JAI HIND COLLEGE

Basantsing Institute of Science & J. T. Lalvani College of Commerce.
and Sheila Gopal Raheja College of Management.
Autonomous

Program Name: <u>Bachelor of Science (B.Sc in Information Technology)</u>

<u>PROGRAM OBJECTIVES</u>:

PO1: To develop adaptability of new technologies like use of Modern tools, resources and software and apply possessed knowledge of fundamental subjects which will enable students to be 'Future technology ready'.

PO2: To develop logical and analytical thinking in-order to solve Complex scientific problems by using mathematical and statistical tools and techniques.

PO3: To inculcate techniques for data analysis and security awareness by examining data sets with appropriate consideration to security and privacy.

PO4: To empower students in implementing computing-based solution.

PO5: To inculcate entrepreneurial interests through experiential learning and business knowledge and function individually and in teamwork by various live project assignments.

PO6: To enable students to acquire desired competency levels, transit to the job market and, at an opportune time, return for acquiring additional skills to further upgrade competencies, as well as, find opportunities to work not only in India but also abroad.

PO7: To recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

PO8: To empower students to communicate effectively with the society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO9: To understand the impact of the professional software engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO10: To recognize the applicability of computing and evaluate its impact on individuals, organizations, and global society.

PO11: To empower students to demonstrate knowledge understanding of the scientific and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: To enable students with capabilities for designing and developing computer programs/computer - based systems in the areas related to networking and web design.

PO13. To enable students to use writing, financial/statistical, presentation and data collecting/ organization tools for academic research and communication.

PO14: To apply a wide variety of learning algorithms and develop capabilities to design and develop formulations for computing models and identify its applications in diverse areas.

PO15: Understand how to evaluate models generated from data. Apply the algorithms to a real problem, optimize the models learned and report on the expected accuracy that can be achieved by applying the models.

COURSE OUTCOMES:

PO1: Design and develop applications in modular programming.

PO2: Design and demonstrate synchronous and asynchronous sequential circuits using flip-flops.

PO3: Describe computing and resource management of the computer organization and operating systems.

PO4: Demonstrate the application of discrete structures in different fields of computer science.

PO5: Interpret technology-based communication.

PO6: Demonstrate the use of file handling, exception handling which can be practiced extensively in the hands-on labs.

PO7: Memorize and employ a basic concept of digital fundamentals to Microprocessor based personal computer system.

PO8: Design valid, well-formed, scalable, and meaningful pages using various web technologies.

PO9: Demonstrate a solid understanding of rigorous mathematical proof. Students will be able to write

clear well-organized and logical mathematical arguments.

PO10: Recognize concepts about energy efficiency, ethical IT assets disposal, carbon footprint estimation.

PO11: Design, illustrate, judge, compare and document own programs.

PO12: Solve problem involving graphs, trees and heaps.

PO13: Identify the different types of network topologies and protocols.

PO14: Describe and construct Relational Algebra and Relational Calculus queries.

PO15: Discuss Java EE Concepts with JSP.

PO16: Employ backend using LINQ and query databases.

PO17: Design and demonstrate microcontroller based embedded systems.

PO18: Sketch flowchart and illustrate pseudocode logic for problem solving.

PO19: Demonstrate the knowledge, techniques, and skills in the development of a software product.

PO20: Design and recognize appropriate security technologies and policies to protect computers and digital information.

PO21: Identify and discuss the concepts and procedures of sampling, data collection, analysis and reporting.

PO22: Identify the communication protocols for IoT.

PO23: Demonstrate their ability to debug programs running on mobile devices.

PO24: Select an appropriate pattern analysis tool for analyzing data in a given feature space.

PO25: Develop enterprise applications using Java Beans concepts for the given problem with persistence.

PO26: Classify basic use of Enterprise software, and its role in integrating business functions.

PO27: Recognize the importance of virtualization in distributed computing and how this has enabled the development of Cloud Computing.

PO28: Design, create and illustrate novel AI techniques based on emerging real-world requirements.

PO29. Implement Cassandra and MongoDB.

PO30: Identify the techniques and tools used in system hacking.