Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Computer Science and Engineering
3CS2-01 Advanced Engineering Mathematics

List of Course Outcomes

After completing this course the student will be able to:

CO 1: Implement numerical difference method, interpolation techniques, numerical differentiation and integration.

CO 2: Find solutions for first and second order differential equations, polynomial and transcendental equations.

CO 3: Understand the Laplace Transformation concept to utilize it in real world applications.

CO 4: Solve field problems by using Fourier Transformation.

CO 5: Exercise the use of Z-transformation and its applications to different equations.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
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II Year-III Semester
B.Tech. Computer Science and Engineering
3CS1-02 Technical Communication

List of Course Outcomes

After completing this course the student will be able to:

CO 1: Present effective technical communication skills through listening, speaking, reading and writing with the help of different tools.

CO 2: Analyze, organize and summarize technical documents by critically reading them.

CO 3: Implement grammar, technical writing and editing skills to write effective academic and technical documentations.

CO 4: Sharply utilize relevant scientific content to write reports, project proposals and technical articles.

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II Year-III Semester
B.Tech. Computer Science and Engineering
3CS3-04-: Digital Electronics

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Different type of number system and their conversion, Basic logic Gates and Boolean algebra, various type of code and their inter conversion.

CO2: Min term, Max term, SOP, POS Minimization of Boolean expressions uses Karnaugh map and Mc Cluskey method.

CO3: Know about the logic families and realization of logic gate.

CO4: Design and analyze combinational and sequential circuit.

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II Year-III Semester
B.Tech. Computer Science and Engineering
3CS4-05: Data Structure and Algorithm

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Describe basic concepts of Stack and its applications.

CO2: Describe basic concepts of Function, Queue and Link-list.

CO3: Design tree based data structures such as Binary Tree, BST, AVL Tree , Searching and Sorting techniques .

CO4: Design and Implement graph and hashing based data structure.

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II Year-III Semester
B.Tech. Computer Science and Engineering
3CS4-06: Object Oriented Programming

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Relate the different programming paradigms, Characteristics, Concepts of OOP and their structure.

CO2: Compare dynamic memory management techniques and apply using pointers, constructors, destructors, friend function.

CO3: Describe the concept of function overloading, operator overloading, virtual functions and polymorphism to solve complex problems

CO4: Classify inheritance with the understanding of early and late binding and design solutions

CO5: Model solutions for exception handling and demonstrate the templates and file handling.

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II Year-III Semester
B.Tech. – Computer Science and Engineering
3CAI4-23: Software Engineering

List of Course Outcomes

After completion of the course, students would be able to:

CO1: Understand Software Engineering lifecycle by understanding requirement specifications, verifications and validations.

CO 2: Analyze varying factors for Software Project Management through Estimation models and risk analysis.

CO 3: Examine the requirements to generate appropriate prototypes and data dictionaries along with various models and diagrams.

CO 4: Examine the various design fundamentals and development solutions with detailed idea of designing documentation.

CO 5: Work with a better understanding of Object oriented analysis and design to demonstrate the Software Project Management Skills.

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II Year-III Semester
B.Tech. Computer Science and Engineering
3CS4-21 : Data Structures and Algorithms Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Understanding an array storage concept and illustrate the concept of row major and column major array storage.

CO 2: Understanding of Depth first and breadth first traversal of graphs representation using adjacency matrix and list.

CO 3: Binary tree implementation with different operations like addition, deletion, traversal.

CO 4: Simulate a stack, queue, circular queue and dequeue using a one dimensional array as storage element.

CO 5: Examination of different sorting algorithm.

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II Year-III Semester
B.Tech. Computer Science and Engineering
3CS4-22: Object Oriented Programming Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Use C++ libraries, create variables and structures.

CO 2: Understand the concept of structures, class and objects and create programs using them and implement code reusability, operator overloading and inheritance.

CO 3: Design programs having an understanding of Arrays and memory allocation.

CO 4: Identify the utilities of data members and member functions to implement them accordingly.

CO 5: Apply various handling techniques and templates on object oriented programming.

