

Progressive Education Society's
**Modern College of Arts, Science and
Commerce,**
Shivajinagar, Pune 5
(An Autonomous College Affiliated to Savitribai Phule Pune University)

Syllabus

For B.Sc. (Animation)

(2019-20 Course)

(with effect from 2019-20)

CIA: Continuous Internal Evaluation

Semester 1 (First Year)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCT-1	19CsAniU101	Foundation Art - I (Elements of Drawing)	3	2	40	60	100
CCT-2	19CsAniU102	Basics of Animation - I	3	2	40	60	100
CCT-3	19CsAniU103	Graphic Arts - I (Image Editing)	3	2	40	60	100
CCT-4	19CsAniU104	Elements of 3D Design - I (Modelling)	3	2	40	60	100
CCT-5	19CsAniU105	Programming Languages - I (HTML, CSS)	3	2	40	60	100
CCT-6	19CsAniU106	2D Animation - I	3	2	40	60	100
CCT-7	19CsAniU107	Elements of Information Technology - I (Hardware)	3	2	40	60	100
CCT-8	19CsAniU108	Script Writing - I (Language Skills)	3	2	40	60	100
CCP-1	19CsAniU109	Foundation Art - I and Basics of Animation - I	4	2	40	60	100
CCP-2	19CsAniU110	Graphic Arts - I and 2D Animation - I	4	2	40	60	100
CCP-3	19CsAniU111	Elements of 3D Design - I	4	2	40	60	100
CCP-4	19CsAniU112	Programming Languages - I	4	2	40	60	100
Total			40	24	480	720	1200
SECT-1	19CpPedU101	Physical Education – I	2	0.5	40	60	100
	Extra Credentials	Activity Based Learning-I – IIT Spoken Tutorial course - Introduction to Computers, HTML			40	60	100

Semester 2 (First Year)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCT-9	19CsAniU201	Foundation Art - II (Elements of Design)	3	2	40	60	100
CCT-10	19CsAniU202	Basics of Animation – II	3	2	40	60	100
CCT-11	19CsAniU203	Graphic Arts - II	3	2	40	60	100
CCT-12	19CsAniU204	Elements of 3D Design - II (3D Dynamics)	3	2	40	60	100
CCT-13	19CsAniU205	Programming Languages - II (C Programming)	3	2	40	60	100
CCT-14	19CsAniU206	2D Animation - II (Action Script)	3	2	40	60	100
CCT-15	19CsAniU207	Elements of Information Technology - II (Networking)	3	2	40	60	100
CCT-16	19CsAniU208	Script Writing - II (Creative Thinking and Writing)	3	2	40	60	100
CCP-5	19CsAniU209	Foundation Art - II and Basics of	4	2	40	60	100

		Animation - II					
CCP-6	19CsAniU210	Graphic Arts - II and 2D Animation - II	4	2	40	60	100
CCP-7	19CsAniU211	Elements of 3D Design – II	4	2	40	60	100
CCP-8	19CsAniU212	Programming Languages- II	4	2	40	60	100
Total			40	24	480	720	1200
SECT-1	19CpPedU201	Physical Education – II	2	0.5	40	60	100
	Extra Credentials	Activity Based Learning-II – IIT Spoken Tutorial course- Information Technology			40	60	100

Progressive Education Society's
Modern College of Arts, Science and Commerce (Autonomous)
Shivajinagar, Pune - 5
First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU101 Course Name: Foundation Art - I (Elements of Drawing)

Teaching Scheme: TH: 3 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Drawing Skills, Creative & Logical thinking ability

Course Objectives:

- To understand drawing as the most powerful visual representation, to make hands free.
- Learn to create simple objects, Perspective drawing, lights and shades, how to create cartoons drawing.

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved their visualization power to explore new ideas .
- Students will develop drawing skills.
- Students will be able to create professional artworks.

Course Contents

Chapter 1	Primitive Geometry	6 lectures
	<ul style="list-style-type: none"> • Basic Shapes • Volume Construction Method • Drawing Techniques 	
Chapter 2	Perspective Drawing	6 lectures
	<ul style="list-style-type: none"> • One-point perspective • Two-point perspective • Three-point perspective • Foreshortening 	
Chapter 3	Introduction to Anatomy	6 lectures
	<ul style="list-style-type: none"> • Bi-peds and Quadrupeds • Human Body Proportions • Human and Animal Body Bone Structure • Muscle Study 	
Chapter 4	Light and Shadow Study	6 lectures
	<ul style="list-style-type: none"> • Properties of Light • Types of Shadows • Types of drawing pencils • Pencil Shading 	
Chapter 5	Colour Theory	6 lectures
	<ul style="list-style-type: none"> • Colour Wheel • Additive, Subtractive and Pigment 	

	Colour Theory <ul style="list-style-type: none"> • Colour Schemes • Colour Symbolism 	
Chapter 6	Cartoon Drawing	5 lectures
	<ul style="list-style-type: none"> • Facial Expressions • Caricature Drawing • Rapid Sketching 	
Chapter 7	Experiential Learning: Outdoor Sketching	1 lecture

Reference books:

- Figure Study Made Easy By- Aditya Chari - Grace Publication
- Perspective By Milind Mulik -- Jyotsna Prakashan
- Animal Anatomy for Artists – The Elements of Form – Eliot Goldfinger

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU102 Course Name: Basics of Animation - I

Teaching Scheme: TH: 3 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Creative ability.

Course Objectives:

- To understand Fundamentals of Animation
- Learn to create Animatics for animation projects

Course Outcomes:

On completion of the course, student will be able to –

- Students will have improved their animation skills.
- Students will develop story board skills.
- Students will be able to create animation projects.

