Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DCS-501	**Title of the Course**	Java Programming	**L**	**T**	**P**	**C**
Year	3rd	**Semester**	5th	**3**	**1**	**0**	
Pre-Requisite		**Co-requisite**					
Course Objectives	1.To be familiar with Programming language						

Course Outcomes	
CO1	Introduction of java and Able To Find And Understand Java Tokens, Java Statements, Constants, Variables, Data Types.
CO2	Use various programming, creating threads, constructs of object oriented language.
CO3	Apply principles of object oriented programming to model/design real world problems.
CO4	Use exception handling mechanism to develop fault tolerant applications.
CO5	Analyze the concepts of multi-threaded programming and synchronizationUse GUI controls and event handling mechanism to develop interactive window/desktop applications. Analyze need of applets, swings to develop simple web application.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	An Overview of JAVA, Data Types & Control statements	Introduction to Object Oriented Programming (two paradigms, abstraction, the three oops principles) creation of JAVA,JAVA Applets & applications, security & portability. Integer, floating point type, character, Boolean, all Operators, JAVA's selection statements, iteration and jump statement	8	CO1
2	Introducing Classes, Methods & Inheritance	Class fundamentals, declaring objects, overloading methods & constructs, access control, nested and inner classes, exploring the string class. Inheritance basics, member access and inheritance. Overriding: Method overriding, super keyword, polymorphism and virtual function.	8	CO2
3	Multithreaded Programming and Exception handling	Multi Threading: Creating Thread, Extending a thread class, Stopping and Blocking a thread, Life cycle of thread, Using thread method, Thread exceptions, Thread priority, Synchronization threads. Concept of Exception handling, benefits, exception hierarchy, usage of try, catch & throw, built in exception, string handling, exploring java.util.	8	CO3
4	Packages and Interfaces	Defining, creating and accessing a package, understanding CLASSPATH, importing packages, difference between Class & Interfaces, defining interface, implementing and applying interface, variable in interface and extending interface, exploring java.io	8	CO4
5	Event Handling , Applets	Events, Events sources, Event classes, Event Listeners, Delegation event model, handling mouse and key board events, Adapter classes. Concept of Applets, difference between applets and application, life cycle of an applet, types of applets, creating applets, passing parameters to applets	8	CO5

References Books:

1. Balagurusamy E, “Programming in JAVA”, TMH, Delhi.
2. K. N. King -: Java programming from the beginning

e-Learning Source:

https://www.geeksforgeeks.org/java/

https://www.w3schools.com/java/

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
CO1	2	3	1	-	1	-	-	-	-	1	-
CO2	1	1	-	-	2	-	-	-	-	3	-
CO3	1	-	-	3	-	-	-	-	-	1	2
CO4	-	-	1	2	3	-	-	-	-	-	-
CO5	1	1	-	-	-	-	-	-	-	3	2

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD

Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DCS-502	**Title of the Course**	Computer Graphics and Animation	**L**	**T**	**P**	**C**
Year	3rd	**Semester**	5th	**3**	**1**	**0**	
Pre-Requisite		**Co-requisite**					
Course Objectives	1. To be familiar with Graphics and Animation						

Course Outcomes	
CO1	Design And Implement Model And Viewing Transformations.
CO2	The Graphics Algorithms to draw line and circle
CO3	Boundary Fill, Flood Fill,Scan Line Polygon Fill Algorithm are algorithms used for the purpose of coloring figures in computer graphics.
CO4	Interactive Render Loop With A 3d Graphics Api .
CO5	Manipulation And Display Of Pictorial InformationImplement Three-Dimensional (3d) Computer Images, Such As Animated Films

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	OVERVIEW OF GRAPHICS SYSTEM	Cathode Ray Tubes, Random Scan and Raster Scan Monitors, Colour CRT Monitors, DVST, Plasma Panel Displays, LED and LCD Monitors, Laser Devices, Three dimensional monitors, Hard copy devices - Printer, Plotters, Display processes Random-Scan systems, DVST system, Raster Scan System.	8	CO1
2	INPUT/OUTPUT PRIMTIVES :	Points and lines, Line drawing Algorithms, DDA Algorithm, Presentations Line Algorithm, Anti-aliasing Lines, circle generating Algorithm - Circle equation, Presentations circle Algorithm.	8	CO2
3	ATTRIBUTES OF OUTPUT PRIMITIVES :	Line styles, Line type, Line width, Line colour, Area filling- Scan line Algorithm, Boundary fill Algorithm, Flood fill Algorithm.	8	CO3
4	INTERACTIVE INPUT METHODS :	Touch panel, Light pens, Graphics tablets, Joy sticks, Track ball, Mouse, Voice systems, Logical classification of input devices, Locator devices, Stroke devices, String device, Valuator devices, Choice device, Pick device.	8	CO4
5	ANIMATION:	Introduction and Principles of Animations, Power of Motion, Animation Techniques, Animation File Format, Making animation for Rolling Ball, making animation for a Bouncing Ball, Animation for the web, GIF, Plug-ins and Players, Animation tools for World Wide Web.	8	CO5

