



**Lok Jagruti Kendra University**  
University with a Difference

# Diploma in Gaming & Animation



**Course Code: 025110305**  
**Fundamentals of Animation**

<b>Programme / Branch Name</b>		Diploma in Gaming & Animation				
<b>Course Name</b>	Fundamentals of Animation			<b>Course Code</b>	025110305	
<b>Course Type</b>	HSSC	BSC	ESC	PCC	OEC	PEC

**Legends:**      HSSC: Humanities and Social Sciences Courses      BSC: Basic Science Courses  
                   ESC: Engineering Science Courses      PCC: Program Core Courses  
                   OEC: Open Elective Courses      PEC: Program Elective Courses

## 1. Teaching and Evaluation Scheme

Teaching Hours / Week / Credits				Evaluation Scheme			
L	T	P	Total Credit	CCE	SEE (Th)	SEE (Pr)	TOTAL
3	0	2	4	50	50	50	150

**Legends:**

L: Lectures      T: Tutorial      P: Practical  
                   CCE:      Continuous & Comprehensive Evaluation  
                   SEE (Th):      Semester End Evaluation (Theory)  
                   SEE (Pr):      Semester End Evaluation (Practical)

## 2. Prerequisites

- ✓ Good verbal and written communication skills.
- ✓ Basic knowledge of computer & programming.

## 3. Rationale

Animation has been one of the most effective and convincing tool to represent your idea, imagination and creativity since early days. Animation empowers any learner with power of creativity and how a concept or idea can be illustrated in front of the world. This course helps future animator and illustrators in getting started with animation. An individual will learn fundamentals of animation and its terminology, basic principles of animation, animation tools and equipment as well as basic TV transmission terms, hence this course will be a stepping stone towards the journey of animation learning. This course helps the students to understand the basic techniques of motion pictures also.

## 4. Objectives

- ✓ The concepts, case studies, principles and relevant soft skills associated with this course are to be implemented so that the learner is able to,
  - Select a suitable animation type.
  - Choose specific animation technique.
  - Identify and apply appropriate animation principle(s) for specific need as well as animation equipment.
  - Have experience and/or awareness of basics of motion pictures and TV transmission related terminologies, media and media formats.



## 5. Contents

Unit No.	Unit Name	Topics	Learning Outcomes	% Weightage	Hours
1	<b>Basics of Animation</b>	1.1. Introduction 1.2. History of Animation 1.3. Early Animation Devices 1.4. Animation Techniques 1.5. Different Types of Animation 1.6. Production Stages in Animation	<ul style="list-style-type: none"> <li>Basics and history of animation.</li> <li>Various animation techniques.</li> <li>Knowledge about types and production stages of animation.</li> </ul>	20	8
2	<b>Basic Principles of Animation - I</b>	2.1. Squash and Stretch 2.2. Anticipation 2.3. Staging 2.4. Straight Ahead Action and Pose to Pose Animation 2.5. Follow Through and Overlapping Action 2.6. Slow In and Slow Out	<ul style="list-style-type: none"> <li>Knowledge of basic animation principles and their applications in animation.</li> </ul>	25	10
3	<b>Basic Principles of Animation - II</b>	3.1. Arcs 3.2. Secondary Action 3.3. Timing 3.4. Exaggeration 3.5. Solid Drawing 3.6. Appeal	<ul style="list-style-type: none"> <li>Knowledge of basic animation principles and their applications in animation.</li> </ul>	25	10
4	<b>Animation Equipment &amp; Concepts</b>	4.1. Peg Holes and Peg Bars 4.2. Cels, Light Box, Line/Pencil Tests 4.3. Field Charts & Rostrum Camera 4.4. The Exposure Sheet 4.5. Concepts of Soundtrack, Track Breakdown, Key Frames, In-Betweens, Clean-Up	<ul style="list-style-type: none"> <li>Understanding and application of various animation equipment.</li> <li>Knowledge of basic sound and framing concepts.</li> </ul>	15	8

