MAHENDRA ENGINEERING COLLEGE

(Autonomous)

Syllabus

Department	Information Technology	Programme Code	2071

V Semester

Course code	Course Name	Periods/week			Credit	Maximum marks
		L	T	P	C	
15IT14301	COMPUTER GRAPHICS AND MULTIMEDIA	3	0	0	3	100

Objective(s)	• Develop an understanding and awareness of how issues such as content, information architecture, motion, sound, design, and technology merge to form effective and compelling interactive experiences for a wide range of audiences and end users. • Be familiar with various software programs used in the creation and implementation of multi-media (interactive, motion/animation, presentation, etc.). • Be aware of current issues relative between new emerging electronic technologies and graphic design (i.e. social, cultural, cognitive, etc). • Understand the relationship between critical analysis and the practical application of design.
Outcome(s)	Upon completion of this course , students will be able to • Effectively and creatively solve a wide range of graphic design problems • Form effective and compelling interactive experiences for a wide range of audiences. • Use various software programs used in the creation and implementation of multi-media (interactive, motion/animation, presentation, etc.). • Discuss issues related to emerging electronic technologies and graphic design.

UNIT-I	INTRODUCTION	9

Overview of Graphics system – Output Primitives: Basic – Line – Curve and ellipse drawing algorithms – Examples – Applications - Attributes – 2D geometric transformations – 2D clipping and viewing – Input techniques.

UNIT-II	THREE-DIMENSIONAL CONCEPTS	9

Three-Dimensional object representations – 3D geometric transformations – 3D viewing – Hidden surface elimination-– Color models – Virtual reality - Animation.

UNIT-III	MULTIMEDIA SYSTEMS DESIGN	9

Multimedia basics – Multimedia applications – Multimedia system architecture – Evolving technologies for multimedia – Defining objects for multimedia systems – Multimedia data interface standards – Multimedia databases.

UNIT-IV	MULTIMEDIA FILE HANDLING	9
Compression and decompression – Data and file format standards – Multimedia I/O technologies – Digital voice and audio – Video image and animation – Full motion video – Storage and retrieval technologies.		
UNIT-V	**HYPERMEDIA**	9
Multimedia authoring and user interface – Hypermedia messaging – Mobile messaging – Hypermedia message component – Creating hypermedia message – Integrated multimedia message standards – Integrated document management – Distributed multimedia systems.		
	TOTAL PERIODS	**45**

TEXT BOOKS :

1	Donald Hearn and M. Pauline Baker, "Computer Graphics C Version", Pearson Education, 2012.
2	Andleigh, P. K and Kiran Thakrar, "Multimedia Systems and Design", PHI, 2005.

REFERENCES:

1	Judith Jeffcoate, "Multimedia in practice: Technology and Applications", PHI, 2013
2	Foley, Vandam, Feiner and Huges, "Computer Graphics: Principles and Practice", 2nd Edition, Pearson Education, 2006.

AU Nominee
Dr. R. Gunasekaran

BoS Chairman
Prof. S. Raju