

AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER**Department Of Computer Engineering****Course Outcomes**

Third Year – 2019 Course			
Course Code	Course Name	Course Outcomes	
Semester - I			
310241	Database Management Systems	CO1	Analyze and design database management system using different data models
		CO2	Implement database queries using database languages
		CO3	Normalize the database design using normal forms
		CO4	Design & develop transaction processing approach for relational databases.
		CO5	Use NoSQL databases for processing unstructured data
		CO6	Understand advances in databases
310242	Theory of Computation	CO1	Understand formal language, translation logic, essentials of translation, alphabets, language representation and apply it to design Finite Automata and its variants
		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	Design Turing Machine for the different requirements outlined by theoretical computer science
		CO6	Understand different classes of problems, classify and analyze them and study concepts of NP completeness
310243	System Programming & Operating system	CO1	Illustrate basic system software and Analyze design of assembler for pseudo machine.
		CO2	Analyze design and working of Macro processor and Interpret basics of compilers
		CO3	Compare different loading schemes and analyze the performance of linker and loader
		CO4	Recognize basics of operating system and compare various process scheduling methods.
		CO5	Analyze the concepts of concurrency control and interpret deadlock handling in OS.
		CO6	Interpret and Evaluate memory management concepts in the operating system.

310244	Computer Networks & Security	CO1	Analyze 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 information security
310245A	Internet of Things & Embedded System	CO1	Understand the fundamentals and need of embedded system for the Internet of Things
		CO2	Apply IoT enabling technologies for developing IoT systems
		CO3	Apply design methodology for designing and implementing IoT applications
		CO4	Analyze IoT protocols for making IoT devices communication
		CO5	Design cloud based IoT systems
		CO6	Design and Develop secured IoT applications
310245D	Software Project Management	CO1	Understand Software 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
310246	Database Management Systems Laboratory	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

310247	Computer Networks & Security Laboratory	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
310248	Laboratory Practice 1	CO1	To implement language translator for pseudo-machine using various data structures.
		CO2	Understand and Implement Dynamic Link Libraries.
		CO3	Differentiate and understand internals and functionalities of Operating System
		CO4	IOTES: Design IoT and Embedded Systems based application SPM: Apply Software Project Management tools
		CO5	IOTES: Develop smart applications using IoT SPM: Implement software project planning and scheduling
		CO6	IOTES: Develop IoT applications based on cloud environment SPM: Analyze staffing in software project
310249	Seminar and Technical Communication	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
Semester – II			
310251	Data Science and Big Data Analytics	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

310252	Web Technology	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
310253	Artificial Intelligence	CO1	Identify and apply suitable Intelligent agents for various AI applications
		CO2	Build smart system using different informed search / uninformed search or heuristic approaches
		CO3	Identify knowledge associated and represent it by ontological engineering to plan a strategy to solve given problem
		CO4	Apply the suitable algorithms to solve AI problems
		CO5	Implement ideas underlying modern logical inference systems
		CO6	Represent complex problems with expressive yet carefully constrained language of representation
310254A	Information Security	CO1	Model the cyber security threats and apply formal procedures to defend the attacks
		CO2	Apply appropriate cryptographic techniques by learning symmetric and asymmetric key cryptography
		CO3	Design and analyze web security solutions by deploying various cryptographic techniques along with data integrity algorithms
		CO4	Identify and Evaluate Information Security threats and vulnerabilities in Information systems and apply security measures to real time scenarios
		CO5	Demonstrate the use of standards and cyber laws to enhance Information Security in the

310254C	Cloud Computing	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
310255	Internship	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.
310256	Data Science and Big Data Analytics Laboratory	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
310257	Web Technology Laboratory	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

310258	Laboratory Practice II	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 representation, and learning
		CO3	Design and develop an interactive AI application
		CO4	IS: Use tools and techniques in the area of Information Security CC: Use tools and techniques in the area of Cloud Computing
		CO5	IS: Use the cryptographic techniques for problem solving CC: Use cloud computing services for problem solving
		CO6	IS: Design and develop security solution CC: Design and develop applications on cloud