE LEARNING THE BASIC PRINCIPLES OF ANIMATION. STUDENTS WILL PARTICIPATE IN SEVERAL PRACTICAL PROJECTS DESIGNED TO ILLUSTRATE THE FUNDAMENTAL PROCESSES OF ANIMATION. THE COURSE WILL EXPLORE THE TRADITIONAL TECHNIQUES OF ANIMATION AND HOW THEY APPLY IN THE MODERN WORLD OF CG ANIMATIONS. THE COURSE WILL EXPLORE THE DIFFERENT TYPES OF ANIMATION INCLUDING STOP-MOTION, TRADITIONAL, 3D ANIMATION AND EXPERIMENTAL ANIMATION.	4
UNIT 2	INTRODUCTION TO ANIMATION PROCESS - THE BASIC CONCEPTS OF STORYBOARD, LAYOUT, EXPOSURE SHEETS, EXTREMES, TIMING, INBETWEENING, WEIGHT, SQUASH-AND-STRETCH, OVERLAPPING ACTION, HOOK-UPS, ARCS, WALK CYCLES AND HEAD TURNS WILL BE COVERED IN THESE COURSES. DRAWING SKILLS WILL BE EMPHASIZED, AS WILL THE IMPORTANCE OF ONE DRAWING IN THE CONTEXT OF MANY. BASIC CONSTRUCTION, LINE OF ACTION, PERSPECTIVE AND LOOKING—BEFORE TOUCHING PENCIL TO PAPER—ARE ESSENTIAL TO DEVELOPING GOOD DRAWING SKILLS AND PERSONAL STYLE. STUDENTS WILL SOLVE PICTORIAL PROBLEMS THROUGH THESE MEANS. CHARACTER MODEL SHEETS, ANIMAL ANATOMY AND LIVE MODELS WILL BE DRAWN.	6
UNIT 3	STORYTELLING AND STORYBOARDS - FOCUSING ON THE ART OF NARRATIVE STORYTELLING, WITH THE BASIC COMPONENTS OF WHAT MAKES A GOOD STORY (CHARACTER, ACTION, CONFLICT, HUMOR, IRONY, GAGS, AND DIALOGUE) AND HOW THEY INTERSECT TO CONSTRUCT AN ANIMATED FILM. THROUGH LECTURE AND	4

	DEMONSTRATION, STUDENTS WILL STUDY HOW TO PITCH IDEAS TO THEIR PEERS, AND THEN CREATE STORYBOARDS TO VISUALIZE THEIR NARRATIVES.	
UNIT 4	INTRODUCTION TO STOP MOTION - A WIDE RANGE OF STOP-MOTION ANIMATION TECHNIQUES, WITH A STRONG EMPHASIS ON CHARACTER DESIGN, WILL BE EXAMINED IN THIS COURSE. SUBJECTS INCLUDE: SIMPLE ARMATURE CONSTRUCTIONS, CLAY AND PUPPET ANIMATION, REPLACEMENTS, BEGINNING CASTING, BACKGROUNDS, RIGGING, AND A VARIETY OF SCULPTURE TECHNIQUES AND MATERIALS. IN THE FIRST SEMESTER, STUDENTS WILL PARTICIPATE IN HANDS-ON MODEL BUILDING AND ANIMATION EXERCISES TO FAMILIARIZE THEMSELVES WITH THE POSSIBILITIES OF THE FIELD. DURING THE SECOND SEMESTER, STUDENTS WILL DESIGN AND EXECUTE A SHORT ANIMATED PROJECT. GUEST LECTURES, FIELD TRIPS AND SCREENING OF BOTH COMMERCIAL AND INDEPENDENT WORK WILL BE INCLUDED.	4
UNIT 5	GROOMING FOR ANIMATION : STUDENTS WHO WANT TO EXPLORE THE DYNAMIC MEDIUM OF ANIMATION WHILE FINDING THEIR PERSONAL STYLE AND VISUAL AND POETIC VISION. EMPHASIS WILL BE PLACE ON INNOVATION, INVENTION AND EXPERIMENTATION. WHETHER PURSUING A NARRATIVE OR NON-NARRATIVE PROJECT, STUDENTS WILL RECEIVE A SOLID GROUNDING IN THE BASICS OF DRAWN ANIMATION, AS WELL AS VARIOUS APPROACHES TO THE MEDIUM SUCH AS STOP-MOTION, SEQUENTIAL DRAWING, GRAPHICS, COMPUTER ANIMATION, MIXED MEDIA AND SOUND. STUDENTS WILL GAIN AN UNDERSTANDING OF CHARACTER/OBJECT DEVELOPMENT, PERFORMANCE, DESIGN, STORY AND PLOT NECESSARY FOR THE FLOW AND RHYTHM OF ANIMATION. EACH STUDENT WILL COMPLETE FOUR SHORT (30 SECONDS TO 2 MINUTES IN LENGTH).	4
UNIT 6	ANIMATION FROM FILMMAKERS PERSPECTIVE - THIS TOPIC PRESENTS AN INTRODUCTION TO THE LANGUAGE, PROCESS AND APPLICATION OF VISUAL STORYTELLING FOR ANIMATORS. IT WILL FOCUS ON THE AESTHETICS OF THE MEDIUM AND THE TECHNICAL TOOLS AVAILABLE TO VISUALLY CONVEY A STORY. THROUGH SCREENINGS, LECTURES AND DISCUSSIONS, STUDENTS WILL BECOME FAMILIAR WITH BASIC ASPECTS OF FILMMAKING, INCLUDING COMPOSITION, STORYBOARDING, LENSING AND LIGHTING. AREAS OF EXPLORATION INCLUDE EDITORIAL AND NARRATIVE STRUCTURE, RHYTHM AND PACE. SCENE STUDY AND EDITING CHOICES THAT MAXIMIZE A CHARACTER'S PERFORMANCES WILL BE EMPHASIZED.	4
UNIT 7	CREATING UNFORGETTABLE CHARACTERS - THIS TOPIC WILL DELVE INTO THE PROCESS OF CREATING ANIMATED CHARACTERS. METHODS OF RESEARCHING, CREATING A BACKSTORY AND UNDERSTANDING CHARACTER PSYCHOLOGY WILL BE DISCUSSED AND ANALYZED. CLASSIC CHARACTERS SUCH AS BUGS BUNNY, DAFFY DUCK, WILE E. COYOTE, AND BEAVIS AND BUTT-HEAD WILL BE SCREENED AND STUDIED. STUDENTS WILL DESIGN AND PRODUCE A PROFILE ON A CHARACTER OF THEIR OWN CREATION.	4
RSACE	PRACTICAL EXERCISE	PRACTICAL HOURS

	<ol style="list-style-type: none"> 1. ACTING FOR ANIMATION WORKSHOP 2. EXPERIMENTAL ANIMATION 3. STOP MOTION ANIMATION 4. 3D ANIMATION (12 PRINCIPLES OF ANIMATION ASSIGNMENTS) 5. IN ORGANIC ANIMATION - EACH INDIVIDUAL STUDENTS HAVE TO CREATE A ANIMATION SHOT (30 SECONDS TO 2 MINUTES) 	90
--	---	----

REFERENCE BOOKS

1. INTRODUCING AUTODESK MAYA 2014 BASIC GUIDE BY DARIUSH DERAKSHANI
2. THINKING ANIMATION BY ANGIE JONES AND JAMIE OLIFF.
3. STOP STARING – BY JASON OSIPA
4. CHARACTER ANIMATION – 2D SKILLS FOR BETTER 3D BY STEVE ROBERTS.
5. THE ART OF 3D COMPUTER ANIMATION AND EFFECTS – BY ISAAC KERLOW

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://DESIGNMODO.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-HTM.HTML](https://knowledge.autodesk.com/support/maya/learn-explore/caas/cloudhelp/cloudhelp/2016/enu/maya/files/guid-dc60577e-1a09-4d51-bd6e-6400f4f5efd7-htm.html)
 - 4 [HTTPS://WWW.PREMIUMBEAT.COM/BLOG/4-PLACES-FIND-FREE-REFERENCE-FOOTAGE-CHARACTER-ANIMATION/](https://www.premiumbeat.com/blog/4-places-find-free-reference-footage-character-animation/)
- [HTTP://WWW.CREATIVEBLOQ.COM/AUDIOVISUAL/IMPROVE-CHARACTER-ANIMATION-41411447](http://www.creativebloq.com/audiovisual/improve-character-animation-41411447)

