Program: Bachelor of Computer Applications (BCA)

Program Specification Outcome

PSO1: Focuses on preparing student for roles pertaining to computer applications and IT industry

PSO2: Start from the basics and in every semester learns each and everything about computers.

PSO3: Develop programming skills, networking skills, learn applications, packages, programming languages and modern techniques of IT

PSO4: Get skill and info not only about computer and information technology but also in common, organization and management

PSO5: Learn programming language such as Java, C++, HTML, SQL, etc…

PSO6: Information about various computer applications and latest development in IT and communication system is also provided

PSO7: Gives overview of the topics in IT like networking, Operating System, web development, trouble shooting, and hardware and software skills.

PSO8: Bachelor in computer applications (BCA) gives a number of opportunities to individuals to go ahead and shine in their lives.

PSO9: A few of them being like software programmer, system and network administrator, web designer faculty for computer science and computer applications.

Course Outcome

Semester-I

Course: Programming Fundamentals using C

C01.   Demonstrate the way code is organized. It helps to understand the visualrepresentation of data flow, flowcharts are useful in writing a program or algorithmand explaining it to others or collaborating with them on it

C02.   To learn the fundamental concept of all programming language.

C03.   Develop the programming skills for mathematical & logical calculations

C04.   Develop decision making skills, conditional, iterative statements to develop applications.

C05.   Exercise user defined functions to solve real time problems. 2. It decomposes the applications into smaller segments & make it easy for understanding, maintaining & debugging

C06.   Understanding the various the mode of inputting & outputting the data.

C07.   It helps to understand the scope, visibility & lifetime of the data which is used in applications

C08.   It develops the skills to deal with sequential data & same type of data

C09.   It helps to receive character type data & helps to copy data, reverse data & to combine the data in applications.

C010.   It develops the skills to deal with different type of data using same memory.

C011.   It helps to optimize the application to run fast or use less memory

C012.   It helps to understand for reading & writing the files.

Course: Fundamentals of Information Technology

CO1: It will helps to getting an idea How to enhance the new features in new versions.

CO2: Will help to understand the working of all input devices so that can be used where required.

CO3: It will help someone to buy suitable printer as required and understood about working of all types.

CO4: Helps to properly manage memory of computer, and know about where to store which data,it will helps someone to do an efficient task.

CO5: Concept of software helps to know about software actually so that installation and management of software can be done easily will encourage developinga attractive software.

CO6: These basic concepts will create confidence in students to learn more about computers.

CO7: Studying about machine language will helps what actually computer understand, detail knowledge about all language will helps a programmer to design a software.

CO8: All number system conversion helps in competitive exam to solve questions.

CO9: It will help to know about structure of networking so that someone can choose networking as a carrier.

CO10: These concepts helps to know about how data is actual transfer on network what thing can help, so that student can choose a profession in networking.

CO11: It will helps to understood about new technology in the field of internets so that by using advanced technology makes life easier and may also choose new topic as research work.

CO12: If student will be aware about all these thing he/she will feel comfortable in this field and will be confident about is/her carrier.

Course: Basic Mathematics

CO1:   Help student for preparation of competitive exam .If students want to choose an electrically field, these basic concept will be used in alternative current electrons.

CO2:   Helps to know how the problem can be solved step by step.

CO3:   To learn about representation of graph.

CO4:   To Studying about balance of angle.

CO5:   To store data in various dimension.

CO6:   It studies about preplanning of any operation which someone is going to perform.

CO7:   Its studies about representation of different numbers also help in competitive exam.

CO8:   Students will learn how to solve the roots of equations.

CO9:   Matrices are used for making seismic surveys, for plotting graphs, statistics and also to do Scientific studies and research in almost different fields.

CO10: Matrices are also used in representing the real world data's like the population of people, Infant mortality rate.

CO11: The determinant effectively represents the degree of unambiguousness inside a matrix.

CO12: Students will learn how to represent the different numbers on computer systems.

CO13: Helps to calculate complex equations' of logarithms.

CO14: Helps to find the whether the solutions are valid or not.

