Indra Ganesan
COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Accredited by NAAC with 'B+' Grade, 2(f) & 12B Status Institution by UGC
IG Valley, Madurai Main Road, Manikandam, Tiruchirappalli - 620012

NAAC DOCUMENTS

QUALITY INDICATOR FRAME WORK

CRITERION – 1

CURRICULAR ASPECTS

SUBMITTED BY

IQAC

INTERNAL QUALITY ASSURANCE CELL

INDRA GANESAN COLLEGE OF ENGINEERING

Criteria 1	Curricular Aspects	100

1.1 Curricular Planning and Implementation (20)

1.1.1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

Table of Content

INDRA GANESAN COLLEGE OF ENGINEERING

IG Valley, Manikandam, Tiruchirappalli, Tamil Nadu – 620 012, India
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

DEPARTMENT OF INFORMATION TECHNOLOGHY

PREFACE OF THE COURSE FILE

Batch	: **2019-2023**
Academic Year	: **2021-2022 / EVEN**
Program	: **INFORMATION TECHNOLOGHY**
Year & Semester	: **3rd Year / VIth Semester**
Course Code	: **CS8092**
Name of the Course	: **Computer Graphics and Multimedia**
Faculty in-charge	: **Dr. V. Nancy, ASP/IT**

Signature of the Faculty in-charge

HoD/IT

Dr. G. Balakrishnan, M.E., Ph.D..
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

Indra Ganesan
COLLEGE OF ENGINEERING
Madurai Main Road (NH-45B), Manikandam, Tiruchirappalli - 620 012
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DEPARTMENT OF INFORMATION TECHNOLOGY

Workload - Even Semester 2021-2022

S. No	Teacher's Name	Course Code	Course Name	Semester	Lecture / week	Total
1	Dr. M. Kanisha	CS8493	Operating Systems	IV	4	18
		IT8601	Computational Intelligence	VI	4	
		CS8461	Operating Systems Laboratory	IV	4	
		IT8811	Project Work	VIII	6	
2	Mrs. S.Saroja Devi	CS8492	Database Management Systems	IV	4	19
		GE8076	Professional Ethics in Engineering	VIII	4	
		IT8076	Software Testing	VI	4	
		CS8481	Database Management Systems Laboratory	IV	4	
		IT8811	Project Work	VIII	3	
3	Dr. V. Nancy	CS8491	Computer Architecture	IV	4	19
		CS8092	Computer Graphics and Multimedia	VI	4	
		IT8078	Web Design and Management	VIII	4	
		IT8611	Mini Project	VI	4	
		IT8811	Project Work	VIII	3	
4	Mrs. S. Surya	CS8451	Design and Analysis of Algorithm	IV	4	16
		IT8602	Mobile Communication	VI	4	
		CS3251	Programming in C	II	4	
		CS8662	Mobile Application Development Laboratory	VI	4	
5	Dr . K. UthraDevi	CS8592	Object Oriented Analysis and System Design	VI	4	16
		CS8091	Big Data Analytics	VI	4	
		CS8582	Object Oriented Analysis and System Design Laboratory	VI	4	
		CS3271	C Programming Laboratory	II	4	

PRINCIPAL

HOD/IT

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DEPARTMENT OF INFORMATION TECHNOLOGY

Academic Year 2021-2022 (Even Semester)

Class: III Year / VI Sem — **Class Coordinator: Mrs.S.Saroja Devi**

Day	1	2	BREAK	3	4	LUNCH	5	6	BREAK	7	SCC/ CCA
	9.15 - 10.15	10.15- 11.05		11.20-12.10	12.10-01.00		1.45-2.30	2.30-3.15		3.30 - 4.15	4.15 - 5.00
MON	CGM	BDA		OOAD	ST		CI	OOAD		SEMINAR	T&P
TUE	ST	CI		MC	OOAD LAB		OOAD LAB			OOAD LAB	T&P
WED	MC	CGM		CI	OOAD		ST	CI		LIBRARY	OOAD
THUR	MC	BDA		CGM	MAD LAB		MAD LAB			MAD LAB	CGM
FRI	BDA	MC		ST	CGM		MINI PROJECT			OOAD	COUNSELLING

NOTE: Attendance will be marked from 9.15 am to 9.25 am

SUBJECT CODE	COURSE NAME	ERP ID	CREDITS/ HOURS	STAFF IN-CHARGE
IT8601	Computational Intelligence	Igce0412	3/ 45	Dr. M. Kanisha Prof/ IT
CS8592	Object Oriented Analysis and Design		3/ 45	Dr . K. UthraDevi AP/IT
IT8602	Mobile Communication		3/ 45	Mrs. S. Surya AP/ IT
CS8091	Big Data Analytics		3/ 45	Mr. A. Vivek Ignatius, AP/IT
CS8092	Computer Graphics and Multimedia		3/ 45	Dr. V. Nancy, ASP/ IT
IT8076	Software Testing	Igce0323	3/ 45	Mrs.S.Saroja Devi ASP/ IT
CS8662	Mobile Application Development Laboratory		2/ 60	Mrs. S. Surya AP/ IT