References Books:

1. Computer Graphics - Hearn & Baker
2. Computer Graphics – Bresenham
3. Prabhat K. and Heigh, Kiran Thakrar, John F. Multimedia systems design Prentice hall of india

e-Learning Source:

https://www.geeksforgeeks.org/introduction-to-computer-graphics/

https://www.w3schools.com/graphics/

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
CO1	3	2	-	1	1	-	-	-	-	-	-
CO2	1	1	-	-	-	-	-	-	2	3	-
CO3	-	1	-	-	-	-	-	-	3	2	-
CO4	-	2	-	-	-	-	-	-	3	1	-
CO5	-	-	-	-	3	-	-	-	2	1	-

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD

Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DCS-503	**Title of the Course**	e-Commerce and ERP	**L**	**T**	**P**	**C**
Year	3rd	**Semester**	5th	**3**	**1**	**0**	
Pre-Requisite		**Co-requisite**					
Course Objectives	1. To develop the skill of E-commerce and ERP						

Course Outcomes	
CO1	The fundamental principles of e-Business and e- Commerce and the role of Management.
CO2	The underlying used technologies with emphasis on Internet Technologies.
CO3	The application of tools and services to the development of small scale e-Commerce applications .
CO4	To understand the different types of business model of e-commerce.
CO5	To understand the concepts of supply chain management (SCM). To understand the concepts of Enterprise resource planning(ERP).

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	ELECTRONIC COMMERCE:	Rverview, Definitions, Advantages and Disadvantages of Ecommerce, threats of E□commerce, Managerial Prospective, Rules and Regulations For controlling E□commerce, Cyber Laws.	8	CO1
2	TECHNOLOGY	Relationship Between E-Commerce and Networking, Different Types of Networking For E-commerce, Internet, Internet and Extranet, EDI System Wireless Application Protocol : Definition, Hand Held Devices, Mobility and Commerce, Mobile computing, Wireless Web, Web Security, Infrastructure, Requirement For E□Commerce	8	CO2
3	BUSINESS MODELS OF E-COMMERCE :	Model based on transaction, Type, Model Based on Transaction Party -B2B, B2C,C2B, C2C, E-Governance.	8	CO3
4	SUPPLY CHAIN MANAGEMENT :	-logistics, Supply Chain Portal, Supply Chain Planning Tools (SCP Tools), E□PAYMENT MECHANISM :Payment through card system, E-Cheque, E-Cash, E□Payment Threats and protections, E-MARKETING :Home-Shopping, E-Marketing, Tele-Marketing.	8	CO4
5	ENTERPRISE RESOURCE PLANNING (ERP) :	Feature, capabilities and overview of commercial software, re-engineering work pressure of IT applications, Business Process Redesign, Knowledge Engineering and data warehouse.	8	CO5

References Books:

1. Greenstein and Feinman, “E-Commerce”, TMH, Delhi.
2. Ravi Kalakota, Andrew Whinston, “Frontiers of Electronic Commerce”, Addision Wesley, Delhi

e-Learning Source:

https://www.tutorialspoint.com/e_commerce/index.html

https://www.geeksforgeeks.org/e-commerce/

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
CO1	1	-	-	-	2	3	-	2	-	-	-
CO2	1	-	-	-	2	3	-	2	-	-	-
CO3	1	-	-	-	2	3	-	2	-	-	-
CO4	1	-	-	-	2	3	-	2	-	-	-
CO5	1	-	-	-	2	3	-	2	-	-	-

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD

Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DCS-504	**Title of the Course**	Database Management System	**L**	**T**	**P**	**C**
Year	3rd	**Semester**	5th	**3**	**1**	**0**	
Pre-Requisite		**Co-requisite**					
Course Objectives	1 To be familiar with Database Management System						