RSACE- 3.24	RIGGING	TEACHING HOURS 30
--------------------	----------------	------------------------------

UNITS	COVERAGE OF MODULES	TIME LECTURE
UNIT 1	<p>CHARACTER RIGGING: BEFORE A 3D CHARACTER MODEL CAN BE HANDED OVER TO THE TEAM OF ANIMATORS, IT MUST BE BOUND TO A SYSTEM OF JOINTS AND CONTROL HANDLES SO THAT THE ANIMATORS CAN POSE THE MODEL. A CHARACTER RIG IS ESSENTIALLY A DIGITAL SKELETON BOUND TO THE 3D MESH. LIKE A REAL SKELETON, A RIG IS MADE UP OF JOINTS AND BONES, EACH OF WHICH ACT AS A "HANDLE" THAT ANIMATORS CAN USE TO BEND THE CHARACTER INTO A DESIRED POSE.</p> <p>A CHARACTER RIG CAN RANGE FROM SIMPLE AND ELEGANT TO STAGGERINGLY COMPLEX. A BASIC SETUP FOR SIMPLE POSING CAN BE BUILT IN A FEW HOURS, WHILE A FULLY ARTICULATED RIG FOR A FEATURE FILM MIGHT REQUIRE DAYS OR WEEKS BEFORE THE CHARACTER IS READY FOR PIXAR-LEVEL ANIMATION.</p>	2

	<p>CHARACTER TDS WORK CLOSELY WITH ANIMATORS TO MAKE SURE ANY SPECIFIC TECHNICAL ISSUES ARE ACCOUNTED FOR, BUT THEIR PRIMARY DUTY IS TO TAKE A STATIC 3D MESH AND MAKE IT READY FOR ANIMATION—A PROCESS CALLED RIGGING.</p>	
UNIT 2	<p>PLACING THE SKELETON: PLACEMENT OF A SKELETON IS PERHAPS THE EASIEST PART OF THE RIGGING PROCESS. FOR THE MOST PART, JOINTS SHOULD BE PLACED EXACTLY WHERE THEY WOULD BE IN A REAL WORLD SKELETON, WITH ONE OR TWO EXCEPTIONS.</p> <p>JOINT HIERARCHY: IN ORDER FOR A RIG TO WORK PROPERLY, THE BONES AND JOINTS MUST FOLLOW A LOGICAL HIERARCHY. WHEN SETTING UP A CHARACTER'S SKELETON, THE FIRST JOINT YOU PLACE IS CALLED THE <i>ROOT JOINT</i>. EVERY SUBSEQUENT JOINT WILL BECONNECTED TO THE ROOT EITHER DIRECTLY OR INDIRECTLY THROUGH ANOTHER JOINT.</p>	2
UNIT 3	<p>FORWARD KINEMATICS: FORWARD KINEMATICS (FK) IS ONE OF TWO BASIC WAYS TO CALCULATE THE JOINT MOVEMENT OF A FULLY RIGGED CHARACTER. WHEN USING FK RIGGING, ANY GIVEN JOINT CAN ONLY AFFECT PARTS OF THE SKELETON THAT FALL BELOW IT ON THE JOINT HIERARCHY.</p> <p>INVERSE KINEMATICS: IK RIGGING IS THE REVERSE PROCESS FROM FORWARD KINEMATICS, AND IS OFTEN USED AN EFFICIENT SOLUTION FOR RIGGING A CHARACTER'S ARMS AND LEGS. WITH AN IK RIG, THE TERMINATING JOINT IS DIRECTLY PLACED BY THE ANIMATOR, WHILE THE JOINTS <i>ABOVE</i> IT ON THE HIERARCHY ARE AUTOMATICALLY INTERPOLATED BY THE SOFTWARE.</p> <p>AN IK CHAIN CONSISTS OF A GROUP OF JOINTS WHOSE ROTATIONS ARE MANIPULATED BY AN OBJECT CALLED AN EFFECTOR. THE FIRST JOINT IN AN IK CHAIN IS KNOWN AS THE ROOT OF THE CHAIN. IT'S ALSO THE ROOT OF THE HIERARCHY, BUT MAY NOT BE THE ROOT OF THE ENTIRE SKELETON. THIS JOINT MAY ALSO CONTAIN DATA THAT HELPS POSITION THE CHAIN, DEPENDING ON THE SOFTWARE.</p>	4
UNIT 4	<p>DEGREES OF FREEDOM/CONSTRAINT - WHEN RIGGING, KEEP IN MIND THAT JOINTS LIKE THE ELBOWS AND KNEES LIMITED TO A SINGLE DEGREE OF FREEDOM IN THE REAL WORLD, MEANING THEY CAN ONLY BEND ALONG ONE AXIS. LIKEWISE, A HUMAN NECK CANNOT ROTATE A FULL 360 DEGREES.</p> <p>TO HELP PREVENT UNREALISTIC ANIMATION, IT'S A GOOD IDEA TO SET UP JOINT CONSTRAINTS WHEN YOU'RE BUILDING YOUR RIG.</p>	2
UNIT 5	<p>SQUASH AND STRETCH - ANOTHER CONSIDERATION THAT MUST BE MADE IS WHETHER THE RIG WILL SUPPORT SQUASH AND STRETCH, OR WHETHER THE CHARACTER WILL BE CONSTRAINED TO REALISTIC MOTION. SQUASH AND STRETCH IS AN IMPORTANT PRINCIPLE IN EXAGGERATED CARTOON ANIMATION, BUT TYPICALLY DOESN'T LOOK RIGHT IN REALISTIC FILM/VFX WORK. IF YOU WANT YOUR RIG TO MAINTAIN REALISTIC PROPORTIONS, IT'S IMPORTANT TO SET A CONSTRAINT TO LOCK THE POSITION OF EACH JOINT IN RELATION TO THE REST OF THE RIG.</p>	4

UNIT 6	FACIAL RIGGING - A CHARACTER'S FACIAL RIG IS USUALLY ALTOGETHER SEPARATE FROM THE MAIN MOTION CONTROLS. IT'S INEFFICIENT AND INCREDIBLY DIFFICULT TO CREATE A SATISFACTORY FACIAL RIG USING A TRADITIONAL JOINT/BONE STRUCTURE, SO MORPH TARGETS (OR BLEND SHAPES) ARE USUALLY SEEN AS A MORE EFFECTIVE SOLUTION.	2
UNIT 7	SKELETONS - MOST SINGLE-SKIN CHARACTERS ARE DEFORMED USING A SKELETON MADE UP OF BONES AND JOINTS. AS WITH THE HUMAN SKELETON, THE RIGID BONES ARE CONNECTED BY JOINTS. IN MOST 3D PACKAGES, BONES ARE HELPER OBJECTS THAT DON'T RENDER. THEY SIT INSIDE THE SKIN OF A CHARACTER AND ACT AS A GUIDE FOR THE DEFORMATION UTILITY THAT ACTUALLY DEFORMS THE MESH OF THE CHARACTER.	4
UNIT 8	MANIPULATING A CHAIN YOU MANIPULATE THE IK CHAIN USING THE EFFECTOR. AS YOU MOVE THE EFFECTOR, THE JOINTS OF THE CHAIN ROTATE ACCORDINGLY. THIS MAKES POSING AND ANIMATING A CHARACTER EASY, BECAUSE YOU NEED TO CONSIDER THE POSITION OF ONLY A SINGLE EFFECTOR, RATHER THAN THE ROTATION OF MANY JOINTS. WHAT HAPPENS WHEN YOU PULL THE EFFECTOR BEYOND THE LIMITS OF THE JOINTS? MOST SOFTWARE KEEPS THE JOINTS AT A FIXED LENGTH, SO THE FULLY EXTENDED CHAIN SIMPLY AIMS ITSELF AT THE EFFECTOR. SOME SOFTWARE, HOWEVER, CAN ALLOW THE JOINTS TO STRETCH, EXPANDING THE LENGTH OF THE ENTIRE CHAIN TO MEET THE EFFECTOR. THIS SORT OF EFFECT CAN BE USED FOR CARTOONY SQUASHING AND STRETCHING MOTIONS.	2
UNIT 9	JOINT LIMITS TO PREVENT JOINTS FROM BENDING THE WRONG WAY, YOU MAY NEED TO INFORM THE SOFTWARE EXACTLY WHAT THE LIMITS ARE FOR A SPECIFIC JOINT. MOST PACKAGES ALLOW FOR THESE LIMITS TO BE CONFIGURED ON A JOINT-BY-JOINT AND AXIS-BY-AXIS BASIS. SOME PACKAGES HAVE DIFFERENT TYPES OF JOINTS AND LET YOU SPECIFY A JOINT AS EITHER HINGED (TWO-DIMENSIONAL) OR BALL AND SOCKET (THREE-DIMENSIONAL).	2
UNIT 10	REST POSITIONS AND GOALS MANY PACKAGES HAVE INCORPORATED THE IDEA OF A DEFAULT JOINT POSITION, ALSO KNOWN AS A REST OR GOAL POSITION, FOR A SERIES OF SKELETON JOINTS. SETTING A DEFAULT POSITION FORCES THE CHAIN TO RETURN TO THE DEFAULT SHAPE WHEN THE EFFECTOR IS MOVED TO ITS DEFAULT POSITION. THE DEFAULT POSITION IS USUALLY THE ONE IN WHICH THE JOINTS WERE ORIGINALLY CREATED, BUT SOME PACKAGES ALLOW FOR IT TO BE REDEFINED AT ANY TIME.	2
UNIT 11	CONTROLLING IK CHAIN DIRECTION YOU'LL ALSO NEED TO CONSIDER THE OVERALL DIRECTION OF THE CHAIN ITSELF. THE KNEES ARE A GOOD EXAMPLE: A CHARACTER'S KNEES CAN POINT EITHER STRAIGHT AHEAD OR OUT TO THE SIDES. BOTH OF THESE SOLUTIONS ARE ACCEPTABLE, BUT MANIPULATING THAT ANGLE REQUIRES SOME EXTRA CONTROL. DEPENDING ON THE SOFTWARE, SEVERAL METHODS CAN BE USED TO SPECIFY HOW THE JOINT SHOULD BEND. THE ANGLE IS OFTEN A SEPARATE ATTRIBUTE	2