Course: Punjabi Compulsory

CO1   To create the Interest in literature, To understand the aspect of life,To create the understanding relationship between literature and real life,To understand the realism,language learning.

CO2 To improve the speaking skill, reading skill, writting skill, listening skill

Semester-II

Course: Data Structures

CO1: Helps to students how they actually store their data in efficient way.

CO2: Array state that how continuously memory can be used for to store data.

CO3: It creates ability to uses how the last stored value can be used at first.

CO4:   To learn about different ways how data can be stored and delete if it is stored in serial order.

CO5: It demonstrates that how data can be stored in liked form by storing address in previous one.

CO6: Ability to learn about various operationsin hierarchical representation.

CO7: It will help to know various method of searching and storing the data

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Course: Digital Electronics

C01. It analyze different type of electronic circuits & simplify them using various mapping &boolean algebra theorems

C02. Convert different type of code & number systems which are used in digital communication & computer systems

C03. Analyze, design & implement logical circuits

C04. Both helps to process the data transmission in communication systems.

C05. It helps to switch or transfer the data, frequency division in registers

C06. It helps to process high speed data that are performed digitally in CPU's & DSPDrug Abuse : Problem, Management and Prevention

CO1: Understand the concept of use, misuse, abuse, dependence, withdrawal and addiction.

CO2: Understand physical,psychological, social and economical effects of drug abuse.

CO3: Analyze how alcohol and other drugs result in family dysfunction.

Course:Punjabi compulsory

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CO2: To improve the speaking skill, reading skill, writing skill, listening skill

Semester-III

Course: Discrete Mathematics

CO1: Knowledge of Set Theory.

CO2: Ability to express a logic sentence in terms of predicates, quantifiers, and logical connectives.

CO3: Able to solve the problems of Induction Reasoning

CO4: Ability to use graph algorithms to solve problems

CO5: Ability to use tree algorithms to solve problems

CO6: Ability to use relations to solve problems

CO7: Able to solve the problems with modular approach

CO8: Knowledge About Basic Concepts

Course: Computer System Organization and Architecture

CO1: Ability to understand the functionality, organization and implementation of computer system.

CO2: Skill to recognize the instruction codes and formats.

CO3: Knowledge of the internal working of main memory, cache memory, associative memory and various modes of data transfer.

CO4: To understand the different register transfer and operation

CO5: To understand the basics of computer hardware and interaction of software with computer hardware.

CO6: Direct Memory Access knowledge

Course: Object Oriented Programming using C++

CO1: To give an overview of benefits of Object-Oriented Programming (OOP) approach over the Traditional Programming approach.

CO2: Familiarization with a widely used programming concept – Object Oriented Programming

CO3: Familiarization with working of Pointers

CO4: Familiarize with working with Modular Approach

CO5: Skill to write codes in C++ by applying concept of OOP, such as Objects, Classes, and Modular Programming Approach

CO6: Familiarize with advance features of C++ such as constructors, Destructors

CO7: Knowledge about Memory allocation and Deallocation using new and delete operators

CO8: Skill to write codes in C++ by applying concept of OOP, such as Inheritance, Data Abstraction, Polymorphism, Operator Overloading

CO9: File Handling Using C++

Course: Fundamentals of Database Management System

CO1: Familiarization with Database Approach and its Environment

CO2: Familiarize with different types of Users

CO3: Familiarization with Database Management System

CO4: Familiarization with different Data Models

CO5: Knowledge about architecture of DBMS

CO6: Familiarized with E-R Model and enhanced E-R Model

CO7: Knowledge about integrity constraints and various type os Keys in Database.

CO8: Familiarize with relational Algebra and problems of Bad Database Design

CO9: Familiarization with how to normalize the data.

CO10: Ability to design database, create queries, forms and macros using MS-ACCESS

Course:Punjabi compulsory

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 CO2. To improve the speaking skill, reading skill, writing skill, listening skill

Semester-IV

Course: Computer Networks

CO1: Gained knowledge about the computer Networks, protocols, hardware requirement for network

CO2: Ability to identify types and topologies of network.

