Deccan Education Society's

FERGUSSON COLLEGE, PUNE
(AUTONOMOUS)

SYLLABUS UNDER AUTONOMY

SECOND YEAR B.Sc. Animation
SEMESTER – III

SYLLABUS FOR S.Y. B.Sc. ANIMATION

Academic Year 2017-2018

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Deccan Education Society's
FERGUSSON COLLEGE, PUNE 411004
Scheme of Course Structure (Faculty of Science)

Department: S.Y. B.Sc. Animation

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Particulars	Name of Paper	Code	Title of Paper	No. of Credits
S.Y. Semester III	Theory Paper 1	ANI2301	Technical English I	3
	Theory Paper 2	ANI2302	Maya I	3
	Theory Paper 3	ANI2303	Graphics Art	3
	Theory Paper 4	ANI2304	Direction for animation	3
	Theory Paper 5	ANI2305	Animation Techniques I	3
	Theory Paper 6	ANI2306	Production Process I	3
	Practical Paper 1	ANI2307	Animation Practical I	2
	Practical Paper 2	ANI2308	Animation Practical II	2
	Practical Paper 3	ANI2309	Animation Practical III	2
S.Y. Semester IV	Theory Paper 1	ANI2401	Technical English II	3
	Theory Paper 2	ANI2402	Maya II	3
	Theory Paper 3	ANI2403	Action Script	3
	Theory Paper 4	ANI2404	Script Writing	3
	Theory Paper 5	ANI2405	Animation Techniques II	3
	Theory Paper 6	ANI2406	Production Process II	3
	Practical Paper 1	ANI2407	Animation Practical I	2
	Practical Paper 2	ANI2408	Animation Practical II	2
	Practical Paper 3	ANI2409	Animation Practical III	2

ANI2301 Technical English -I

PAPER CODE: ANI2301
PAPER –I: Technical English -I
 [Credit -3: No. of Lectures 45]

	Technical English -I	No. of Lectures
Unit -I	Introduction to Technical Writing	8
Unit -II	Producing the Product	8
Unit –III	Writing clarity	5
Unit –IV	Audience Recognition & Involvement	8
Unit –V	Memos & e-Mails	8
Unit –VI	Letters	8

References:
1. Technical Writing – By Sharon J. Gerson & Steven
M. Gerson PEARSON Publications

ANI2302 Maya I

Objective:

This course introduces students to all the major features of Maya: Introduction, Modelling, Texturing Rendering and popular workflow. Concepts are quickly reviewed and explained and then demonstrated using Maya. Students will gain proficiency by following class examples as well as creating projects and exercises. The coursework is designed to make sure the student is exposed to all relevant aspects of CG creation with Maya with an eye toward giving the student a base foundation from which to explore and expand.

PAPER CODE: ANI2302 **PAPER –II: Maya I** [Credit -3: No. of Lectures 48]		
	Maya I	**No. of Lectures**
Unit -I	Understanding the Maya Interface	8
Unit -II	Modeling with Polygons	14
Unit –III	Modeling a Character	8
Unit –IV	Surfacing Your Character	10
Unit –V	Blend Shapes	8
References: Introduction-to-Maya-2014 by DARIUSH DERAKHSHANI.		

ANI2303 Graphics Art

Objective:

This course will demonstrate the various tools that assist in formatting text importing images and creating page layouts. By the end of the course the student will be familiarized with In Design from the beginning stages of laying out print documents to learning how to create interactive projects all within one program. At the completion of the course, the Students will be able to:

Apply the use of all toolbars in order to create effective Page Design Projects. Easily design projects that will include Typographic and Graphic elements together.

PAPER CODE: ANI2303
PAPER –I: Graphics Art
[Credit -3: No. of Lectures 45]

		No. of Lectures
Unit -I	**Introduction to Indesign** 1.1 Arranging palettes 1.2 Customizing workspace 1.3 Palette menus 1.4 Navigation and magnification 1.5 Layers 1.6 Context menus 1.7 Selecting objects	8
Unit -II	**Documents** 2.1 Starting new documents and page size 2.2 Master pages 2.3 Footers 2.4 Placeholder master 2.5 Applying master and overriding master 2.6 Editing master pages	5
Unit –III	**Importing and editing text** 3.1 Managing fonts 3.2 Working with styles 3.3 Aligning text 3.4 Threading text 3.5 Changing number of columns 3.6 Changing text alignment 3.7 Character style 3.8 Find and Replace and Spell check 3.9 Text on a path	8
Unit –IV	**Typography** 4.1 Vertical spacing 4.2 Baseline grid 4.3 Space above and below paragraph 4.4 Font and type style 4.5 Paragraph alignment 4.6 Special font features and drop cap	8