	THAT CAN BE MODIFIED OR ANIMATED.	
UNIT 12	<p>MIXING FORWARD AND INVERSE KINEMATICS</p> <p>WHILE IK IS ALMOST ALWAYS USED FOR LEGS, IT'S NOT ALWAYS THE BEST OPTION FOR OTHER PARTS OF THE BODY. SINCE FORWARD KINEMATICS IS BASED ON ROTATIONS, ITS DEFAULT MOTION CAUSES THE JOINTS TO MOVE ALONG ROTATIONAL ARCS, WHICH LOOKS MORE NATURAL BECAUSE IT IS THE WAY REAL SKELETONS WORK. THIS IS MUCH MORE DESIRABLE THAN IK'S DEFAULT MOTION, WHICH IS A STRAIGHT LINE. OF COURSE, THERE ARE MANY TIMES WHEN YOU WILL NEED IK TO LOCK DOWN THE HANDS, BUT WHEN THE HANDS ARE FREE, FK CAN BE MUCH EASIER TO ANIMATE.</p> <p>IN ORDER TO MEET THESE DIFFERING NEEDS, MOST ADVANCED PACKAGES OFFER SOME METHOD OF SWITCHING BETWEEN FK AND IK, OFTEN BY LETTING YOU CHANGE THE INFLUENCE OF THE IK EFFECTOR. WHEN IT'S AT 100 PERCENT, IK IS FULLY ENGAGED; CHANGE THAT INFLUENCE TO ZERO AND FK IS FULLY ENGAGED.</p>	2

REFERENCE BOOKS

1. INTRODUCING AUTODESK MAYA 2014 BASIC GUIDE BY DARIUSH DERAKSHANI
2. STOP STARING – BY JASON OSIPA
3. HOW TO CHEAT IN MAYA – ERIC LUHTA & KENNY ROY

REFERENCE LINK

[HTTPS://WWW.LIFEWIRE.COM/WHAT-IS-RIGGING-2095](https://www.lifewire.com/what-is-rigging-2095)

[HTTP://WWW.PEACHPIT.COM/ARTICLES/ARTICLE.ASPX?P=483773](http://www.peachpit.com/articles/article.aspx?p=483773)

[HTTPS://WWW.PINTEREST.COM/EIGENKAZUKI/RIGGING-TIPS/](https://www.pinterest.com/eigenkazuki/rigging-tips/)

RSACE-3:25	CHARACTER ANIMATION	TEACHING HOURS 60
-------------------	----------------------------	------------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	<p>VISUAL LANGUAGE SKILLS-THE AESTHETICS OF A SHOT, PSYCHOLOGY OF LINE, SHAPE, COMPOSITION, LIGHTING AND COLOUR ARE COVERED IN STORY/VISUAL LANGUAGE.</p> <p>LIFE DRAWING IS ESSENTIAL FOR ALL ANIMATION STUDENTS, AS STRONG DRAWING SKILLS BUILD CONFIDENCE AND ALL ANIMATORS BENEFIT FROM SIMPLIFIED STRUCTURAL DRAWING FOR PLANNING ANIMATION. 3D ANIMATORS LEARN MAYA FUNDAMENTALS IN ANIMATION INTERFACE, PREFERENCES AND FILE MANAGEMENT, AND BASIC MODELING IS INTRODUCED FOR CREATING PROPS AND</p>	4

	ENVIRONMENTS	
UNIT 3	<p>HISTORY OF ANIMATION IS OFFERED FOR AN IN-DEPTH LOOK AT HOW THE ART FORM HAS EVOLVED. THE CONVENTIONAL CARTOON APPROACH HAS ALWAYS THRIVED, AN INFLUENCE THAT IS STILL PREVAILING IN CONTEMPORARY ANIMATION'S MOST RECENT INCARNATION, WEB ANIMATION. THE CARTOON STYLE IS VERY POPULAR, PERHAPS IT ESSENTIALLY LIES IN THE NEEDS OF CHARACTER DESIGN WHEN APPLIED TO ANIMATION. AN ANIMATED CHARACTER, BY NECESSITY, HAS TO BE EASY TO DRAW, CONSISTENTLY PROPORTIONED FROM ALL VIEW POINTS, AND SHOULD NOT INVOLVE TOO MUCH PENCIL MILEAGE.</p>	2
UNIT 4	<p>ACTING FOR ANIMATION-CHARACTER AWARENESS-THE STUDY OF ANIMATION THROUGH MORE DETAILED BODY MECHANICS INTRODUCES ACTING, CHARACTER AWARENESS, THINKING AND DEALING WITH THE ENVIRONMENT TO STRENGTHEN CONTENT BELIEVABILITY. STORY/VISUAL LANGUAGE ADVANCES TO DEAL WITH THE PSYCHOLOGY OF CINEMATIC IMAGE, ACTING AND STORY STRUCTURE WHILE STORYBOARDING ASSIGNMENTS PREPARE YOU FOR TERM 3 ASSIGNMENTS AND TERM 4 DEMO PROJECTS.</p> <p>LIFE DRAWING CONTINUES, ADVANCING BODY CONSTRUCTION AWARENESS AND DYNAMIC POSING. IN MAYA CLASS, ORGANIC MODELING IS TAUGHT USING EXISTING CHARACTER MODELS, BUILDING CLOTHING, HAIR AND PROPS THAT WILL SUPPORT YOUR STORYTELLING EFFORTS THROUGH CHARACTER ANIMATION.</p>	4
UNIT 5	<p>ADVANCE OBSERVATION TECHNIQUES IN DESIGNING-THE COURSE TAKES AN INNOVATIVE LOOK AT 'THE ANIMATOR AS ACTOR' ROLE. YOU WILL OBSERVE ,IN STORY/VISUAL LANGUAGE YOU WILL DEVELOP, STORYBOARD AND CREATE ASSETS FOR YOUR TERM 4 DEMO PROJECT. WORKSHOPS IN ADOBE PREMIERE PREPARE YOU FOR CREATING, EDITING AND ADDING AUDIO TO STORY REELS AND FINAL PROJECTS.</p> <p>LIFE DRAWING ADVANCES BODY CONSTRUCTION AWARENESS AND DYNAMIC POSING. THE APPLICATION OF TECHNIQUES LEARNED IN MAYA 1 AND 2 AID IN THE BUILDING OF SETS AND CHARACTER ASSETS FOR THE SHORT STORY PROJECT.</p>	4
UNIT 6	<p>THE TERM IS FOR HONING CHARACTER ANIMATION SKILLS WHILE CREATING YOUR CHARACTER ANIMATION DEMO REEL.</p> <p>HARMONY CLASSES INTRODUCE SOFTWARE COMPONENTS SPECIFIC TO YOUR FILM PROJECT.</p> <p>LIGHTING AND RENDERING ARE TAUGHT IN THE MAYA COURSE TO HELP ENHANCE THE VISUAL PRESENTATION OF YOUR DEMO REEL PROJECT, AS WELL AS PROVIDING VISUAL POLISH ON PREVIOUS ANIMATION ASSIGNMENTS.</p> <p>LIFE DRAWING ADVANCES BODY CONSTRUCTION AWARENESS AND DYNAMIC POSING TO HELP STRENGTHEN YOUR ANIMATION POSES. YOU ALSO EXPLORE ARTISTIC EXPRESSION THROUGH LINE AND</p>	4