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CS8582	Object Oriented Analysis and Design Laboratory		2/ 60	Dr . K. UthraDevi, AP/IT
IT8611	Mini Project		1/ 30	Mrs.S.Jenila AP/ IT

Time Table In charge

HOD

Principal

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DEPARTMENT OF INFORMATION TECHNOLOGHY

CS8092 COMPUTER GRAPHICS AND MULTIMEDIA L T P C
3 0 0 3

OBJECTIVES:

- To develop an understanding and awareness 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.
- To become familiar with various software programs used in the creation and implementation ofmulti-media
- To appreciate the importance of technical ability and creativity within design practice.
- To gain knowledge about graphics hardware devices and software used. To appreciate illumination and color models.
- To understand the two-dimensional & three-dimensional graphics and their transformations.
- To become familiar with understand clipping techniques & Blender Graphics

UNIT I ILLUMINATION AND COLOR MODELS 9

Light sources - basic illumination models – halftone patterns and dithering techniques; Properties of light - Standard primaries and chromaticity diagram; Intuitive colour concepts - RGB colour model - YIQ colour model - CMY colour model - HSV colour model - HLS colour model; Colour selection. Output primitives – points and lines, line drawing algorithms, loading the frame buffer, line function; circle and ellipse generating algorithms; Pixel addressing and object geometry, filled area primitives.

UNIT II TWO-DIMENSIONAL GRAPHICS 9

Two dimensional geometric transformations – Matrix representations and homogeneous coordinates, composite transformations; Two dimensional viewing – viewing pipeline, viewing coordinate reference frame; window-to-viewport coordinate transformation, Two dimensional viewing functions; clipping operations – point, line, and polygon clipping algorithms.

UNIT III THREE-DIMENSIONAL GRAPHICS 9

Three dimensional concepts; Three dimensional object representations – Polygon surfaces- Polygon tables- Plane equations - Polygon meshes; Curved Lines and surfaces, Quadratic surfaces; Blobby objects; Spline representations – Bezier curves and surfaces -B-Spline curves and surfaces. TRANSFORMATION AND VIEWING: Three dimensional geometric and modeling transformations – Translation, Rotation, Scaling, composite transformations; Three dimensional viewing – viewing pipeline, viewing coordinates, Projections, Clipping; Visible surface detection methods.

UNIT IV MULTIMEDIA SYSTEM DESIGN & MULTIMEDIA FILE HANDLING 9

Multimedia basics – Multimedia applications – Multimedia system architecture – Evolving technologies for multimedia – Defining objects for multimedia systems – Multimedia data interface standards – Multimedia databases. 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. CASE STUDY: BLENDER GRAPHICS Blender Fundamentals – Drawing Basic Shapes – Modelling – Shading & Textures

TOTAL : 45 PERIODS

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OUTCOMES:

At the end of the course, the students should be able to:

- Design two dimensional graphics.
- Apply two dimensional transformations.
- Design three dimensional graphics.
- Apply three dimensional transformations.
- Apply Illumination and color models.
- Apply clipping techniques to graphics.
- Understood Different types of Multimedia File Format
- Design Basic 3d Scenes using Blender

TEXT BOOKS:

1. Donald Hearn and Pauline Baker M, —Computer Graphics", Prentice Hall, New Delhi, 2007 [UNIT I– III]
2. Andleigh, P. K and Kiran Thakrar, —Multimedia Systems and Design‖, PHI, 2003. [UNIT IV, V]

REFERENCES:

1. Judith Jeffcoate, —Multimedia in practice: Technology and Applications‖, PHI, 1998.
2. Foley, Vandam, Feiner and Hughes, —Computer Graphics: Principles and Practice‖, 2nd Edition, Pearson Education, 2003.
3. Jeffrey McConnell, —Computer Graphics: Theory into Practice‖, Jones and Bartlett Publishers,2006.
4. Hill F S Jr., "Computer Graphics", Maxwell Macmillan , 1990.
5. Peter Shirley, Michael Ashikhmin, Michael Gleicher, Stephen R Marschner, Erik Reinhard, KelvinSung, and AK Peters, —Fundamentals of Computer Graphics‖, CRC Press, 2010.
6. William M. Newman and Robert F.Sproull, —Principles of Interactive Computer Graphics‖ Mc Graw Hill 1978.