Course Contents

Chapter 1	Introduction to Animation	7 lectures
	<ul style="list-style-type: none"> • Animation Definition • Science behind Animation • 12 Basic Principles of Animation 	
Chapter 2	Types of Animation	7 lectures
	<ul style="list-style-type: none"> • Traditional • Stop motion • 2D Animation • 3D Animation 	
Chapter 3	History of Animation	7 lectures
	<ul style="list-style-type: none"> • Conventional methods of Animation • Equipment used for Animation during 19th century. • Qualities of Animation Artist 	
Chapter 4	Animation Production Pipeline	7 lectures
	<ul style="list-style-type: none"> • Terms used in Animation • Introduction to story board 	
Chapter 5	Tools required for Animation	7 lectures
	<ul style="list-style-type: none"> • Light board • Pin bar • Digital tools (Software) 	
Chapter 7	Experiential Learning: Traditional Animation Project	1 lecture

Reference books:

- The Complete Animation course by Chris Patmore, By – Barons Educational Series (New York)
- Anatomy of the Artist – Thompson & Thompson.

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU103 Course Name: Graphic Arts - I

Teaching Scheme: TH: 3 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Software Skills

Course Objectives:

- To understand aspects of digital design
- Learn to edit digital images

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved their software knowledge.
- Students will develop editing skills.
- Students will be able to create professional designs.

Course Contents

Chapter 1	Introduction to digital image editing	6 lectures
	<ul style="list-style-type: none"> • Raster Image • Vector Image • Image File Formats 	
Chapter 2	Photoshop Workspace	6 lectures
	<ul style="list-style-type: none"> • Interface Basic • Palettes and Menus • Tool Bar - Selection Tools, painting tools, Editing and retouching tools • Text tools. • Ruler, Guides and Grids 	
Chapter 3	Preferences	6 lectures
	<ul style="list-style-type: none"> • Recovery and undo • Memory and Performance • Image size and Resolution • Cropping and resizing 	
Chapter 4	Color	6 lectures
	<ul style="list-style-type: none"> • Color Mode • Color Correction • Levels and Curves 	
Chapter 5	Layers	6 lectures
	<ul style="list-style-type: none"> • Layer concept • Selecting, Grouping and linking layers • Layer Effects 	

	<ul style="list-style-type: none"> • Layer Mask 	
Chapter 6	Filters	5 lectures
	<ul style="list-style-type: none"> • Applying filters • Digital painting techniques • Automating tasks - creating action 	
Chapter 7	Experiential Learning: Digital Painting	1 lecture

Reference books:

- Adobe Photoshop Bible cs5 by Lisa Danae Dayley, Brad Dayley --- Wiley India ISBN 13 - 9788126527199
- Adobe Photoshop CS6 (Classroom in a Book), PEARSONPublications, ISBN – 978-81-317-9164-6

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU104 Course Name: Elements of 3D Design – I (Modelling)

Teaching Scheme: TH: 3 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Basic drawing skill, visual storytelling and concept of moving images should be known.
- Knowledge of basic Computer hardware & software is also necessary.
- Basic Knowledge of cel& 2D Animation

Course Objectives:

- Define Computer-based Animation
- 2D Splines, Shapes & compound object
- 3D Modelling
- Lighting & Camera
- Texturing
- Rendering with M-Ray

Course Outcomes:

On completion of the course, student will be able to

- To develop the skill & knowledge in 3D Modelling.
- Students will understand the knowhow and can function either as an entrepreneur or can take up jobs in the multimedia and animation industry, video studios, edit set-up and other Special Effects sectors

Course Contents

Chapter 1	Concept of 3D Design	6 lectures
	<ul style="list-style-type: none"> • Difference between 2D and 3D design • 3D software • 3D production pipeline 	
Chapter 2	3Ds Max Workspace	6 lectures
	<ul style="list-style-type: none"> • Interface of 3Ds Max • Viewport and Navigation • Move, Rotate and Scale tools • Cloning and Array 	
Chapter 3	3D Modelling	6 lectures
	<ul style="list-style-type: none"> • Creating Standard and Extended Primitives • Using Modifiers - Object space, Selection and World Space Modifiers • Working with Vertex, Polygon and edge • Introduction to Spline Modelling • NURBS 	
Chapter 4	Material Editor	6 lectures

	<ul style="list-style-type: none"> • Compact editor and Slate editor • Shader Concepts • Texture and Maps • UVW Mapping • Unwrap UVW 	
Chapter 5	3D Lighting	6 lectures
	<ul style="list-style-type: none"> • Properties of Light • Light Sources - Omni, Spot and Directional light • Ambient Occlusion • Photometric lighting, Standard lighting • Exposure control 	
Chapter 6	Camera and Rendering	5 lectures
	<ul style="list-style-type: none"> • Render Setup • Rendering options • Camera type 	
Chapter 7	Experiential Learning: Creating physical 3D structure	1 lecture

Reference books:

- Autodesk 3ds Max 2014 Bible Publisher: Wiley ISBN-13: 978-1118755075

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First Year of B.Sc. (Animation) (2019 Course)

Course Code:19CsAniU105 Course Name: Programming Languages(HTML & CSS)

Teaching Scheme: TH: 3 Hours/Week

Credit: 2

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Basic Computer awareness
- Fundamentals of computers

Course Objectives:

- Students can design dynamic web pages using HTML, CSS
- Students can apply CSS properties suitably to make screen design attractive.