Unit –V	**Working with color**	8
	5.1 Adding color to swatch palette	
	5.2 Applying color to objects	
	5.3 Dash stroke	
	5.4 Gradient	
	5.5 Tint	
	5.6 Spot color	
	5.7 Apply color to text	
	5.8 Apply color to object	
	5.9 Creating and applying gradient swatch	
Unit –VI	**Vector graphics**	8
	6.1 Document grids	
	6.2 Applying color to path	
	6.3 Pencil tool	
	6.4 Pen tool	
	6.5 Drawing curve and straight segments	
	6.6 Compound path	
Reference Book:		
Adobe InDesign CC Classroom in a Book		

ANI2304 DIRECTION FOR ANIMATION

Objective:
Students will learn difference between live action direction and animation direction,
Student will also able to understand different media of films, Film language.

PAPER CODE: ANI2304
PAPER –IV: DIRECTION FOR ANIMATION
[Credit -2: No. of Lectures 45]

	Visual Art	No. of Lectures
Unit -I	**BASICS OF DIRECTING AN ANIMATION FILM** a) A director's role in animation b) Few famous animation directors and their noted films c) Other roles in an animation film d) Preparing a production plan for an animated film (seeing a PP of an animated film) e) Types of animation with their types of direction	9
Unit -II	**DIRECTING A FILM – 2D AND 3D** a) From traditional to digital animation b) Types of 2D animation and their direction c) Case study – a 2D film (an old animation) d) Case study – a 3D film (any new sci-fi animation) e) Steps of directing a 2D film (process of animating) f) Steps of directing a 3D film (process of animating) g) Software used for 2D and 3D film's direction (making) h) Roles played in making a 2D and a 3D film	9
Unit –III	**FROM PRE-PRODUCTION TO PRODUCTION** a) Pre-production and the story, importance of script b) Brainstorming sessions for developing a story/character and location of a film c) Pre-production makes production easier (the process) d) Producing a 2D film and a 3D film e) Process of production of an animated film – studying examples f) Case study – doing a film's pre-production	9
Unit –IV	**VFX, MOTION GRAPHICS AND OTHER FIELDS OF DIRECTION** a) Case study on various good special effects b) How should we decide the placement c) Introduction to the software/s used d) New trends in animation e) Animation and the scope of special effects f) Types and steps involved in creating an effect	9
Unit –V	**ELEMENTS OF A FILM** a) Characters and traits b) Conflict and developing a conflict c) Fulfilling resolution and methods of reaching to it d) Film structure and the arc rule	9

| | e) Scene – breakdown – completing a shot – visuals tells the story unlike words
f) Dialogues – importance – placement – character connection
g) Five facts of fact-based fiction
h) The theory behind making a live action film
i) Do you have it in you? | |

References:

Shot by shot visualizing from concept to screen Book by Steven D. Katz

ANI2305 Animation Techniques I

Objective:

This unit aims to teach students the fundamental stop-motion animation techniques based on character design, armature construction and fabrication. Students learn how to build a simple biped character and animate it in a number of motion tests. Students become familiar with the use of camera, lights, stop motion software and are exposed to a wide range of stop motion styles to encourage personal aesthetic exploration.

PAPER CODE: ANI2305 **PAPER –I: Animation Techniques I** **[Credit -3: No. of Lectures 45]**		
		No. of Lectures
Unit -I	**Appeal and History of Stop Motion** 1.1 Appeal & History of Stop Motion 1.2 Appeal of Medium 1.3 The Beginning of stop motion animation 1.4 Cut – out animation & Clay-mation	8
Unit -II	**Stop Motion Industry** 2.1 The Production Pipeline 2.2 Concept art and design 2.3 Storyboarding 2.4 Sound recording and exposure sheet 2.5 Designing and Building Puppets and Sets 2.6 Animation 2.7 Post-Production	9
Unit –III	**Introduction to Claymation Technique** 3.1 Claymation Industry 3.2 Creating Clay model 3.3 Wire Armatures 3.4 Building Simple wire Armatures 3.5 Latex build-ups Puppets 3.6 Clay Puppets 3.7 Creating multi models for animation	10
Unit –IV	**Introduction to Cut-Out Animation Technique** 4.1 History of Cut out Animation 4.2 Traditional Cut out Technique 4.3 Digital Cut out Technique	9
Unit –V	**Character Design for Cut – out Technique**	9

	5.1 Design character for cut out technique 5.2 Creating hand gestures 5.3 Facial expressions 5.4 Blink	

References:

The Art of Stop Motion Animation - by Ken Priebe -- Course technology.

