



S. E. SOCIETY'S

S.N.B.P. COLLEGE

Maharashtra Housing Board, Yerawada, Pune - 411 006.

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AISHE CODE : C - 41455 PU/PN/C/359/2009 - College Code - 0883

Outward No. :

Date :

Name of the Programme: B. Sc. (Computer Science)

Course Outcomes (COs)

Name of the Class	Course Title	Course Outcomes	
F.Y.B.Sc (Computer Science)	Problem Solving Using Computer and 'C' Programming - I	CO1	Explore algorithmic approaches to problem solving.
		CO2	Develop modular programs using control structures and arrays in 'C'.
F.Y.B.Sc. (Computer Science)	Database Management Systems	CO1	Solve real world problems using appropriate set, function, and relational models
		CO2	Design E-R Model for given requirements and convert the same into database tables.
		CO3	Use SQL.
F.Y.B.Sc. (Computer Science)	Practical course on Problem Solving using Computer and 'C' programming and Database Management Systems	CO1	On completion of this course, students will be able to .Devise pseudo codes and flowchart for computational problems.
		CO2	Write, debug and execute simple programs in 'C'.
		CO3	Create database tables in postgre SQL.
		CO3	Write and execute simple, nested queries.
F.Y.B.Sc (Computer Science)	Advanced 'C' Programming	CO1	The student will be able to Develop modular programs using control structures, pointers, arrays, strings and structures
		CO2	The student understands the importance Design and develop solutions to real world problems using C.
F.Y.B.Sc (Computer Science)	Relational Database Management Systems	CO1	On completion of the course, student will be able to Design E-R Model for given requirements and convert the same into database tables.
		CO2	Use database techniques such as SQL & PL/SQL..
		CO3	Explain transaction Management in relational database System responsible for our performance in life.



		CO4	Use advanced database Programming concepts.
F.Y.B.Sc (Computer Science)	Practical Course on Advanced 'C' Programming and Relational Database Management Systems	CO1	On completion of this course, students will be able to :
			Write, debug and execute programs using advanced features in 'C'.
		CO2	To use SQL & PL/SQL
		CO3	To perform advanced database operations
S.Y.B.Sc (Computer Science).	Data Structures and Algorithms –I	CO1	On completion of the course, student will be able to use well-organized data structures in solving various problems.
		CO2	To differentiate the usage of various structures in problem solution
		CO3	Implementing algorithms to solve problems using appropriate datastructures.
S.Y.B.Sc. (Computer Science).	Software Engineering	CO1	On completion of the course, student will be able to Compare and chose a process model for a software project development.
		CO2	Identify requirements analyze and prepare models.
		CO3	Prepare the SRS, Design document, Project plan of a given software system.
S.Y.B.Sc. (Computer Science).	Practical course on CS 231 (Data Structures and Algorithms I) and CS 232 (Software Engineering)	CO1	Student will be able to To use well-organized data structures insolving various problems.
		CO2	Implementing algorithms to solveproblems using appropriate data structures.
		CO3	Prepare detailed statement of problem for the selected mini project
		CO4	Identify suitable process model for the same
		CO5	Develop Software Requirement Specification for the project.
		CO6	Identify scenarios and develop UML Use case
		CO7	Other artifacts: Class Diagram, activity diagram, sequence diagram, component diagram and any other diagrams as applicable to the project.
S.Y.B.Sc. (Computer Science).	Data Structures and Algorithms - II	CO1	On completion of this course students will be able to Implementation of different data structures efficiently.
		CO2	The students will able to understand the Usage of well-organized data structures to handle large amount of data



		CO3	The students will be able to understand Usage of appropriate data structures for problem solving.
S.Y.B.Sc. (Computer Science).	Computer Networks-I	CO1	Have a good understanding of the OSI and TCP/IP Reference Models and in particular have a good knowledge of Layers.
		CO2	The learner understands the basic Understand the working of various protocols..
		CO3	Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies.
S.Y.B.Sc. (Computer Science)	Practical course on CS 241(Data Structures and Algorithms II) and CS 242 (Computer Networks I)	CO1	The students will be able to understand the codes should be uploaded on either the local server, Moodle, Github or any open source LMS.
		CO2	To understand the basic commands run on cmd. And find the information about the computer pursuing the protocol and different types of address which is required to make communication possible over the network.
		CO3	To understand & identify the class full addressing in IPV4.
T.Y.B.Sc. (Computer Science)	Operating Systems – I	CO1	After completion of this course students will be able to understand the concept of Processes and Thread Scheduling by operating system
		CO2	Synchronization in process and threads by operating system
		CO3	Memory management by operating system using with the help of various schemes.
T.Y.B.Sc. (Computer Science)	Computer Networks - II	CO1	On completion of the course, student will be able to Student will understand the different protocols of Application layer.
		CO2	Develop understanding of technical aspect of Multimedia Systems
		CO3	Develop various Multimedia Systems applicable in real time
		CO4	Identify information security goals.
		CO5	Understand, compare and apply cryptographic techniques for data security.
		CO1	Learners shall be able to understand basic concepts and Web Page