Course Outcomes:

On completion of the course, student will be able to–

- Design web pages using HTML& CSS

Course Contents

Chapter 1	Introduction to Web Technologies	3 lectures
	1.1 Introduction to Web Technologies 1.2 How the Website Works? 1.3 Clients- Servers and Communication 1.4 Client and Server Scripting Languages 1.5 Internet-Basic, Internet Protocols(HTTP,FTP,IP) 1.6 World Wide Web(WWW) 1.7 HTTP request message, HTTP response message 1.8 Types of Websites(Static and Dynamic Websites)	
Chapter 2	HTML – OVERVIEW	2 lectures
	2.1 Basics in Web Design 2.2 <i>Five Golden rules of web designing</i> 2.3 <i>Home Page Layout</i> 2.4 Basic HTML Document 2.5 HTML Tags 2.6 HTML Document Structure 2.7 The <!DOCTYPE> Declaration	
Chapter 3	HTML – BASIC TAGS	5 lectures
	3.1 <i>Heading Tags, ParagraphTag, Line Break Tag</i> 3.2 Centering Content, Horizontal Lines 3.3 HTML – COMMENTS 3.3 HTML link tag 3.5Html Background with Colors, Html Background with Images 3.6 Colors and fonts 3.7 Marquee	

	3.8 HTML – LISTS	
Chapter 4	HTML – FORMATTING	4 lectures
	4.1 Bold Text, Italic Text, Underlined Text, Strike Text 4.2 Superscript Text, Subscript Text 4.3 Inserted Text 4.4 Deleted Text 4.5 Larger Text 4.6 Smaller Text 4.7 Grouping Content	
Chapter 5	HTML – IMAGES	5 lectures
	5.1 Insert Image 5.2 Set Image Location 5.3 Set Image Width/Height 5.4 Set Image Border 5.5 Set Image Alignment	
Chapter 6	HTML – TABLES	6 lectures
	6.1 Table Heading 6.2 Cellpadding and Cellspacing Attributes 6.3 Colspan and Rowspan Attributes 6.4 Tables Backgrounds 6.5 Table Height and Width 6.6 Table Caption 6.7 Table Header, Body, and Footer 6.8 Nested Tables	
Chapter 7	Advance HTML tags	7 lectures
	7.1 Embedding Audio and Video. 7.2 Working with Text 7.3 Working with Frames 7.4 Working with controls	
Chapter 8	Introduction to HTML JAVASCRIPT	3 lectures
Chapter 8	Experiential Learning: HTML Quiz	1 Lecture

Reference Books :

1. Complete HTML- Thomas Powell
2. HTML and JavaScript–Ivan Bayross

Reference Links

1. <https://www.tutorialspoint.com/>
2. <https://www.w3schools.com/>

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU106 Course Name: 2D animation - I

Teaching Scheme: TH: 3 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Basic drawing skill, visual storytelling and concept of moving images should be known.

Course Objectives:

- Define Computer-based 2D Animation

Course Outcomes:

On completion of the course, student will be able to

- To develop the skill & knowledge in 2D Animation
- Students will able to create Flash based 2D Animation applications.

Course Contents

Chapter 1	Introduction to 2D Animation	3 lectures
	<ul style="list-style-type: none"> • Traditional Animation • Computer Based Animation 	
Chapter 2	Overview of Flash	6 lectures
	<ul style="list-style-type: none"> • Flash Interface • Stage Setting • Frame Rate • Layers • Timeline • Properties • Flash Tools 	
Chapter 3	Drawing in Flash	6 lectures
	<ul style="list-style-type: none"> • Drawing Modes • Drawing Techniques • Text and Colors 	
Chapter 4	Symbols	6 lectures
	<ul style="list-style-type: none"> • Graphic Symbol • Button Symbol • Movie clip symbol 	
Chapter 5	Animation	6 lectures
	<ul style="list-style-type: none"> • Frame and Key frame • Motion Guide • Key frame animation • Masking 	
Chapter 6	Tweens	6 lectures
	<ul style="list-style-type: none"> • Motion Tween • Classic Tween • Shape Tween 	
Chapter 7	Sound in Flash	2 lectures
	<ul style="list-style-type: none"> • Importing Sound 	

	• Editing Sound	
Chapter 8	Experiential Learning: Flip Book	1 lecture

Reference books:

- Flash CS4 Professional Bible Published by Wiley Publishing (Robert R & Snow D.)

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First Year of B.Sc. (Animation)(2019 Course)

Course Code: 19CsAniU107 Course Name: Elements of Information Technology (Hardware)

Teaching Scheme: TH: 3 Hours/Week

Credit: 02

Examination Scheme: CIA:40 Marks

End-Sem:60 Marks

Prerequisite Courses:

- Preliminary knowledge of computer, their operations and applications.

Course Objectives:

- The main objective is to introduce IT in a simple language to all undergraduate students, regardless of their specialization. It will help them to pursue specialized programs leading to technical and professional careers and certifications in the IT industry.
- The focus of the subject is on introducing skills relating to IT basics, computer applications, programming, interactive medias, Internet basics etc.

Course Outcomes:

On completion of the course, student will be able to–

- (a) Understand basic concepts and terminology of information technology.
- (b) Have a basic understanding of personal computers and their operations.
- (c) Be able to identify issues related to information security.

Course Contents

Chapter 1	Introduction	3 lectures
	<ul style="list-style-type: none">• Characteristics of computer• Evolution of computer• Computer generations	
Chapter 2	Basic Computer organization	4 lectures
	<ul style="list-style-type: none">• Input unit• Output unit• Storage unit• ALU,CU,CPU• The system Concept	
Chapter 3	Number Systems	4 lectures
	<ul style="list-style-type: none">• What is decimal, Binary, Octal, Hexadecimal number system• Converting from one numbersystemtoanother	
Chapter 4	Processor and Memory	4 lectures
	<ul style="list-style-type: none">• DetailCentralprocessingUnit• DetailstudyofMainMemory	
Chapter 5	Secondary Storage Devices	5 lectures

	<ul style="list-style-type: none"> • SequentialandDirect-AccessDevices • MagneticDisks • OpticalDisks • MemorystorageDevices 	
Chapter 6	Input-Output Devices	6 lectures
	<ul style="list-style-type: none"> • Whatisinputandoutputdevice • Keyboard • Point-and-DrawDevice • Monitors • VDU • Plotters Printerandtypesofprinter 	
Chapter 7	ComputerProgram	9 lectures
	<ul style="list-style-type: none"> • WhatisAlgorithm? • SampleAlgorithms • Representationofalgorithm • WhatisFlowchart? • Whytouseflowcharts • Flowchartsymbols • Levelsofflowchart • Flowchartingrules • Advantagesanddisadvantagesofflowcharts • Machinelanguage • Assemblylanguage • High-levellanguage 	
Chapter 8	Experiential Learning: Observing Hardware	1 lecture

Reference Books:

- 1.ComputerFundamentsByPradeep K.Sinha&Priti Sinha,sixthEdition(BPBPpublication)
- 2.FundamentalsofComputersbyV.Rajaraman

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Shivajinagar, Pune - 5
First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU108 Course Name: Script Writing - I

Teaching Scheme: TH: 3 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Language Skill

Course Objectives:

- To be an excellent communicator as the value of an idea in a visual medium is determined by how well it is delivered to the audience.
- To develop an eye for details and keen observation skills whereby students will be able to break ordinary patterns of life and see that which is extraordinary.
- To Learn to convert our ideas from their abstract form to captivating scripts.

