(101A)

Ajantha Education & Military Preparatory Institutes,

INDRARAJ ARTS, COMMERCE AND SCIENCE COLLEGE, SILLOD, DIST. AURANGABAD

B.Sc. Computer Science (101A)

COURSE OUTCOMES

(F.Y., S.Y., and T.Y.)

Course Code	Course Title	On complitation of this course the learner students will be able to unerstand
B.Sc. F. Y. SEMESTER- I		
Comp. Sci.: CS01	**Computer Fundamentals**	1. Demonstrate a basic understanding of computer hardware and software. 2. Demonstrate problem-solving skills. 3. Apply logical skills to programming in a variety of languages. 4. Utilize web technologies. 5. Demonstrate basic understanding of network principles
Comp. Sci.: CS02	**Digital Electronics**	1. Understand different Number systems, Codes, Logic Gates, Boolean laws & Theorems. 2. Simplify the Boolean functions to the minimum number of literals using Karnaugh Map 3. Gain knowledge about combinational circuits and sequential circuits. 4. Can design various synchronous and asynchronous circuits using flip flop. 5. Design Counters, Shift Registers using J-K / D Flip Flop. 6. Design Counters, Shift Registers using J-K / D Flip Flop.
Comp. Sci: CS03	**Practical**	1. To acquire knowledge in Pc Software (Ms Office) 2. Introduction to Ms Word and working with documents carrying out editing, formatting, creating, inserting tables and charts. 3. Introduction to spreadsheets & its application, working with spreadsheets. 4. Computing and formatting spreadsheets. 5. Distinguish between analog and digital systems. 6. . Identify the various digital ICs and understand their operation. 7. Apply Boolean laws to simplify the digital circuits. 8. Design simple logic circuits.
B.Sc. F. Y. SEMESTER- II		

Comp. Sci.: CS04	**Operating System I**	1. Able to understand the role played by system software's such as assembler, interpreter, linker, loader and compilers. 2. Studies various machine architectures and explains various loading, linking Facilities. 3. Able to understand machine independent and dependent Compiler features. 4. Understands Operating System Process Concepts and Interrupt Processing 5. Learns various process management concepts including scheduling, synchronization, deadlocks and multithreading 6. Student will master issues related to file system interface, implementation and disk management
Comp. Sci. : CS04	**Programming in C**	1. Understands the basic structure, operators and statements of C language. 2. Define decision making statements and solve problems based on it. 3. Learns that it serves as a basic language of all advanced computer languages. 4. Gains knowledge about arrays functions and solve problems based on it. 5. Know the alternative ways of providing solution to a given problem.
Comp. Sci.: CS106	**Practical**	**1**. General understanding of structure of modern computers **2**. Purpose, structure and functions of operating systems **3**. Become familiar (if not already) with the C language, gcc compiler, and Make files **4**. Understand the high-level structure of the Linux kernel both in concept and source code **5.** Acquire a detailed understanding of one aspect (the scheduler) of the Linux kernel 1. Understand the logic for a given problem. 2. Write the algorithm of a given problem. 3. Draw a flow chart of a given problem. 4. Recognize and understand the syntax and construction of C programming code. **5.** Gain experience of procedural language programming.
B.Sc. S. Y. SEMESTER- III		
Comp. Sci. : CS07	**Advance C programming**	1. Make use of different data-structures like arrays, pointers, structures and files. 2. Understand how to access and use library functions. 3. Understand function declaration and definition. 4. Understand function declaration and definition. 5. Write programs to print output on the screen as well as in the files.

		6. Know the alternative ways of providing solution to a given problem.
Comp. Sci. : CS08	**Data Structure**	1. Able to choose an appropriate data structure to specific problem. 2. Choose among alternative data structures to solve specific data-representation and algorithmic problems. 3. Students will be able to define basic static and dynamic data structures and relevant standard algorithms for them: stack, queue, dynamically linked lists, trees, graphs, heap, priority queue, hash tables, sorting algorithms. 4. Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures. 5. Formulate new solutions for programing problems or improve existing code using learned algorithms and data structures. 6. Evaluate algorithms and data structures in terms of time and memory complexity of basic operations.
Comp. Sci. : CS09	**Practical**	1. Understanding a functional hierarchical code organization. 2. Ability to define and manage data structures based on problem subject domain. 3. Ability to work with textual information, characters and strings. 4. Ability to work with arrays of complex objects. 5. Understanding a concept of object thinking within the framework of functional model. 6. Understanding a concept of functional hierarchical code organization. **7.** Understanding a defensive programming concept. Ability to handle possibleerrors during programexecution
Comp. Sci. : CS10	**Practical**	1. Ability to analyze algorithms and algorithm correctness. 2. Ability to summarize searching and sorting techniques. 3. Ability to describe stack,queue and linked list operation. 4. Ability to have knowledge of treeand graphs concepts.
B.Sc. S. Y. SEMESTER- IV		
Comp. Sci. : CS011	**Programming in CPP**	1. Apply and implement major object oriented concepts like message passing, function overloading, operator overloading and inheritance to solve real-world problems. 2. To study the designing of complex classes: Friend Functions and Static member functions, Inline functions. 3. To be taught about Inheritance: Single Inheritance, Multiple Inheritance, Multi-level Inheritance, Hierarchical Inheritance and Hybrid Inheritance. 4. Learn Objects, Classes, Methods, Constructors and Destructors.

