

SULLAMUSSALM SCIENCE COLLEGE, AREACODE

DEPARTMENT OF COMPUTER SCIENCE

PROGRAMME: M.Sc. COMPUTER SCIENCE

PROGRAMME OUTCOMES

PO1: Take up challenging research oriented responsibilities and courses for their higher studies/profession.
PO2: To analyze, test, interpret and form independent Judgments in both academic and non-academic contexts
PO3: Exhibit positive attitudes and values toward the discipline.
PO4: Have an appropriate set of professional skills to ensure a productive career.
PO5: Communicate effectively with whom they are interacting and the society to make effective presentations, and give and receive clear instruction.

PROGRAMME SPECIFIC OUTCOMES

PSOS11: PSOS11:Know the basic and advanced concepts of data structures.
PSOS12:Know the basic concepts in the theory of computation
PSOS13:Learn the art of designing algorithms and flowcharts.
PSOS14:Familiarize with digital fundamentals.
PSOS15:Practically implement theory portions covered in the paper 'The Art of Programming Methodology'.
PSOS21:1Know the concept of algorithmic approach for solving real life problems.
PSOS22:Study networking concepts.
PSOS23:Understand artificial intelligence and machine learning
PSOS24:Practically implement the theory portions covered in the course 'operating system concepts', and 'computer networks'.
PSOS25:Prepare a review paper using literature survey
PSOS26:Understand the nature and scope of computational biology and bioinformatics.
PSOS31:Study Advanced Database Management System.
PSOS32:Study Compiler Designing.
PSOS33:Study OOPS concepts using java programming Language.
PSOS34:Practical implementation of java and RDBMS.
PSOS35:Familiarize cryptography and network security.
PSOS36:Study pervasive computing concepts.
PSOS42:Study advanced DBMS concepts.
PSOS43:Give a practical exposure to the process of software development life cycle.

COURSE OUTCOMES

Semester I

Advanced Data Structures

Course Outcome
CO1: Know the basic and advanced concepts of data structures.
CO2: Aware various data structures.
CO3: Understand advanced data structures dealing with algorithm development and problem solving

Theory of Computation

Course Outcome
CO1: CO1:Know the basic concepts in the theory of computation.
CO2: Learn the central concepts of automata theory, regular expression, context free language etc.
CO3: :Aware the concepts of Turing machines.
CO4:Learn the church thesis, Cooks theorem etc.

The Art of Programming Methodology

Course Outcome
CO1:Learn the art of designing algorithms and flowcharts.
CO2:Introduce the concept of algorithmic approach for solving real-life problems.
CO3:Develop competencies for the design and coding of computer programs.
CO4:Learn designing programs with advanced features of C.

Computer Organization and Architecture

Course Outcome
CO1:Familiarize with digital fundamentals.
CO2:Know the basics of instruction codes, computer registers, instruction cycle etc.
CO3:Study interrupt design of basic computer.
CO4:Familiarize the architecture of 8085 microprocessor.

Practical: C and Data Structures

Course Outcome
CO1:Practically implement theory portions covered in the paper ‘The Art of Programming Methodology’
CO2: Practically implement theory portions covered in the paper ‘Advanced Data Structures’.
CO3:Solve mathematical and scientific problems using C.
CO4: Use data structures to solve real life problems.

Semester II

Design and Analysis of Algorithms

Course Outcome
CO1:Know the concept of algorithmic approach for solving real life problems.
CO2:Know basic principles and techniques for computational complexity.
CO3:Familiarize parallel algorithms and related techniques.
CO4:Learn the basics of algorithmic design and analysis.

Operating System Concepts

Course Outcome
CO1:Know the principles and fundamentals of Operating Systems.
CO2:Know basic concepts of various memory management functions and principles
CO3:Know various public and commercially available operating systems.
CO4:Study the concepts like process, threads etc.

Computer Networks

Course Outcome
CO1:Study the top down approach of networking.
CO2:Understand basic concepts of networking.
CO3:Study Protocols used in networks.
CO4:Know the Architecture of different network protocols.

Computational Intelligence

Course Outcome
CO1:Understand artificial intelligence and machine learning
CO2:Know the problem, scope and applications of AI
CO3:Study various searching algorithms in AI
CO4:Study Architecture of AI

Practical (Computer Networks and Operating Systems.)

Course Outcome
CO1:Practically implement the theory portions covered in the course ' operating system concepts', and 'computer networks'.
CO2:Extend the programming knowledge acquired through the course 'The art of Programming Methodology'.

Term Paper

Course Outcome
CO1: Understand literature survey.
CO2: Analyze papers using literature survey.
CO3:Identify core research areas in the area of Computer Science
CO4:Prepare review papers based on literature survey.

Bioinformatics

Course Outcome
CO1:Understand the nature and scope of computational biology and bioinformatics.
CO2:Learn the basic algorithms in Computational biology.
CO3:Understand the popular genomic and proteomic databases.
CO4:Impact knowledge in processing and analyzing genomic data.

Semester III

Advanced Database Management System

Course Outcome
CO1:Understand the relational model, and know how to translate requirements captured in an Entity-Relationship diagram into a relational schema.
CO2:Reason about dependencies in a relational schema.
CO3: Understand normal form schemas, and the decomposition process by which normal forms are obtained
CO4; Familiarize with advanced SQL statements

Principles of Compilers

Course Outcome
CO1:Understand the fundamental concepts of various phases of compiler design.
CO2:Know various compiler construction tools.
CO3:Study phases like Lexical analysis, syntax analysis, intermediate code generation etc.
CO4:Study various models like NFA, DFA etc.

Object Oriented Programming Concepts

Course Outcome
CO1:Understand the concepts of object oriented design.
CO2:Understand the programming concepts and methodologies.
CO3:Learn the implementation of OO design using Java.
CO4:Know the basis of java program.

Practical : OOPS and DBMS

Course Outcome
CO1:Practically implement the theoretical concepts covered in the course ‘Advanced Database Management System’
CO2:Practically implement the theoretical concepts covered in the course ‘Object Oriented Programming Concepts’

Cryptography and Network Security

Course Outcome
CO1:Familiar with classical and modern encryption and decryption techniques and apply in the security system.
CO2:Understand various aspects of network security standards
CO3:Aware computer security concepts and challenges.
CO4:Learn the concepts of message authentication, digital signature etc.

Pervasive Computing

Course Outcome
CO1:Know the foundation areas in Pervasive Computing
CO2:Conceptualize, analyze and design select classes of pervasive computing systems.
CO3:Know web voice technology, speech recognition etc.
CO4:Study web application concepts.

Semester IV

Principles of Software Engineering

Course Outcome
CO1:Develop familiarity with software engineering principles and practices.
CO2:Understand the process of product/literature survey, techniques for problem definition and methods of report writing.
CO3:Know software, life cycle of software, is different models of development.
CO4:Understand the software requirements and the form in which data has to be collected.

Advanced Topics in Database Design

Course Outcome
CO1:Study the advanced database techniques beyond the fundamental database techniques
CO2:Understand the relational model, and know how to translate requirements captured in an Entity-Relationship diagram into a relational schema.
CO3:Reason about dependencies in a relational schema.
CO4:Understand normal form schemas, and the decomposition process by which normal forms are obtained.

Project Work

Course Outcome
CO1:Give a practical exposure to the process of software development life cycle.
CO2:Develop a quality software solution by following software engineering principles and practices.
CO3:Develop a platform to demonstrate their practical and theoretical skills.
CO4:Practice knowledge on software development process.

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