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved communication skills to expound on their ideas in oral and written form.
- Students will develop a simultaneous consciousness to master vertical as well as lateral thinking.
- Students will be able to write a spec script.

Course Contents

Chapter 1	Introduction to Language Skills for Animation	7 lectures
	<ul style="list-style-type: none"> • Comprehension Skills • Vocabulary • Verbs • Tense • Subject verb agreement • English in Action 	
Chapter 2	Introduction to Creative Thinking	5 lectures
	<ul style="list-style-type: none"> • The way the mind works • Difference between lateral and vertical thinking • Nature of Lateral Thinking • Use of Lateral Thinking 	
Chapter 3	Creative Thinking: Technique and Application	6 lectures
	<ul style="list-style-type: none"> • The generation of alternatives • Challenging assumptions • Innovation • Suspended judgement • Design 	

	<ul style="list-style-type: none"> • Dominant ideas and crucial factors 	
Chapter 4	Story Dynamics: Building Blocks	6 lectures
	<ul style="list-style-type: none"> • Different scripts for varied mediums • Identifying your script with a Genre • Role of Foreshadowing, Crisis and Big Event. • <u>Turning points in a plot-</u> <ul style="list-style-type: none"> • Plot structure of Action and Emotion driven script • Plot structure of Goal driven script • Drawing captivating characters 	
Chapter 5	Story Dynamics: Content Development	6 lectures
	<ul style="list-style-type: none"> • The role of dialogue, subtext and exposition • Writing for television: Suspense and sitcoms • Copy editing <ul style="list-style-type: none"> • Review Writing 	
Chapter 6	Introduction to Script Writing	5 lectures
	<ul style="list-style-type: none"> • Materializing your ideas • Development of plot and sub-plot • Review your story from third person' perspective <ul style="list-style-type: none"> • Drafting of a spec script 	
Chapter 7	Experiential Learning : Stand up Performance	1 lecture

Reference books:

- Practising English (A Workbook), by M. S. Nagaraja Rao and D. S. Manjunatha, Published 2013 (Reprinted 2014), Orient Black Swan Private Ltd.
- Lateral Thinking- Creativity Step by Step, by Edward De Bono, Published 1990 (Reissued 2015), Harper Perennial.
- Creativity Workout- 62 Exercises to Unlock Your Most Creative Ideas, by Edward De Bono, Published by Ulysses Press, US.
- Hack Into Your Creativity- Story Prompts for Every Type of Writers, by Michael Burns, Published 2017, Penguin Random House, India.
- The Script Writer's Bible, by David Trottier, 6th Edition, Silman- James Press, Los Angeles.

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First Year of B.Sc. (Animation) (2019 Course)

**Course Code: 19CsAniU109 Course Name: Foundation Art - I (Elements of Drawing) and
Basics of Animation -I**

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- To understand drawing as the most powerful visual representation, to make hands free.
- Learn to create simple objects, Perspective drawing, lights and shades, how to create cartoons drawing.

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved their visualization power to explore new ideas .
- Students will develop drawing skills.
- Students will be able to create professional artworks.

No	Topic	Lectures
1	Assignment on Lines and curves	2
2	Assignment on Geometrical Shapes	2
3	Assignment on Illustration	2
4	Assignment on Pencil Shading	2
5	Assignment on One point perspective	2
6	Assignment on Two point perspective	2
7	Assignment on Three point perspective	2
8	Assignment on Foreshortening	2
9	Assignment on Anatomy	2
10	Assignment on Color whee	2

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First Year of B.Sc. (Animation) (2019 Course)

Course Code: 19CsAniU110 Course Name: Graphic Arts - I and 2-D Animation - I

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- To understand aspects of digital design
- Learn to edit digital images

Course Outcomes:

On completion of the course, student will be able to:

- Students will have improved their software knowledge.
- Students will develop editing skills.
- Students will be able to create professional designs.

No	Topic	Lectures
1	Assignment on Image Cropping, resizing	2
2	Assignment on Colour correction	2
3	Assignment on Remove Background, change Background	2
4	Assignment on Black and white to colour	2
5	Assignment on Applying filters	2
6	Assignment on Text graphics	2
7	Assignment on Layer effects	2
8	Assignment on Masking	2
9	Assignment on Digital Painting	2
10	Assignment on Compositing	2

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Shivajinagar, Pune - 5

First Year of B.Sc. (Animation) (2019 Course)

Course Code: 19CsAniU111 CourseName: Elements of 3D Design – I (Modelling)

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- Define Computer-based Animation
- 2D Splines, Shapes & compound object
- 3D Modelling
- Lighting & Camera
- Texturing
- Rendering with M-Ray

Course Outcomes:

On completion of the course, student will be able to

- To develop the skill & knowledge in 3D Modelling.
- Students will understand the knowhow and can function either as an entrepreneur or can take up jobs in the multimedia and animation industry, video studios, edit set-up and other Special Effects sectors

No	Topic	Lectures
1	Assignment on Table and chair	4
2	Assignment on House Model	4
3	Assignment on Mobile Phone	4
4	Assignment on Interior	4
5	Assignment on Fruit Dish Model	4
6	Assignment on Bike	4
7	Assignment on Car model	4
8	Assignment on Face Model	4
9	Assignment on Human Body Model	4
10	Assignment on Animal Mode	4

Progressive Education Society's
Modern College of Arts, Science and Commerce (Autonomous),
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First Year of B.Sc. (Animation) (2019 Course)

Course Code: 19CsAniU112 Course Name: Programming Languages -I (HTML & CSS)

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- Students can design dynamic web pages using HTML, CSS
- Students can apply CSS properties suitably to make screen design attractive.