Comp. Sci.: CS012	**DBMS Using SQL**	1. Master the basic concepts and appreciate the applications of database systems. 2. Mater sound design principles for logical design of databases, including the E-R method and Normalization approach. 3. Be familiar with the relational database theory, and be able to write relational algebra expressions for queries. 4. Be familiar with a commercial relational database system (Oracle) by writing SQL using the system. 5. Master the basics of SQL and construct queries using SQL.
Comp. Sci.: CS013	**Practical**	1. Identify importance of object oriented programming and difference between structured oriented and object oriented programming features. 2. Able to make use of objects and classes for developing programs. 3. Able to use various object oriented concepts to solve different problems
Comp. Sci.: CS014	**Practical**	1. Construct problem definition statements for real life applications and implement a database for the same. 2. Design conceptual models of a database using ER modeling for real life applications and also construct queries in Relational Algebra. 3. Create and populate a RDBMS, using SQL. 4. Write queries in SQL to retrieve any type of information from a data base. 5. Analyze and apply concepts of normalization to design an optimal.
B.Sc. T. Y. SEMESTER- V		
Comp. Sci. : CS015	**Software Engineering**	1. Understand basic concepts of software engineering. 2. Shows the Software Requirements Analysis and Specifications. 3. Knows about Quality of Software with ISO 9000, SEI CMM. 4. Knows about Quality of Software with ISO 9000, SEI CMM. 5. Analyse the principles of requirement Engineering
Comp. Sci.: CS016	**Web Designing**	1. Familiarity about the internet access, web browsing and hyper text. 2. Usage of the search engine and Electronic Mail. 3. To use the lists and add images in HTML. 4. Creating a link within a web page and creating a table. 5. Create links to Video Files.
Comp. Sci.: CS017	**Practical**	1. Complete all required reading, including link to external material. 2. Reviews questions and answers included throughout the case study. 3. Elements of care. 4. Content and the circle of care. 5. To identify the key points or issue.

Comp. Sci.: CS018	**Practical**	1. Calculate a capital budgeting. 2. Creating a advertisement banner using image box control. 3. Preparation of resume using HTML Tag. 4. Creation of database using Data control, option button, check box and date picker. 5. Preparation of frame and display of multiform document
B.Sc. T. Y. SEMESTER- VI		
Comp. Sci. : CS019	**Data Communication and Networking**	1. Understands the concepts of OSI and the TCP - IP reference models CO. 2. Learn the concepts of error detection & correction methods. 3. Working of Internetworking & devices, Routing techniques. 4. Describe protocols like DNS, SMTP, SNMP, FTP, HTTP etc. 5. Students will get the concepts of Security
Comp. Sci. : CS020	**Ethics and Cyber Low**	1. Introduction and concept of cyber law and cyber law in E-commerce contract aspects. 2. Write up the security and intellectual property aspects. 3. Clear understanding about the evidence and criminal aspect. 4. To know the global trends in India. 5. Students will get the concepts of Security.
Comp. Sci. : CS021	**Practical Seminar**	1. To study research papers for understanding of a new field, in the absence of a textbook, to summarise and review them. 2. To impart skills in preparing detailed report describing the project and results 3. To identify promising new directions of various cutting edge technologies. 4. To effectively communicate by making an oral presentation before an evaluation committee
Comp. Sci.: CS022	**Practical Project**	1. To give a practical exposure to the process of software development life cycle. 2. To develop a quality software solution by following the software engineering principles and practices. 3. Students are also encouraged to take up a research oriented work to formulate a research problem and produce results based on its implementation/simulation/experimental analysis. 4. Methods and tools to design, implement, test, document, and maintain a computer-based system. 5. Apply research methods, techniques, and problem solving approaches from the field of research in which they are specializing. 6. Access, retrieve and evaluate relevant professional information reliably.

		7. Methods and tools for analyzing complex real-world problems and devise computer-based solutions.

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