



ORIENTAL EDUCATION SOCIETY'S

SANPADA COLLEGE OF COMMERCE & TECHNOLOGY

Affiliated to The University of Mumbai

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PROGRAMME OUTCOME AND COURSE OUTCOMES OF Bachelor of Science (Information Technology) (B.Sc. IT)

ORIENTAL EDUCATION SOCIETY'S SANPADA COLLEGE OF COMMERCE AND TECHNOLOGY

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Programme Outcomes and Course Outcomes
Bachelor of Science in Information Technology (B.Sc IT)

Program Outcomes

PO1: Students will be able to think analytically, creatively and critically for developing robust, extensive and highly technological software.

PO2: They will be able to manage complex IT projects with consideration of the human, financial and environmental factors.

PO3: They will work as a part of a team to achieve a common goal.

PO4: They adhere to the highest standards of ethics, including relevant industry and organizational codes of conduct.

SEMESTER I

COURSE TITLE: Programming Principles With C

CO 1: Learners will be able to; Learn the basic principles of programming. Develop of logic using algorithm and flowchart.

CO 2 :Acquire the information about data types. . Understanding of input and output functions.

COURSE TITLE: digital logic and applications

CO 1: Learners will be able to; Apply number conversion techniques in real digital systems. Solve boolean algebra expressions.

CO 2 :Derive and design logic circuits by applying minimization in SOP and POS forms . Design and develop Combinational and Sequential circuits

COURSE TITLE: Fundamentals of Database Management System

CO 1 :Learners will be able to; Define and describe the fundamental elements of relational database management system. . To relate the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.

CO 2 : Design ER-models to represent simple database application scenarios. . Transform the ER-model to relational tables, populate relational database and formulate SQL queries on data.

COURSE TITLE: Computational Logic and Discrete Structure

CO 1 :Learners will be able to; Use logical notation . Perform logical proofs .

CO 2 Apply recursive functions and solve recurrence relations . Use graphs and trees

COURSE TITLE: Technical Communication Skills

CO 1: Learners will be able to; Analyze, synthesize and utilize the process and strategies from delivery to solving communication problem. Learn the communication methodologies at workplace and learning about importance of team collaboration.

CO 2 :Learn about different technical communication such as presentations and interviews. . Understand and apply the art of written communication in writing reports, proposals.

SEMESTER II

COURSE TITLE: Object Oriented Programming with c++

CO1: Students understand the basic concepts of object oriented programming, use of inheritance and functions.

CO2: They learn to read and interpret the information given, graphically.

COURSE TITLE: Fundamentals of Micro Processor and Microcontrollers

CO1:-Students understand the concept of Assembly language and learn different types of instructions with respect to 8085 microprocessor and execute assembly language program.

CO2:- The basic programming logic is developed in students.

COURSE TITLE: Web Applications Development

CO1:- Students understand basic working of Internet and World Wide Web and develop ability to design web pages using Hyper Text Mark-up Language (HTML) and JavaScript and PHP.

CO2:- They also are made aware of the basics of PHP, databases etc.

COURSE TITLE: Numerical Methods

CO1:- Students are able to approximate the solution of differential equations, which is clearly used in almost every field of science like control systems and are able to forecast future opportunities.

CO2:- Students learn the risks which is the most prominent application of regression analysis in business.

COURSE TITLE: Green IT

CO1:-Students gain knowledge objective and standard for green computing and understand the importance of minimizing power use and cooling along with concept of recycling and reuse.

CO2:- Awareness regarding Environmental friendly ways is developed in students.

SEMESTER III

COURSE TITLE: Python Programming

CO 1: students would be able to learn; different operations in python basic to advance python programming, list, tuple and dictionary OOPs concept, exception handling, multithreading, file operations, GUI programming and database connectivity

CO 2: Students are able to design GUI Applications using Python widgets

COURSE TITLE: Data Structures

CO 1: The learner will be able to: Identify and distinguish data structure classification, data types, their complexities, Implement array, linked list, stack and queue.

CO 2: Implement trees, various hashing techniques and graph for various applications, Compare various sorting and searching techniques

COURSE TITLE: Computer Networks

CO 1: The learner will be able to: Identify various data communication standards, topologies and terminologies. Describe how signals are used to transfer data and communication aspects between nodes

CO 2: Configure IP addresses using TCP/IP protocol suite Use different application layer protocols

COURSE TITLE: Applied mathematics

CO 1: The students will be able to; Solve the matrix operations, identify the linear dependence and independence of a vectors; Familiar with the various forms and operations of a complex number.

CO 2: Find the Laplace transform of a function and Inverse Laplace transform of a function using definition also solve ordinary differential equations using Laplace transform. Evaluate the multiple integrals in Cartesian, Polar coordinates, change the order of the integral,

COURSE TITLE: Operating System

CO 1: Role of Operating System Computer System. Use the different types of Operating System and their services.

CO 2: Configure process scheduling algorithms and synchronization techniques to achieve better performance of a computer system. Apply virtual memory concepts.