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II Year-III Semester
B.Tech. Computer Science and Engineering
3CS4-23 Software Engineering Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Understand the need and working of UML diagrams and DFDs for projects.
CO 2: Implement test cases and OOP concepts using JAVA and testing.
CO 3: Use various tools required in the software life cycle.
CO 4: Analyse and design Software requirement specifications.
CO 5: Develop and demonstrate structural and behavioural UML diagrams using ProjectLibre project management tools.

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II Year-III Semester
B.Tech. Computer Science and Engineering
3CS4-24 Digital Electronics Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Implement and realize truth tables of various types of logic gates using bread board.

CO 2: Design and verify the truth tables of SOP and POS logic circuits.

CO 3: Implement and analyze combinational circuits and sequential circuits.

CO 4: Understand the precautions required for the errorless functioning of the equipments.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS2-01: Discrete Mathematics Structures

List of Course Outcomes

After completion of this course student will be able to:

CO1: Be familiar with fundamental mathematical concepts such as sets and apply them.

CO2: Understand fundamental of functions such as (domain, co-domain, range, image, inverse image and composition) and types of functions.

CO3: Use of mathematical propositions and proof techniques to check the truthfulness of a real life situation and to apply the notion of mathematical thinking, mathematical proofs and logics such as predicate logic, propositional logic and inference rules.

CO4: Use graph theory and trees to formulate the problems and solve them.

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS1-03: Managerial Economics and Financial Accounting

List of Course Outcomes

After completion of this course student will be able to:

CO1: Explain the basic fundamental of economics

CO2: Define law of demand and its exceptions, to use different forecasting methods for predicting demand for various products and services.

CO3: Assess the functional relationship between Production and factors of production and list out various costs associated with production.

CO4: Implement various techniques for assessing the financial position of the business.

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS3-04: Microprocessor & Interfaces

List of Course Outcomes

After completion of this course student will be able to:

CO1: Assess and solve basic binary math operations using the microprocessor and explain the microprocessor's and Microcontroller's internal architecture.

CO2: Apply knowledge and demonstrate programming proficiency using the various addressing modes and data transfer instructions.

CO3: Compare accepted standards and guidelines to select appropriate Microprocessor and analyze assembly language programs.

CO4: Evaluate assembly language programs and download the machine code that will provide solutions real-world control problems.

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS4-05: Database Management System

List of Course Outcomes

After completion of this course student will be able to:

CO1: Describe data models and schemas in DBMS and also the fundamental elements of RDBMS.

CO2: Apply logical DBMS design principles, including E-R diagrams and database normalization and SQL.

CO3: Construct simple and moderately advanced database queries using Relational Algebra.

CO4: Understand the concept of Transaction and Concurrency Control and the concept of Failure and Recovery.

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CSR4-06: Theory of Computation

List of Course Outcomes

After completion of this course student will be able to:

CO1: Discuss the concept of formal grammar, formal language, regular expression and automata machine.

CO2: Design finite automata and push down automata **(**PDA) machines for given formal languages or computational real-world problem statements.

CO3: Understand the capability of Turing machine and design Turing Machine for context-sensitive languages or computational real-world problem statements.

CO4: Choose and design appropriate automata for modeling the solution for various computational engineering problems.

CO5: Understand the concepts of tractable & untraceable problems and able to decide a given problem is tractable or not.

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS4-07: Data Communication and Computer Network

List of Course Outcomes

After completion of this course student will be able to:

CO1: Describe the functions of each layer in OSI and TCP/IP model.

CO2: Describe the functions of data link layer and protocols used in MAC sub layer.

CO3: Build the skills of IP addressing, Routing Mechanisms and Congestion Control technique.

CO4: Identify the essential principles of a transport layer protocol and session layer protocol and illustrate the features of various application layer protocols such as HTTP, DNS, SMTP, etc.

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS4-21: Microprocessor & Interfaces Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Demonstrate ability to handle arithmetic operations using assembly language programming in TASM and training boards.

CO2: Demonstrate ability to handle logical operations using assembly language programming in TASM.