ANI2306 Production Process I

Objective: Pre-production is the phase of further developing ideas and planning prior to the process of production. In a live action movie sense it is the period before filming starts. In an animation sense it is the period before any real animating takes place.

Like all great projects the success is in the planning. This section gives an overview of the different steps involved in the Pre-production process and how each step helps to develop a 'roadmap' on which to base the further production stages.

PAPER CODE: ANI2306 PAPER –I: Production Process I [Credit -3: No. of Lectures 45]		
		No. of Lectures
Unit -I	**Pre-Production** 1.1 Concept And Story 1.2 Concept Design 1.3 Difference between concept & Story 1.4 Building one from the other 1.5 Storytelling 1.6 Introduction to Story Writing 1.7 How to write story	10
Unit -II	**Research** 2.1 Period/Location 2.2 Historic / Scientific facts 2.3 Society 2.4 Costumes 2.5 Props	9
Unit –III	**Character Design** 3.1 Anthropomorphism 3.2 Personality 3.3 Appeal 3.4 Character Bible and Design 3.5 Different types of Character 3.6 Male female children 3.7 Character Biography 3.8 Character Construction 3.9 Character Proportion 3.10 Costume	10
Unit –IV	**Character Model Sheets** 4.1 Turn- around 4.2 Expression Chart 4.3 Extreme poses 4.4 Proportion Chart	8
Unit –V	**BG Design** 5.1 Color Keys 5.2 Color moods	8

| | 5.3 Location, Plan,
5.4 Establishing BG,
5.5 Key Location
5.6 Props Design | |

Reference :

Storyboard Design Course by Giuseppe Cristiano ---- Barron's
How to write for Animation – Jeffery Scott- The Overlook Press Woodstock and New york
The Art of layout and storyboarding – Mark T.Byrne

	PAPER CODE: ANI2307 PAPER –: Animation Practical I [Credit -2: No. of Practicals 10]
	Maya I
1	Basic Object Modelling: Table, Chair
2	Basic Object Modelling: House
3	Basic Object Modelling: Pen, pencil,
4	Details Object Modelling: Cupboard, wall clock
5	Spine Modelling: Wine Glass, Bottle
6	Details Spine Modelling: Coffee Mug, Water Jug
7	Basic Material Color: Apply color in different object
8	Texture in Detail Model. Wall clock / Cupboard
9	Basic Human Character
10	Basic Animal Character

	PAPER CODE: ANI2308 PAPER –: Animation Practical II [Credit -2: No. of Practicals 10]
	Indesign
1	Design a cover page for college Annual magazine 2017 Size 8.5 x11 inches
2	Design a one fold brochure of A4 for Art Exhibition 2017
3	Design a 8 x4 inches advertisement for college admission open
4	Design a book inner pages min 16 including, Master Page, and style sheet book size 8.5 x 5.5 inches, use Dummy text for Book.
5	Create a 8 column news paper front page Layout
6	Create a invitation card for Annual Convocation of college 2017 Chief Guest: Mark Zuker burg
7	Create a Diwali Greeting Card 2018
8	Design a cover page for fashion magazine name of Book: Vogue
9	Design Index Page For Annual Magazine of College 2017
10	Create a typographical Layout for using of font weight and size for poster of typography festival size 12x 18 inches Create a poster for calligraphy work shop size 12x 18 inches

	PAPER CODE: ANI2309 **PAPER –:** Animation Practical III **[Credit -2: No. of Practicals 10]**
1	Make any five Expressions with clay modeling.
2	Create 5 wire armatures with diff. gestures.
3	Character build –up (Armature +Clay+Mode)
4	Design the character for a cut out animation tech.
5	Draw a concept Art for the, Haunted House or sci –fi Lab or Drawing Classroom
6	Anthropomorphism (Character with three diff. Gestures)
7	Draw a character's with different shape construction (any 10 characters)
8	Character turn around
9	Design a mythological character (Indian) with costume, weapon & its additional props.
10	Create expression chart (10 Expressions)

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ANI2401 Technical English -II

PAPER CODE: ANI2401
PAPER –I: Technical English -II
[Credit -3: No. of Lectures 48]