Course Outcomes:

On completion of the course, student will be able to–

- Design web pages using HTML& CSS

No	Topic	Lectures
1	Assignment on Creating Simple HTML Pages.	4
2	Assignment on HTML Programming using lists, hyperlinks.	4
3	Assignment on HTML Programming using table .	
4	Assignment on HTML Programming using frames ,iframes.	4
5	Assignment on Advanced feature of HTML (Using Inline CSS) .	4
6	Assignment on Advanced features of HTML(Using Internal CSS).	4
7	Assignment on Advanced features of HTML(Using External CSS).	4
8	Assignment on Creation of forms, small case study to create HTML pages using all the above learnt techniques.	4
9	Assignment on Creation of Forms layout designing by using div element with CSS property.	4
10	CASE STUDY-I	4

Shivajinagar, Pune - 5
First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU113 Course Name: 2D animation - I

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- Define Computer-based 2D Animation

Course Outcomes:

On completion of the course, student will be able to

- To develop the skill & knowledge in 2D Animation
- Students will able to create Flash based 2D Animation applications.

No	Topic	Lectures
1	Assignment on Drawing in Flash	4
2	Assignment on Table fan animation	4
3	Assignment on Frog Jump animation	
4	Assignment on Bouncing ball	4
5	Assignment on Moving car	4
6	Assignment on Giant wheel	4
7	Assignment on Bi-ped walk cycle	4
8	Assignment on Quadruped walk cycle	4
9	Assignment on Bird fly cycle	4
10	Assignment on Facial expressions	4

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU201 Course Name: Foundation Art - II
(Elements of Design)

Teaching Scheme: TH: 3 Hours/Week

Credit 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Design Skill

Course Objectives:

- To understand design basics and principles.
- Learn to create 3D models from different materials.

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved their designing power
- Students will develop modelling skills.
- Students will be able to create sets for Film and Animation projects.

Course Contents

Chapter 1	Introduction To Visual Design	7 lectures
	<ul style="list-style-type: none"> • Elements of Design • Principles of Design • Space - positive & negative space 	
Chapter 2	Gestalt's Laws of Design	7 lectures
	<ul style="list-style-type: none"> • Proximity • Similarity • Pragnanz • Law of Closure • Figure and Ground 	
Chapter 3	Introduction to Material	7 lectures
	<ul style="list-style-type: none"> • Paper • Cloth • Wood • Clay 	
Chapter 4	3D Modelling Techniques	8 lectures
	<ul style="list-style-type: none"> • Paper Modelling • Cloth Puppets • Clay Modelling • Cut out animation character 	
Chapter 5	Set Design	6 lectures

	<ul style="list-style-type: none"> • Floor Plan • Structure Design • Set Modelling <ul style="list-style-type: none"> • Texturing 	
Chapter 6	Experiential Learning : Outdoor Landscape	1 Lecture

Reference books:

- Figure Study Made Easy By- Aditya Chari - Grace Publication
- Perspective By Milind Mulik -- Jyotsna Prakashan
- Animal Anatomy for Artists – The Elements of Form – Eliot Goldfinger -

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU202 Course Name: Basics of Animation - II

Teaching Scheme: TH: 3 Hours/Week

Credit 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Creative ability.

Course Objectives:

- To understand Fundamentals of Animation
- Learn to create Animatics for animation projects

Course Outcomes:

On completion of the course, student will be able to –

- Students will have improved their animation skills.
- Students will develop story board skills.
- Students will be able to create animation projects.

Course Contents

Chapter 1	Character Design	7 lectures
	<ul style="list-style-type: none"> • Character Bible • Character turn around • Props 	
Chapter 2	Background design	7 lectures
	<ul style="list-style-type: none"> • Outdoor background • Indoor background • Background Themes • Color Palette of Background 	
Chapter 3	Animatics	7 lectures
	<ul style="list-style-type: none"> • Graphic Animation • Line testing • Animatics with sound 	
Chapter 4	Animation Movements	7 lectures
	<ul style="list-style-type: none"> • Trajectory • Observing real life action • Sequential movement drawing 	
Chapter 5	In- between Drawing	7 lectures
	<ul style="list-style-type: none"> • Pose to pose Animation • Straight ahead Animation 	
Chapter 6	Experiential Learning : Hand painted Animation	1 lecture

Reference books:

- The Complete Animation course by Chris Patmore, By – Barons Educational Series (New York)
- Anatomy of the Artist – Thompson & Thompson.

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU203 Course Name: Graphic Arts - II

Teaching Scheme: TH: 3 Hours/Week

Credit 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Software Skills

Course Objectives:

- To understand aspects of digital design
- Learn Graphic Designing techniques

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved their software knowledge.
- Students will develop Graphicdesigning skills.
- Students will be able to create professional Graphic designs.