CO3: Demonstrate ability to handle string instructions using assembly language programming in TASM.

CO4: Demonstrate ability to handle sorting operations and using assembly language programming in TASM.

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS4-22: Database Management System Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the basic concepts of Database Systems and Applications. Arrange the data in a computational way.

CO2: Use the basics of SQL and construct queries using SQL.

CO3: Design the ER diagrams as well as interpret the Design of database.

CO4: Design a commercial relational database system (Oracle, MySQL) by writing SQL using the system. Acquire skills in using SQL commands for data definition and data manipulation.

CO5: Analyze and Select storage and recovery techniques of database system. Formulate the queries required to solve the issues in DBMS. Develop solutions for database applications using procedures, cursors and triggers.

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS4-23 Network Programming Lab

List of Course Outcomes

After completion of this course student will be able to:

CO 1: *Define* the fundamentals of underlying principles of computer networking.

CO 2: *Understand* the key topology which supports the internet.

CO 3: *Create* socket and *analyze* different client server model.

CO 4: *Demonstrate* the installation and configuration of network simulator.

CO 5: Applying Network routing algorithm and evaluate the process of implementing simple routed internetwork.

CO 6: Evaluate the error using various error correcting techniques.

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Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS4-24 Linux Shell Programming Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: List the basic commands of UNIX operating system and use them in Linux environment

CO2: Understand commands related to process control and apply them to manage processes.

CO3: Understand the concepts of control structure, loops, case and functions in shell programming and apply them to create shell scripts.

CO4: Associate the concepts of arrays with Linux and apply them to create, compile and execute C programs in Linux terminal.

CO5: Compare different editors and use them to create shell script and C program for given problem.

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II Year-IV Semester
B.Tech. Computer Science and Engineering
4CS4-25: Java Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand and apply various object oriented features like inheritance, data abstraction, encapsulation and polymorphism to solve various computing problems using Java language.

CO2: Develop Java programs for real applications using java constructs and libraries.

CO3: Implement Exception Handling and Multithreading in java.

CO4: Develop and deploy Applet in java.

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III Year-V Semester
B.Tech. Computer Science and Engineering
5CS3-01 Information Theory and Coding

List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Understand the basic concept of Information Theory and coding.
CO 2: Utilize coding schemes for data compaction as per requirements.
CO 3: Detect and describe errors using error detection and correction methods.
CO 4: Understand the basic properties of Galois Fields and implementation of encoder and decoder for cyclic codes.
CO 5: Describe various types of convolution codes and their Algorithms.

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III Year-V Semester
B.Tech. Computer Science and Engineering
5CS4-02: Compiler Design

List of Course Outcomes

After the completion of this course students will be able to :

CO1: Explain the working of compilers, interpreters and LEX.

CO2: Analyse parsing and ambiguity of grammar.

CO3: Understand the Formation, Syntax and Semantics of Three-address code for the given line of code**.**

CO4: Understand the organization and management of various data structures for understanding storage allocation strategies.

CO5: Implement the various code optimization techniques.

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III Year-V Semester
B.Tech. Computer Sccience and Engineering
5CS4-03: Operating System

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Define basic functioning and properties of OS, process and file management along with scheduling algorithms.

CO2: Understand the features associated with memory management.

CO3: Analyze the concept of deadlock, deadlock prevention algorithms and device management.

CO4: Understand the role of OS in File management and utilize it for accessing and storing file.

CO5: Perform various operations on OS like UNIX, LINUX, and Android etc by referring various case studies.

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III Year- V Semester
B.Tech. – Computer Science and Engineering
5CS4-04: Computer Graphics & Multimedia

List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Explain the applications, areas and devices associated with Computer Graphics along with graphic standards.

CO 2: Apply and compare algorithms for drawing 2D images with the understanding of concepts like aliasing and various attributes.

CO 3: Transform and analyze 2D graphics by using clipping and transformation concepts and logics.

CO 4: Understand basic operations that can be performed on 3D graphics by evaluating various algorithms.