HoD/IT

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Register Number:

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Internal Assessment Exam - I			Date/Session		Marks	50
Course code	CS8092	Course Title	COMPUTER GRAPHICS AND MULTIMEDIA			
Regulation	2017	Duration	90 minutes	Academic Year	2021-2022	
Year	III	Semester	VI	Department	IT	

COURSE OUTCOMES

CO1:	To apply the various colour models and algorithms in graphics
CO2:	To know the two-dimensional transformations, viewing and clipping operations
CO3:	To learn the three-dimensional representations, transformations, viewing and clipping
CO4:	To analyze the multimedia file formats
CO5:	To apply the Blender graphics and Hypermedia concepts
CO6:	To know about Different types of Multimedia File Format

Part – A (10×2=20)

	Answer All the Questions	CO's	K
1	List out the various light sources.	1	K2
2	What is meant by diffuse reflection?	1	K1
3	What is ambient light?	1	K1
4	What is dithering? When does it occur?	1	K2
5	What are line attributes?	1	K2
6	Define the term Hue and Saturation.	1	K1
7	What are the uses of chromaticity diagram?	1	K2
8	Write the uses of translation and rotation transformations.	2	K1
9	Define shear transformation.	2	K1
10	Write the viewing transformation matrix.	2	K2

Part – B (2×10=20)

		Answer All the Questions	CO's	K
11	a	Explain the illumination models in detail.	1	K1
		(OR)		
11	b	Explain in detail about DDA line drawing algorithm.	1	K2
12	a	Describe in detail about RGB and CMY colour models.	1	K1
		(OR)		
12	b	Explain the 2D reflection transformation in detail.	2	K2

Part – C (1×10=10)

		Answer All the Questions	CO's	K
13	a	Write and explain Bresenham's line drawing algorithm and trace the given points (2,1) to (10,12)	1	K3
		(OR)		
13	b	Explain the types of 2D transformations with the matrices.	2	K2

Course Faculty
(Name /Sign / Date)

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HoD
(Name /Sign / Date)

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DEPARTMENT OF INFORMATION TECHNOLOGHY

Proof and identification of Content Beyond Syllabus(CBS)

Name of the Faculty: Dr. V. Nancy **Course Code & Name: CS8092 & CGM**
Degree & Program: B.TECH & IT **Semester: VI Academic Year: 2021 -2022 /EVEN**

TOPIC: Uses of Multimedia in Education

ABSTRACT

This paper makes the strong claim that for multimedia to have any significant effect on education, the educational multimedia applications must be designed by the teachers of those classes. The arguments supporting this claim are presented in the headlines: curriculum, software, hardware and evaluation. The paper begins with an introduction discusses what is a multimedia and a multimedia authoring tools and describes some typical areas of multimedia application development. Finally the paper ends with the action plan and concludes that we must and need as educator to create our own multimedia applications if we really want to make use of the multimedia applications as an effective tool in education.
Keywords: Education, Learning, Multimedia applications, Software, authoring tools

INTRODUCTION

Since educators first began to use computers in the classroom, researchers have tried to evaluate whether the use of educational technology has a significant and reliable impact on student achievement (Clark, 1994; Kozma, 1994; Tennyson, 1994). Searching for an answer, researchers have realized that technology cannot be treated as a single independent variable, and that student achievement is gauged not only by how well students perform on standardized tests but also by students' ability to use higher-order thinking skills such as: thinking critically, analyzing, making inferences, and solving problems (Means, Blando, Olson, Middleton, Morocco, Remz, & Zorfass, 1993). Judging the impact of any particular technology requires an understanding of how it is used in the classroom and what learning goals are held by the educators involved, knowledge about the type of assessments that are used to evaluate improvements in student achievement, and an awareness of the complex nature of change in the school environment. Whether technology should be used in schools is no longer the issue in education. Instead, the current emphasis is ensuring that technology is used effectively to create new opportunities for learning and to promote student achievement. Educational technology is not, and never will be, transformative on its own, however. It requires the assistance of educators who integrate technology into the curriculum, align it with student learning goals, and use it for engaged learning projects (Carlson 2002). DarlingHammond and Berry (2005) suggest that "For widespread change to occur, teachers need to incorporate the opportunities of the emerging technological infrastructure into their overall curricular thinking"(P.199). The role of the classroom teacher is the crucial factor in the full development and use of technology in the schools (Trotter, 1999).

When educators use the accumulating knowledge regarding the circumstances under which technology supports the broad definition of student achievement, they will be able to make informed choices about what technologies will best meet the particular needs of specific schools or districts. They also will be able to ensure that teachers, parents, students, and community members understand what role technology is playing in a school or district and how its impact is being evaluated. Finally, they will be able to justify the investments being made in technology.

