



Department of Computer Engineering

Course Outcomes

Course Name:- Database Management Systems

Course Code:- 310241

At the end of course, students will be able to-

- CO1:- Analyze and design Database Management System using ER model
- CO2:- Implement database queries using database languages
- CO3:- Normalize the database design using normal forms
- CO4:- Apply Transaction Management concepts in real-time situations
- CO5:- Use NoSQL databases for processing unstructured data
- CO6:- Differentiate between Complex Data Types and analyze the use of appropriate data types

Course Name:- Theory of Computation

Course Code:- 310242

At the end of course, students will be able to-

- CO1:- Understand formal language, translation logic, essentials of translation, alphabets, language representation and apply
- CO2:- Construct regular expression to present regular language and understand pumping lemma for RE
- CO3:- Design Context Free Grammars and learn to simplify the grammar
- CO4:- Construct Pushdown Automaton model for the Context Free Language
- CO5:- Devise Turing Machine for the different requirements outlined by theoretical computer science
- CO6:- Analyze different classes of problems, and study concepts of NP completeness

Course Name:- Systems Programming and operating system

Course Code:- 310243

At the end of course, students will be able to-

- CO1:- Analyze and synthesize basic System Software and its functionality.
- CO2:- Identify suitable data structures and Design & Implement various System Software
- CO3:- Compare different loading schemes and analyze the performance of linker and loader
- CO4:- Implement and Analyze the performance of process scheduling algorithms
- CO5:- Identify the mechanism to deal with deadlock and concurrency issues
- CO6:- Demonstrate memory organization and memory management policies

Course Name:- Computer Networks

Course Code:- 310244

At the end of course, students will be able to-

- CO1:- Summarize fundamental concepts of Computer Networks, architectures, protocols and technologies
- CO2:- Illustrate the working and functions of data link layer
- CO3:- Analyze the working of different routing protocols and mechanisms
- CO4:- Implement client-server applications using sockets
- CO5:- Illustrate role of application layer with its protocols, client-server architectures
- CO6:- Comprehend the basics of Network Security

Course Name:- Elective I: Software Project Management

Course Code:- 310245(D)

At the end of course, students will be able to-

- CO1:- Comprehend Project Management Concepts
- CO2:- Use various tools of Software Project Management
- CO3:- Schedule various activities in software projects
- CO4:- Track a project and manage changes
- CO5:- Apply Agile Project Management
- CO6:- Analyse staffing process for team building and decision making in Software Projects and Management

Course Name:-	Database Management Systems Laboratory
Course Code:-	310246
At the end of course, students will be able to-	
CO1:-	Design E-R Model for given requirements and convert the same into database tables
CO2:-	Design schema in appropriate normal form considering actual requirements
CO3:-	Implement SQL queries for given requirements, using different SQL concepts
CO4:-	Implement PL/SQL Code block for given requirements
CO5:-	Implement NoSQL queries using MongoDB
CO6:-	Design and develop application considering actual requirements and using database concepts
Course Name:-	Computer Networks and Security Laboratory
Course Code:-	310247
At the end of course, students will be able to-	
CO1:-	Analyze the requirements of network types, topology and transmission media
CO2:-	Demonstrate error control, flow control techniques and protocols and analyze them
CO3:-	Demonstrate the subnet formation with IP allocation mechanism and apply various routing algorithms
CO4:-	Develop Client-Server architectures and prototypes
CO5:-	Implement web applications and services using application layer protocols
CO6:-	Use network security services and mechanisms
Course Name:-	Laboratory Practice I
Course Code:-	310248
At the end of course, students will be able to-	
CO1:-	Analyze the requirements for a given organizational structure to select the most appropriate networking architecture
CO2:-	Demonstrate LAN and WAN protocol behavior using Modern Tools.
CO3:-	Analyze data flow between peer to peer in an IP network using Application, Transport and Network Layer Protocols.
CO4:-	Illustrate applications of Computer Network capabilities, selection and usage for various sectors of user community.
CO5:-	Develop Client-Server architectures and prototypes by the means of correct standards and technology.
Course Name:-	Seminar and Technical Communication
Course Code:-	310249
At the end of course, students will be able to-	
CO1:-	Analyze a latest topic of professional interest
CO2:-	Enhance technical writing skills
CO3:-	Identify an engineering problem, analyze it and propose a work plan to solve it
CO4:-	Communicate with professional technical presentation skills
Course Name:-	Audit Course 5 Cyber Security
Course Code:-	310250
At the end of course, students will be able to-	
CO1:-	Understand and classify various cybercrimes
CO2:-	Understand how criminals plan for the cybercrimes
CO3:-	Apply tools and methods used in cybercrime
CO4:-	Analyze the examples of few case studies of cybercrimes