Course Contents

Chapter 1	Introduction to digital designing	6 lectures
	<ul style="list-style-type: none"> • Laws of Typography • Digital Design Principles • Design measurements, crop marks, layouts • Logo Design 	
Chapter 2	Corel Draw Workspace	6 lectures
	<ul style="list-style-type: none"> • Corel Draw Interface • Menu bar Options • Tool Bar options 	
Chapter 3	Working With Shapes	6 lectures
	<ul style="list-style-type: none"> • Creating Objects • Editing Objects • Convert to curves • Arranging objects • Grouping objects 	
Chapter 4	Text Options	6 lectures
	<ul style="list-style-type: none"> • Character formatting • Paragraph formatting • Columns • Fit text to path • Envelop 	
Chapter 5	Interactive tools	6 lectures

	<ul style="list-style-type: none"> • Blend tool • Contour tool • Distort tool • Drop shadow tool • Envelop tool • Extrude tool <ul style="list-style-type: none"> • Transparency tool 	
Chapter 6	Working with Bitmaps	5 lectures
	<ul style="list-style-type: none"> • Edit Bitmap • Power clip options • Trace bitmap <ul style="list-style-type: none"> • Bitmap Effects 	
Chapter 7	Experiential Learning : Graphical Collage	1 lecture

Reference books:

- Corel Draw Graphic suit Manual

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU204 Course Name: Elements of 3D Design - II
(3D Dynamics)

Teaching Scheme: TH: 3 Hours/Week

Credit 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Basic drawing skill, visual storytelling and concept of moving images should be known.
- Knowledge of basic Computer hardware & software is also necessary.
- Basic Knowledge of cel& 2D Animation

Course Objectives:

- Define Computer-based Animation
- 2D Splines, Shapes & compound object
- 3D Modelling and Animation
- Lighting & Camera
- Texturing
- Rendering with M-Ray
- Particle system

Course Outcomes:

On completion of the course, student will be able to

- To develop the skill & knowledge in 3D Modelling and Animation
- Students will understand the knowhow and can function either as an entrepreneur or can take up jobs in the multimedia and animation industry, video studios, edit set-up and other Special Effects sectors

Course Contents

Chapter 1	3D Animation	6 lectures
	<ul style="list-style-type: none"> • Using Timeline • Timeline configuration • Moving Objects • Path Animation • Morphing Objects 	
Chapter 2	Rigging	6 lectures
	<ul style="list-style-type: none"> • Forward Kinematics • Inverse Kinematics • Setting the bones • Skinning- Bind Skin • Joint Constraints 	

Chapter 3	Particle System in Max	6 lectures
	<ul style="list-style-type: none"> • Particle Flow Source (PF Source) • Spray • Snow • Blizzard • P array • P cloud • Super spray 	
Chapter 4	Cloth Simulation	6 lectures
	<ul style="list-style-type: none"> • Animating Cloth • Garment Maker • Space Warps 	
Chapter 5	Atmospheric Effects	6 lectures
	<ul style="list-style-type: none"> • Fire Effect • Fog Effect • Lens Effect • Render Effect <ul style="list-style-type: none"> • Auto Secondary 	
Chapter 6	Solid Body Collisions	5 lectures
	<ul style="list-style-type: none"> • Soft Body Collision • Rigid Body Collision 	
Chapter 6	Experiential Learning : Observing Real life Dynamics	1 lecture1

Reference books:ly

- Autodesk 3Ds Max Bible

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First Year of B.Sc. (Animation) (2019 Course)

Course Code:19CsAniU205 Course Name: Programming Languages(C Programming)

Teaching Scheme: TH: 3 Hours/Week

Credit: 2

Examination Scheme: CIA :50 Marks

End-Sem : 60 Marks

Prerequisite Courses:

- Basic Computer awareness
- Fundamentals of computers

Course Objectives:

- To introduce foundations of problem solving methodologies and programming.
- To develop the ability in student to analyze the problem and develop algorithm to solve the problem.
- To develop the programming skill and logic to solve the arithmetic and logical problems.
- To understand the various steps in program development through the structured programming approach.
- To learn the syntax and semantics of C programming language thereby learning the programming concepts in general.

Course Outcomes:

On completion of the course, student will be able to–

- Develop his / her own algorithms, flowcharts for a given problem.
- Write the program from the pseudo code.
- Develop his / her own logic to solve any problem using programming tool.
- Formulate the problem in the form of program of any programming language.
- Code, test and debug the given logic in C programming language.
- To decompose a problem into functions and to develop modular reusable code.

Course Contents

Chapter 1	Introduction to C	10 lectures
	<ul style="list-style-type: none">• History• Structure of a C program• Functions as building blocks• Keywords• Identifiers• Variables• Constants character, integer, oat, string, escape sequences• Data types:-built-in and user defined• Operators and Expressions: Operator types (arithmetic, relational, logical, assignment, bitwise, conditional, other operators),• Precedence and associatively rules.	

	Simple programming	
Chapter 2	Control Structures	5 lectures
	<ul style="list-style-type: none"> • Decision making structures: If, if-else, switch • Loop Control structures: While, do-while, for • Nested structures break and continue 	
Chapter 3	Functions in C	5 lectures
	<ul style="list-style-type: none"> • Definition and declaration • Parameter Passing to functions • Global and local variables • Formal and actual parameters 	
Chapter 4	Arrays	6 lectures
	<ul style="list-style-type: none"> • Array declaration, initialization • Types one, two and multidimensional Passing arrays to functions	
Chapter 5	Pointers	4 lectures
	<ul style="list-style-type: none"> • What is pointer? • Use of pointer. • Implementation of pointer 	
Chapter 6	Structures	5 lectures
	<ul style="list-style-type: none"> • What is structure? • What is use of structures? • Creating structure • Introduction to Union 	
Chapter 7	Experiential Learning :Programming Quiz	1 lecture

Reference books:

1. Problem Solving and Programming Concept, Maureen Sprankle, 7th Edition, ISBN-10: 0-13-119459-3, ISBN-13: 978-0-13-119459-5, Pearson Publication.
2. How to Solve it by Computer, R.G. Dromey, Pearson Education. ISBN-10: 81-317-0562-5
3. Let us C by Yashwant Kanetkar, BPB Publication 2018, ISBN 9387284492, 9789387284494
4. C: the Complete Reference, Schildt Herbert, 4th edition, McGraw Hill, ISBN 0071502394, 9780071502399
5. A Structured Programming Approach Using C, Behrouz A. Forouzan, Richard F. Gilberg, Cengage Learning India, ISBN8131507629, 9788131507629
6. The 'C' programming language, Brian Kernighan, Dennis Ritchie, PHI ,2nd Edition, ISBN0131103628, 9780131103627
7. Programming in C ,A Practical Approach, Ajay Mittal , Pearson , ISBN 978-81-317-2934-2
8. Programming with C, B. Gottfried, 2nd edition, Schaum's outline Series, Tata McGraw Hill, ISBN 0071142592, 9780071142595
9. Programming in ANSI C, E. Balagurusamy, 6th Edition, McGraw Hill, ISBN 129051005

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU206 Course Name: 2D animation –II (Action Script)

Teaching Scheme: TH: 3 Hours/Week

Credit 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Basic knowledge of programming.