CO 5: Exemplify illumination and color models in computer graphics to develop 2D and 3D graphics.

CO 6: Put in application and illustrate graphic animation through animation and realism methodologies.

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III Year-V Semester
B.Tech. Computer Science and Engineering
5CS4-05: Analysis of Algorithm

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Review algorithms and analyze Divide and conquer.
CO2: Explain Greedy Method and Dynamic programming.
CO3: Illustrate Branch and Bound and Pattern matching Algorithms.
CO4: Explain Assignment Problems and Randomized algorithm.
CO5: Understand problem classes Np, Np-Hard and Np- Complete.

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III Year- V Semester
B.Tech. – Computer Science and Engineering
5CS5-12: Human Computer Interaction

List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Outline and discuss usability goals, definition and techniques of System Designs.

CO 2: Identify different types of HCI models and understand various laws and utilize them to get an idea of model based design case studies.

CO 3: Apply suitable guidelines on how a computer system may be modified to include human diversity.

CO 4: Draw required information from concretely empirical evidence, and therefore "verifiable" evidence through one way ANOVA.

CO 5: Perform hierarchical analysis of tasks to formulate task models and trees which results in Dialogue Design.

CO 6: Generate a user interface design using CA, OOP and OOM.

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III Year-V Semester
B.Tech. Computer Science and Engineering
5CS4-21 Computer Graphics and Multimedia Lab

List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Generate and transform various geometric shapes and drawings using predefined functions.

CO 2: Convert basic 2D geometrical primitives, area fillings and clippings using algorithms.

CO 3: Design different kinds of viewings and projections for 3D objects and scenes using transformation methods.

CO 4: Exemplify the knowledge by generating fractal images.

CO 5: Create an advanced graphic animation.

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III Year-V Semester
B.Tech. Computer Science and Engineering
5CS4-22 Compiler Design Lab

List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Identify keywords and generate count of keywords, operators and characters in a file.

CO 2: Create Symbol table and execute various operations on them.

CO 3: Identify valid entities and count blank spaces, words, lines, no. of consonants and vowels in the file by writing a LEX program.

CO 4: Utilize YAAC tool to examine and evaluate given expression to identify the validity of given string.

CO 5: Find first of any grammar by writing a C program.

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III Year-V Semester
B.Tech. Computer Science and Engineering
5CS4-23 Analysis of Algorithms Lab
List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Sort given set of elements and determine the time required to sort the elements and plot a graph for varying values by using techniques like Quick Sort and Merge Sort.

CO 2: Identify topologies of digraph vertices.

CO3: Use Algorithms like Warshall's, Dijkstra's, Prim's, Floyd's and Kruskal's to determine transitive closure, shortest path and minimum cost spanning tree from various suitable graphs.

CO 4: Create a program to traverse a graph to generate the required outputs by using traversal methods like BFS and DFS.

CO 5: Utilize Back Tracking method to implement N Queen's problem.

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III Year-V Semester
B.Tech. Computer Science and Engineering
5CS4-24 Advance JAVA Lab
List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Create widgets and handlers using Abstract Windowing Toolkit and Swings.

CO 2: Utilize JAVA Database Connectivity and other features to create programs.

CO 3: Formulate applications using RMI and have an understanding of the working of JNDI and J2EE.

CO 4: Apply JAVA Servlet and Filters to formulate applications like Filter applications, Session handling and Event handling.

CO 5: Build dynamic web pages using JSP, Tags, XML and SQL Libraries.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS3-01: Digital Image Processing

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the fundamental elements of image and steps involved in image processing.

CO2: Define image transformation and filtering along with their various features.

CO3: Analyze and apply image restoration methods and Filtering processes.

CO4: Understand and apply Image compression through various compression techniques.

CO5: Utilize image segmentation methods and exemplify Digital image processing transformations.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS4-02: Machine Learning

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the concept of supervised learning and its algorithms.

CO2: Understand the concept of unsupervised learning and its algorithms.

CO3: Implement Statistical learning theory through various machine learning algorithms.

