

COURSE NAME : COMPUTER TECHNOLOGY / INFORMATION TECHNOLOGY
COURSE CODE : CM/IF
SEMESTER : FIFTH
SUBJECT TITLE : MULTIMEDIA AND ANIMATION TECHNIQUES (ELECTIVE- I)
SUBJECT CODE : 9118

Teaching and Examination Scheme:

Teaching Scheme			Examination Scheme						
TH	TU	PR	PAPER HRS	TH	TEST	PR	OR	TW	TOTAL
02	--	04*	03	80	20	--	--	25@	125

* 2 Sessions of 2 Hrs / Week

Rationale:

One picture speaks thousand words & animated multimedia picture can speak a lot more. Animation has given a boost to various areas like film production, e-learning & animated web-site etc. This subject will enable the students to implement their creative imagination to produce animated text & images.

It is a practical oriented subject which deals with various fonts, audio & video formats, basic shapes, images to the controls, tools & animation.

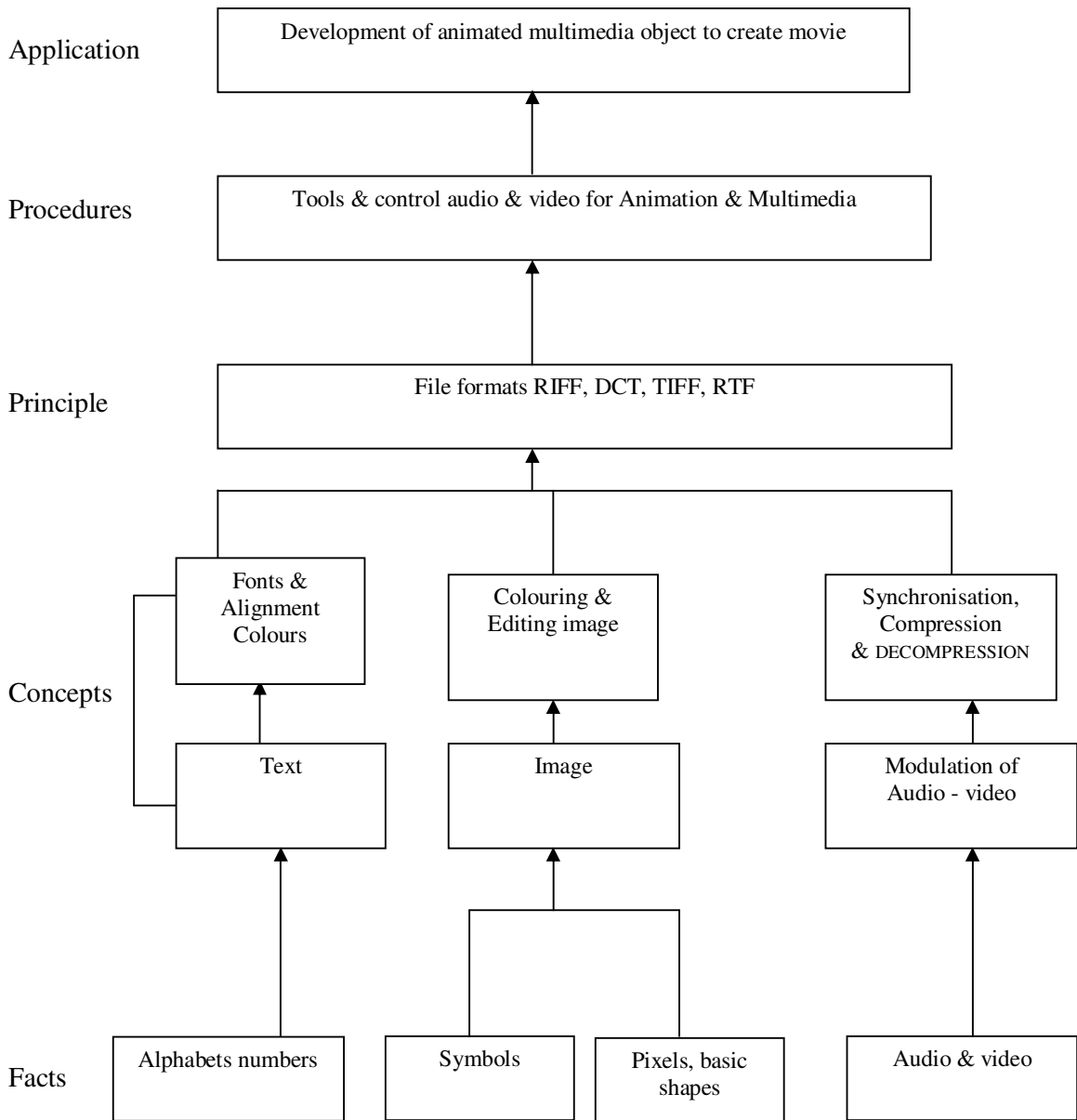
Students will develop the skill for using the basic shapes, text, images apply controls, colours to create final animated multimedia object.

Objectives:

Students will be able to:

1. Import, Export Images.
2. Edit Images.
3. Create Animation.
4. Build Flash Movie.
5. Integrate Audio & Video.
6. Build Text-Based Animation.
7. Play Movie.
8. Integrate Multimedia In Web Page.