CO3: Learn the standard models used in Computer Networks

CO4: understand the working of Data Link Layer

CO5: Knowledge of network layer and the routing

CO6: Familiarization with the techniques used in transport Layer

CO7: Identify the protocols of Application Layer

CO8: Familiarization with the techniques of Network Security.

Course: Management Information System

CO1: Understanding of the MIS

CO2: Able to illustrate the MIS system its elements and types

CO3: Familiarization with the functioning of management

CO4: Study in detail the different models of MIS

CO5: Gained knowledge about the different development approaches

CO6: Can Able to identify the application areas of MISCourse: Computer Oriented Numerical and Statistical Methods

CO1: Able to solve the problems of roots of polynomial

CO2: Identify the solution to the algebraic equation using different methods

CO3: Can able to solve the problems of numerical Differentiation

CO4: Can identify and explain the concept of Interpolation

CO5: identify the methods to solve the curve fitting problems

CO6: Understand the basics of Statistics

CO7: Can able to solve the problems of mean median mode using basic statistics formulas

CO8: Understand the concept of Correlation and Regression using examples

Course: Relational Database Management System with Oracle

CO1: Student able to understand the concept of DBMS and RDBMS

CO2: Identify the working of File system in RDBMS

CO3: understand the Concept of file organization system

CO4: Able to illustrate the transaction management system in RDBMS

CO5: Familiarization with the techniques of Concurrency control

CO6: Understand the Recovery system in RDBMS

CO7: Deep Knowledge of the different database languages + able to use the ORACLE software as the RDBMS TOOL

Course:Punjabi compulsory

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Semester-V

Course: Web Designing using HTML and DHTML

CO1: Ability to learn how to develop, validate and publish a website on web server.

CO2: It helps to understand various effects and appearance of web page.

CO3: Demonstrate how to establish a link between various web pages of a website

CO4: Demonstrate how to add images in HTML document to make the website look more Attractive.

CO5: Ability to learn how to insert Tables, List, Frames in web page to make the page more Attractive.

CO6: To gain knowledge how to make a website look more reliable and effective by using the Concept of CSS.

CO7: Ability to learn how to accept data from user from front end by using the concept of Form in HTML document.

CO8: To Gain the knowledge how to add client and server side programming in HTML Document by using the concept of java script.

CO9: Get knowledge how to develop a dynamic webpage by using the concept of DHTML.

Course: System Software

CO1: To learn about the need, application and difference between various types of software.

CO2: To understand the working, need and various phase of Language Processor

CO3: To learn about various instructions used Assembly Language and Internal design and Working of variousPhase of Assembler.

CO4: Detailed knowledge of Compilation process of a Program

CO5: Understanding the working of Linker and Loaders – Components used during the process of program execution.

CO6: To learn the role and working of various software tools used during software development.

Course: Java Programming Language

CO1: Skill to write Java application programs using OOP principles and proper program structuring.

CO2: Implement Object Oriented programming concept using basic Operators and Expressions.

CO3: To get knowledge of operator precedence &associatively rules.

CO4: Implement Object Oriented programming concept using basic syntaxes of control Structures, strings and Function for developing skills of logic building activity.

CO5: Identify classes, objects, members of a class and the relationships among them needed for a finding the solution to specific problem

CO6: Demonstrates how to achieve reusability using inheritance to describes faster application development can be achieved

CO7: Demonstrates how to achieve reusability using interfaces and packages and describes faster application development can be achieved

CO8: Ability to create packages and interfaces.

CO9: Ability to implement error handling techniques using exception handling

CO10: Demonstrate understanding and use of different exception handling mechanisms and concept of multithreading for robust faster and efficient application development.

CO12: Learn about starting and stopping threads, basic thread synchronization using the synchronized keyword, locking, thread pools, wait and   notify, callable and future, and several other concurrency

Course: System Analysis and Design

C01.   To get knowledge about system and types of system.