MULTIMEDIA

According to (Sethi, 2005); (Mayer, 2001) Multimedia refers to the integration of two or more different information media within a computer system. These media can include text, images, audio, video, and animation. Vaughan (2011) defined multimedia as a combination of digitally manipulated text, photographs, graphic art, sound, animation, and video elements. In this context multimedia can be thought of as a combination of text, graphics, sound, animation and video delivered by some form of computer. When the user has some control of what is presented it becomes interactive multimedia.

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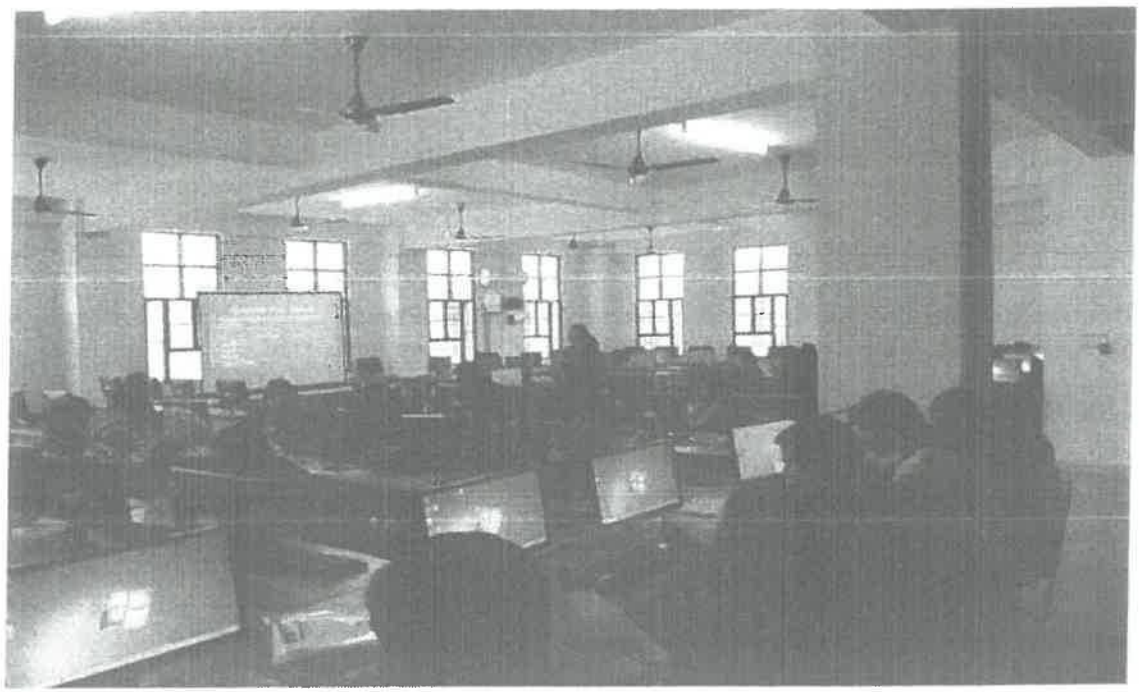
Multimedia does not have to be interactive, for example a tutorial may just involve the student pressing enter to go on to the next screen in a linear fashion. The tutorial would become interactive if the student affects the tutorial, for example if their answer to a question determined which screen came up next (Vaughan 2011).

MULTIMEDIA AUTHORING TOOLS

Any software, or collection of software components, that authors can use to create or modify multimedia content for use by other people, is a multimedia authoring tools (Sethi, 2005). Vaughan (2011) defines authoring tools as "These software tools are designed to manage individual multimedia elements and provide user interaction" (Vaughan 2011, p.2). In the development of educational software, an authoring system is a program that allows a non-programmer to easily create software with programming features. The programming features are built in but hidden behind buttons and other tools, so the author does not need to know how to program. Generally authoring systems provide lots of graphics, interaction, and other tools educational software needs. Sethi (2005) classified in three categories based on the metaphor used for sequencing or organizing multimedia elements and events.

1. Card or page based tools 2. Icon base, event driven tools 3. Time base and presentation tools



Depending on the educational multimedia application which is to be developed, what information is to be conveyed, who the audience will be, and how much interaction there will be between the application and the user, an appropriate tool can be chosen. Educational multimedia applications can be subdivided into four typical educational multimedia application areas:

• Text-Based applications • Interactive applications • Web applications • Mobile (Smart) phones applications

Signature of the Faculty

HoD/ IT

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DEPARTMENT OF INFORMATION TECHNOLOGHY

