

SWARNANDHRA COLLEGE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
VII SEM COURSE OUTCOMES (R16)

S.NO	COURSE NAME	COURSE OUTOMES
1	Distributed Systems	<ol style="list-style-type: none"> 1. Define the concept of distributed systems and various distributed models. 2. Analyze inter-process communication mechanisms used in distributed systems. 3. Describe the knowledge on RPC and RMI. 4. Explain the process of Synchronization and Replication. 5. Define distributed file systems and name services. 6. Explain distributed transactions and concurrency control.
2	Cryptography and Network Security	<ol style="list-style-type: none"> 1. Illustrate the different type of Security attacks 2. Analyze and compare Security Mechanisms and Services 3. Understand mathematical foundations required for Cryptographic Algorithms 4. Distinguish different modern Encryption Algorithms 5. Define the basic Knowledge in different Authentication Mechanisms 6. Justify latest techniques used in different Security aspects (Ex. Network Security and Web Security etc.)
3	Data Warehousing and Data Mining	<ol style="list-style-type: none"> 1. Define why there is a need for data warehouse in addition to traditional operational database systems. 2. Identify components in typical data warehouse architectures. 3. Design a data warehouse and understand the process required to construct one. 4. Solve real data mining problems by using the right tools to find interesting patterns 5. Illustrate the data mining functionalities in detail with examples. 6. Examine the types of the data to be mined and apply preprocessing methods on raw data.
4	Image Processing	<ol style="list-style-type: none"> 1. Describe and explain basic principles of digital image processing; 2. Define different techniques for image enhancement, video and image recovery 3. Identify the techniques for image and video segmentation 4. Analyze the techniques for image and video compression and object recognition 5. Explain information on color image processing 6. Illustrate with processing of images, recognition of the pattern and their applications.
5	Big Data Analytics	<ol style="list-style-type: none"> 1. Distinguish efficient big data solutions for various application areas using appropriately selected algorithms and data structures. 2. Analyze methods and algorithms, to compare and real-world problems. 3. Explain trade-offs in big data processing technique. 4. Explain the Big Data Fundamentals, including the evolution and the characteristics of Big Data 5. Solve non-relational databases, the techniques for storing and processing large volumes of structured and unstructured data. 6. Apply the novel architectures and platforms introduced for Big data.

6	Internet of Things	<ol style="list-style-type: none">1. Explain Arduino IDE tool and Arduino Programming concept.2. Illustrate concept hardware configuration with Firmata protocols.3. Explain the knowledge Arduino pin configuration.4. Differentiate various sensors configuration and workflows.5. Define architecture of IoT.6. Explain the knowledge in cloud based web application.
7	Semantic Web & Social Networks	<ol style="list-style-type: none">1. Define semantic web2. Explain Knowledge representation for the semantic web.3. Illustrate the role of otology and inference engines in semantic web.4. Explain web intelligence5. Define Semantic web application services and technology.6. Identify social networks analysis

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V SEM COURSE OUTCOMES (R19)

S.NO	COURSE NAME	COURSE OUTOMES
1	COMPUTER NETWORKS	<ol style="list-style-type: none"> 1. Differentiate network reference models such as OSI, TCP/IP 2. Classify variousData Link Layer protocols such as sliding window. 3. Distinguish various MAC sub Layer Protocls , such as ALOHA, CSMA, CSMA/CD 4. Differentiate various Network layer protocols and Its Applications 5. Distinguish various Transport layer protocols and its applications 6. Illustrate various application layer protocols such as WWW and HTTP etc.
2	OBJECT ORIENTED ANALYSIS & DESIGN	<ol style="list-style-type: none"> 1. Identify the importance of modeling and object-oriented systems analysis and design. 2. Design the basic structural modeling techniques using building blocks of UML. 3. Explain common modeling techniques for class and object diagrams. 4. Describe the basic behavioral and advanced behavioral modeling diagrams. 5. Illustrate the components and deployment diagrams. 6. Apply Forward engineering techniques for a given case study.
3	DATA SCIENCE	<ol style="list-style-type: none"> 1. Apply the skills of data inspecting and cleansing. 2. Determine the relationship between data dependencies using statistics 3. Can handle data using primary tools used for data science in Python 4. Represent the useful information using mathematical skills 5. Can apply the knowledge for data describing and visualization using tools.
4	AUTOMATA THORY AND COMPILER DESIGN	<ol style="list-style-type: none"> 1. Understand the necessity and types of different language translators in use. 2. Apply the techniques and design different components (phases) of a compiler. 3. Ability to implement practical aspects of automata theory. 4. Use the tools Lex, Yacc in compiler construction.
5	MICROPROCESSOR AND INTERFACING	<ol style="list-style-type: none"> 1. Analyzee the development and design of 8086Microprocessor. 2. Illustrate different programming solutions for various industrial requirements. 3. Develop different interfacing applications using Peripherals with 8086 microprocessor. 4. Designing of minimum controllable applications using Microcontrollers.
6	COMPUTER GRAPHICS	<ol style="list-style-type: none"> 1. Define the operations of Display Devices and develop algorithms for graphics primitives 2. Draw lines, circles, ellipse and Design 2D-object Transformations and Viewing. 3. Illustrate 3D-object representations, Transformations and Viewing. 4. Analyze different Visibility Detection methods 5. Develop simple Graphics Animation Applications.