Course Objectives:

- Define Action script coding.

Course Outcomes:

On completion of the course, student will be able to

- To develop the skill & knowledge in 2D Animation with action script coding
- Students will able to create Flash based interactive applications.

Course Contents

Chapter 1	Introduction to Action script	7 lectures
	<ul style="list-style-type: none"> • Object Oriented Language Concepts • Variables and their scope in Flash • Data type Variables • Arithmetic operations 	
Chapter 2	Conditional Logic	8 lectures
	<ul style="list-style-type: none"> • Script control • Multiple conditions • Nested Conditions • Switch cases 	
Chapter 3	Arrays	7 lectures
	<ul style="list-style-type: none"> • Understanding Array • Properties and Methods • Multidimensional Arrays • Use of Array 	
Chapter 4	Loops	7 lectures
	<ul style="list-style-type: none"> • Importance of Loops • Nested Loops • loop Conditions • Functions 	
Chapter 5	Event Handler	6 lectures
	<ul style="list-style-type: none"> • Key board Events and Mouse Events • Event Listener • Call backs 	
Chapter 6	Experiential Learning : Action Script Quiz	1 lecture

Reference books:

- Flash CS4 Professional Bible Published by Wiley Publishing (Robert R & Snow D.)

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First Year of B.Sc. (Animation) (2019 Course)

Course Code: 19CsAniU207 Course Name: Elements of Information Technology(Networking)

Teaching Scheme: TH: 3 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Preliminary knowledge of computer, their operations and applications.

Course Objectives:

- The main objective is to introduce IT in a simple language to all undergraduate students, regardless of their specialization. It will help them to pursue specialized programs leading to technical and professional careers and certifications in the IT industry.
- The focus of the subject is on introducing skills relating to IT basics, computer applications, programming, interactive medias, Internet basics etc.

Course Outcomes:

On completion of the course, student will be able to–

- (a) Understand basic concepts and terminology of information technology.
- (b) Have a basic understanding of personal computers and their operations.
- (c) Be able to identify issues related to information security

Course Contents

Chapter 1	Operating Systems	8 lectures
	<ul style="list-style-type: none">• What is operating system?• Main functions of Operating systems• What is process?• Process management in early systems• Memory management• File management• Device management• Security	
Chapter 2	Data Communication and Computer Networks	10 lectures
	<ul style="list-style-type: none">• Basic Elements of Communication• Data Transmission Mode• Data Transmission Media• Digital and Analog data transmission• Data transmission services• Multiplexing Techniques• Asynchronous and synchronous transmission• Switching techniques• Routing	

	<ul style="list-style-type: none"> • Network topology • Network Types • Communication protocol • Internetworking Tools • Wireless Networks • Distributed Computing system 	
Chapter 3	The Internet	5 lectures
	<ul style="list-style-type: none"> • Definition • Brief History • Electronic mail • FTP • Telnet • WWW • Internet search engines • Uses of the internet 	
Chapter 4	Classification of Computers	4 lectures
	<ul style="list-style-type: none"> • Notebook Computer • Personal Computers • Mainframe system • Supercomputer • Client and server computers • Handheld Computer 	
Chapter 5	Computer viruses	5 lectures
	<ul style="list-style-type: none"> • An overview of Computer viruses • What is a virus? Virus symptoms, How do they get transmitted • What are the dangers? • General Precaution 	
Chapter 6	Internet searches:	3 lectures
	<ul style="list-style-type: none"> • Search engines: Google, Yahoo. • Concepts in text-based searching • Searching Medline, Pub Med, bibliographic databases 	
Chapter 7	Experiential Learning : Hardware assembly, Software installation	1 lecture

Reference Books:

Computer Networks.4th edition (2008).Tanen Baum. Pearson Education, India

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Shivajinagar, Pune - 5

First Year of B.Sc. (Animation)(2019 Course)
Course Code: 19CsAniU208 Course Name: Script Writing - II
(Creative Thinking and Writing)

Teaching Scheme: TH: 3 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Prerequisite Courses:

- Communication Skill.

Course Objectives:

- To study advance intricacies of language to further one's eloquence.
- To learn creative thinking techniques to enhance lateral thinking.
- To produce a finished script keeping in mind style guide, plagiarism, and techniques of marketing the final product.

Course Outcomes:

On completion of the course, student will be able to–

- Students will be able to read, write, speak and comprehend texts with ease with an enhanced command over language.
- Students will be able to make lateral thinking a way of life along with vertical thinking.
- Students will be able to acquaint oneself with the format of presentation of a script and pitching the same.

