

SITAM**SATYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, VIZIANAGARAM**

Gajula Rega, Vizianagaram, ANDHRA PRADESH, INDIA-535002.

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING****COURSE OBJECTIVE-II Year-I Semester (R20)****1. MATHEMATICS – III****COURSE OBJECTIVES:**

- To familiarize the techniques in partial differential equations.
- To furnish the learners with basic concepts and techniques at plus two level to lead them into advanced level by handling various real world applications.

COURSE OUTCOMES:

- Interpret the physical meaning of different operators such as gradient, curl and divergence (L5)
- Estimate the work done against a field, circulation and flux using vector calculus (L5)
- Apply the Laplace transform for solving differential equations (L3)
- Find or compute the Fourier series of periodic signals (L3)
- Know and be able to apply integral expressions for the forwards and inverse Fourier transform to a range of non-periodic waveforms (L3)
- Identify solution methods for partial differential equations that model physical processes (L3)

2. OBJECT ORIENTED PROGRAMMING THROUGH C++**COURSE OBJECTIVES:**

- Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
- Understand dynamic memory management techniques using pointers, constructors, destructors.
- Describe the concept of function overloading, operator overloading, virtual functions and polymorphism.

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- Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.

- Demonstrate the use of various OOPs concepts with the help of programs.

COURSE OUTCOMES:

- Classify object oriented programming and procedural programming.

- Apply C++ features such as composition of objects, operator overloads, dynamic memory allocation, inheritance and polymorphism, file I/O, exception handling.

- Build C++ classes using appropriate encapsulation and design principles.

- Apply object oriented or non-object oriented techniques to solve bigger computing problems.

3. OPERATING SYSTEMS

COURSE OBJECTIVES:

- Introduce to the internal operation of modern operating systems.

- Define, explain, processes and threads, mutual exclusion, CPU scheduling, deadlock, memory management, and file systems.

- Understand File Systems in Operating System like UNIX/Linux and Windows.

- Understand Input Output Management and use of Device Driver and Secondary Storage (Disk) Mechanism.

- Analyze Security and Protection Mechanism in Operating System.

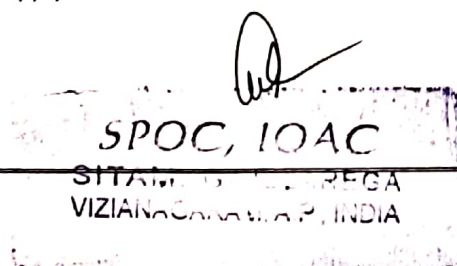
COURSE OUTCOMES:


- Describe various generations of Operating System and functions of Operating System.

- Describe the concept of program, process and thread and analyze various CPU Scheduling Algorithms and compare their performance.

- Solve Inter Process Communication problems using Mathematical Equations by various methods.

- Compare various Memory Management Schemes especially paging and Segmentation in Operating System and apply various Page Replacement Techniques.




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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE OBJECTIVE-II Year-II Semester (R20)

1. PROBABILITY AND STATISTICS

Course Objectives:

- To familiarize the students with the foundations of probability and statistical methods
- To impart probability concepts and statistical methods in various applications Engineering

Course Outcomes:

- Classify the concepts of data science and its importance
- Interpret the association of characteristics and through correlation and regression tools
- Make use of the concepts of probability and their applications
- Apply discrete and continuous probability distributions
- Design the components of a classical hypothesis test
- Infer the statistical inferential methods based on small and large sampling tests

2. DATABASE MANAGEMENT SYSTEMS

Course Objectives:

- To introduce about database management systems
- To give a good formal foundation on the relational model of data and usage of Relational Algebra

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- To introduce the concepts of basic SQL as a universal Database language
- To demonstrate the principles behind systematic database design approaches by covering conceptual design, logical design through normalization
- To provide an overview of physical design of a database system, by discussing Database indexing techniques and storage techniques

Course Outcomes:

- Describe a relational database and object-oriented database
- Create, maintain and manipulate a relational database using SQL
- Describe ER model and normalization for database design
- Examine issues in data storage and query processing and can formulate appropriate solutions
- Outline the role and issues in management of data such as efficiency, privacy, security, ethical responsibility, and strategic advantage


3.FORMAL LANGUAGES AND AUTOMATA THEORY


Course Objectives:

- To learn fundamentals of Regular and Context Free Grammars and Languages
- To understand the relation between Regular Language and Finite Automata and machines
- To learn how to design Automata's and machines as Acceptors, Verifiers and Translators
- To understand the relation between Contexts free Languages, PDA and TM
- To learn how to design PDA as acceptor and TM as Calculators

Course Outcomes:

- Classify machines by their power to recognize languages.
- Summarize language classes & grammars relationship among them with the help of Chomsky hierarchy
- Employ finite state machines to solve problems in computing
- Illustrate deterministic and non-deterministic machines
- Quote the hierarchy of problems arising in the computer science


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