Course Outcomes	
CO1	Students become familiar with DBMS and its various terminologies. Knowledge of various features and functionalities of using DBMS.
CO2	Students are familiarized with the concept of 3 level dbms architecture and different views of users..
CO3	Develop understanding of data models and their role in database designing.
CO4	Familiarized with the concept of E-R model , various keys, attributes, and constraints
CO5	Knowledge of SQL and various commands of SQL. Introduced with the concept of database integrity and concurrency control. Develop the ability to write simple queries in SQL

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	OVERVIEW OF DBMS	Data, Representation of Data, Record, Data item, Field name, File, Data and Information, Database (Properties), Benefits of Database approach, Database Management System (Capabilities, Advantages, Disadvantages) and Functions of DBMS. Basic DBMS terminology (Data items, Entities and Attributes, Schema and Subschema, Database users, Instance and Schemas).	8	CO1
2	Three views of Data	Three views of Data (External View, Conceptual View, Internal View), Three level architecture of DBMS, Data Independence. Basic concepts, Advantages of a DBMS over file processing system, Data Abstraction, Database Languages, Data Independence.	8	CO2
3	DATA MODELS :	Define data model, classify data model, Local Models :Object and Record based- Object Oriented Model- Entity relationship Models - Entity sets and relationship sets- Attributes -Keys in entity and relationship sets : (a)Super Key (b) Candidate Key (c) Primary Key (e) Unique Key ,Mapping constraints. Object based logical models, E-R model, E-R diagram, Notations, Hierarchical Model (Advantage, Disadvantages), Network model (Advantages, Disadvantages),Relational Model (Advantages, Disadvantages), Object oriented database, Object oriented relational database.	8	CO3
4	STRUCTURE QUERY LANGUAGE (SQL)	SQL, Object naming conventions, Object naming guidelines, Data types (Varchar 2, Number, Long, Date, Raw, Long Raw, Row id, Char etc.), Tables, Views, Indexes, SQL Command :-DESCRIBE, SELECT, COLUMN ALIASES, CONCATENATION OPERATOR, DISTINCT CLAUSE, ORDER BY, WHERE CLAUSE, LOGICAL OPERATIONS, SQL OPERATORS.	8	CO4
5	DATABASE IMPLEMENTATION:	Database integrity, Locking techniques for concurrency control, Concurrency control based in Time Stamp Ordering, Multi version Concurrency control techniques, Database Security	8	CO5

References Books:

1. Fundamental of DBMS by Rameer Elmasri & S B Navathe, Pearson Publication

2. A First Course In Database Systems by Jeffrey D. Ullman, Pearson Publication.

e-Learning Source:

https://www.w3schools.in/dbms/intro

https://www.w3schools.blog/dbms-tutorial

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
CO1	1	2	2	1	2	-	-	-	-	-	-
CO2	-	1	1	-	2	-	-	-	-	-	-
CO3	-	-	1	1	2	1	-	-	-	-	-
CO4	-	-	-	2	2	1	-	-	-	-	-
CO5	-	-	-	-	2	-	-	-	1	3	-

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	**Sign & Seal of HoD**

Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DCS-505	**Title of the Course**	Cyber Law and Information Security	**L**	**T**	**P**	**C**
Year	3rd	**Semester**	5th	**3**	**1**	**0**	
Pre-Requisite		**Co-requisite**					
Course Objectives	1 To provide skill for network security and knowledge of cyber law						

Course Outcomes	
CO1	Classification and their benefits of information security and different types of cyber laws .
CO2	To understand the concepts of history of information system.
CO3	To understand the concepts of security in mobile and wireless computing.
CO4	To understand the different security threats to E-commerce
CO5	Analyze the different Security Attacks, Services, and Mechanisms work security models.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Cyber law	Classification and their benefits Information Security & Law, IPR, Patent Law, Copyright Law, Legal Issues in Data mining Security, Building Security into Software Life Cycle Ethics- Ethical Issues, Issues in Data and Software Privacy Cyber Crime Types & overview of Cyber Crimes.	8	CO1
2	History of Information Systems	History of Information Systems and its Importance, basics, Changing Nature of Information Systems, Need of Distributed Information Systems, Role of Internet and Web Services, Information System Threats and attacks, Classification of Threats and Assessing Damages	8	CO2
3	Security in Mobile and Wireless Computing	Security Challenges in Mobile Devices, authentication Service Security, Security Implication for organizations, Laptops Security Basic Principles of Information Security, Confidentiality, Integrity Availability and other terms in Information Security, Information Classification and their Roles.	8	CO3
4	Security	Security Threats to E Commerce, Virtual Organization, Business Transactions on Web, E Governance and EDI, Concepts in Electronics payment systems, E Cash, Credit/Debit Cards.	8	CO4
5	Model of Cryptographic Systems	Model of Cryptographic Systems, Issues in Documents Security, System of Keys, Public Key Cryptography, Digital Signature, Requirement of Digital Signature System, Finger Prints, Firewalls, Design and Implementation Issues. Analyzing the model of cryptographic system,issues in document security.	8	CO5