Learning Structure:



Contents: Theory

Chapter	Name of the Topic	Hours	Marks
01	Multimedia Elements Multimedia Application 1.1 I/P, O/P devices, 1.2 Evaluation of Multimedia systems 1.3 Storage media	04	10
02	Architecture & Issues For Distributed Multimedia System. 2.1 Multimedia System Architecture. 2.2 Distributed Multimedia. 2.3 Synchronization, Orchestration & QOS Architecture 2.4 Framework for Multimedia System.	04	10
03	Compression/Decompression & File Formats 3.1 Need 3.2 Types 3.3 Evaluating & Visibility 3.4 Video Compression Technique 3.5 Introduction to Standardization of Algorithm 3.6 File Formats 3.7 History of RIF, TIFF 3.8 Introduction to RIFF, AVI 3.9 JPEG-objectives, Architecture, JPEG-DCT encoding Quantization. 3.10 JPEG-stastical coding, predictive lossless coding, JPEG- performance 3.11 MPEG-objectives, Architecture, BIT stream syntax performance 3.12 MPEG2 & MPEG4	10	18
04	Multimedia Authoring and User Interface 4.1 Multi Media Authoring System and its type 4.2 Hypermedia Application Design consideration 4.3 User Interface Design 4.4 Information Access 4.5 Object Display / Playback Issues	05	12
05	Distributed Multimedia Systems 5.1 Components of Distributed Multimedia Systems 5.2 Distributed Client Server Operation 5.3 Multimedia Object Server 5.4 Multi Server Network topologies 5.5. Distributed Multimedia Databases	05	16
06	Multimedia Tool 6.1 Introduction to Multimedia tool – Flash 6.2 Creating & Modifying elements 6.3 Line tool, fill/attributes, different shapes, text tools & pen tool 6.4 Selecting lines fill with arrow tool, selecting shapes, using lasso tool performing basic editing tools, selecting & deselecting elements, modifying created objects.	04	14
Total		32	80

PRACTICAL:

SKILLS TO BE DEVELOPED:

INTELLECTUAL SKILLS:

- USE OF PROGRAMMING LANGUAGE.
- TO BE ABLE TO APPLY DIFFERENT LOGICS TO SOLVE GIVEN PROBLEM.
- TO BE ABLE TO WRITE PROGRAM USING DIFFERENT IMPLEMENTATIONS FOR THE SAME PROBLEM
- IDENTIFY DIFFERENT TYPES OF ERRORS AS SYNTAX SEMANTIC, FATAL, LINKER & LOGICAL
- DEBUGGING OF PROGRAMS
- UNDERSTANDING DIFFERENT STEPS TO DEVELOP PROGRAM SUCH AS

MOTOR SKILLS:

- PROPER HANDLING OF COMPUTER SYSTEM.

Practical Content:

All of the experiment shall be performed using MS-Flash or 3D-MAX or MAYA.

Students must also do a mini project covering practical knowledge gained in the subject & submit a brief project report in work book. This report should also include the importance of the project from industry point of view.

Each experiment including mini project shall be stored in the CD and updated after every practical session.

Students shall maintain a work-book giving details of the work-carried out during every practical session.

Assessment shall be done based on the work-book and the CD. This CD along with workbook shall be submitted as term-work.

List of Experiments:

1. Create a cycle & name each part of cycle using different styles & format & animate text.
2. Draw seed & create small plant with use of at least 4 frames.
3. Create a forest of tree with flowers & fruits from a small plant using different layers & frame transition time.
4. Create a forest of trees using the object created earlier. Also add lighting and rain effect.
5. Insert audio to relevant frames that has lighting & rain effect.
6. Convert created work into file format which can be publish on web.

7. Interfacing digital-web-cam, capturing live image & editing using web-cam software.
8. Importing & exporting images, apply different image editing tools.
9. Mini Project: Students should create a movie of minimum 2 minutes playtime using either Flash or 3D-MAX or MAYA software.

Learning Resources:

Books:

Sr. No.	AUTHOR	TITLE	PUBLICATION
01	PRABHAT K. ANDHEIGH, KIRAN THAKRAR, JOHN F	MULTIMEDIA SYSTEMS DESIGN	PRENTICE HALL OF INDIA
02	KOEGEL BUFORD	MULTIMEDIA SYSTEMS	PEARSON EDUCATION
03	KATHERINE ULRICH	MICROMEDIA FLASH FOR WINDOWS AND MACINTOSH	PEARSON EDUCATION
04	FREE HALSHALL	MULTIMEDIA COMMUNICATION	PEARSON EDUCATION
05	R. STEIMNETZ, K. NAHRSTEDT	MULTIMEDIA COMPUTING, COMMUNICATION AND APPLICATION	PEARSON EDUCATION
06	J.D. Gibson	MULTIMEDIA COMMUNICATION DIRECTIONS AND INNOVATIONS	ACADEMIC PRESS, HARCOURT INDIA
07	J.F. Kurose, K. W. Rose	COMPUTER NETWORKING	PEARSON EDUCATION