	Technical English -II	No. of Lectures
Unit -I	Job Searching	9
Unit -II	Visual Appeal : Document Design	9
Unit –III	Visual Appeal : Graphics	9
Unit –IV	Technical Applications : brochures & Newsletters	9
Unit –V	Technical Description	9
Unit –VI	Preparing Instructions & User Manual	9
References: Technical Writing – By Sharon J. Gerson & Steven M. Gerson PEARSON Publications		

ANI2402 Maya II

Objective:

This course introduces students to all the major features of Maya: Introduction, Modelling, Texturing Rendering and popular workflow. Concepts are quickly reviewed and explained and then demonstrated using Maya. Students will gain proficiency by following class examples as well as creating projects and exercises. The coursework is designed to make sure the student is exposed to all relevant aspects of CG creation with Maya with an eye toward giving the student a base foundation from which to explore and expand.

PAPER CODE: ANI2402
PAPER –II: Maya II
[Credit -3: No. of Lectures 48]

	Maya II	**No. of Lectures**
Unit -I	Rigging and Muscle Systems	**13**
Unit -II	Animation Techniques	**7**
Unit –III	Lighting with mental ray	**10**
Unit –IV	Rendering for Compositing	**10**
Unit –V	Dynamics and Effects	**8**

References:
Mastering Autodesk Maya 2015, Author - Todd Palmar

ANI2403 Action Script

Objective:

Flash Action Script is an object oriented programming (OOP) language that is designed specifically for media – rich website animation & interactive user interfaces.

This course is an introduction to Action Script for students who have no programming experience or beginners.

By the end of the course student will able to create user controlled animation simple games, and smart web pages that can adapt to the user''s preferences.

PAPER CODE: Action Script **PAPER –I: ANI2403** **[Credit -3: No. of Lectures 48]**		
		No. of Lectures
Unit -I	Introduction to ActionScript 1.1. Variables and its scope in flash 1.2. Working with strict data type variables 1.3. Arithmatic operations with numbers and string data type	5
Unit -II	2. Conditional Logic 2.1. Script control 2.2. Multiple conditions 2.3. Nested conditions 2.4. Control user interaction 2.5. Switch Cases	5
Unit –III	3. Arrays 3.1 Understanding of Array 3.2 Properties and methods 3.3 Multidimensional arrays 3.4 Use of Array	5
Unit –IV	4. Loops 4.1 Importance of Loops 4.2 Types of loops 4.3 Nested loops 4.4 Loop Conditions	5
Unit –V	5. Functions 5.1 Understanding the role of functions 5.2 Creating functions 5.3 Reuse of function 5.4 Passing parameters to function 5.5 Local Variables 5.6 Return type functions	5
Unit –VI	6. Event Handler 6.1 Understanding of events 6.2 Event listener 6.3 Callbacks	4
Unit –VII	7. Creating Dynamic Assets 7.1 Attach Movie clips	6

	7.2 Creating empty movie clips 7.3 Using movie clip as a button 7.4 Creating dynamic text field 7.5 Working with drawing API	
Unit –VIII	8. Loading Assets 8.1 Loading text files 8.2 Loading JPEG and PNG files 8.3 Loading MP3 files 8.4 Loading FLV files	4
Unit –IX	9. XML 9.1 Introduction to XML 9.2 Understanding of XML	4
Unit –X	10. Built - in Classes 10.1 String Operations 10.2 Working with Text Field 10.3 Understanding of other classes	5

Reference Books:

· ActionScript 3.0 Visual Quick Start Guide *, by Derrick Yenburg

· Essential ActionScript 3.0, by Colin Moock

· Learning ActionScript 3.0, by Rich Shupe and Zevan Rosser

ANI2404 Script Writing

Objective:

Screenwriting, also called scriptwriting, is the art and craft of writing scripts for mass media such as feature films, television productions or video games. It is frequently a freelance profession.

PAPER CODE: ANI2404
PAPER –V: Script Writing
[Credit -3: No. of Lectures 48]

	Script Writing	No. of Lectures
Unit -I	**Genres and Categories in animation film** 1. How to Research and Analyze. 2. Finding Ideas and fixing	10
Unit -II	**Storyboard – the visual write-up** 1. Script and Animation Terminology 2. The Differences between Live action and Animation Scripts.	10
Unit –III	**Basic Animation Writing Structure** 1. Dialogue 2. Fundamentals of film writing	10
Unit –IV	**The Animated Feature Film** 1. The Script Process and Format. 2. Editing and Rewriting	10
Unit –V	**Beyond the Basics Advice, Tips, and Tricks** 1. Pitching your work. 2. Agents, Networking, and Finding Work	8