References Books:

1. Godbole," Information Systems Security", Willey

2. Schou, Shoemaker, " Information Assurance for the Enterprise", Tata McGraw Hill

e-Learning Source:

https://www.w3schools.com/cybersecurity/

https://www.w3schools.in/cyber-security

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
CO1	1	2	2	-	-	3	-	2	-	-	-
CO2	2	1	2	-	-	3	-	2	-	-	-
CO3	1	2	2	-	-	3	-	2	-	-	-
CO4	2	1	2	-	-	3	-	2	-	-	-
CO5	1	2	2	-	-	3	-	2	-	-	-

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	**Sign & Seal of HoD**

Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DIM-501	**Title of the Course**	Industrial Management and Entrepreneurship	**L**	**T**	**P**	**C**
Year	3rd	**Semester**	5th	**3**	**1**	**0**	
Pre-Requisite		**Co-requisite**					
Course Objectives	1 To develop the skills of Management & Entrepreneurship						

Course Outcomes	
CO1	The course will increase the skills in the students like communication skills, presentation, Human skills, Leadership skills, Managerial skills etc. after the completion of the course.
CO2	Increase students' capabilities and confidence to handle administrative, managerial and financial activities.
CO3	The course will assist in developing intellectual skills like creative thinking, Decision making, Leadership, Brain Storming, Motivation, etc.
CO4	The course will introduce skills in the students like team work, leadership skills, communication skills, body languages, positive attitude, etc.
CO5	This course is designed to develop understanding of various functions of management, role of workers and engineers and providing knowledge ab

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Principles of Management	Definition of management, Administration organization, Functions management, Planning, Organizing, Co-ordination and control, Structure and function of industrial organizations, Leadership- Need for leadership, Factors to be considered for accomplishing effective leadership, Communication -Importance, Processes, Barriers to communication, Making communication, Effective, formal and informal communication, Motivation - Factors determining motivation, Positive and negative motivation, Methods for improving motivation, Incentives, Pay promotion and rewards, Controlling - Just in time, Total quality management, Quality circle, Zero defect concept. Concept of Stress Management	8	CO1
2	Human Resource Development and Human and Industrial Relations:	Introduction, Staff development and career development, Training strategies and methods. Human relations and performance in organization, Understand self and others for effective behavior, Industrial relation and disputes, Characteristics of group behavior and Trade unionism, Mob psychology, Labour welfare, Workers participation in management	8	CO2
3	Personnel and Financial Management	Responsibilities of human resource management - Policies and functions, Selection - Mode of selection -Procedure - training of workers, Job evaluation and Merit rating - Objectives and importance wage and salary administration - Classification of wage, Payment schemes, Components of wage, Wage fixation. Fixed and working capital - resource of capital, Shares, types preference and equity shares, Debenture types, Public deposits, Factory costing, Direct cost, Indirect cost, Factory overhead, Fixation of selling price of product, Depreciation□Causes, Methods.	8	CO3
4	Material Management, Labour, Industrial and Tax Laws:	Objective of a good stock control system - ABC analysis of inventory, Procurement and consumption cycle, Reorder level, Lead time, Economic order quantity, Purchasing procedure, Stock keeping, Bin card. Importance and necessity of industrial legislation, Types of labour laws and dispute, Factory Act 1948, Payment of Wages Act 1947, Employee State Insurance Act 1948, Various types of taxes - Production Tax, Local Tax, Trade tax, Excise duty, Income Tax.	8	CO4
5	Entrepreneurship Development and Intellectual Property Rights:	Concept of entrepreneurship, need of entrepreneurship in context of prevailing employment conditions of the country. Successful entrepreneurship and training for entrepreneurship development. Idea of project report preparation. Introduction to IPR (Patents, Copy Right, Trade Mark), Protection of undisclosed information, Concept and history of patents, Indian and International Patents Acts and Rules, Patentable and No patentable invention including product versus Process.	8	CO5