CO4: Solve real time complex problems by applying semi-supervised and reinforcement learning.

CO5: Analyze and understand various filtering techniques and various concepts related to neural networks and deep learning.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS4-03: Information Security System

List of Course Outcomes

After completion of this course student will be able to:

CO1: Explain various aspects and need of Information Security System.
CO2: Classify security attacks and various encryption techniques.
CO3: Analyze modern block cipher along with DES and AES.
CO4: Define Public key cryptosystems and its applications.
CO5: Understand Cryptographic hash functions, Authentication codes and concept of Digital Signatures.
CO6: Explain key management schemes and distribution techniques and various protocols associated with them.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS4-04: Computer Architecture and Organization

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the theory and architecture of central processing unit.

CO2: Analyze some of the design issues in terms of speed, technology, cost, performance and design a simple CPU with applying the theory concepts.

CO3: Use appropriate tools to design verify and test the CPU architecture

CO4: Learn the concepts of parallel processing, pipelining and inter-process communication.

CO5: Understand the architecture and functionality of central processing unit.

CO6: Exemplify in a better way the I/O and memory organization and define different number systems, binary addition and subtraction, 2's complement representation and

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS4-05: Artificial Intelligence

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand various approaches of AI.
CO2: Analyze problem solving by using various Search Algorithms.
CO3: Grasp various methodologies widely used in Game playing.
CO4: Analyze the role of Knowledge Base and Reasoning in Artificial Intelligence.
CO5: Classify learning paradigms, its different forms and applications.
CO6: Acquire knowledge of Natural Language processing and various issues involved in it.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS4-06: Cloud Computing

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the basics of cloud computing and all the factors involved in it like migration factors, history of cloud etc.

CO2: Access and analyze Cloud Computing architecture, programming models and software.

CO3: Comprehend Virtualization Technology, its implementation and various tools involve in it.

CO4: Get the point of the cloud security issues, its challenges, risk factors and methodologies to secure clouds.

CO5: Analyze the Cloud platform industry and various companies working in this business.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS5-13: Ecommerce and ERP

List of Course Outcomes

After completion of this course student will be able to:

CO1 : Discus various aspects and process associated with E-Comm.
CO2 : Analyze modes and activities of E-Comm.
CO3 : Understand the components of Internet and its impact on E-Comm.
CO4 : Access ISP, WWW and Portals and utilize them through multiple ways.
CO5 : Utilize XML,HTML and other programming languages for ERP.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS4-21: Digital Image Processing Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: To understand the Manipulate Color image segmentation algorithms.
CO2: To investigate Compare image coding and compression techniques.
CO3: To Examine image enhancement techniques.
CO4: To Understand Computer vision for skin tumor image.
CO5: To study Morphological operations.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS4-22: Machine Learning Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Define Data Frame, Statistical Learning, Feature extraction and Feature Selection.

CO2: Examine real world problem and solve them using various supervised machine learning models.

CO3: Examine real world problems and solve them using various unsupervised machine learning models.

CO4: Study the Implementation of Apriori algorithm and f-p growth algorithm to develop application involving Market basket analysis.

CO5: Implement Recommendation System.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS4-23: Python Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Define and demonstrate the use of built-in data structures "lists" and "dictionary".

CO2: Design and implement a program to solve a real world problem.

CO3: Design and implement GUI application and how to handle exceptions and files.

CO4: Design and implement a program to solve sorting problems.

CO5: Study Merge sort, Selection sort, Insertion sort.

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III Year-VI Semester
B.Tech. Computer Science and Engineering
6CS4-24: MAD Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Explain Android Platform, Architecture and features
CO2: Design User Interface and develop activity for Android App.
CO3: Implement various basic concepts of Android during application development
CO4: Select and use best GUI components which are user friendly.
CO5: Design gaming application to handle images and videos according to size.

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IV Year-VII Semester
B.Tech. Computer Science and Engineering
7CS4-01 Internet of Things

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Discuss IOT and its logical and physical design.

CO2: Review enabling technologies of IOT, hardware, software components.