	PROPORTION.	
UNIT 7	CHARACTER ANIMATION –THE PROGRAM BEGINS WITH TRADITIONAL EXERCISES USING PENCIL AND PAPER THAT ALLOWS A STUDENT TO EXPLORE THE BASICS OF DRAWING FOR ANIMATION BEFORE PROGRESSING TO A MORE CHALLENGING ACTING SCENES. ONCE THE BASICS ON PAPER ARE GRASPED THE STUDENTS TRANSITION TO DIGITAL ANIMATION AND BEGIN USING PROGRAMS LIKE TV PAINT , TOON BOOM HARMONY AND AFTER EFFECTS. THEY ALSO PARTICIPATE IN WIDE VARIETY OF FILM MAKING RELATED COURSES LIKE LAYOUT, CHARACTER DESIGN AND STORYBOARDING	4
UNIT 8	THE STUDENTS TAKE THEIR 2D ANIMATION SKILLS INTO 3D PLATFORM USING MAYA AND EXPERIENCE ANIMATING A CG CHARACTER. THE STUDENTS ALSO ENCOUNTER ANOTHER ASPECT OF A 3D WORKFLOW SUCH AS BASIC MODELING, RIGGING, LIGHTING AND RENDERING.	4
UNIT 9	ANIMATION CYCLE – THIS SUBJECT INTRODUCES STUDENT TO GENERIC WALK CYCLE, AND WALK CYCLE WITH PERSONALITY. THEY WILL LEARN HOW TO CREATE THE ANIMATION CYCLES WITH A 3D CHARACTER IN MAYA AND APPLY THE PRINCIPLES OF ANIMATION TOP MAKE THE ANIMATION CYCLE LOOK INTERESTING AND BELIEVABLE.	4
UNIT 10	PRE VIZ / ANIMATICS – PRE VISUALIZATION OR ANIMATION IS THE REFERENCE VIDEO FOR AN ANIMATOR. THE PRE-PRODUCITON TEAM WILL LOCK THE CAMERA ANGLE AND ROUGH TIMING BASED ON THE DIALOGUE AND ROUGH MUSIC. THE ANIMATOR WILL KEEP THIS TIMING FOR REFERNECE TO DO THE ANIMATION.	4
UNIT 11	UNDERSTANDING OF RIGGING – THE SUBJECT CONTINUES WITH A FOCUS ON MOVING BEYOND SIMPLE CHARACTERS TO MORE REALISTIC DETAILED RIGS. TOPICS INCLUDING CONTROL OF CLOTHING, MUSCULAR DEFORMATION SYSTEMS. THOUGH THE USE OF ADVANCED TOOLS RIGS INCORPORATING ADVANCED FACIAL CONTROL, SURFACES THAT DYNAMICALLY REACT TO BOTH EXTERNAL AND ENVIRONMENTAL AND MUSCULAR FORCES WILL BE REVIEWED AND DICUSSED.	4
UNIT 12	STAGING AND BLOCKING – STAGING IS A PROCESS WHERE THE CHARACTERS ARE PLACED AS PER THE CAMERA ANGLE AND ROUGH PROPS AND SETS. BLOCKING – IS A PROCESS WHERE A POSE TO POSE ANIMATION IS CREATED AND THE ANIMATION SUPERVISOR WILL WORK CLOSELY WITH THE ANIMATOR TO GET THE CORRECT KEY POSSES.	4
UNIT 13	BODY MECHANICS – THEY WILL LEARN HOW TO ANIMATE A 3D CHARACTER DOING COMPLEX ACTION SEQUENCES AS RUNNING, JUMPING AND CLIMBING OVER OBSTACLES.	4
UNIT 14	CHARACTER ANIMATION I – THIS MODULE EXPLORES THE BACKGROUND OF NATURIST CHARACTER MOVEMENT AND ADVANCE KEY FRAME ANIMATION TECHNIQUES. STUDENTS WILL LEARN HOW TO ADD PERSONALITY AND LIFE TO THEIR CREATIONS	4
UNIT 15	CHARACTER ANIMATION II – THIS MODULE COVERS THE FUNDAMENTALS OF QUADRUPLED ANIMATION.	4
RSACE	PRACTICAL EXERCISES	HOURS
	SHORT FILM DOMOREEL PROJECT:	120

	<p>A SHORT FILM, AS DESIGNED AND STORY BOARDED, OR COMPLETING A SEQUENCE OF ASSIGNMENTS TO STRENGTHEN YOUR SKILLS AS A CHARACTER ANIMATOR.</p> <p>CHARACTER POSES:</p> <p>STUDENTS HAVE TO CREATE ATTITUDE POSES USING RIGGED CHARACTERS – MINIMUM 10 POSES OF THE FOLLOWING</p> <p>(1) HUMAN CHARACTERS (2) ANIMAL CHARACTER (3) CREATURE / BIRD ETC.</p> <p>CHARACTER ANIMATION ASSIGNMENTS:</p> <p>USING PRE BUILT RIGS STUDENTS PRODUCE A SERIES OF NATURALISTIC ANIMAL MOTION EXERCISES. STUDENTS WILL LEARN HOW TO ANIMATE FACIAL EXPRESSION AND EYE MOVEMENTS TO PRODUCE DYNAMIC CHARACTER PERFORMANCES.</p> <p>LIFE DRAWING ASSIGNMENTS– THE SUBJECT OFFERS STUDENT THE OPPORTUNITY TO DEVELOP THEIR SKILLS OF OBSERVATION AND DRAWING BY INTRODUCING THEM TO STUDY OF HUMAN. THEY WILL EXAMINE THE CONSTRUCTION OF THE HUMAN BODY IN ORDER TO UNDERSTAND THE TOPOLOGY OF HUMAN FORM.</p>	
--	--	--

REFERENCE BOOKS

1. INTRODUCING AUTODESK MAYA 2014 BASIC GUIDE BY DARIUSH DERAKSHANI
2. STOP STARING – BY JASON OSIPA
3. HOW TO CHEAT IN MAYA – ERIC LUHTA & KENNY ROY

REFERENCE LINK

[HTTP://WWW.ANIMWORK.DK/EN/CHARACTER ANIMATION.ASP](http://www.animwork.dk/en/character_animation.asp)

[HTTP://MAGES.EDU.SG/ACADEMICS/PROGRAMMES/ADVANCED-DIPLOMA/ADVANCED-DIPLOMA-ANIMATION](http://mages.edu.sg/academics/programmes/advanced-diploma/advanced-diploma-animation)

[HTTP://MEDIA-FREAKS.COM/THE-PROCESS-OF-3D-ANIMATION/](http://media-freaks.com/the-process-of-3d-animation/)

RSACE-3:26	TECHNICAL ANIMATION (EFFECTS)	TEACHING HOURS 30
-------------------	--------------------------------------	--------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	N CLOTH AND HAIR ARE EXTREMELY POWERFUL AND SURPRISINGLY	4