Course Contents

Chapter 1	Advanced Language Skills	6 lectures
	<ul style="list-style-type: none"> • Comprehension skills and vocabulary • Modal Auxiliaries • Articles • Preposition • Active and Passive Voice • Types of sentences • Reported Speech 	
Chapter 2	Advanced Creative Thinking Strategies	6 lectures
	<ul style="list-style-type: none"> • Role of Fractionation • The Reversal Method • Brainstorming • Analogies • Choice of Entry Point and Attention Area 	
Chapter 3	Tools for Enhancing Creative Thinking	6 lectures
	<ul style="list-style-type: none"> • Random Stimulation • Concept/ division/ polarization • The Importance of Cues to the Mind. • Mind block • Problem solving 	

Chapter 4	Script Writing: Drafting and Binding	6 lectures
	<ul style="list-style-type: none"> • Birds eye view of formatting • Study of a Sample Script • Scene heading • Narrative Description and Dialogue 	
Chapter 5	Glossary of Script Writing Terms	6 lectures
	<ul style="list-style-type: none"> • Compilation of Terms Discussed During the Course • Compilation of Rarely Used Terms 	
Chapter 6	Marketing your content	6 lectures
	<ul style="list-style-type: none"> • Making your script market-ready • Finding an agent • Crafting the query • Preparing a pitch • Protecting your work 	
Chapter 7	Experiential Learning : Group Skit performance	1 lecture

Reference books:

- Practising English (A Workbook), by M. S. Nagaraja Rao and D. S. Manjunatha, Published 2013 (Reprinted 2014), Orient BlackSwan Private Ltd.
- Lateral Thinking- Creativity Step by Step, by Edward De Bono, Published 1990 (Reissued 2015), Harper Perennial.
- Creativity Workout- 62 Exercises to Unlock Your Most Creative Ideas, by Edward De Bono, Published by Ulysses Press, US.
- Hack Into Your Creativity- Story Prompts for Every Type of Writers, by Michael Burns, Published 2017, Penguin Random House, India.
- The Script Writer's Bible, by David Trottier, 6th Edition, Silman- James Press, Los Angeles.

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First Year of B.Sc. (Animation) (2019 Course)

Course Code: 19CsAniU209 Course Name: Foundation Art – II (Elements of Design) and Basics of Animation -II

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- To understand design basics and principles.
- Learn to create 3D models from different materials.

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved their designing power
- Students will develop modelling skills.
- Students will be able to create sets for Film and Animation projects.

No	Topic	Lectures
1	Assignment on Logo Design	4
2	Assignment on Photo Collage	4
3	Assignment on Paper Model	4
4	Assignment on Cloth Puppet	4
5	Assignment on Wood carving	4
6	Assignment on Clay model	4
7	Assignment on Set model	4
8	Assignment on Wall painting	4
9	Assignment on Graffiti	4
10	Assignment on Retail Design	4

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU210 Course Name: Graphic Arts – II and 2D Animation -II

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- To understand aspects of digital design
- Learn Graphic Designing techniques

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved their software knowledge.
- Students will develop Graphic designing skills.
- Students will be able to create professional Graphic designs.

No	Topic	Lectures
1	Assignment on Visiting card, letterhead and envelop	4
2	Assignment on Book cover	4
3	Assignment on Magazine cover	
4	Assignment on CD cover	4
5	Assignment on Advertisement	4
6	Assignment on Newspaper layout	4
7	Assignment on Menu card	4
8	Assignment on Greeting card	4
9	Assignment on Bank cheque design	4
10	Assignment on Textile Design	4

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU2111 Course Name: Elements of 3D Design – II (3D Dynamics)

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- Define Computer-based Animation
- 2D Splines, Shapes & compound object
- 3D Modelling and Animation
- Lighting & Camera
- Texturing
- Rendering with M-Ray
- Particle system

Course Outcomes:

On completion of the course, student will be able to

- To develop the skill & knowledge in 3D Modelling and Animation
- Students will understand the knowhow and can function either as an entrepreneur or can take up jobs in the multimedia and animation industry, video studios, edit set-up and other Special Effects sectors

No	Topic	Lectures
1	Assignment on Flag simulation	4
2	Assignment on Garment maker	4
3	Assignment on Rigging and skinning	4
4	Assignment on Path animation	4
5	Assignment on Fluid effect	4
6	Assignment on Particle effects	4
7	Assignment on Camera movements	4
8	Assignment on Solid body collision	4
9	Assignment on Facial expressions	4
10	Assignment on Lip Synchronization	4

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU212 Course Name: Programming Languages –II (C Programming)

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- To introduce foundations of problem solving methodologies and programming.
- To develop the ability in student to analyze the problem and develop algorithm to solve the problem.
- To develop the programming skill and logic to solve the arithmetic and logical problems.
- To understand the various steps in program development through the structured programming approach.
- To learn the syntax and semantics of C programming language thereby learning the programming concepts in general.

Course Outcomes:

On completion of the course, student will be able to–

- Develop his / her own algorithms, flowcharts for a given problem.
- Write the program from the pseudo code.
- Develop his / her own logic to solve any problem using programming tool.
- Formulate the problem in the form of program of any programming language.
- Code, test and debug the given logic in C programming language.
- To decompose a problem into functions and to develop modular reusable code.

No	Topic	Lectures
1	Assignment to demonstrate use of datatypes, simple operators (expressions)	4
2	Assignment to demonstrate decision making statements (if and if-else, nested structures) and switch case	4
3	Assignment to demonstrate decision making statements using switch case and menu driven programming	
4	Assignment to demonstrate use of simple loops and nested loops	4
5	Assignment to demonstrate writing C programs in modular way (use of user defined functions and standard library functions)	4
6	Assignment to demonstrate recursive functions.	4
7	Assignment to demonstrate use of arrays (1-d and 2-d arrays) and functions	4
8	Assignment to demonstrate use of pointers, string and pointers	4

9	Assignment to demonstrate array of strings, array and functions	4
10	Assignment to demonstrate structures and unions	4

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First Year of B.Sc. (Animation) (2019 Course)
Course Code: 19CsAniU213 CourseName: 2D animation – II (Action Script)

Teaching Scheme: TH: 4 Hours/Week

Credit: 02

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

- Define Action script coding.

Course Outcomes:

On completion of the course, student will be able to

- To develop the skill & knowledge in 2D Animation with action script coding
- Students will able to create Flash based interactive applications.

No	Topic	Lectures
1	Assignment on Calculator	4
2	Assignment on Image Gallery	4
3	Assignment on Button click	4
4	Assignment on Image swapping	4
5	Assignment on Keyboard events	4
6	Assignment on Puzzle game	4
7	Assignment on Quiz game	4
8	Assignment on E- learning application	4
9	Assignment on Interactive website	4
10	Assignment on Flash game with sound	4