

Shree Gurudatta Gramvikas Pratisthan's
COLLEGE OF BBA, BCA, BCS & B.Com.

Jategaon Bk., Tal-Shirur, Dist - Pune

B.B. A. (Batchelor of Business Administration) Computer Application

Programme Outcomes:

After successfully completing B. B.A. (C.A.) Programme students will be able to:

- PO1: Academic Excellence:** Apply the basic concepts and applications of computer.
- PO2: Problem Solving Skills:** Analyze and apply latest technologies to solve problems in the areas of computer applications.
- PO3: System Analysis and Design:** Use the Systems Analysis Design paradigm to analyze a problem Critically.
- PO4: Quantitative and Qualitative Techniques** Analyze and synthesis computing systems through quantitative and qualitative techniques.
- PO5: Professional Skills:** Apply technical and professional skills to excel in business.
- PO6: Basic Business Accounting Communication Skills:** Communicate in grammatically correct written and oral English language and use general business accounting and process.
- PO7: Designing and Development Skills:** Design and develop web pages.
- PO8: Business Ethics and Corporate Responsibility:** Design and develop reliable software applications for social needs and excel in IT enabled services.
- PO9: Knowledge of Computer languages and programming** use Data base management, Software Development, Computer-Languages, Software engineering, Web based
- PO10: Learn to organize** information efficiently in the forms of outlines, charts, etc. by using appropriate software. applications Competently etc.

Course Outcomes

F.Y.B.B.A. (CA) Computer Application

FYBBA(CA)

Sem-I

Course 101: Business Communication

After successfully completing this course, students will be able to:

- CO1: Define basic concepts of communication, introduction of communication and communication skills.
- CO2: Discuss the importance of effective communication in business.

CO3: Describe various communication methods (written and oral) in different businesses and need.

CO4: Differentiate between different methods of communication.

CO5: Write a business communication given a specific audience and purpose

CO6: Discuss the impact that word choice and tone can have on a business message

CO7: Analysis of different media of communication.

Course 102: Principles of Management

On completion of this course the student should be able to:

CO 1: Discuss Meaning , importance , functions and types Management

CO2: Understand contribution of various management scholar in Management

CO3: Describe the function of Planning, Organizing Coordinating in Business Management.

CO4 : Describe the functions of Staffing and Controlling in Business Management

CO5: Explain Leadership and qualities of effective Leadership in Business management

CO6: Explain the Recent trends in Management

CO7: Describe Strategy and Role of Strategic Management in company.

CO8: Explain Change and Change Management in corporate sector

Course 103: C Language

After successfully completing this course, students will be able to:

CO1: Define Fundamentals of C Programming.

CO2: List and identify loops and decision making statements to solve the problem.

CO3: Explain different Operations and types of Arrays in c programming.

CO4: Describe concept of string and various Strings methods in strings.

CO5: Explain concepts of Functions, recursion in language fundamentals.

CO6: Perform various operations on arrays, structure, Union, strings in programming.

CO7: Apply pointers, structures and unions on programs.

CO8: Apply and perform file Operations in C programming for a given application.

Course 104: Database Management System

After successfully completing this course, students will be able to:

CO1: Define file, logical and physical file, index, data, information, DBMS, record, relation, tuple, attribute, cardinality, domain, ERD, SQL, keys, normalization

CO2: List types of file organization, index, DBMS users in database management system.

CO3: Describe SQL commands, types of database, types of normalization in SQL

CO4: Explain basic file operation, DBMS architecture, applications of DBMS

CO5: Explain ERD, relational algebra operations in relational model.

CO6: Demonstrate and solve DBMS query using SQL

CO7: Solve examples using relational algebra operations in relational model.

CO8: Solve case studies using ERD

Course 105: Statistics

After successfully completing this course, students will be able to:

CO1: Recall the definitions and formulae of terms related to descriptive statistics.

CO2: Describe the concept by giving examples.

CO3: Solve simple problems.

CO4: Differentiate the concepts in real life situations.

CO5: Construct graphs and diagrams for related problems.

- CO6: Explain the types of correlation
- CO7: Analyze the situation and draw inference
- CO8: Solve Karl Pearson's correlation examples and problems.

Course 106: LAB based on C and Database Management System

After successfully completing this course, students will be able to:

- CO1: Solve basic programs using arithmetic concepts C.
- CO2: Solve Algorithm and draw flowchart of a program using loop, array
- CO3: Analyze a given problem and develop an algorithm to solve the problem
- CO4: Draw ERD.
- CO5: Demonstrate the SQL query
- CO6: Illustrate debugging and error handling in programming.
- CO7: Analyse and dry run programs using programming concepts.

