

B –TECH COMPUTER SCIENCE ENGINEERING

II YEAR –IISEM

COURSE COUT COMES

Computer Organization

- CO 1:** Design the architecture of modern computer.
- CO 2:** Analyze the Performance of a computer using performance equation
- CO 3:** Explain different instruction types.
- CO4:** calculate the effective address of an operand by addressing modes
- CO 5:** Describe how computer stores positive and negative numbers.
- CO 6:** Analyse how a computer performs arithmetic operation of positive and negative numbers.

Design and Analysis of Algorithms (DAA)

- CO 1 :** Choose best data structure to improve the efficiency of an algorithm.
- CO 2:** Analyze algorithm and improve the efficiency of algorithms.
- CO 3:** Apply different traversal techniques on graph and game tree algorithms.
- CO 4:** Build different designing methods for development of algorithms to realistic problems, such as divide and conquer, greedy and etc.,
- CO 5:** Adopt an appropriate design method for development of algorithm to real world problem by comparing the performance of algorithm which is implemented in more than one design method (Ex: 0/1 knapsack problem using greedy and dynamic programming).

Database Management Systems (DBMS)

- CO 1 :** Distinguish between a Traditional File System and a Database System
- CO 2 :** Describe Data Models, Schemas, Instances, Three Schema Architecture and DBMS Component Modules
- CO 3 :** Model the real world database systems using Entity Relationship Diagrams (ERD) from the requirements specification.
- CO 4 :** Apply normalization techniques to normalize a database.

- CO 5 :** Identify the data integrity and security requirements of the database.
- CO 6 :** Apply Binary Relational Operations and Additional Relational Operations on database
- CO 7 :** Design queries in Relational Algebra and Relational Calculus

Formal Languages and Automata Theory

- CO 1 :** Describe Formal Languages, the Language Specification tools, and Recognizers. Classify various Recognizers.
- CO 2 :** Recall the concept of Abstract Machines in different forms such as Deterministic and Non Deterministic Finite State Machines.
- CO 3 :** Construct Deterministic & Non-Deterministic Finite State Machines to recognize the formal languages
- CO 4 :** Translate Non-Deterministic machines to deterministic machines and vice versa.
- CO 5 :** Illustrate Language classes, Grammars and the relationships among them with the help of Chomsky hierarchy.

JAVA PROGRAMMING

- CO 1 :** Develop solutions for a range of problems using object-oriented programming.
- CO 2 :** Apply divide and conquer strategy to searching and sorting problems using iterative and/or recursive solutions.
- CO 3 :** Design and implement simple GUI applications.
- CO 4 :** Identify classes, objects, members of a class and the relationships among them needed for a specific problem.
- CO 5 :** Create Java application programs using sound OOP practices (e.g., interfaces and APIs) and proper program structuring (e.g., by using access control identifies, automatic documentation through comments, error exception handling)
- CO 5 :** Use testing and debugging tools to automatically discover errors of Java programs as well as use versioning tools for collaborative programming/editing.

ENVIRONMENTAL STUDIES

- CO 1 :** Implement the ecological principles in when and wherever they are required.
- CO 2 :** Recognize and assess the anthropogenic impact on the entire environment.

CO 3: Develop eco-friendly technologies on the basis of ecological principles and environmental regulations which in turn help in sustainable development

Gender Sensitization

CO 1 Will have developed a better understanding of important issues related to gender in contemporary India.

CO 2 Will be sensitized to basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through discussion materials derived from research, facts, everyday life, literature and films.

CO 3 Will attain a finger grasp of how gender discrimination works in our society and how to counter it

CO 1 Will acquire insight into the gendered division of labor and its relation to politics and economics.

CO 1 (Men and women students & professionals) will be better equipped to work and live together as equals.