COURSE TITLE: Mobile Programming Practical

CO 1: Designing the mobile app to implement different widgets, Layouts, Gestures. Designing the mobile app to implement the theming and styling.

CO 2: Designing the mobile app working with SQLite Database.

Designing the mobile app to implement the routing, animation, state management.

SEMESTER IV

COURSE TITLE: Core Java

CO1: -Students gain knowledge of Java platform and language, followed by instructions for setting up a development environment consisting of a Java Development Kit (JDK). Students are able to design windows based application using AWT (Abstract Windows Toolkit).

CO2: -This gives them knowledge of actual software being used in market.

COURSE TITLE: Introduction to Embedded Systems

CO1: -Students gain knowledge about embedded system and are able to design program for embedded system.

CO2: -Students understand to develop the real time embedded system.

COURSE TITLE: Computer Oriented Statistical Techniques

CO1: -Students are able to analyze numerical data using different types of averages and measures of dispersion and learn to use sampling theory to establish relationship existing between population and samples. Also they become aware of hypothesis testing.

CO2: - This course helps them in Data Analysis.

COURSE TITLE: Software Engineering

CO1: -Students understand the basics of Software design, SDLC and become aware of quality standards.

CO2: - They get an idea of actual project management and software development environment.

COURSE TITLE: Computer Graphics and Animation

CO1 -Students understand Working of a Cathode Ray Tube Monitor and learn to implement Line Drawing Algorithms and are able to apply transformations on 2D and 3D objects in real world. And understand how animation works using graphics.

CO2: They get an idea on how to develop animations

COURSE TITLE: Software Project Management

CO 1: Students would be able to: Apply the process to be followed in the software development life-cycle models. Implement communication, modeling, construction & deployment practices in software development.

CO 2: Analyze & design the software models using unified modeling language (UML). Explain the concepts of various software testing methods & be able to apply appropriate testing approaches for development of software.

COURSE TITLE: Internet of Things

CO 1: Students would be able to Understand IoT Overview, Design Principles for Connected Devices, Communication protocols. Thinking About Prototyping, Prototyping Embedded Devices, sensors actuators, Business Models.

CO 2: Use of Raspberry pi board set up. Understand and implement an idea of various types of applications built using IoT

COURSE TITLE: Advanced Web Programming

CO 1: students will be able to work understanding programming concepts using C# programming language. Create a user interface on an ASP.NET page by using standard Web server controls.

CO 2: Create a user control and a custom server control and add them to an ASP.NET page. Able to create your own Website, enhanced by using Master pages and Themes.

COURSE TITLE: Linux System Administration

CO 1: students would be able to Work with Linux file system structure, Linux Environment Handle shell commands for scripting, with features of regular expressions, redirections

CO 2: Implement file security permissions Work with vi for shell scripting on Linux Platform also will learn how different configurations with other platforms like with ssh,ftp,dhcp

COURSE TITLE: Enterprise Java

CO 1: Identify advance concepts of java programming with database connectivity. Design and develop platform independent applications using a variety of component based frameworks.

CO 2 : Able to implement the concepts of Hibernate, XML& EJB for building enterprise applications.

COURSE TITLE: Project Dissertation

CO 1: Students would be able to work effectively as an individual or as a team member to produce correct, efficient, well-organized and documented programs in a reasonable time.

CO 2 :Recognize problems that are amenable to computer solutions, and knowledge of the tool necessary for solving such problems.

COURSE TITLE: Software Quality Assurance

CO1: -Students understand basic concepts of software quality and essentials of testing and skills required by a tester

COURSE TITLE: Security in Computing

CO1:-Students learn the best practices for network defense and the process of Encryption/Decryption. Students also learn to use of intrusion detection systems.

CO2: - This helps in understanding algorithms related to Network Security.

COURSE TITLE: Business Intelligence

CO 1: Students will be able to ; become familiar with the role of mathematical models, Business intelligence architectures, representation of the decision-making process, evolution of information systems 2.define development of a model, representation of input data ,data mining process, analysis methodologies, data validation, data transformation, data reduction

CO 2 : evaluate classification models, Bayesian methods, Clustering methods, Partition methods, Hierarchical methods study relational marketing, sales force management, optimization models for logistics planning, efficiency measures, efficient frontier,

COURSE TITLE: Principles of Geographic Information Systems

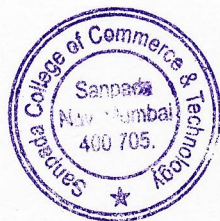
CO1: -Students learn the concept of GPS (Global Positioning System).

CO2: -After this, students can develop maps to show geographical location of a particular address.

COURSE TITLE: Cyber Laws

CO1: -Students learn the “Information Technology Act, 2000” in detail.

CO2: -Sections under the Act, how they are applicable in real world, learn about its adjudication and penalties. Students gain knowledge of Case Studies on how do various cyber-crimes happen like Hacking, Cyber Fraud.



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PRINCIPAL

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