Faculty Time Table

Dr. V. Nancy, ASP/ IT

Day	1	2	BREAK	3	4	LUNCH	5	6	BREAK	7	SCC/ CCA
	9.15 - 10.15	10.15- 11.05		11.20- 12.10	12.10- 01.00		1.45- 2.30	2.30-3.15		3.30 - 4.15	4.15 - 5.00
MON	CGM	WDM								CA	
TUE	WDM	CA									CA
WED		CGM			WDM		CA			LIBRARY III IT	
THUR	CA			CGM							CGM
FRI	WDM	SEMINAR IV IT			CGM						COUNSELLING

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DEPARTMENT OF INFORMATION TECHNOLOGHY

Ref: SBECW/ IT / Course committee meeting / EM-I/ 2021-22 (Even) DATE: 15.03.2022

COURSE COMMITTEE MEETING-CS8092-COMPUTER GRAPHICS AND MULTIMEDIA

ACADEMIC YEAR: 2021-2022 (EVEN) **SEM:** 06 **REGULATION:** 2017
PROGRAM: IT **DATE OF MEETING:** 15.03.22 **TIME:** 10.00AM **Venue:** IT Dept. HoD Cabin

Members Present

Table.1 Course committee members

S.No.	Name of the faculty & Designation, Program	Sem/Sec/Program	Signature
1.	Dr.M. Kanisha, Prof/IT- Course coordinator	VI SEM/IT	
2.	Mrs.k.Uthra Devi., ASP/IT	VI SEM// IT	

HOD welcomed all the members present

1. Content of syllabus, unit wise discussed. Nature of qualitative, quantitative, problematic, theoretical concepts etc. have been discussed
2. With reference to the R-2017 regulation, Number of periods per unit = 09, total number of periods = 45 periods. 10 periods allotted for tutorials.
3. Vision and mission of the college, department discussed. POs, PEOs, PSOs discussed.
4. Course outcomes defined for each units, considering learning outcomes.

Table.2 Course Outcomes

CO	Course Outcomes	POs	PSOs
C305.1	To apply the various colour models and algorithms in graphics	1,2,3,4,5,6,7,8,9,10,11,12	1,2
C305.2	To know the two-dimensional transformations, viewing and clipping operations	1,2,3,4,5,6,7,8,9,10,11,12	1,2
C305.3	To learn the three-dimensional representations, transformations, viewing and clipping	1,2,3,4,5,6,7,8,9,10,11,12	1,2
C305.4	To analyze the multimedia file formats	1,2,3,4,5,6,7,8,9,10,11,12	1,2
C305.5	To apply the Blender graphics and Hypermedia concepts	1,2,3,4,5,6,7,8,9,10,11,12	1,2
C305.6	To know about Different types of Multimedia File Format	1,2,3,4,5,6,7,8,9,10,11,12	1,2

1. Mapping of COs with POs and PSOs is done with suitable correlation levels(1 for low, 2 for medium, 3 for high,"-" for no correlation, before content beyond syllabus)

Table.3 Mapping of COs, C, PSOs with POs- before CBS.

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C305.1	2	2	1	1	-	-	-	-	1	1	2	-	2	-
C305.2	2	2	-	-	3	-	-	-	-	-	2	1	2	2
C305.3	-	2	3	-	-	2	-	-	2	-	-	-	-	-
C305.4	-	-	2	-	1	2	2	-	-	3	2	2	-	2
C305.5	2	-	-	-	2	2	-	-	-	-	2	-	-	2
C305.6	-	2	-	2	-	-	1	-	-	-	-	-	2	-

2. Identification of content beyond syllabus- curricular gaps are identified considering industry needs, employers feedback, alumni feedback, government policy on industrialization, new investments by private/ public sectors, societal needs and level of correlation of COs with POs and PSOs. Accordingly the details of CBS added and its correlation is given below

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Table.4 Identification of content beyond syllabus

Content beyond syllabus added	POs strengthened/Vacant filled	CO/Unit
Uses of Multimedia in Education	PO5 Vaccant Filled	C305.2 / II

3. Mapping of COs with POs, PSOs- after CBS.

Table.5 Mapping of COs, C, PSOs with POs- after CBS.

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C305.1	2	2	1	1	-	-	-	-	1	1	2	-	2	-
C305.2	2	2	-	-	3	-	*3	-	-	-	2	1	2	2
C305.3	-	2	3	-	-	2	-	-	2	-	-	-	-	-
C305.4	-	-	2	-	1	2	2	-	-	3	2	2	-	2
C305.5	2	-	-	-	2	2	-	-	-	-	2	-	-	2
C305.6	-	2	-	2	-	-	1	-	-	-	-	-	2	-