	EASY TO USE DEPENDING ON THE REQUIREMENTS OF THE SCENE. YOU CAN CREATE SOME INTERESTING DYNAMIC MOVEMENTS TO THE OBJECTS IN YOUR SCENE WITHOUT THE NEED FOR COMPLEX EXPRESSIONS AND CONNECTIONS. NCLOTH AND HAIR SYSTEMS CAN ALSO INTERACT WITH MAYA PARTICLES AND FLUIDS AS WELL, LAYERING SUCH DYNAMIC SIMULATIONS IS SOMETIMES REQUIRED TO CREATE THE VERY SPECIFIC AND UNUSUAL DYNAMIC MOTIONS WE FREQUENTLY SEE IN SCIENTIFIC ANIMATIONS.	
UNIT 2	CREATING AND NCLOTH CELL - . NCLOTH IS NOT JUST FOR SIMULATING CLOTHING. BY ADJUSTING SETTINGS ON THE NCLOTH OBJECT AND THE NUCLEUS SOLVER YOU CAN SIMULATE ANYTHING FROM WATER BALLOONS TO CHAIN MAIL. ONE OF THE NICEST ASPECTS OF THIS SYSTEM IS THAT, WHEN USING LOWER RESOLUTION OBJECTS, THE INTERACTION IS FAST ENOUGH THAT YOU CAN EXPERIMENT WITH COMBINATIONS OF SETTINGS WHILE THE SIMULATION IS RUNNING AND FINE TUNE THOSE TO GET THE TYPE OF MOTION YOU WANT.	2
UNIT 3	PASSIVE NCLOTH OBJECTS - PASSIVE OBJECTS ARE NON CLOTH OBJECTS THAT CAN INTERACT WITH NCLOTH OBJECTS. WHEN WORKING WITH COLLISION OBJECTS YOU HAVE SEVERAL OPTIONS FOR BALANCING THE SPEED AND ACCURACY OF THE SIMULATION. IF YOU SELECT THE PLANE AND OPEN ITS ATTRIBUTE EDITOR TO THE NRIGIDSHAPE1 NODE, UNDER QUALITY SETTINGS YOU'LL SEE THE COLLISION FLAG OPTION. THIS CAN BE SET TO FACE, VERTEX, OR EDGE. THE FACE SETTING IS THE MOST ACCURATE AND SLOWEST TO CALCULATE.	2
UNIT 4	PRESSURE - AT THIS POINT YOU'RE READY TO ANIMATE THE ROUNDING OF THE CELL. THIS WILL BE ACCOMPLISHED IN AN EXTREMELY SIMPLE MANNER. YOU'LL EDIT THE SETTINGS ON THE NCLOTH SHAPE, NUCLEUS WILL THEN APPLY THESE SETTINGS AND THE ANIMATION WILL OCCUR AUTOMATICALLY AS NUCLEUS INTERPOLATES BETWEEN THE INITIAL STATE AND THE APPLIED SETTINGS.	2
UNIT 5	THERE ARE TWO WAYS TO CALCULATE PRESSURE – ONE IS THE PRESSURE SLIDER AND PRESSURE DAMPING SLIDERS ARE THE ONLY TWO CONTROLS. THESE CAN BE KEYFRAMED TO TUNE THE EFFECT. THE OTHER IS THE SETTINGS ON THIS MODEL OFFER MORE PRECISE CONTROL AS THIS MODEL CALCULATES THE VOLUME OF THE CLOTH COMBINED WITH THE INFLOW AND OUTFLOW OF AIR. THE PUMP RATE VALUE DETERMINES THE RATE AT WHICH AIR IS ADDED WITHIN THE VOLUME.	2
UNIT 6	DYNAMIC CURVES - MAYA'S DYNAMIC HAIR SYSTEM CAN BE USED FOR MUCH MORE THAN CHARACTER HAIRSTYLES. THE MOST USEFUL PROPERTY OF THE SYSTEM FOR THE PURPOSE OF CREATING SCIENTIFIC ANIMATIONS IS THE ABILITY TO TURN A REGULAR NURBS CURVE IN TO A DYNAMIC CURVE. THIS IS SIMILAR TO CREATING A SOFTBODY CURVE HOWEVER; LIKE CLOTH, THE INTERACTIONS AND COLLISIONS BETWEEN CURVES ARE MUCH MORE REALISTIC AND EASIER TO SET UP. LIKE NCLOTH, ONCE YOU CONVERT A CURVE INTO A DYNAMIC CURVE, YOU CAN ADJUST ITS QUALITY BY CHANGING THE PARAMETERS ON THE HAIR NODE, THIS CAN BE DONE WHILE THE ANIMATION IS PLAYING ALLOWING YOU TO EXPERIMENT WITH THE SETTINGS UNTIL YOU GET SOMETHING YOU LIKE.	2

UNIT 7	CREATE A HAIR CACHE - WHEN YOU CREATE A HAIR CACHE THE DYNAMICS OF THE CURVE ARE STORED IN A FILE OR A SERIES OF FILES. NOT ONLY DOES THIS ENSURE THAT THE ANIMATION WILL BE CORRECT WHEN ITS TIME TO RENDER, IT ALSO ALLOWS YOU TO ADD DEFORMERS TO THE HAIR CURVE. YOU'LL TAKE ADVANTAGE OF THIS SO THAT THE HAIR AND THE ORIGINAL CHROMOSOME CURVE CAN BE ANIMATED TOGETHER - USE HAIR AS AN IK SPLINE CURVE. THE JOINT CHAIN CAN BE CONTROLLED USING A SPLINE IK, TO ADD ANOTHER LEVEL OF DYNAMIC MOTION YOU CAN CONVERT THE SPLINE IK CURVE INTO A DYNAMIC HAIR CURVE.	2
UNIT 8	CONSTRAIN CLOTH TO HAIR - IT'S FAIRLY SIMPLE TO ATTACH AN NCLOTH OBJECT TO A HAIR CURVE INDIRECTLY USING A LOCATOR AND AN NCONSTRAINT. IN THIS EXERCISE YOU'LL SEE HOW YOU CAN USE THIS TECHNIQUE TO ANIMATE THE SEPARATION OF CHROMOSOMES DURING ANAPHASE. THIS SECTION WILL GO THROUGH SETTING UP JUST PART OF THE ANIMATION, COMPLETING THE ANIMATION IS SIMPLY A MATTER OF EXPANDING THE TECHNIQUES SO THAT BOTH SETS OF CHROMOSOMES ARE ANIMATED.	2
UNIT 9	NCLOTH CELL DIVISION - THERE ARE NUMEROUS APPROACHES FOR CREATING BELIEVABLE CELL DIVISION ANIMATION IN MAYA. IN THIS SECTION YOU'LL SEE SOME OF THE POSSIBILITIES OFFERED BY NCLOTH. THE GOAL OF THIS LESSON, AS WELL AS THE OTHERS IN THIS SECTION, IS TO MAKE YOU AWARE OF THE MANY CHOICES YOU HAVE AND INSPIRE YOU TO CREATE YOUR OWN SOLUTIONS TO THE PROBLEMS POSED BY SCIENTIFIC VISUALIZATION. YOU'LL USE NCLOTH TO ANIMATE ONE SIDE OF THE CELL DIVISION. LATER ON YOU'LL CREATE A CACHE AND DUPLICATE THE RIGHT SIDE OF THE CELL TO CREATE THE LEFT SIDE OF THE CELL. BY USING APPLYING A CACHE TO BOTH HALVES OF THE CELL YOU'LL ONLY HAVE TO CREATE A NCLOTH SIMULATION FOR ONE SIDE OF THE CELL.	2
UNIT 10	COAT THE GEOMETRY WITH PARTICLES - TO CREATE THE LOOK OF A SINGLE CELL OBJECT DIVIDING INTO TWO CELLS, YOU CAN USE COAT EACH CELL HALF WITH A SINGLE PARTICLE OBJECT SET TO THE BLOBBY SURFACE RENDER TYPE.	2
UNIT 11	YOU MAY NOTICE THAT THE DIVIDED CELLS ARE RATHER LUMPY. THIS IS BECAUSE FOR EACH HALF OF THE CELL ONLY HALF THE VERTICES ARE BEING COVERED – THE PARTICLES ARE ATTRACTED TO THE GOAL BASED ON THEIR PARTICLE ID NUMBER SO SOME VERTICES ARE LEFT OPEN BECAUSE THE CORRESPONDING PARTICLE IS ON THE OPPOSITE HALF OF THE CELL. THE EASIEST WAY TO REMEDY THIS IS TO PERFORM A SMOOTH OPERATION ON EACH OF THE CELL HALVES AND THEN RAISE THE MAX PARTICLE COUNT ON THE PARTICLE SHAPE NODE SO THAT ENOUGH PARTICLES ARE CREATED. THEN RAISE THE RADIUS AND THRESHOLD OF THE BLOBBY SURFACE PARTICLES. THIS WILL SMOOTH THE SURFACE OF THE CELLS SOMEWHAT BUT IT'S NOT A PERFECT SOLUTION.	2
RSACE	PRACTICAL EXERCISES	HOURS
	<ul style="list-style-type: none"> • CREATE A FLAG ANIMATION • CREATE A GARMENT FOR A CHARACTER AND WALK CYCLE WITH PROPER CLOTH ANIMATION • USE THE SAME CHARACTER TO CREATE A REALISTIC HAIR 	90

	<ul style="list-style-type: none"> • CREATE A CREATURE CHARACTER AND ADD FUR. 	
--	--	--

REFERENCE BOOKS

1. INTRODUCING AUTODESK MAYA 2014 BASIC GUIDE BY DARIUSH DERAKSHANI

REFERENCE LINK

[HTTP://WWW.MOLECULARMOVIES.COM/IMG/PDF_TUTORIALS/NCLOTHHAIRMITOSIS.PDF](http://www.molecularmovies.com/img/pdf_tutorials/nclothhairmitosis.pdf)

[HTTP://WWW.CREATIVEBLOQ.COM/3D/HOW-CREATE-REALISTIC-3D-HAIR-AND-FUR-91412900](http://www.creativebloq.com/3d/how-create-realistic-3d-hair-and-fur-91412900)

[HTTPS://IN.PINTEREST.COM/PIN/473018767092813141/](https://in.pinterest.com/pin/473018767092813141/)

