

**BHARATHIAR UNIVERSITY; COIMBATORE 641 046**  
**CENTRE FOR COLLABORATION OF INDUSTRY AND INSTITUTIONS**  
**DIPLOMA IN MULTIMEDIA AND ANIMATION**

(For the CCII students admitted from the academic year 2014-15 onwards)

**1. Description of Course/Objective of the Course**

This course is designed to prepare technicians with specialized skills, knowledge and attitude to work in Animation field. The program will be conducted at CLUSTERS Institute of Media And Technology, Centre recognized by Bharathiar University under the CCII Collaborative Program.

**2. Eligibility**

Candidates those who are passed in 10+2 Examination/PUC (11+1)/Equivalent Examination thereto, recognized by Bharathiar University.

**3. Duration of the Course: 1Year (Annual Pattern)**

**4. Courses and Scheme of Examination**

Sl.No	Course Title	University Exam
1.	MULITMEDIA & ITS APPLICATIONS	100
2.	INTRODUCTION TO WEB DESIGN & APPLICATIONS	100
3.	PRINCIPLES OF ANIMATION	100
4.	FOUNDATION COURSE IN CLASSICAL ANIMATION	100
5.	ANIMATION ART – Practical 1	100
6.	ADVANCED MEDIA - Practical 2 Elective	100

Elective 1 – Advanced Graphic Designing

Elective 2 – Advanced Web Designing

## **MULTIMEDIA & ITS APPLICATIONS**

### **UNIT I :**

Introduction – Branch Overlapping Aspects of Multimedia Content – Global Structure – Multimedia Literature . Multimedia – Media and Data Streams – Medium .

### **UNIT II:**

Sound/Audio : Basic Sound Concepts – Music –Speech , Images and Graphics : BasicConcepts – Computer Image Processing – Video and Animation : Basic Concepts – Television –Computer Based Animation .

### **UNIT III:**

Data Compression : Storage Space – Coding Requirements – JPEG – MPEG – DVI ,Optical Storage Media , Computer Technology – Multimedia Operating System.

### **UNIT IV:**

Networking System : Layers , Protocols and Services , Networks , Metropolitan AreaNetworks , WAN , Multimedia Communication System.

### **UNIT V:**

User Interfaces, Synchronization , Abstraction for Programming : Abstraction Levels – Libraries – System Software – Toolkit – Higher Programming Languages .  
MultimediaApplication : Introduction – Media Population – Media Composition – Media Communication –Trends.

### **TEXT BOOK :**

Ralf Steinmetz &KlaraNahrstedt – “ Multimedia Computing , Communication & Applications “Pearson Education.

### **REFERENCE BOOK:**

Fred T,Hofstetter – “ Multimedia Literacy “ – 3rd edition TMH.

## INTRODUCTION TO WEB DESIGN AND APPLICATIONS

### UNIT I:

**Fundamentals of Electronic Mail** :Introduction - Email :Advantages andDisadvantages – User ids, Passwords and Email addresses - Message Components – MessageComposition - Mailer Features - E mail Inner Workings - Email Management - MIME Types .

**Browsing and Publishing** ; Introduction – Browser bare bones – Coast – to – Coast surfing – Hyber Text Markup Languages – Web page installation – Web page set up – HTML formattingand hyper link creation .

### UNIT II:

**The internet** : Introduction – internet defined – internet history – the way the internetworks – internet congestion – Inter net culture – Business culture and the internet – collaborativecomputing and the internet .

**World Wide Web** : introduction the web defined – web browserdetails – web writing styles – web presentation outline, design , and management – registeringweb pages.

### UNIT III:

**Searching the world wide web** : introduction – directories , search engines andmetasearch engines – search fundamentals – search strategies – how does a search engine works.

**Telnet and FTP** : introduction – telnet and remote login – File transfer – Computer Viruses .

### UNIT IV:

**Basic HTML** : introduction – semantic versus syntactic – based style types – headersand footers – lists – tables – debugging . **Advanced HTML** :introduction – frames – html forms– CGI scripts – dynamic documents – html tools – next generation html – cascading style sheets.

### UNIT V:

**News groups, Mailing Lists, Chat rooms and MUDs** : introduction – news groups andmailing lists history – mailing list fundamentals – newsgroups and mailing lists availability –chat-rooms – MUDs.

**Electronic Publishing** :introduction – electronic publishing advantagesand disadvantages – copy right issues – project Gutenberg and on-line books – electronicjournals , magazines and news papers – miscellaneous publishing issues.

