

MAJOR SUBJECT (COMPUTER SCIENCE/APPLICATION)

COURSE OUTCOMES

B.A I YEAR I SEMESTER

Course Code: B070101T Course Title: Problem Solving using Computer Theory

Credits: 4 Core Compulsory Max. Marks: 25+75 Semester: First

Course outcomes:

- Understand hardware components of computer system such as memory system organization, input/output devices, aware of software components of computer system, and windows operating system concepts.
- Develops basic understanding of computers, the concept of algorithm and algorithmic thinking
- Develops the ability to analyse a problem, develop an algorithm to solve it.
- Develops the use of the Python programming language to implement various algorithms, and develops the basic concepts and terminology of programming in general.
- Introduces them more advanced features of the Python language

Course Code: B070102P

Course Title: Software Lab using Python

Credits: 2

Max. Marks: 25+75

Practical

Course outcomes:

- To learn and understand Python programming basics.
- To learn and understand python looping, control statements and string manipulations.
- Students should be made familiar with the concepts of GUI controls and designing GUI applications.
- To learn and know the concepts of file handling, exception handling and database connectivity.

B.A I YEAR II SEMESTER

Programme : B.A

Year : First

Semester : Second

Theory

Credits : 04

Course Code: B070201T Course Title: Database Management System Max. Marks:25+75

Course outcomes:

1. Understands the basic concepts of data base management systems.
2. Design E-R diagrams for real world applications.
3. Formulate relational algebraic expressions using relational data models and languages.
4. Apply normalization transaction properties and concurrency control to design database.
5. Analyze the security algorithms for database protection.

Programme : **B.A** Year : **First** Semester : **Second** **Theory Credits : 04**

Course Code: **B070202P** Course Title: **Database Management System Lab** Max. Marks:**25+75**

Course outcomes:

Ability to:

1. Understand, analyze and apply common SQL statements including DDL, DML and DCL statements to perform different operations.
2. Design and implement a database schema for a given problem.
3. Do connectivity of PHP and MySQL to develop applications.

B.A. II YEAR III SEMESTER

Programme : **B.A** Year : **Second** Semester : **Third** **Theory Credits : 04**

Course Code: **B070301T** Course Title: **Operating System** Max. Marks:**25+75**

Course outcomes:

After the completion of the course the students will be able:

1. Understand role, responsibilities, features, and design of operating system.
2. Analyze memory management schemes and process scheduling algorithms.
3. Apply process synchronization techniques to formulate solution for critical section problems.
4. Illustrate concept of disk scheduling.
5. Evaluate process deadlock handling techniques.

Programme : **B.A** Year : **Second** Semester : **Third** **Theory Credits : 04**

Course Code: **B070302P** Course Title: **Operating System Lab** Max. Marks:**25+75**

Course outcomes:

Ability to:

1. Use of Linux operating system and able to write shell programs.
2. Simulate and demonstrate the concepts of operating systems.

B.A. II YEAR IV SEMESTER

Course Code: B070401T Course Title: Computer Systems Architecture

Credits: 4 Max. Marks: 25+75 Theory Semester Forth

Course outcomes:

The student will be able to understand the basic arithmetic of a Computer System; how the data is represented, how the various operation are performed on the data, the basic circuits to perform these operations, how instructions are formatted and how these instructions are executed to accomplish a particular operation. Student can also learn the organization of the peripheral devices, the interface between these devices to the system. Student can also understand the architecture of a basic computer, its registers, bus system and the interaction flow among them

Course Code: B070402P Course Title: Computer System Architecture Lab

Credits: 2 Max. Marks: 25+75 Practical

Course outcomes:

An ability to understand:

- The functions of various hardware components and their building blocks
- Boolean algebraic expressions to digital design
- And implementation of different sequential and Combinational circuits
- computer buses and input/output peripherals
- memory hierarchy and design of primary memory

B.A. III YEAR V SEMESTER

Program : B.A. Year : Third Semester : Fifth Course Code: B070501T

Theory Credit: 04 Course Title: Analysis of Algorithm and Data Structures Max.Marks:25+75

Course outcomes:

1. Understand that various problem solving categories exist such as; iterative technique, divide and conquer, dynamic programming, greedy algorithms, and understand various searching and sorting algorithms
2. Employ a deep knowledge of various data structures when constructing a program.
3. Design and construct simple object-oriented software with an appreciation for data abstraction and information hiding.
4. Effectively use software development tools including libraries, compilers, editors, linkers and debuggers to write and troubleshoot programs.

Programme : B.A. Year : Third Semester : Fifth CourseCode:B070502T

Theory Credit: 04 Course Title: Soft Computing Max. Marks: 25+75

Course outcomes:

Upon the completion of this course the student will have the knowledge of soft computing concepts and he can apply them for practical applications. He would be able to choose and design suitable Neural Network for real time problems. He can appropriately use fuzzy rules and reasoning to develop decision making and expert systems. He would know the Importance of optimization techniques and genetic programming.

Programme : **B.A.** Year : **Third** Semester : **Fifth** Course Code: **B070503P**
Theory Credit: **02** Course Title: **Lab on Algorithm and Data Structures with C++** Max. Marks: **25+75**

Course outcomes:

1. Optimize the solution with respect to time complexity & memory usage.
2. Assess how the choice of data structures and algorithm design methods impacts the performance of programs.
3. Choose the appropriate data structure and algorithm design method for a specified application.
4. Solve problems using data structures such as linear lists, stacks, queues, binary trees, binary search trees and writing programs for these solutions

B.A. III YEAR VI SEMESTER

Programme : **B.A.** Year: **Third** Semester: **Six** CourseCode:**B070601T**
Theory Credit: **4** Course Title: **Data Communication and Computer Network** Max. Marks: **25+75**

Course outcomes:

After the completion of the course the students will be able:

1. To develop understanding of computer networks and communication basics.
2. To understand design issues and services at different layers of reference models.
3. To learn various error detection/correction techniques, routing protocols, congestion control algorithms, and connection establishment/release.
4. To describe and analyze related technical, administrative, and social aspects of networking.

Programme : **B.A.** Year: **Third** Semester: **Six** Course Code: **B070602T**
Theory Credit: **4** Course Title: **Cyber Security & Cyber Laws** Max. Marks: **25+75**

Course outcomes:

After the completion of the course the students will be able to:

1. Understand types of information, cyber threats, and national/international cyber security standards.
2. Do mathematical modeling and development of security techniques and information system.
3. Develop understanding of legal issues related to cyber security.
4. Apply ethical principles/responsibilities in cyber practices.

Programme : **B.A.** Year: **Third** Semester: **Six** CourseCode:**B070603P**
Theory Credit: **02** Course Title: **Lab on Computer Networks** Max. Marks: **25+75**

Course outcomes:

1. Understand and explain the concept of Data Communication and networks, layered architecture and their applications.
2. Analyze and Setup protocol designing issues for Communication networks.
3. Evaluate data communication link considering elementary concepts of data link layer protocols for error detection and correction.
4. Apply various network layer techniques for designing subnets and super nets and analyze packet flow on basis of routing protocols