RSACE-3:27	LIGHTING & RENDERING	TEACHING HOURS 60
-------------------	---------------------------------	------------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	FUNDAMENTALS OF LIGHTING DESIGN – HOW DO YOU TELL GOOD LIGHTING FROM BAD? IT STARTS WITH VISUAL GOALS OF LIGHTING DESIGN, THE MOTIVATION FOR LIGHT SOURCES AND WALKS STEP BY STEP THROUGH HOW LIGHTING DESIGNERS CHEAT TO ACHIEVE THE RESULTS THEY WANT	2
UNIT 2	LIGHTING BASICS AND GOOD PRACTICES – WHEN AND HOW TO START THE PROCESS OF LIGHTING DURING A PRODUCTION. 3 POINT LIGHTING, HOW TO CHOOSE BETWEEN ALL TYPES OF LIGHTS IN YOUR 3D PROGRAM ADJUSTING CONTROLS AND OPTIONS ON LIGHTS. UPDATED WITH NEW EXAMPLES: IES PHYSICALLY BASED LIGHTS, OBJECTS AS LIGHT SOURCES ETC.	4
UNIT 3	SHADOWS AND OCCLUSION – CREATING DIFFERENT LOOKS WITH SHADOWS. CONTROLLING RAYTRACED HARD AND SOFT SHADOWS FROM DIFFERENT TYPES OF LIGHTS. DEPTH MAP SHADOWS, HOW TO FIX BIAS AND FRAMING ISSUES, FIXING LIGHT LEAKS AND ARTIFACTS. NEW COVERAGE OF OCCLUSION	4

	SANDWICH TECHNIQUE AND OCCLUSION PASSES WITH DISPLACEMENT AND REFLECTIONS. CHEAT AND TRICKS TO FAKE AND MANIPULATE SHADOWS AND OCCLUSION.	
UNIT 4	LIGHTING ENVIRONMENTS AND ARCHITECTURE – LIGHTING SETS AND ENVIRONMENTS WITH NATURAL LIGHT OR ARTIFICIAL LIGHTS BY DAY OR NIGHT. NEW EXAMPLES OF SPILL LIGHT, GLOBAL ILLUMINATION TECHNIQUES, SIMULATING GLOBAL ILLUMINATION, BREAKING UP SPACES WITH VARIED LIGHTING, WORKING WITH VOLUMETRIC FOG AND ATMOSPHERE, NEW FOCUS ON UNDERWATER LIGHTING.	4
UNIT 5	LIGHTING CREATURES, CHARACTERS AND ANIMATION – CREATING DIFFERENT LOOKS IN CHARACTER LIGHTING; HOW TO LIGHT CHARACTERS IN MOTION AND FOLLOW EMOTIONAL SHIFTS IN SCENES. ADJUSTING KEY, SPILL, BOUNCE, FILL, RIM AND KICK LIGHTS TO MODEL; CHARACTERS WITH LIGHT. STRATEGIES FOR DEVELOPING CHARACTER LIGHTING RIGS AND LIGHTING MULTIPLE CHARACTERS. MIXING CHARACTER LIGHTING WITH SET LIGHTS AND GLOBAL ILLUMINATION. TIPS AND EXAMPLES FOR LIGHTING AND RENDERING CHARACTER EYES, SKIN SHADING AND SUBSURFACE SCATTERING, AND LIGHTING CHARACTER HAIR.	4
UNIT 6	CAMERAS AND EXPOSURE – UNDERSTANDING EXPOSURE ON REAL CAMERAS, F- STOPS, SHUTTER SPEED, SHUTTER ANGLE, THE ZONE SYSTEM, HOW TO SHOOT IMAGES TO CREATE HDRI . MATCHING WITH LIVE ACTION CINEMATOGRAPHY AND SIMULATING CAMERA ARTIFACTS IN 3D: MATCHING DEPTH OF FIELD, NEW DETAIL ABOUT ADJUSTING MOTION BLUR, LENS BREATHING, CHROMATIC ABERRATIONS AND LENS DISTORTION.	4
UNIT 7	COMPOSITION AND STAGING – PLANNING CINEMATIC PRODUCTIONS USING DIFFERENT TYPES OF SHOTS, USING REALISTIC CAMERA RIGS TO SIMULATE CONVINCING CAMERA MOVES, PLANNING SHOTS THAT WILL CUT TOGETHER WELL WHEN EDITED, WORKING IN DIFFERENT DIGITAL AND FILM FORMATS AND ASPECT RATIOS, USING LIGHTING TO HELP IMPROVE YOUR COMPOSITION AND ENHANCE VISUAL STORYTELLING.	2
UNIT 8	THE ART AND SCIENCE OF COLOR – NEW FOCUS ON THE LINEAR WORKFLOW, HOW TO AVOID PROBLEMS WITH GAMMA AND COLOR SPACES, AND WHY THE LINEAR WORKFLOW MATTERS IN LIGHTING AND COMPOSITING. CREATING A COMPELLING SCENE THROUGH DEVELOPING A CONSISTENT COLOR SCHEME. UNDERSTANDING DIGITAL COLOR FROM THE RGB STANDARD TO BIT DEPTH AND OPEN EXR HALF FLOATS. THE MEANINGS OF DIFFERENT COLORS AND USING COLOR TO INFLUENCE THE EMOTIONAL IMPACT OF A SCENE. SIMULATING A FILM COLOR BALANCE AND MATCHING COLOR KELVIN TEMPERATURES FOR THE REAL LIGHT SOURCES.	4
UNIT 9	SHADERS AND RENDERING ALGORITHMS – EXPLORE THE BASIC COMPONENTS OF MATERIALS AND SHADERS, DIFFERENT KINDS OF SHADERS, AND WHAT KIND OF LOOKS YOU CAN CREATE. UNDERSTANDING VOCABULARY SUCH AS DIFFUSE, GLOSSY, AND SPECULAR, BRDF, BSSRDF, ENERGY CONSERVATION AND PHYSICALLY BASED SHADERS. DIFFERENT KINDS OF RENDERING ALGORITHMS: REYES, RAYTRACERS, APPROACHES TO GLOBAL	4

	ILLUMINATION AND UNBIASED RENDERERS.	
UNIT 10	DESIGNING AND ASSIGNING TEXTURES –THIS CHAPTER FEATURES EXAMPLES OF MANY TYPES OF MAPPING, THE DIFFERENCES BETWEEN DISPLACEMENT, BUMP MAPPING, NORMAL MAPPING AND POLYNOMIAL TEXTURE MAPPING, DIFFERENT STRATEGIES FOR ALIGNMENT BETWEEN MAPS AND GEOMETRY SUCH AS UV MAPS, PROJECTIONS, AND PTEX, AND TUTORIALS ON CREATING TEXTURE MAPS, EQUALIZING LEVELS TO CREATE BETTER TILING MAPS.	4
UNIT 11	RENDERING IN LAYERS AND PASSES FOR COMPOSITING – APPROACHES TO SPLITTING YOUR SCENES INTO RENDER LAYERS AND RENDER PASSES, HOW TO RECREATE A COMPLETE SCENE FROM RENDERED ELEMENTS AND THE BENEFITS TO THE LOOKS DEVELOPMENT PROCESS OF MULTI PASS RENDERING AND COMPOSITING. USING STRAIGHT VS PRE MULTIPLIED ALPHA CHANNELS. COMPOSITING EXAMPLES UPDATED TO USE NUKE AS WELL AS WORKAROUNDS IN PHOTOSHOP THAT ANYONE CAN FOLLOW. COMPOSITING WITH A LINEAR WORKFLOW.	6
UNIT 12	PRODUCTION PIPELINES AND PROFESSIONAL PRACTICES – HOW FEATURE FILMS MOVE THROUGH A MULTI DEPARTMENT PRODUCTION PIPELINE FOR VISUAL EFFECTS OR ANIMATED FEATURE PRODUCTION. UNDERSTANDING WHAT ALL THE DEPARTMENTS DO, HOW LIGHTING FITS IN WITH A LARGER PIPELINE AND HOW LIGHTING TDS PUT TOGETHER ASSETS FROM MANY DEPARTMENTS IN BUILDING A SHOT. NEW FOCUS ON STRATEGIES SUCH AS LIGHTING KEY SHOTS, REFERENCING AND SHARING LIGHT RIGS THAT LET MULTIPLE LIGHTERS EFFICIENTLY COLLABORATE TO LIGHT FEATURE FILMS AND OTHER LARGER PROJECTS.	4
RSACE	PRACTICAL EXERCISES	HOURS
	<ul style="list-style-type: none"> • CREATE A 3 POINT LIGHTING FOR A POTRAIT CHARACTER • SUBMIT 10 PHOTOGRAPHS WITH DIFFERENT MOODS IN OUDOOR AND INDOOR LIGHTING. • LIGHTING A COMPLETE SET – INTERIOR • LIGHTING A 3D HOUSE – EXTERIOR (MATCH IT WITH THE REAL PHOTOGRAPHS) • 3D MULTI LAYER RENDERING 	120