4. Content beyond syllabus is thus identified based on the above. Plan for handling of CBS by internal/external resource person/ industrial visits are decided. This will be included in the class log book.
5. Lecture schedule should be prepared unit wise, as in the syllabus. Number of periods per unit and total number of periods planned should not be less than, periods allotted in the syllabus of Anna University.
6. Plan for additional Periods for IA tests, CBS, NPTEL delivery, Seminar, Quiz etc are to be incorporated in the lecture schedule. These periods are added exclusive of number of periods prescribed in the syllabus.
7. Plan for at least three assignments (with level of correlation), seminar topic, quiz questions discussed.
8. Separate tutorial sheets should be prepared and supplied to all students. Minimum two periods per unit to be planned, totally 10 tutorial periods. Minimum 2 tutorial questions should be set per unit, totally 10 tutorial questions.
9. Bright students and slow learners are to be identified, immediately after IA test - I. such students may be counselled suitably and the evidence for counselling to be recorded in the attendance cum assessment record. (Sign of students with date and time of counselling, to be strictly recorded and to be attached in the course file). Such counselling may be conducted after college hours.
10. For those students secured less than 60% in the IA Test, Makeup test should be conducted. Correspondingly root cause analysis for reasons of failure, corrective and preventive action, and follow up action taken should be filed properly.
11. Contents of course file to be reviewed periodically.
12. Lecture schedule, assignment questions, tutorial questions, course materials, AU questions (at least 5) should be supplied within one week after the commencement of classes.
13. Course material should be uploaded in the college website for student's reference.
14. Discrepancy in question paper, if any to be informed to the controller of examinations through web portal entry, after getting approval from the HoD & the Principal. Critically asked questions, if any to be discussed with the students of the next batch.
15. Immediately after the publication of the results, analysis are to be carried out and follow up action to be taken for the failures.
16. IA test question papers should be set as per the norms of the college, incorporating marks for learning outcomes and course outcomes. Common question papers should be set.
17. Certificate courses/Workshop/guest lectures may be planned inviting experts from industry/higher learning institutions.
18. After IA test, an objective type tests may be conducted (3 times in a semester-30 minutes duration-maximum 10 questions). Questions asked in GATE, TANCET, IES or any other Competitive examination can be taken as a reference. This is to facilitate the bright students to prepare for higher level of thinking and to enhance placement and higher studies opportunities.
19. IA test papers, assignment papers or any other papers submitted by the students, should be returned to the students within 5 days after correction. Sample paper should be suitably filed.
20. Long absentees of students if any to be informed to the parents through class coordinator, if such students attendance less than 75%.

V. Nay
Course coordinator

HoD/IT

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Internal Assessment Test - I Even Sem Time Table (Higher Semester) - 2021-22

S.No	Branch	YEAR	18.04.22	18.04.22	19.04.22	19.04.22	20.04.22	20.04.22
1	CIVIL	II						
		III	CE8601 & DSSE	CE8602&SA-II	CE8603&IE	CE8604&HE	EN8592&WWE	
		IV						
2	CSE	II	CS3452&TOC	CS3491&AI	CS3492&DBMS	CS3401&ALG	GE3451&EVS	CS3451&OS
		III	CS8651&IP	CS8691&AI	CS8601&MC	CS8602&CD	CS8603&DS	
		IV	GE8076&PE	CS8080&IRT				
3	EEE	II	EE3404&MPMC	EE3405&EM II	EE3401&TD	EE3403&MI	GE3451&EVS	EE3402&LIC
		III	EE8601&SSD	EE8602&PSG	EE8691&ES	EE8005&SEM	EE8002&DEA	
		IV	EE8015&EEG	EE8018&MCB				
4	ECE	II	EC3452&EMF	EC3401&NS	EC3491&CS	EC3451&LIC	GE3451&EVS	EC3492&DSP
		III	MG8591&POM	EC8651&TLRF	EC8691&MPMC	EC8652&WC	EC8095&VLSI	
		IV	GE8076&PE	EC8094&SATCOM				
5	MECH	II	ME3491&TOM	ME3451 &TE	ME3493 &MT-II	ME3492&H&P	GE3451&EVS	CE3491&SM
		III	ME8651&DTS	ME8691&CAD/CAM	ME8693& HMT	ME8692&FEA	ME8694&HP	
		IV	MG8591&POM	ME8094&CIM				
6	AGRI	II	AI3401&TES	AI3402&SWC	AI3403&SOM	CE3691&HWE	GE3451&EVS	ME3391&TD
		III						
		IV						
7	AI&DS	II	MA3391&PS	AL3452&OS	AL3451&ML	AD3491&FDS	GE3451&EVS	CS3591&CN
		III						
		IV						
8	IT	II	CS3452&TOC	CS3491&AI	CS3492&DBMS	IT3491&WE	GE3451&EVS	CS3451&OS
		III	IT8601&CI	CS8592&OOAD	IT8602&MC	CS8091&BDA	CS8092&CGM	
		IV	GE8076&PE	CS8080&IRT				

Exam cell Coordinator

Principal

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(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