T.Y.B.Sc. (Computer Science)	Web Technologies - I	CO2	On completion of the course, student will be able to Understand how to develop dynamic and interactive Web Page
T.Y.B.Sc. (Computer Science)	Foundations of Data Science	CO1	On completion of the course, student will be able to Perform Exploratory Data Analysis
		CO2	Obtain, clean/process, and transform data
		CO3	Detect and diagnose common data issues, such as missing values, special values, outliers, inconsistencies, and localization
		CO4	Demonstrate proficiency with statistical analysis of data.
		CO5	Present results using data visualization techniques
		CO6	Prepare data for use with a variety of statistical methods and models and recognize how the quality of the data and the means of data collection may affect conclusions.
T.Y.B.Sc. (Computer Science)	Object Oriented Programming using Java - I	CO1	On completion of the course, student will be able to understand the concept of classes, object, packages and Collections.
		CO2	To develop GUI based application.
T.Y.B.Sc. (Computer Science)	Theoretical Computer Science	CO1	On completion of the course, student will be able to understand the use of automata during language design.
		CO2	Relate various automata and languages
T.Y.B.Sc. (Computer Science)	Practical Course based on CS - 351	CO1	After completion of this course students will be able to understand the concept of Process synchronization
		CO2	Processes and Thread Scheduling by operating system
		CO3	Memory management by operating system using with the help of various schemes
T.Y.B.Sc. (Computer Science)	Practical Course based on CS - 353 and CS - 354	CO1	Understand how to develop dynamic and interactive Web Page.
T.Y.B.Sc. (Computer Science)	Practical Course based on CS - 355	CO2	Prepare data for use with a variety of statistical methods and recognize how the quality of the data may affect conclusions.
		CO3	Perform exploratory data analysis.
		CO1	Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs
		CO2	Read and make elementary modifications to Java programs that solve real-world problems.
		CO3	Validate input in a Java program.




T.Y.B.Sc. (Computer Science)	Python Programming	CO1	On completion of the course, student will be able to develop logic for problem solving
		CO2	Determine the methods to create and develop Python programs by utilizing the data.
		CO3	Structures like lists, dictionaries, tuples and sets.
		CO4	To be familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc.
		CO5	To write python programs and develop a small application project.
T.Y.B.Sc. (Computer Science)	Blockchain Technology	CO1	On completion of the course, student will be able to Learn the fundamentals of Blockchain Technology.
		CO2	Learn Blockchain programming
		CO3	Basic knowledge of Smart Contracts and how they function.
T.Y.B.Sc. (Computer Science)	Operating Systems-II	CO1	After completion of this course students will be able to understand the concept of Management of deadlocks and File System by operating system
		CO2	Scheduling storage or disk for processes
		CO3	Distributed Operating System and its architecture and the extended features in mobile OS.
T.Y.B.Sc. (Computer Science)	Software Testing	CO1	To understand various software testing methods and strategies.
		CO2	To understand a variety of software metrics, and identify defects and managing those defects for improvement in quality for given software.
		CO3	To design test cases and test plans, review reports of testing for qualitative software.
		CO4	To understand latest testing methods used in the software industries
T.Y.B.Sc. (Computer Science)	Web Technologies - II	CO1	On completion of the course, student will be able to– Build dynamic website.
		CO2	Using MVC based framework easy to design and handling the errors in dynamic website
		CO1	On completion of the course, student will be able to– Use appropriate models of analysis, assess the quality of input, and derive insight from results.




T.Y.B.Sc. (Computer Science)	Data Analytics	CO2	Analyze data, choose relevant models and algorithms for respective applications
		CO3	Understand different data mining techniques like classification, prediction, clustering and association rule mining
		CO4	Apply modeling and data analysis techniques to the solution of real world business problems
T.Y.B.Sc. (Computer Science)	Object Oriented Programming using Java – II	CO1	On completion of the course, student will be able to– To access open database through Java programs using JDBC and develop the application
		CO2	Understand and Create dynamic web pages, using Servlets and JSP.
		CO3	Work with basics of framework to develop secure web applications.
T.Y.B.Sc. (Computer Science)	Object Oriented Programming using Java – II	CO1	On completion of the course, student will be able to access open database through Java programs using Java Data Base Connectivity (JDBC) and develop the application
		CO2	Understand and Create dynamic web pages, using Servlets and JSP.
		CO3	Work with basics of framework to develop secure web applications.
T.Y.B.Sc. (Computer Science)	Compiler Construction	CO1	On completion of the course, student will be able to understand the process of scanning and parsing of source code




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		CO2	Learn the conversion code written in source language to machine language.
		CO3	Understand tools like LEX and YACC.
T.Y.B.Sc. (Computer Science)	Practical Course based on CS - 361	CO1	After completion of this course students will be able to understand the concept of Management of deadlocks by operating system
		CO2	File System management
		CO3	Disk space management and scheduling for processes
T.Y.B.Sc. (Computer Science)	Practical Course based on CS - 363 and CS - 364	CO1	Build dynamic website
		CO2	Using MVC based framework easy to design and handling the errors in dynamic website.
T.Y.B.Sc. (Computer Science)	Practical Course based on CS - 365	CO1	To Learn database Programming using Java
		CO2	Understand and Create dynamic web pages using Servlets and JSP.
		CO3	Work with basics of framework to develop secure web applications
T.Y.B.Sc. (Computer Science)	Software Testing Tools	CO1	To understand various software testing methods and strategies
		CO2	To understand a variety of software metrics and identify defects and managing those defects for improvement in quality for given software.
		CO3	To design test cases and test plans, review reports of testing for qualitative software.
		CO4	To understand latest testing tools used in the software industries.
T.Y.B.Sc. (Computer Science)	Project	CO1	To understand the use of technologies how it will be implemented while developing the project. And students must co-relate their knowledge and have confidence to represent with well understanding facts.




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