F.Y.B.B.A. (CA) Computer Application

FYBBA(CA)

Sem-II

Course 201: Organization Behaviour & Human Resource Management

After successfully completing this course, students will be able to:

- CO1: Understand the concept and scope of Organization Behaviour.
- CO2: Explain the basic concept of Human Resource Management. Role played by HR Manager
- CO3: Explain various recruitment and placement Policies.
- CO4: Recognize the importance of training and development of employees
- CO5: Describe the Performance appraisal process
- CO6: Explain all types of interviews in selection process.
- CO7: Explain all HRM activities related to electronic media.
- CO8: Explain E-HRM, E-Recruitment, E-Selection in HRM.

Course: 202. Financial Accounting

After successfully completing this course, students will be able to:

- CO1: Explain Accounting concepts, principles and conventions.
- CO2: Understand the accounting process.
- CO3: Understand the kind of accounting relationship between customer and bank
- CO4: Distinguish between different transactions and its nature.
- CO5: Explain the Accounting Standard applicable in India
- CO6: Explain interpret bank reconciliation statement.
- CO7: Distinguish between different transactions and its nature
- CO8: Understand growing importance of software.

Course: 203. Business Mathematics

After successfully completing this course, students will be able to:

- CO1: Define fundamental Concept of Organisational Behaviour
- CO2: Describe Models and emerging aspects of Organisational Behaviour
- CO3: Explain the concept of Attitude, Values and Motivation in Organisation
- CO4: Describe work stress , stress management in organisation.
- CO5: Describe conflict and their types in organisation
- CO6: Explain Personality and Theories of Organisational Behaviour
- CO7: Explain team building and effective team work in group behaviour

CO8: Discuss types of change in organisation.

Course: 204. Relational database

After successfully completing this course, students will be able to:

CO1: Define basic concepts in database management systems.

CO2: List the fundamental concepts of a relational database system

CO3: Make use of the functional dependencies and design of the database.

CO4: Explain the concept of Transaction and Query processing in transaction management.

CO5: Demonstrate PL/SQL Blocks in relational database management system using oracle.

CO6: Use database package to create, populate, maintain, and query a database.

CO7: Apply Recovery with Concurrent Transaction using checkpoints and deadlocks on database

CO8: Use Lock, Timestamp, Validation Based Protocol to check concurrency of database.

Course: 205. Web Technology HTML-JS-CSS

After successfully completing this course, students will be able to:

CO1: Identify Web Essentials, Web page elements and its attribute.

CO2: Apply HTML and CSS to design a static Web Page and apply JavaScript and PHP to design interactive web page.

CO3: Explain basic HTML structure, CSS, JavaScript language structure and PHP language structure.

CO4: Define function, regular expressions, strings and Arrays in PHP.

CO5: Use PHP functions and regular expressions and arrays to write PHP programs.

CO6: Analyze a web page with different JavaScript validations and PHP with different validations.

CO7: Choose predefined string functions and event handling in JavaScript.

CO8: Compare JavaScript and PHP to write web pages.

Course 206: Computer Laboratory Based on 204 & 205

After successfully completing this course, students will be able to:

CO1: Solve JAVASCRIPT program using loop, array, pointer, structure in programming.

CO2: Demonstrate Normalisation in database.

CO3: Solve Queries using DBMS.

CO4: Design web page using HTML, CSS, JS and PHP.

CO5: Solve problems using PHP.

CO6: Perform debugging and error handling in programming.

CO7: Analyse and dry run programs using programming concepts.

SYBBA(CA)

Sem-III

Course 301: Digital Marketing

After successfully completing this course, students will be able to:

CO1: Explain the new age digital marketing.

CO2: Understand the different types of marketing

CO3: Explain the different plans in marketing.

CO4: Explain the concept of Search Engine Optimization.

CO5: Create the plan of Digital marketing for business.

CO6: Write the content for digital marketing.

CO7: Explain the strategy for Customer Relationship Management

CO8: Understand the use of digital marketing tools.

Course 302: Data Structure

After successfully completing this course, students will be able to:

CO1: Define basic concepts of Data Structure.

CO2: Describe basic data structures arrays, linked lists, stacks and queues.

CO3: Explain operations of linked list, stacks and queues using sequential data.

CO4: Explain the concept and perform various operations on data structure

CO5: Solve problems of non-sequential data in graphs, trees and heaps.

CO6: Apply Algorithms for solving problems like sorting and searching.

CO7: Use singly linked list to perform operations such as insertion, traversing and deletion of data.

CO8: Apply graph operations to check depth and breadth of graph.

Course 303: Software Engineering

After successfully completing this course, students will be able to:

CO1: Define basic terminology and features of software engineering.

CO2: Explain classifications and characteristics embodied in software engineering.

CO3: List the fundamental concepts of entity relationship diagram and data flow diagram in relational database system.

CO4: Describe key activities in software development and the role of modelling.

CO5: Explain SDLC, water fall method using software development methods.

CO6: Describe different types of software testing methods to check and debug data.

CO7: Apply Software Engineering tools on case studies.

CO8: Solve different case studies using software engineering concepts.