## PRINCIPLES OF ANIMATION

### UNIT I:

Digital 2D Animation orientation – Basic factors affecting the illusion of motion – Impact of digital techniques on the craft of film and video animation – Professional animation practice and job description – Prevailing file format standards and other compatibility issues – history and future trends of computer animation application in the visual arts - 12 principles of animation.

### UNIT II:

Mechanics- Rolling coin Uniform, Rolling coin Harmonic-Simple Harmonic Motion; Demonstrating that one component of uniform circular motion is simple harmonic motion, Bouncing Ball- Animate three different types of „ball“ bouncing down a set of stairs.

### UNIT III:

Pendulum with Thread (follow through)- A simple animation viewing a Foucault Pendulum at the North Pole from an inertial frame above the Earth-Double Pendulum -Hand Lift-Flag- A small animation of a vibrating tuning fork producing a sound wave.

### UNIT IV:

Bio-Mechanics - (Bird flight (Cut out), Man Jump, Head Turn, Own character. Animation timings on key drawings, indicating clearly the number of inbetweens initially expect to create. time out the action by going through the motions by using either a stopwatch or a watch with a second hand.

### UNIT V:

Man Walk, Front Walk, Run Cycle, Animal Walk, Sfx – Water. Aims- The aim of this short exercise is to extend your understanding of animation timing and to develop an understanding of the basic principles as they apply to a walk cycle.

### REFERENCES :

- Susie Hodge; „How To Draw Faces“ , Search Press Ltd. Tunbridge Wells, UK. 2011.
- Andrew Loomis; „Creative Illustration-1947“, Titan Books London, UK. 2012.
- George B. Bridgman; „ The Human Machine“ , Dover Publications; First Edition edition- New York, 1972.
- George B. Bridgman; „Constructive Anatomy (Dover Anatomy for Artists)“ ,Dover Publications, New York City . 1973.
- Winsor McCay; „ Gertie the Dinosaur“. 1909.

## **FOUNDATION COURSE IN CLASSICAL ANIMATION**

### **UNIT I:**

Fundamentals of Art, Design & Visualization – Fundamentals of design -Principles of design-Fundamental of drawing,- Introduction to perspective - Colour Theory- Anatomy Study,(man & animal) Introduction to 2D and 3D.Pre Historic paintings-Traditional Art-Variou eras & isms-Prehistoric Sequential Drawings.

### **UNIT II:**

Object - Getting to know about Pencil, Paper- Intro to Lines, shapes andForms - Drawing with different shapes and forms- Drawing complicated forms withthehelp of shapes. Layout & Background Painting – Basic and Advanced techniques layout -Basic and Advanced techniques in BG Painting. The Student will learn everything from introductory concepts of perspective, color keys to advanced techniques in layout and Background painting. The class is geared up towards the beginner to intermediate student, and is centered on layout for animation.

### **UNIT III :**

History of animation - Showcase of Animation films- Getting to know aboutthe old Animation film process- Knowing the new Animation technology. 2D animation frame-sequencing features – Straight-ahead animation – Key frames animation – Motion paths – Applying geometric transformations over time – Intertwining options – Looping and palindrome motion – Features specific to the program in use.

### **UNIT IV:**

Human Anatomy- Hand – Humorous Bone – Ulna Bone – Radius Bone – Carpals Bone – Meta Carpals Bone – Trachea Bone – Inner Cornville Bone – Outer Cornville Bone – Sternum Bone. Filmpipeline and the Diff career opportunities in Animation- Development ofTraditional Animation & Digital Animation.

### **UNIT V:**

Digital 2D Animation orientation – Basic factors affecting the illusion of motion – Impact of digital techniques on the craft of film and video animation – Professional animation practice and job description – Prevailing file format standards and other compatibility issues – History and future trends of computer animation application in the visual arts.

**REFERENCES** :Wells, P;“Understanding Animation”. London & New York :Routledge,1998. Whitaker H & Halas J;“Timing for Animation”. Boston &Oxford : Focal Press,2002. VikasGubta&Kogent Solutions Inc; “Multimedia and Web Design”, Dream tech,2000VikasGubta; “A Revolutionary 3-Stage Sub learning System”. Dream tech , 2006. Adams T. R; “Tom and Jerry : 50 Years of Cat and Mouse” .New York : Crescent Books.1991 .

Practical 1 :**ANIMATION ART**

- Adobe Photoshop
- Adobe Flash
- Sound Editing Tools and Techniques

Practical 2 :**ADVANCED MEDIA**

- **Elective 1 – Advanced Graphic Designing**
  - Adobe Illustrator/Corel Draw
  - Adobe Indesign

Or

- **Elective 2 – Advanced Web Designing**
  - Adobe Dreamweaver
  - HTML,CSS
  - JQuery, JavaScript