SEMESTER-II

Course Name:-	Data Science and Big Data Analytics(
Course Code:-	310251
At the end of course, students will be able to-	
CO1:-	Analyze needs and challenges for Data Science Big Data Analytics
CO2:-	Apply statistics for Big Data Analytics
CO3:-	Apply the lifecycle of Big Data analytics to real world problems
CO4:-	Implement Big Data Analytics using Python programming
CO5:-	Implement data visualization using visualization tools in Python programming
CO6:-	Design and implement Big Databases using the Hadoop ecosystem

Course Name:-	Web Technology
Course Code:-	310252
At the end of course, students will be able to-	
CO1:-	Implement and analyze behavior of web pages using HTML and CSS
CO2:-	Apply the client side technologies for web development
CO3:-	Analyze the concepts of Servlet and JSP
CO4:-	Analyze the Web services and frameworks
CO5:-	Apply the server side technologies for web development
CO6:-	Create the effective web applications for business functionalities using latest web development platforms
Course Name:-	Artificial Intelligence
Course Code:-	310253
At the end of course, students will be able to-	
CO1:-	To understand the concept of Artificial Intelligence (AI) in the form of various Intellectual tasks
CO2:-	To understand Problem Solving using various peculiar search strategies for AI
CO3:-	To understand multi-agent environment in competitive environment
CO4:-	To acquaint with the fundamentals of knowledge and reasoning
CO5:-	To devise plan of action to achieve goals as a critical part of AI
CO6:-	To develop a mind to solve real world problems unconventionally with optimality
Course Name:-	Cloud Computing
Course Code:-	310254(C)
At the end of course, students will be able to-	
CO1:-	Understand the different Cloud Computing environment
CO2:-	Use appropriate data storage technique on Cloud, based on Cloud application
CO3:-	Analyze virtualization technology and install virtualization software
CO4:-	Develop and deploy applications on Cloud
CO5:-	Apply security in cloud applications
CO6:-	Use advance techniques in Cloud Computing
Course Name:-	Internship
Course Code:-	310255
At the end of course, students will be able to-	
CO1:-	To demonstrate professional competence through industry internship
CO2:-	To apply knowledge gained through internships to complete academic activities in a professional manner.
CO3:-	To choose appropriate technology and tools to solve given problem.
CO4:-	To demonstrate abilities of a responsible professional and use ethical practices in day to day life.
CO5:-	Creating network and social circle, and developing relationships with industry people
CO6:-	To analyze various career opportunities and decide carrier goals.
Course Name:-	Data Science and Big Data Analytics Laboratory
Course Code:-	310256
At the end of course, students will be able to-	
CO1:-	Apply principles of Data Science for the analysis of real time problems
CO2:-	Implement data representation using statistical methods
CO3:-	Implement and evaluate data analytics algorithms
CO4:-	Perform text preprocessing
CO5:-	Implement data visualization techniques
CO6:-	Use cutting edge tools and technologies to analyze Big Data
Course Name:-	Web Technology Laboratory
Course Code:-	310257
At the end of course, students will be able to-	
CO1:-	Understand the importance of website planning and website design issues
CO2:-	Apply the client side and server side technologies for web application development
CO3:-	Analyze the web technology languages, frameworks and services
CO4:-	Create three tier web based applications
Course Name:-	Laboratory Practice II
Course Code:-	310258
At the end of course, students will be able to-	
CO1:-	Design a system using different informed search / uninformed search or heuristic approaches
CO2:-	Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge
CO3:-	Design and develop an interactive AI application
CO4:-	Use tools and techniques in the area of Information Security

CO5:-	Use the cryptographic techniques for problem solving
CO6:-	Design and develop security solution
Course Name:-	Audit Course 6 MOOC-Learn New Skills
Course Code:-	310259E
At the end of course, students will be able to-	
CO1:-	Illustrate the agility and principles
CO2:-	Understand the software development using agile methology
CO3:-	Apply DevOps for the software product development
CO4:-	Develop software prducts for early delivery through continual feedback and learning