7	PRINCIPLES OF PROGRAMMING LANGUAGES	<ol style="list-style-type: none"> 1. To understand and describe syntax and semantics of programming languages 2. To understand data, data types, and basic statements 3. To understand call-return architecture and ways of implementing them 4. To understand object-orientation, concurrency, and event handling in programming languages 5. To develop programs in non-procedural programming paradigms
8	SOFTWARE PROJECT MANAGEMENT	<ol style="list-style-type: none"> 1. Apply the process to be followed in the software development life-cycle models. 2. Apply the concepts of project management & planning. 3. Implement the project plans through managing people, communications and change 4. Conduct activities necessary to successfully complete and close the Software projects 5. Implement communication, modeling, and construction & deployment practices in software development.
9	COMPUTER NETWORKS LAB	<ol style="list-style-type: none"> 1. Study and practicing various networking commands and Linux network configuration. 2. Study and implementing different network cables 3. Understand various networking commands in packet traces software 4. Configure a network using packet tracer software 5. Implement and configuring various routing algorithms using packet tracer
10	OBJECT ORIENTED ANALYSIS & DESIGN LAB	<ol style="list-style-type: none"> 1. Model various UML diagrams. 2. Perform a System Analyst role and identify the functionality of each UML model in developing object-oriented software. 3. Explain the importance of systems analysis and design in solving computer based problems. 4. Develop software architecture for a mini project problem. 5. Classify dynamic and static aspects of various case studies. 6. Transform model to code and code to model through round trip engineering.

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III SEM COURSE OUTCOMES (R20)

S.NO	COURSE NAME	COURSE OUTOMES
1	DISCRETE MATHEMATICS	<ol style="list-style-type: none"> 1. Identify programming errors efficiently through enhanced logical capabilities (K₃) 2. Find a general solution of recurrence equation (K₃) 3. learn set theory, graph of the relations which are used in data structures (K₃) 4. Explain the concepts in graph theory (K₃) 5. Apply graph theory concepts in core subjects such as data structures and network theory effectively. (K₃)
2	DATA STRUCTURES	<ol style="list-style-type: none"> 1. Design applications using stacks and implement various types of queues. 2. Analyze and implement operations on linked lists and demonstrate their applications. 3. Demonstrate operations on trees. 4. Demonstrate implementation of various types of Graphs and Graph Traversals. 5. Implement various searching and sorting techniques.
3	DATABASE MANAGEMENT SYSTEMS	<ol style="list-style-type: none"> 1. Explain the basic concepts of database management system and design an Entity-Relationship (E-R) model and convert E-R model to relational model. 2. Construct database using Relational algebra and SQL. 3. Apply Normalization techniques to normalize the database. 4. Discuss transaction management using different concurrency control protocols and recovery algorithms. 5. Illustrate different file organization and indexing methods.
4	DIGITAL LOGIC DESIGN	<ol style="list-style-type: none"> 1: Understand the function of digital systems. (K1) 2: Analyze Boolean functions with basic theorems and properties.(K4) 3: Explain the behavior of various combinational circuits (K2,K4) 4: Construct digital systems using sequential circuits (K3)

5	COMPUTER ORGANIZATION AND ARCHITECTURE	<ol style="list-style-type: none"> 1. Describe the basic structure of computer organization and its instruction sets. 2. Define the CPU operations and language concepts. 3. Explain the arithmetic algorithms and decimal arithmetic operations. 4. Demonstrate input/output and memory organization in the computer systems. 5. Express the concept of pipelining and various processor families.
6	DATA STRUCTURES USING C LAB	<ol style="list-style-type: none"> 1. Illustrate various linked lists and its operations. 2. Complete operations on stack application using arrays and linked lists. 3. State Queue operations and applications using arrays and linked lists. 4. Demonstrate various operations on binary trees. 5. Apply various searching techniques for user data. 6. Apply various sorting techniques for user data.
7	DATA ANALYTICS USING MS EXCEL	<ol style="list-style-type: none"> 1. To understand the basics of Excel as business analytics. 2. To use of basic functions and statistical functions in Excel 3. To obtain knowledge about using of pivot tables and charts 4. To understand the advanced business analytics related charts 5. To know about statistical concepts for data analysis and basics of Power BI.
8	DIGITAL LOGIC DESIGN LAB	<ol style="list-style-type: none"> 1. Describe and implementation of Logic Gates (K1) 2. Explain simple Boolean expressions using the theorems and to minimize the combinational functions.(K2,K3) 3. Analyze combinational circuits like Adders, Subtractions, Encoders, Decoders etc. (K4) 4. Construct various types of sequential circuits like Flip-flops, counters and Registers (K3)