DEPARTMENT OF INFORMATION TECHNOLOGHY

Assignment Question Paper

Assignment – 01			Date of Issue:	25.03.2022	Marks	10
Course code	CS8092	Course Title	COMPUTER GRAPHICS AND MULTIMEDIA			
Year	III	Semester	VI	Date of Submission:	04.04.2022	

Q.No	Questions	CO
1	Viewing Coordinate reference frame	C305.3
2	Window to Viewport coordinate transformation	C305.3

Mark Allocation

Rubrics	Marks Allocated	Marks obtained
Content Quality	6	6
Presentation Quality	2	2
Timely submission	2	2
Total marks	10	10

V. Dany
Name and Signature of the Faculty Incharge

HoD/IT

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Indra Ganesan College of Engineering
Manikandam, Trichy- 620012

Branch: IT	Internal Assessment-I	Year /Sem: III / VI
Date: 20.4.22 FN		Time: 1 hr 30 min
Subject Code/Name: CS8092-Computer Graphics and Multimedia		Max. Marks:50

Answer All the Questions

Part – A (10×2=20)

		CO's	K
1	What is meant by rendering?	1	K2
2	Define specular reflection.	1	K1
3	What is diffuse illumination?	1	K1
4	Write note on halftones.	1	K2
5	What is coefficient of reflection?	1	K1
6	Define Lambert's Cosine law.	1	K1
7	Draw the HLS double cone colour model.	1	K2
8	Define shear transformation.	2	K1
9	What is the need of homogenous coordinates?	2	K1
10	State the applications of viewing transformation.	2	K2

Part – B (2×10=20)

			CO's	K
11	a	Write in detail about phong model and warn model.	1	K2
		(OR)		
11	b	Calculate the pixel position along the circle with radius r=8 using DDA circle algorithm from (0,8) to point x=y.	1	K3
12	a	Briefly explain different colour models in detail.	1	K2
		(OR)		
12	b	Derive the viewing transformation matrix.	2	K2

Part – C (1×10=10)

			CO's	K
13	a	Digitize the line with end-points (3,15) to (-4,18) using Bresenham's line algorithm.	1	K3
		(OR)		
13	b	Explain the window to viewport coordinate transformation.	2	K2

Indra Ganesan College of Engineering
Manikandam, Trichy- 620012

Branch: IT	Internal Assessment-I	Year /Sem: III / VI
Date: 20.4.22 FN		Time: 1 hr 30 min
Subject Code/Name: CS8092-Computer Graphics and Multimedia		Max. Marks:50

Answer All the Questions

Part – A (10×2=20)

		CO's	K
1	What is meant by rendering?	1	K2
2	Define specular reflection.	1	K1
3	What is diffuse illumination?	1	K1
4	Write note on halftones.	1	K2
5	What is coefficient of reflection?	1	K1
6	Define Lambert's Cosine law.	1	K1
7	Draw the HLS double cone colour model.	1	K2
8	Define shear transformation.	2	K1
9	What is the need of homogenous coordinates?	2	K1
10	State the applications of viewing transformation.	2	K2

Part – B (2×10=20)

			CO's	K
11	a	Write in detail about phong model and warn model.	1	K2
		(OR)		
11	b	Calculate the pixel position along the circle with radius r=8 using DDA circle algorithm from (0,8) to point x=y.	1	K3
12	a	Briefly explain different colour models in detail.	1	K2
		(OR)		
12	b	Derive the viewing transformation matrix.	2	K2

Part – C (1×10=10)

			CO's	K
13	a	Digitize the line with end-points (3,15) to (-4,18) using Bresenham's line algorithm.	1	K3
		(OR)		
13	b	Explain the window to viewport coordinate transformation.	2	K2

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Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennai
NAAC Accredited, 2(F) Status Institution by UGC

Internal Assessment Test - I Retest Even Sem Time Table (Higher Semester) - 2021-22