References:
- The Screenwriter's Bible: A Complete Guide to Writing, Formatting, and Selling Your Script **Author**: David Trottier. **ISBN**: 9781935247029
- Developing Characters for Script Writing, **Author**: Rib Davis, **Publisher**: A&C Black (2004), **ISBN**: 9780713669503

ANI2405 Animation Techniques II

Objective: This subject covers a very important software Adobe after effects. This subject will teach students about compositing. They will learn about composition chroma text animation background removal & many other aspects

PAPER CODE: ANI2405 PAPER –V: Animation Techniques II [Credit -3: No. of Lectures 45]		
		No. of Lectures
Unit -I	Getting to know the workflow	4
	Creating a basic animation using effectsand presets	3
	Animating text4	2
Unit -II	Working with masks	4
	Using the brush tool	2
	Performing color correction	2
Unit -III	Animating a multimedia presentation	2
	Animating layers	3
	Distorting objects with the puppet tools	3
Unit -IV	Composing layer passes	4
	Tracking & stablizing techniques	4
Unit -V	Building 3d objects	4
	Particles	4
	Rendering and outputting	4
References: After Effects cs6 classroom in a book – author adobe creative team, Pearson education After effects cs5 in simple steps by Kogent Learning Solutions Inc – Wiley		

ANI2406 Production Process II

Objective:

The objective of the subject shall be as follow:
1. To familiarize the student with various techniques of Animation process.
2. Mastering traditional & digital tools to produce stills and moving images.
3. Student will learn process of creating story board, Animatic and staging.
4. To enable students to manage Animation Projects from its Conceptual Stage to the final product creation.

PAPER CODE: ANI2406
PAPER –I: Production Process II
[Credit -3: No. of Lectures 45]

		No. of Lectures
Unit -I	**Exposure Sheet** 1.1 Introduction to Exposure sheet/x-sheet 1.2 Preparing X – Sheets	9
Unit -II	**Staging** 2.1 Introduction to framing 2.2 Composting frame	6
Unit –III	**Story board** 3.1 Introduction to Thumbnails 3.2 The frame /Aspect ratio 3.3 Types of story boards 3.4 Scene and shots 3.5 Different types of camera angle 3.6 The language of storyboards	10
Unit –IV	**DIALOGUE** 4.1 Introduction to Dialogue 4.2 How to write dialogues 4.3 Lip Sqc.	8
Unit –V	**ANIMATICS** 5.1 Preparing the Animatics 5.2 Preparing Animatics using Digital Software	12
Reference : Storyboard Design Course by Giuseppe Cristiano ---- Barron's How to write for Animation – Jeffery Scott- The Overlook Press Woodstock and New york The Art of layout and storyboarding – Mark T.Byrne		

	PAPER CODE: ANI2407 PAPER –: Animation Practical I **[Credit -2: No. of Practicals 10]**
1	Rigging of a character
2	Skinning of character
3	2 leg walk cycle
4	4 leg run cycle
5	Any action
6	Creating Shadow. Introduce with Light and Shadow
7	Any one dynamic effect
8	Basic Rendering. Render with Different format and save it
9	Render setup with camera. Object Render with shadow
10	Batch Render. Batch Render with Project Management.

	PAPER CODE: ANI2408 **PAPER –X:** Animation Practical II **[Credit -2: No. of Practicals 10]**
1	Sort given array
2	Display text in lowercase
3	Find random number of two values
4	Insert element at the end of an array
5	Navigate to a URL on button click
6	Display the largest number of 2 numbers in a text box.
7	Create input text box that displays text in password format and set x co-ordinate =20 and y=20
8	Create two new text boxes, type any letter in first text box and display it into second.
9	Sort the given array with following options:DESCENDING, CASEINSENSITIVE var poets:Array = ["Blake", "cummings", "Angelou", "Dante"];
10	Write a program to generate a random number between 1 to 100 and display it in a text box.

	PAPER CODE: ANI2409 **PAPER –XI:** Animation Practical III **[Credit -2: No. of Practicals 10]**
1	Create one logo animation in AE
2	Track a scene using single point & four point tracking.
3	Composite a scene using any 3-5 Chroma scenes with suitable background. & make colour correction for it
4	Using various render passes, composite a scene
5	Create a multimedia presentation in AE
6	Create a story board of your own daily life with clear sequence (min 20 Frames)
7	Create a story board on given story (15 frame)
8	Draw the human body structure with three camera angles (High Angle, Eye Level, Low angle)
9	Make an illustrations of all camera shots with the character.
10	Explain camera movements with illustrated chart (six camera movements)

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