References Books:

1. Industrial Management & Entrepreneurship Development: O. P. Khanna, Dhanpat Rai & Sons Publication

2. Industrial Management & Entrepreneurship Development: Mohd Shuaib Siddiqui & Aftab Alam

e-Learning Source:

https://www.skkatariaandsons.com/view_book.aspx?productid=8410

https://www.ramauniversity.ac.in/pdf/2021/generic/fcm/industrial-management-entrepreneurship-development.pdf

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
CO1	-	-	-	-	1	-	-	-	1	-	-
CO2	-	-	3	-	1	-	-	-	1	-	-
CO3	-	3	-	-	-	-	-	-	1	1	-
CO4	-	-	-	-	-	-	-	-	-	1	-
CO5	2	2	-	2	-	-	-	2	-	1	-

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD

Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DCS-551	**Title of the Course**	Java Programming Lab	**L**	**T**	**P**	**C**
Year	III	**Semester**	V	**1**		**3**	
Pre-Requisite		**Co-requisite**					
Course Objectives	To be familiar with object oriented programming language and to help develop the project.						

Course Outcomes	
CO1	Simple java program using control and looping statements.
CO2	Simple java program to demonstrate use of command line argument in java.
CO3	Simple java program to define a class,describe its constructor ,overload the constructor..
CO4	Simple java program to define a instance methods for setting and retrieving values of instance variables.
CO5	Simple java program for dynamic method invocation .
CO6	Simple java program use of nested else.

Practical No.	List of Practicals	Contact Hrs.	Mapped CO
1	Simple Java Program using control and looping statements.	03	CO1
2	Write a simple Java program to demonstrate use of command line arguments in Java	03	CO2
3	Write a Java Program to define a class, describe its constructor, overload the constructors and instantiate its object	03	CO2
4	Write a Java Program to define a class, define instance methods for setting and retrieving values of instance variables and instantiate its object	03	CO3
5	Write a Java Program to define a class, define instance methods and overload them and use them for dynamic method invocation	03	CO3
6	Write a Java Program to demonstrate use of sub class	03	CO3
7	Write a Java Program to demonstrate use of nested class	03	CO4
8	. Write a Java Program to practice Use of single Dimensional array Use of multidimensional array	03	CO-4
9	Write a Java Program to implement array of objects	03	CO-4
10	WAP to create a thread that implement the Runable interface	03	CO-5
11	WAP to create a menu using the frame	03	CO-5
12	WAP to create a class component that show controls and event handling on that controls (math calculation)	03	CO-5
13	Write a Java Program to implement Applet	03	CO-5

References Books:

1. Balagurusamy E, “Programming in JAVA”, TMH, Delhi.
2. K. N. King -: Java programming from the beginning

e-Learning Source:

WWW.W3school.com

www.javatpoint.com

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3	PSO4
CO1	1	2	-	1	2	-	-	-	-	3	2				
CO2	1	2	-	1	2	-	-	-	-	3	2				
CO3	1	2	-	1	2	-	-	-	-	3	2				
CO4	2	1	-	2	1	-	-	-	-	3	2				
CO5	2	1	-	2	1	-	-	-	-	3	2				
CO6	1	2	-	1	2	-	-	-	-	3	2				

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD

Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DCS-552	**Title of the Course**	Computer Graphics and Animation Lab	**L**	**T**	**P**	**C**
Year	III	**Semester**	V	**1**		**2**	
Pre-Requisite		**Co-requisite**					
Course Objectives	To familiar with Graphics and animation technique & algorithm						

Course Outcomes	
CO1	Implement Line drawing using C++
CO2	Implement DDA algorithm for line drawing using C++
CO3	Implement Circle drawing using C+ +
CO4	Implement Bresennham's algorithm for line drawing
CO5	Implement to fill coler in triangle,cirlce,polygon
CO6	Able to create an animation to indicate a ball bouncing and create an animation to represent the growing moon.