C02.   This module aims to as to introduce variety of new software used by analysts, designers to manage projects, analyze and document systems, design new systems and implement their plans.

C03.   To know about a system analyst like their qualification and roles.

C04.   Gather data to analyze and specify the requirements of a system.

C05.   Design system components and environments.

C06.   Build general and detailed models that assist programmers in implementing a system.

C07. Design a database for storing data, a user interface for data input and output, and controls to protect the system and its data.

C08. To learn about system maintenance and procedure to select hardware and software.

Course:Punjabi compulsory

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Semester-VI

Course: Software Engineering

CO1 knowledge of basic s/w engineering methods and practices, and their appropriate application;

CO2 A general understanding of software process models such as the waterfall and evolutionary models.

CO3 An understanding of the role of project management including planning, scheduling, risk management, etc.

CO4 An understanding of software requirements and the SRS document.

CO5 An understanding of implementation issues such as modularity and coding standards.

CO6 An understanding of approaches to verification and validation including static analysis, and reviews.

CO7 An understanding of software testing approaches such as unit testing and integration testing.

Course: Operating System

CO1 Learn the principles operating systems

CO2 Understand relationship between subsystems of a modern operating system

CO3 Evaluate the efficiency aspect of using system resources (processor, memory, disk).

CO4 Understand what a process is and how processes are synchronized and scheduled.

CO5 Understand different approaches to memory management.

CO6   Be able to use system calls for managing processes, memory and the file system.

CO7   Understand the data structures and algorithms used to implement an OS

Course: Web Designing using ASP.NET

C01.   To gain knowledge of basic components of .Net platform used for developing Various types of Application

C02.   To gain knowledge of server-side scripting (ASP.NET) languages used to build dynamic web pages.

C03.   Ability to learn how to code a program using C# language.

CO4   Ability to learn how to use various controls available in ASP.Net for accepting,

displaying data on Dynamic website.

CO5   Ability to learn how to accept valid data from user from front end.

CO6   To gain knowledge of some complex controls used in ASP.Net.

CO7   Ability to learn to develop a website or web application with some pre-define format.

CO8   Ability to develop database applications with SQL Server by using the concept of ADO.Net

Course: E-Commerce

C01.   Understand the basic concepts of Internet Trading, relationships between Business to Consumer, Business-to-Business, Intra-organizational.

C02.   Describe the Anatomy of E-commerce.

C03.   Describe the Infrastructure used for E-commerce.

C04.   Discuss the various security protocol used to achieve web based security.

C05.   Describe the Mercantile Process Model.

C06.   Describe the process of Selling and Marketing on Web.

C07.   Understand different types of online payment system used for Internet Trading.

C08.   Describe how to send electronic document using EDI platform.

C09.   Recognize and discuss various legal and privacy issues related to E-Commerce.

Course: Java Minor Project

C01.   Skill to apply Software Development Cycle to develop a software module.

C02.   Ability to use the techniques, skills and modern engineering tools necessary for software development.

C03.   Develop a software product along with its complete documentation.

Course:Punjabi compulsory

CO1. Importance of culture, rites&ritules,folkarts,ethics,moral value

CO2. To create the Interest in literature, To understand the aspect of life, To create the understanding relationship between literature and real life, To understand the realism, language learning, To develop the creativity , To give the moral value , To become a good citizen to student

 CO3 -To improve the speaking skill,readingskill,writting skill, listening skill

Subject: General English (1 & 2^{nd}Sem), Communication Skills (3 & 4^{th}Sem)

CO1: To enhance their reading skills and to be able to comprehend the meaning.

CO2: To be able to write using good vocabulary.

CO3: To be able to understand English in various contexts.

CO4: To use meaningful sentences in everyday life.

Subject: English literary skills (5th and 6th Sem.)

CO1: Enhancement of reading skills.Poetry section enriches the vocabulary of the students.

CO2: Job applications improve the writing skills of the students. It helps them in applying for various jobs.

CO3: Knowledge of grammar rules, enhancement of knowledge of noun clauses, use of conditionals in writing. Knowledge of various clauses which are used in English grammar.