REFERENCE BOOKS

1. INTRODUCING AUTODESK MAYA 2014 BASIC GUIDE BY DARIUSH DERAKSHANI
2. COLOR AND LIGHT : A GUIDE FOR THE REALIST PAINTER (JAMES GUMEY ART)
3. DIGITAL LIGHTING AND RENDERING – 1ST AND 2ND EDITION. – BY JERMY BIM

REFERENCE LINK

[HTTP://WWW.3DRENDER.COM/LIGHT/](http://www.3drender.com/light/)

[HTTPS://DOC.LAGOUT.ORG/OTHERS/GAME%20DEVELOPMENT/DESIGNING/DIGITAL%20LIGHTING%20AND%20RENDERING.PDF](https://doc.lagout.org/others/game%20development/designing/digital%20lighting%20and%20rendering.pdf)

RSACE-3:28	COMPOSITING I	TEACHING HOURS 30
-------------------	----------------------	------------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	INTRODUCTION: STEREO COMPOSITING, MULTI-PASS CGI COMPOSITING, 3D COMPOSITING, ADOBE PHOTOSHOP, PRODUCTION TIPS, MAKING THE GOOD COMPOSITE, THE QUEST FOR REALISM, THE SLICE TOOL, FLOW GRAPHS, THE COLOR CURVE	2
UNIT 2	PULLING MATTES: LUMA KEY MATTES, CHROMA KEY MATTES, DIFFERENCE MATTES, BUMP MATTES, KEYERS, COLOR DIFFERENCE MATTES, ADOBE AFTER EFFECTS MATTE	2
UNIT 3	REFINING MATTES: THE MATTE MONITOR, GARBAGE MATTES, FILTERING THE MATTE, ADJUSTING THE MATTE SIZE	2
UNIT 4	DESPILL: THE DESPILL OPERATION, DESPILL ARTIFACTS, DESPILL ALGORITHMS, REFINING THE DESPILL, UNSPILL OPERATIONS	2
UNIT 5	THE COMPOSITE: THE COMPOSITING OPERATION, THE PROCESSED FOREGROUND METHOD, THE ADD-MIX COMPOSITE, REFINING THE COMPOSITE, STEREO COMPOSITING	2
UNIT 6	CGI COMPOSITING: PREMULIPLY AND UNPREMULIPLY, MULTI-PASS CGI COMPOSITING, HDR IMAGES, 3D COMPOSITING, A SHORT COURSE IN 3D, MATCHMOVING, CAMERA PROJECTION, SET EXTENSION, 3D BACKGROUNDS	2
UNIT 7	BLEND OPERATIONS: IMAGE BLENDING OPERATIONS, ADOBE PHOTOSHOP BLENDING MODES, SLOT GAGS	2
UNIT 8	COLOR- CORRECTION: THE COLOR OF NATURE, THE BEHAVIOR OF LIGHT, MATCHING THE LIGHT SPACE	2
UNIT 9	CAMERA EFFECTS: MATCHING THE FOCUS, DEPTH OF FIELD, LENS FLARE, VEILING GLARE, GRAIN	2
UNIT 10	ANIMATION: GEOMETRIC TRANSFORMATIONS, MOTION TRACKING, WARPS AND MORPHS	2
UNIT 11	GAMMA: WHAT IS GAMMA? THE EFFECTS OF GAMMA CHANGES ON IMAGES, THE THREE GAMMAS OF A DISPLAY SYSTEM, THE DIM SURROUND EFFECT, THE GAMMA OF VIDEO, THE GAMMA OF FILM	2

UNIT 12	VIDEO: HOW VIDEO WORKS, HI-DEF VIDEO, TELECINE, WORKING WITH VIDEO, WORKING WITH VIDEO IN A FILM JOB, WORKING WITH FILM IN A VIDEO JOB, WORKING WITH CGI IN A VIDEO JOB	2
UNIT 13	FILM: THE FILM PROCESS, TERMS AND DEFINITIONS, FILM FORMATS, FILM SCANNERS, FILM RECORDERS, DIGITAL INTERMEDIATE	2
UNIT 14	LOG VS. LINEAR : DYNAMIC RANGE IN THE REAL WORLD, THE BEHAVIOR OF FILM, REPRESENTING FILM DATA IN LOG FORMAT, DIGITIZING FILM, BIT DEPTH, BANDING	2
UNIT 15	LOG IMAGES: CONVERTING LOG IMAGES, WORKING WITH LOG IMAGES	2
RSACE	PRACTICAL EXERCISES	HOURS
	<ul style="list-style-type: none"> • 3D MULTI LAYER COMPOSITING • RE LIGHTING • COLOR CORRECTION 	30

REFERENCE BOOKS

1. NUKE 101

REFERENCE LINK

RSACE-3:29	ADVANCED CGI COMPOSITING & EDITING	TEACHING HOURS 30
-------------------	---	--------------------------

UNITS	COVERAGE OF MODULES	TIME (LECTURES)
UNIT 1	KEYING: INTRODUCING NUKE'S KEYING NODES, HUEKEYER, THE IBK: IMAGE BASED KEYS, KEYLIGHT, COMBINING KEYS USING THE TREE .	2
UNIT 2	COMPOSITING: USING THE PROJECT SETTINGS PANEL, SETTING UP A HIGH-RES STEREO SCRIPT, COMPOSITING A STEREO PROJECT, RENDERING AND VIEWING STEREO TREES, COMPOSITING 3D MULTI LAYER RENDERING, SCENE RELIGHTING.	4
UNIT 3	THE NUKE 3D ENGINE: 3D SCENE SETUPS, MOVING IMAGES WITH A 3D SCENE, RECONCILE3D: TRANSFORMING 3D DATA INTO 2D DATA, FINAL DISCLOSURE	2
UNIT 4	CAMERA TRACKING: CALCULATING REFLECTION MOVEMENT USING CAMERA TRACKING, 3D TRACKING IN NUKE, LOADING A PRE-GENERATED CAMERATRACKER NODE, ALIGNING THE SCENE, CREATING THE REFLECTION	2
UNIT 5	CAMERA PROJECTION: BUILDING A CAMERA PROJECTION SCENE, TWEAKING THE GEOMETRY, ANIMATING THE CAMERA, TWEAKING THE TEXTURE, USING A SPHERICAL TRANSFORM TO REPLACE SKY,	2