S.No	Branch	YEAR	26.04.22	26.04.22	27.04.22	27.04.22	28.04.22	28.04.22
1	CIVIL	II						
		III	CE8601 & DSSE	CE8602&SA-II	CE8603&IE	CE8604&HE	EN8592&WWE	
		IV						
2	CSE	II	CS3452&TOC	CS3491&AI	CS3492&DBMS	CS3401&ALG	GE3451&EVS	CS3451&OS
		III	CS8651&IP	CS8691&AI	CS8601&MC	CS8602&CD	CS8603&DS	
		IV	GE8076&PE	CS8080&IRT				
3	EEE	II	EE3404&MPMC	EE3405&EM II	EE3401&TD	EE3403&MI	GE3451&EVS	EE3402&LIC
		III	EE8601&SSD	EE8602&PSG	EE8691&ES	EE8005&SEM	EE8002&DEA	
		IV	EE8015&EEG	EE8018&MCB				
4	ECE	II	EC3452&EMF	EC3401&NS	EC3491&CS	EC3451&LIC	GE3451&EVS	EC3492&DSP
		III	MG8591&POM	EC8651&TLRF	EC8691&MPMC	EC8652&WC	EC8095&VLSI	
		IV	GE8076&PE	EC8094&SATCOM				
5	MECH	II	ME3491&TOM	ME3451 &TE	ME3493 &MT-II	ME3492&H&P	GE3451&EVS	CE3491&SM
		III	ME8651&DTS	ME8691&CAD/CAM	ME8693& HMT	ME8692&FEA	ME8694&HP	
		IV	MG8591&POM	ME8094&CIM				
6	AGRI	II	AI3401&TES	AI3402&SWC	AI3403&SOM	CE3691&HWE	GE3451&EVS	ME3391&TD
		III						
		IV						
7	AI&DS	II	MA3391&PS	AL3452&OS	AL3451&ML	AD3491&FDS	GE3451&EVS	CS3591&CN
		III						
		IV						
8	IT	II	CS3452&TOC	CS3491&AI	CS3492&DBMS	IT3491&WE	GE3451&EVS	CS3451&OS
		III	IT8601&CI	CS8592&OOAD	IT8602&MC	CS8091&BDA	CS8092&CGM	
		IV	GE8076&PE	CS8080&IRT				

Exam cell Coordinator

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DEPARTMENT OF INFORMATION TECHNOLOGHY

ROOT CAUSE ANALYSIS

Name of the Faculty : V. Nancy
Degree & Program : B Tech / IT
IA Test : I/ II/ III/ Model

Course code & Name : CS8092 & Computer Graphics & Multimedia
Semester & Section : VI sem
University Exam/ Month & Year : APR / MAY – 2022

Target : –
Achieved : –

S.NO	ROLL NO	NAME OF THE STUDENT	CAUSES FOR FAILURE	CORRECTIVE ACTION TAKEN	PREVENTIVE ACTION TAKEN	FOLLOWUP STATUS	REMARKS OF THE HOD
–	–	–	–	–	–	–	–

V. Nancy
Signature of the Faculty

Signature of the HOD/ IT

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
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IQAC Academic Audit Form

ACADEMIC YEAR: 2021-2022 EVEN SEMESTER

Name of Department :	IT	Year / Sem :	3 / VI	No. of Students Registered :	29

Details of Examination : ~~IA Test -1~~ / IA Test -2 / IA Test -3 / Model Test

S.No.	Course Code	List of Reg.No Verified	Course Log Book Verified (Y / N)	Course File Verified (Y / N)	No of students Attended	No of Absentees	No of Failures	Pass %	Remarks
1.	IT8601	811218205004	Y	Y	29	–	4	86%	–
2.	CS8592	811218205011	Y	Y	29	–	3	89%	–
3.	IT8602	811218205014	Y	Y	29	–	0	100%	–
4.	CS8091	811218205017	Y	Y	29	–	1	96%	–
5.	CS8092	811218205002	Y	Y	29	–	2	93%	–
6	IT8076	811218205022	Y	Y	29	–	1	96%	–

Verified by

External Member Name and Signature:	Dr. M. Senthilkumar &
Internal Member Name and Signature:	Dr. B. KANISHA &

Overall Remarks:

HoD/ IT

IQAC Co-ordinator

Principal

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Internal Assessment Test Answer Book

Name	Dharshini. K			**Year/ Semester/Section**	III / VI
Batch No.	2021 - 2022	**Date/Session**	20.A.22/FN	**Department**	IT
Course code		**Course Title**			
Internal Assessment Test	**IAT 1** ☐	**IAT 2** ☑	**IAT 3** ☐	**Model** ☐	
Name and Signature of the Invigilator with date					

Instruction to the Student: Put tick mark to the question attended in the column against question.

Part A			Part B / Part C					Total Marks
Q. No.	✓	Marks	Q. NO.	✓	a Marks	✓	b Marks	
1	✓	2	11	✓	10			10
2	✓	2	12			✓	11	11
3	✓	1	13	✓	13			13
4	✓	1	14					
5	✓	2	15					
6	✓	1	16					
7	✓	2					Total	34
8	✓	2						
9	✓	1	49					
10	✓	2						
Total		16	Grand Total				Name and Signature of the Examiner with date	

To be filled by the examiner

Course Outcomes	1	2	3	4	5	6	Total
Marks allotted	35	15					50
Marks Obtained	35	14					49

IQAC Audit - Remarks

Name and Signature of the IQAC member

Dr. G. Balakrishnan, M.E., Ph.D
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Manikandam, Trichy-620 012.