Practical No.	List of Practicals	Contact Hrs.	Mapped CO
1	Implement DDA algorithm for line drawing	02	CO1
2	Implement Bresennham's algorithm for line drawing	02	CO2
3	Implement DDA algorithm for circle drawing	02	CO2
4	Implement Bresennham's algorithm of circle drawing	02	CO3
5	Implement Flood fill algorithm for Polygon filling	02	CO3
6	Implement scan-line algorithm for polygon filling.	03	CO4
7	Procedure to create an animation to represent the growing moon.	02	CO4
8	.Procedure to create an animation to indicate a ball bouncing on steps	02	CO-4
9	Write and implement program for rotation about an arbitrary point.	02	CO-5
10	Write a program to draw a curve using Bezier's algorithm.	02	CO-5

References Books:

1. Computer Graphics - Hearn & Baker
2. Computer Graphics – Bresenham
3. Prabhat K. and Heigh, Kiran Thakrar, John F. Multimedia systems design Prentice hall of india

e-Learning Source:

https://www.javatpoint.com/computer-graphics-tutoria

https://www.geeksforgeeks.org/introduction-to-computer-graphics/

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3	PSO4
CO1	1	-	-	-	-	-	-	-	2	3	-				
CO2	1								3	2	1				
CO3		1							2	3					
CO4	2	1							3	3					
CO5		1							3	2					
CO6	1	1							2	3					

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	**Sign & Seal of HoD**

Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DCS-554	**Title of the Course**	Database Management System Lab	**L**	**T**	**P**	**C**
Year	III	**Semester**	V	**1**		**2**	
Pre-Requisite		**Co-requisite**					
Course Objectives	The main objective is to develop, maintain and removal of Data Base.						

Course Outcomes	
CO1	Introduction to SQL,statement
CO2	Design and implement a database commands such as insert,delete,update,etc for a given problem.
CO3	Formulate a query to retrieve information from database
CO4	To implement database security and maintenance.
CO5	Normalize a database.
CO6	Applying enforce integrity constraints on a database.

Practical No.	List of Practicals	Contact Hrs.	Mapped CO
1	Performing function of SQL like Creating a database	02	CO1
2	Creating a table	02	CO2
3	Specifying relational data types	02	CO2
4	Specifying constraints	02	CO3
5	Creating indexes	02	CO3
6	Table and Record Handling INSERT statement Using SELECT and INSERT together	02	CO4
7	DELETE, UPDATE, TRUNCATE Statement. DROP, ALTER statement	02	CO4
8	. Retrieving Data From a Database The SELECT statement Using the WHERE clause Using Logical Operators in the WHERE clause	02	CO-4
9	Using In, BETWEEN, LIKE, ORDER BY, GROUP BY & HAVING clause	02	CO-5
10	Using Aggregate Functions Combining Tables Using JOINS	02	CO-5

References Books:

1. Fundamental of DBMS by Rameer Elmasri & S B Navathe, Pearson Publication
2. A First Course In Database Systems by Jeffrey D. Ullman, Pearson Publication.

e-Learning Source:

www.w3school.com

www.javatpoint.com

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3	PSO4
CO1	1	2								3					
CO2	2									3	1				
CO3	1	3							1	2	1				
CO4	1	2							1	3					
CO5	1	1			2					3					
CO6	1	1			2	1	1			3	1				

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD

Integral University, Lucknow

Effective from Session: 2018-19							
Course Code	DCS-555	**Title of the Course**	Mini Project	**L**	**T**	**P**	**C**
Year	III	**Semester**	V	**1**		**3**	
Pre-Requisite		**Co-requisite**					
Course Objectives	Students should undergo an industrial training during their summer vacation and learn to make some small project which preferably should be a working model of their thoughts based on their subject of choice. They will be assigned a faculty guide who would be the supervisor and evaluator of their work.						

Course Outcomes	
CO1	Students get a glimpse of the real world problems and challenges that need IT based solutions.
CO2	Students undergo an industrial training for a period of 30 to 45 days.
CO3	Develop an awareness of several domain areas where IT can be effectively used.
CO4	Ability to develop their own small project that could be implemented successfully.
CO5	Learn the basics of preparing the documentation of a project.
CO6	Develop the ability to present their contents through improved communication skills.

PO-PSO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3	PSO4
CO1		1	1	2			1			2	2				
CO2				1						3	2				
CO3		2	2	1			1			1					
CO4		2	1	3	3						1				
CO5		1		2						2	3				
CO6							3			1	2				

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	**Sign & Seal of HoD**