	COMPOSITING OUTSIDE THE SCANLINE RENDER NODE, 2D COMPOSITING INSIDE 3D SCENES	
UNIT 6	CUSTOMIZING NUKE WITH GIZMOS: ABOUT SAFETY AREAS, BUILDING THE GIZMO'S TREE, CREATING USER KNOBS, SCRIPTING WITH A LITTLE TCL, TESTING THE GIZMO' TREE, WRAPPING IN GROUPS, MANIPULATING THE NUKE SCRIPT IN A TEXT EDITOR, TURNING A GROUP INTO A GIZMO, USING THE THE VIEWER INPUT PROCESS, MORE ABOUT GIZMOS	4
UNIT 7	CUSTOMIZING NUKE WITH PYTHON: PYTHON SCRIPTING BASICS, CREATING A BUTTON WITH PYTHON, ADDING A HOT KEY, MAKING CUSTOMIZATION STICK WITH MENU.PY FILE	
UNIT 8	TOURING ADOBE PREMIERE PRO: NONLINEAR EDITING IN ADOBE PREMIERE PRO, PRESENTING THE STANDARD DIGITAL VIDEO WORKFLOW, ENHANCING THE WORKFLOW WITH HIGH-LEVEL FEATURES, INCORPORATING OTHER CS5 COMPONENTS INTO THE EDITING WORKFLOW, ADOBE PRODUCTION PREMIUM WORKFLOW, TOURING THE ADOBE PREMIERE PRO WORKSPACE, THE WORKSPACE LAYOUT, CUSTOMIZING THE WORKSPACE	2
UNIT 9	SELECTING SETTINGS, ADJUSTING PREFERENCES, AND MANAGING ASSETS: SELECTING PROJECT SETTINGS BY SEQUENCE, THREE TYPES OF SETTINGS, SPECIFYING PROJECT SETTINGS, SEQUENCE SETTINGS, ADJUSTING USER PREFERENCES, IMPORTING ASSETS, TAKING A CLOSER LOOK AT IMAGES, IMAGE TIPS, MANAGING MEDIA IN BINS, EXPLORING ADDITIONAL BIN FEATURES, HAVING MULTIPLE BINS OPEN AT ONCE, FINDING ASSETS, FINDING ASSETS WITH THE MEDIA BROWSER	2
UNIT 10	IMPORTING AND MANAGING TAPELESS MEDIA: USING A TAPELESS WORKFLOW, PANASONIC P2, SONY XDCAM, AVCHD, DIGITAL STILL CAMERAS THAT SHOOT HIGH-DEFINITION VIDEO, USING THE MEDIA BROWSER, IMPORTING XDCAM MEDIA, IMPORTING P2 MEDIA, P2 FOLDER STRUCTURE, IMPORTING AVCHD MEDIA, MIXING MEDIA FORMATS	2
UNIT 11	SHOOTING AND CAPTURING GREAT VIDEO ASSETS: TIPS FOR SHOOTING GREAT VIDEO, GET A CLOSING SHOT, GET AN ESTABLISHING SHOT, SHOOT PLENTY OF VIDEO, ADHERE TO THE RULE OF THIRDS, KEEP YOUR SHOTS STEADY, FOLLOW THE ACTION, USE TRUCKING SHOTS, FIND UNUSUAL ANGLES, LEAN FORWARD OR BACKWARD, GET WIDE AND TIGHT SHOTS, SHOOT MATCHED ACTION, GET SEQUENCES, AVOID FAST PANS AND SNAP ZOOMS, SHOOT CUTAWAYS, USE LIGHTS, GRAB GOOD SOUND BITES, GET PLENTY OF NATURAL SOUND, PLAN YOUR SHOOT, CAPTURING VIDEO, THREE DV/HDV-CAPTURING SCENARIOS, CAPTURING AN ENTIRE TAPE, USING BATCH CAPTURE AND SCENE DETECTION, USE A CLIP-NAMING CONVENTION, USE SCENE DETECTION, TACKLING MANUAL ANALOG MOVIE CAPTURE, CAPTURING HDV AND HD VIDEO	2
UNIT 12	CREATING CUTS-ONLY VIDEOS: USING A STORYBOARD TO BUILD A ROUGH CUT, ARRANGING YOUR STORYBOARD, AUTOMATING YOUR STORYBOARD TO A SEQUENCE, EDITING CLIPS ON THE TIMELINE, TRIMMING A CLIP, USING THE RIPPLE EDIT TOOL, MOVING CLIPS TO, FROM, AND WITHIN THE TIMELINE, USING THE CURRENT-TIME INDICATOR TO ESTABLISH THE EDIT POINT, ADDING CLIPS TO THE TIMELINE WITH THE SOURCE MONITOR, WORKING WITH SOURCE MONITOR EDITING TOOLS, MORE PRACTICE, ADJUSTING CLIPS IN THE	2

	TRIM PANEL, USING OTHER EDITING TOOLS	
UNIT 13	ADDING VIDEO TRANSITIONS: USING TRANSITIONS WITH RESTRAINT, ADDING WHIMSY, ADDING VISUAL INTEREST, TRYING SOME TRANSITIONS, SEQUENCE DISPLAY CHANGES, CHANGING PARAMETERS IN THE EFFECT CONTROLS PANEL, USING A/B MODE TO FINE-TUNE A TRANSITION, WORKING WITH THE EFFECT CONTROLS PANEL'S A/B FEATURE, DEALING WITH INADEQUATE (OR NO) HEAD OR TAIL HANDLES, APPLYING TRANSITIONS TO MULTIPLE CLIPS AT ONCE, ADDING AUDIO TRANSITIONS	2
RSACE	PRACTICAL EXERCISES	HOURS
	<ul style="list-style-type: none"> • ROTOSCOPY – 50 FRAMES • MULTI LAYER COMPOSITING & COLOR CORRECTION- 100 FRAMES SEQUENCE • KEYING – 100 FRAMES SEQUENCE. 	90

REFERENCE BOOKS

- NUKE 101
- THE FOUNDRY NUKE X 7 FOR COMPOSITORS – BY PROF SHAM TICKOO PURDUE
- ADOBE PREMIER IN CLASS ROOM
- EDITING DIGITAL VIDEO – BY ROBERT M GOOD MAN.

REFERENCE LINK

[HTTP://NATURALRECORDSSTUDIOS.COM/WHAT-IS-CGI-ANIMATION/](http://NATURALRECORDSSTUDIOS.COM/WHAT-IS-CGI-ANIMATION/)

[HTTP://WWW.LSBU.AC.UK/COURSES/COURSE-FINDER/VFX-BA-HONS#MAIN_CONTAINER](http://WWW.LSBU.AC.UK/COURSES/COURSE-FINDER/VFX-BA-HONS#MAIN_CONTAINER)

[HTTP://BLOG.TED.COM/10-TIPS-FOR-EDITING-VIDEO/](http://BLOG.TED.COM/10-TIPS-FOR-EDITING-VIDEO/)

[HTTPS://BLOG.POND5.COM/11099-13-CREATIVE-EDITING-TECHNIQUES-EVERY-VIDEO-EDITOR-SHOULD-KNOW/](https://BLOG.POND5.COM/11099-13-CREATIVE-EDITING-TECHNIQUES-EVERY-VIDEO-EDITOR-SHOULD-KNOW/)

RSACE-3:30	GRADUATION PROJECT	TEACHING HOURS
-------------------	---------------------------	-----------------------

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. 	4
	<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 OF THE ANIMATION VETERANS AND 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 NITIGITIES, 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>	4
	<p><u>ANIMATIONS SHORT FILM EVALUATION</u></p> <p>FOR SHORT FILM, MINIMUM 6 MONTHS TIME WILL BE PROVIDED FOR A GROUP OF STUDENTS. MINIMUM 10 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 AND INDUSTRY PROFESSIONALS WILL REVIEW THE PROJECT AT VARIOUS STAGES TO ENSURE THE DESIRE QUALITY IS ACHIEVED.</p>	4
	<p><u>GRADUATION PROJECTS BRIEF</u></p> <p>THE FINAL GROUP PROJECT IS A GRADUATION FILM IT CAN BE A 2D ANIMATION SHORT FILM. / 3D ANIMATION SHORT FILM / EXPERIMENTAL FILM /</p> <p>THE FORMAT: HD DIGITAL VIDEO.</p> <p>THE STUDENTS FROM BACHELORS IN ANIMATION WILL LEARN TO WORK AS A TEAM ENVIRONMENT, ON VARIOUS TECHNIQUES INVOLVED IN ANIMATION (THEY WILL TEAM UP WITH 10 TO 15 IN A GROUP) MAXIMUM. THEY WILL LEARN TO CREATE MODELS WITH PROPER MESH FLOW. CLEAN-UP , OPTIMIZATION OF THE MODELS AND CREATING BLEND SHAPES, THE PROPER WORKFLOW OF THE ASSET DEVELOPMENT PROCESS. STUDENTS WILL LEARN TO CREATE SHADERS AND TEXTURING WITH ALL THE GUIDELINE PRESCRIBED, AND WILL WORK ON THE FINAL GRADUATION FILM (THEY WILL APPLY ANIMATION</p>	210

	<p>PRINCIPLES, MANIPULATE TIMING ETC).HERE THEY WILL GET EXPOSURE ON 3D VFX, LIGHTING & COMPOSITING TECHNIQUES AND LEARN ADVANCED LIGHTING AND RENDERING. THEIR FINAL PROJECT FILM WILL SERVE AS A PLATFORM FOR THEM TO EXHIBIT THEIR TALENT. STUDENTS WILL DEVELOP FILM FROM CONCEPT TILL COMPLETION AND WILL BE GUIDED BY THE FACULTIES, THROUGH OUT THEIR PROJECT. IT WILL BE A UNIQUE OPPORTUNITY FOR EACH AND EVERY STUDENT TO APPLY THEIR CREATIVE SKILLS,. THE INSTITUTE WILL CHOOSE THE BEST OF THE GRADUATION FILMS TO BE SENT FOR FESTIVALS ACROSS THE WORLD.</p> <p>ONE OF THE STUDENT WILL TAKE A ROLE OF A PRODUCTION CO ORDINATOR, WHO WILL BE IN CHARGE ALLOCATING THE SYSTEMS, SUPERVISING ON THE DELIVERABLES, THE PRODUCTION TEAM'S RESPONSIBILITY TO DELIVER THE FILM BY DEADLINE.</p>	
--	---	--

Ordinances, Regulations and Syllabus Relating to

Bachelor in Animation

(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:
 $SGPA = \frac{\sum CG}{\sum C}$ 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 :

$CGPA = \frac{\sum CG}{\sum C}$ 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.