<b>5</b>	<b>Basics Of Television Transmission</b>	5.1. Frames, Lines & Timing	<ul style="list-style-type: none"> <li>• In-depth knowledge of terminologies of TV transmission.</li> <li>• Clear understanding of TV standards, file formats &amp; aspect ratios.</li> <li>• Working knowledge of audio &amp; video compression.</li> </ul>	15	<b>6</b>
		5.2. Television Standards 5.3. Standards Conversion, Aspect Ratios & Interchanging Aspect Ratios 5.4. Safe Areas, Display Resolutions & File Formats 5.5. Audio-Video Compression & Compression Ratio			

**Total Hours** **42**

## 6. List of Practicals / Exercises

The practical/exercises should be properly designed and implemented in an attempt to develop different types of skills so that students can acquire the competencies/programme outcomes. Following is the list of practical exercises for guidance.

<b>Sr. No.</b>	<b>Practicals / Exercises</b>	<b>Key Competency</b>	<b>Hours</b>
1	Prepare a brief presentation on basics of animation.	In-depth knowledge of basics of animation.	2
2	Prepare a brief presentation on basics and history of animation.	In-depth knowledge of history of animation.	2
3	Prepare a document showcasing uses, application, working of early era animation devices.	Understanding of early era animation device.	2
4	Prepare a document showcasing uses, application, working of latest animation devices.	Understanding of latest animation device.	2
5	Prepare a case study covering following basic principles of animation. (Squash and Stretch, Anticipation, Staging)	Detailed study of animation principle.	2
6	Prepare a case study covering following basic principles of animation. (Straight Ahead Action and Pose to Pose Animation, Follow Through and Overlapping Action, Slow In and Slow Out)	Detailed study of animation principle.	2
7	Prepare a case study covering following basic principles of animation. (Arcs, Secondary Action, Timing)	Detailed study of animation principle.	2
8	Prepare a case study covering following basic principles of animation. (Exaggeration, Solid Drawing, Appeal)	Detailed study of animation principle.	2
9	Prepare a sketch that uses animation equipment.	Application of animation equipment.	2



10	Create a case study document covering concepts of basics of television transmission.	Basics of television transmission	2
11	Illustrate a movie clip/video file and explain where the principles of animations are used in various parts of clip/video	Implementation of animation principles.	2
12	Create interactive presentation/sketch/animation with all basic concepts learned.	Illustration and application of animation tools & techniques.	6
<b>Total Hours</b>			<b>28</b>

## 7. Suggested Specification Table for Evaluation Scheme

Unit No.	Unit Name	Distribution of Topics According to Bloom's Taxonomy					
		R %	U %	App %	C %	E %	An %
1	Basics of Animation	40	40	20	-	-	-
2	Basic Principles of Animation - I	30	30	30	5	5	-
3	Basic Principles of Animation - II	30	30	30	5	5	-
4	Animation Equipment & Concepts	30	30	30	10	-	-
5	Basics Of Television Transmission	30	30	30	10	-	-

**Legends:** R: Remembering U: Understanding  
 App: Applying C: Creating  
 E: Evaluating An: Analyzing

## 8. Textbooks

- 1) The History of Animation, by Charles Solomon, Random House, Latest Edition, Value Publishing.
- 2) The Animator's Survival Kit, by Richard E. Williams, Latest Edition, Faber & Faber.
- 3) Disney Animation - The Illusion of Life, by Frank Thomas and Ollie Johnston, Latest Disney Edition.
- 4) Animation from Pencils to Pixels: Classical Techniques for the Digital Animator, by Tony White, Latest Edition, Routledge.

## 9. Reference Books

- 1) How to Make Animated Films, by Tony White, Latest Edition, Routledge.

## 10. Open Sources (Website, Video, Movie)

- 1) [https://onlinecourses.swayam2.ac.in/cec22\\_cs01](https://onlinecourses.swayam2.ac.in/cec22_cs01)
- 2) <https://www.udemy.com/course/learn-animation-the-beginner-s-guides>
- 3) <https://www.udemy.com/course/save-time-in-face-animation-with-cartoon-animator-4-pipeline>