CO3: Discover architecture of IOT and challenges of IOT and its dissimilarity with M2M.

CO4: Examine case studies related to domain specific IOTs.

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IV Year-VII Semester
B.Tech. Computer Science and Engineering
7AG6-60.2 Environmental Engineering and Disaster Management
List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Specify the needs, requirements and managements required for safe water supply for domestic and rural areas.

CO 2: Have a better understanding of mandatory standards for drinking water and how to maintain it through sanitation and water treatments.

CO 3: Specify the characteristics of domestic waste water and how to manage using different disposal methods and treatments.

CO 4: Analyze solid waste management strategies for rural and urban areas.

CO 5: Evaluate the effects of air pollution on human beings based on the types of pollutants and their properties and discuss the BIS standards for pollutants in air and their abetments.

CO 6: Explain disasters and how they affect earth and its residents and the role of disaster management in disastrous situations.

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IV Year-VII Semester
B.Tech. Computer Science and Engineering
7CS45-21 Internet of Things Lab
List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Understand the working of Raspberry Pi.

CO2: Execute various Linux and Python commands on it.

CO3: Utilize Python programs to perform operations in real time on real world objects and tasks.

CO4: Use cron outputs and implement them to perform real world tasks.

CO5: Have hands on experience in using various sensors like temperature, humidity, smoke, light, etc. and will be able to use control web camera, network, and relays connected to the Pi.

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IV Year-VII Semester
B.Tech. Computer Science and Engineering
7CS4-22 Cyber Security Lab
List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Implement cryptographic techniques to create encryptions.

CO2: Accomplish digital encryption that securely exchanges cryptographic keys between two parties.

CO3: Perform installation of security and open source tools for network security and induce various attacks to implement them.

CO4: Utilize various tools to demonstrate intrusion detection system .

CO5: Create digital signatures and demonstrate their applications for secure data storage and transmission.

CO6: Put in application the cryptography and encryption methods in real world scenarios.

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IV Year-VIII Semester
B.Tech. Computer Science and Engineering
8CS4-01: Big Data Analytics

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Describe Big Data and Hadoop's building blocks.

CO2: Utilize MapReduce and Hadoop to perform operations through programming.

CO3: Simplify Hadoop programming by using Pig Architecture.

CO4: Analyze and apply Hive to Hadoop Data.

CO5: Exemplify Big Data Analytics by solving complex real-world problems in for decision support

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IV Year-VIII Semester
B.Tech. Computer Science and Engineering
8TT6-60.2 Disaster Management
List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Analyze various disasters based on the risk factors, vulnerabilities, response time, scale, frequency, forewarnings and damage potentials.

CO 2: Have a wide approach towards disasters and their coping strategies based on the type of disasters.

CO 3: Asses hazard vulnerabilities on the basis of dimensions and risks involved to put into practice risk management methods and recovery planning

CO 4: Understand the concept of capacity building and its assessments for risk reduction.

CO 5: Formulate a risk reduction plan and have an understanding of the Disaster Management Acts and Policies in India and how they work based on the case studies.

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IV Year-VIII Semester
B.Tech. Computer Science and Engineering
8CS4-21: Big Data Analytics Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Implement different data structures by using JAVA.

CO2: Understand and apply set up and installation of Hadoop in its three operating modes. Apply to perform File Management Task.

CO3: Understand MapReduce Paradigms and write a program to solve real world problems through large volume log data.

CO4: Install PIG and understand Pig Latin Script to perform data manipulations.

CO5: Install HIVE and utilize it to orchestrate databases, tables, views, functions, and indexes.

CO6: Exemplify various features and operations of Big Data in real world problems.

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IV Year-VIII Semester
B.Tech. Computer Science and Engineering
8CS4-22: Software Testing and Validation Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Use tools like JaButi to perform required operations for software projects.

CO2: Create test strategies and plans, design test cases, prioritize and execute them.

CO3: Analyze the performance of websites using JMeter .

CO4: Utilize various open source tools to analyze various features of websites.

CO5: Put in application Selenium tool on various websites to generate test sequence and validation.

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