

JOGESHWARI EDUCATION SOCIETY'S

COLLEGE OF COMMERCE SCIENCE & INFORMATION TECHNOLOGY

(AFFILIATED TO UNIVERSITY OF MUMBAI)

JES Education Complex, Caves Road, Arvind Gandbhir Campus, Jogeshwari (East), Mumbai - 400 060. **Tel:** 022 2824 5527 / 83568 67783 | **Email:** jescollegecom@gmail.com | **Web:** jescollege.edu.in

INDEX

List of Books and chapters in edited volume and books published and papers published in national / international conference in year 2021-2022

SR.NO.	NAME OF THE FACULTY	TITLE OF THE BOOK	YEAR OF PUBLICATION	PAGE NO
1	Ms. Anjali Gaikwad	COMPUTER GRAPHICS AND ANIMATION (SYBSC.IT SEM IV)	2021-2022	2-5
	13	TWO DIMENSIONAL TRANSFORMATIONS	24.0	





JOGESHWARI EDUCATION SOCIETY'S

COLLEGE OF COMMERCE SCIENCE & INFORMATION TECHNOLOGY

JES Education Complex. Caves Road, Arvind Gandbhir Campus, Jogeshwari (East), Mumbai - 400 060.

Tel: 022 2824 5527 / 83568 67783 | Emeil : jescollege.com@gmail.com | Web : jescollege.edu.in

ACADEMIC YEAR 2021 - 2022





S.Y.B.Sc. (IT) SEMESTER - IV (CBCS)

COMPUTER GRAPHICS AND ANIMATION

SUBJECT CODE: USIT405



PRINCIPAL

JOGESHWARI EDUCATION SOCIETY'S COLLEGE OF COMMERCE SCIENCE & INFORMATION TECHNOLOGY Caves Road, Jogeshwari (E), Mumbai-400 060.

© UNIVERSITY OF MUMBAI

Prof. Suhas Pednekar

Vice Chancellor University of Mumbai, Mumbai.

Prof. Ravindra D. Kulkarni

Prof. Prakash Mahanwar

Pro Vice-Chancellor,

Director

University of Mumbai.

IDOL, University of Mumbai.

Programe Co-ordinator

Shri. Mandar Bhanushe

Head, Faculty of Science and Technology,

IDOL, Univeristy of Mumbai

Course Co-ordinator

: Ms. Gouri Sawant

Assistant Professor B.Sc.I.T, IDOL, University of Mumbai.

Editor

COLLEGE

OMMERCE.

& INFORMA

MBAI-4

: Dr. Ghayathri

Associate Professor in Computer Science (PG), Kongu Arts and Science College (Autonomus)

Course Writers:

: Ms. Binita Thakkar

Assistant Professor,

VIVA College of Arts, Commerce and Science, Virar W

: Ms. Rohini Desai

Assistant Professor, Vidyalankar School of Information Technology

: Ms. Priti Pathak

Assistant Professor, Mulund College of Commerce, Sarojni Naidu Road, Mulund(West), Mumbai-80

: Ms. Anjali Gaikwad

Assistant Professor, JES college of commerce, science and

Information technology

: Ms. Kshitija Palav

Assistant Professor, VIVA College of Arts Commerce and Science.

Virar(W). Tal: Vasai, Dist: Palghar

December 2021, Print I

Published by

Director

Institute of Distance and Open Learning, University of Mumbai, Vidyanagari, Mumbai - 400 098.

PRINCIPAL

DTP COMPOSED AND PRINTED BY

Mumbai University Press,

Vidyanagari, Santacruz (E), Mumbai - 400098.

JOGESHWARI EDUCATION SOCIETY COLLEGE OF COMMERCE SCIENCE & INFORMATION TECHNOLOGY

Caves Road, Jogeshwari (E), Mumbai-400 060.

CONTENTS

Chapter No.		Title		Page No
1,		1, 10		
Unit 1				
1.	Introduction To Computer Graphics			1
2.	Display Technologies			15
3.	Scan Conversion Line And Circle			29
4.	Scan Conversion - Line And Polygon	Clipping		45
Unit	п			
5.	Two Dimensional Transformations			57
6.	Three Dimensional Transformations			75
Unit	m e			
7.	Viewing In 3d			99
8.	Light: - Light: Radiometry, Transport,	Equation, Photometry		127
9.	Color: - Colorimetry, Color Spaces, C	Chromatic Adaptation,		
	Color Appearance		· ·	143
Uni	tIV			
10.	Visible-Surface Determination And Plane Curves And Surfaces			157
11.	Plane Curves And Surfaces			171
Uni	t V			
12.	Computer Animation			186
13.	Image Manipulation And Storage			199



PRINCIPAL,

JOGESHWARI EDUCATION SOCIETY'S COLLEGE OF COMMERCE SCIENCE & INFORMATION TECHNOLOGY Caves Road, Jogeshwari (E), Mumbai-400 060.

मुंबई विद्यापीठ

दुर व मुक्त अध्ययन संस्था

डॉ. शंकर दयाल शर्मा भवन, विद्यानगरी, सांताकुझ (पूर्व), मुंबई - ४०० ०९८.

Website: mu.ac.in/distance-open-learning

"स्वर्ण महोत्सवी वर्ष २०२०-२०२१"



e-mail : director@idol.mu.ac.in

University of Alumbai INSTITUTE OF DISTANCE AND OPEN LEARNING

Dr. Shankar Dayal Sharma Bhavan, Vidyanagari, Santacruz (East), Mumbal - 400 098.

Tel. No. - 022 2652 7082

"Golden Jubilee Year 2020-2021"

IDOL/SMU62669 1 2021



Ms. Binita Thakkar Assistant Professor

A/2, Gokul Apartment, Irani Road, Behind IDBI Bank, Dahanu Road (W) - 401602.

Dist: Palghar. State: Maharashtra.

To

Ms. Anjali Ambadas Gaikwad Assistant Professor D 403 Raj palace apartment majaswadi

Jogeshwari east Mumbai-60

To

Ms Priti HareKrishna Pathak

Assistant Professor

Shree Samarth CHS, Flat No:- C-16/1:3,

Sector: 15, Airoli, Navi Mumbai: - 400708

Mrs Rohini Desai

Assistant Professor

Flat No - 204, Shree Samarth Plaza, Kopar Road Behind Apurva Hospital, Dombivli

West - 421202

To

Mrs. Kshitija Abhish Palav(Mane)

Assistant Professor

A-301, Shree Samarth Apt, Swami Samarth

Nagar, Nana Nani Park Road. Opp-Ganesh

Tower, Phoolpada. Virar(East).-

401305.Tal: Vasai. Dist: Palghar. State:

Maharashtra



It's my great pleasure to inform that you have been appointed as course writer for preparing Self Learning Material (SLM) in the Course B.Sc.I.T for Computer Graphics and Animation, Semester IV.

Individual faculty is requested to prepare the study material as under:-

Module / Unit No.	No of Chapters	Name of the course writer
Unit - J	4	Ms, Binita Thakkar
Unit - II	2	Ms, Anjali Ambadas Gaikwad
Unit - III	3	Ms Priti HareKrishna Pathak
Unit - IV	2	Mrs Rohlni Desai
Unit - V	2	Mrs. Kshitija Abhish Palav(Mane)

Detailed syllabus and Format of the respective units is enclosed for information. Further, entire syllabus should not exceed 8 sub- units/chapters and same will be of 3500 to 5000 words. Course writers are requested to prepare their respective units duly taking into consideration the standard guidelines of University of Mumbai with regard to Plagiarism Guiding principles are given below for reference.