Course 304: PHP

After successfully completing this course, students will be able to:

CO1: Understand the setup of development environment.

CO2: Understand the basic concepts in PHP

CO3: Explain the control structure, loops and functions.

CO4: Understand POST and GET in form submission

CO5: Effectively utilize database and database management systems to organize, store and retrieve data for use.

CO6: Solve the errors in programming

CO7: Demonstrate how server-side programming works on the web.

CO8: Understand the PHPMyAdmin Overview.

Course 305: Big Data

After successfully completing this course, students will be able to:

CO1: Understand the data and Big data.

CO2: List the types of data.

CO3: Explain the types of Big data analytics such as descriptive, predictive and prescriptive.

CO4: Explain the population and sample

CO5: Explain the descriptive statistics

CO6: Understand the Basics of Machine Learning

CO7: Explain the Supervised and Unsupervised machine learning.

CO8: Demonstrate the Data visualisation, data analysis using R.

Course 306: LAB based on RDBMS and Data Structure

After successfully completing this course, students will be able to:

- CO1: Develop simple PL/SQL programs.
- CO2: Demonstrate various operations of the Trigger, Cursor, Function,
- CO3: Develop Procedure and Packages in PL/SQL programs.
- CO4: Demonstrate basic data structures such as arrays and linked list.
- CO5: Demonstrate fundamental algorithmic problems including Tree Traversals, Graph traversals, and shortest paths.
- CO6: Perform various searching and sorting algorithms.
- CO7: Programs to demonstrate the implementation of various operations on stack and queue.
- CO8: Illustrate debugging and error handling in programming.

SYBBA(CA) (Sem-IV)

Course 401: Networking

After successfully completing this course, students will be able to:

- CO1: Define fundamentals concepts of Networking.
- CO2: Describe Bluetooth, hubs, bridge, switch, repeater, router, gateways, firewalls, intranet, extranet, internet, WWW, HTTP, ISP, web server, search engine in computer fundamentals.
- CO3: List types of networks and types of topology using networking.
- CO4: Explain ISO-OSI Reference Model using network models.
- CO5: Explain types of communication, types of addressing, types of guided media and unguided media in transmission media.
- CO6: Explain modes of communication, TCP-IP model, IEEE standard architecture, Bluetooth architecture.
- CO7: Explain categories of connectivity devices, network security devices, firewall, IIS, WWW architecture.
- CO8: Explain HTTP Transaction and its types Persistent and non-persistent connection in internet basics

Course 402: Object Oriented Concepts Through CPP

After successfully completing this course, students will be able to:

- CO1: Identify difference between object oriented programming and procedural Oriented language and data types in C++.
- CO2: List all the features of Object Oriented Programming and C++ such as composition of objects, Operator overloading, inheritance, Polymorphism etc.
- CO3: Describe the procedural and object oriented paradigm with concepts of streams and classes.
- CO4: Explain dynamic memory management techniques using pointers, constructors, destructors, etc.
- CO5: Use the concept of function overloading, operator overloading, virtual functions in polymorphism.
- CO6: Apply inheritance with the understanding of early and late binding, usage of exception handling, generic programming.

CO7: Explain functions, data and objects, templates in Object Oriented Programming.

CO8: Explain concepts of opening, closing, error handling in file.

Course 403: Operating System

After successfully completing this course, students will be able to:

CO1: Define basic concepts of operating system.

CO2: List types of operating System, CPU Scheduling Algorithm, Page Replacement Algorithm, Disk Scheduling algorithm, Deadlock Algorithms.

CO3: Explain Computer System Architecture and services provided by operating system in memory management

CO4: Explain file access methods in file.

CO5: Describe direct memory access and I/O interface in memory management.

CO6: Discuss the concepts of Device Management Memory management policies and virtual memory.

CO7: Solving problems using different types of Algorithms.

CO8: Apply algorithms to check dead lock problems.

Course 404: Advanced PHP

After successfully completing this course, students will be able to:

CO1: Recall Object-Oriented Design principles and use them in PHP.

CO2: Define Session and Cookies.

CO3: Explain use of sessions and cookies to maintain state and different web techniques.

CO4: Describe how Web Services can be used to implement Service Oriented Architecture (SOA)

CO5: Demonstrate simple web application using server side PHP programming and Database Connectivity using MySQL.

CO6: Demonstrate Web Services and its components

CO7: Demonstrate basic operation of an AJAX application, including the use of AJAX toolkits and APIs.

CO8: Illustrate well-formed XML documents and parse XML documents by using DOM, SAX.

Course 405: Project

After successfully completing this course, students will be able to:

CO1: Interpret technical ideas, strategies and methodologies in written form.

CO2: Analyse, design and implement a software project using programming languages like Java, Python, advance PHP and CPP etc.

CO3: Apply and validate the conformance of the developed prototype against the original requirements of the problem.

CO4: Apply new tools, algorithms, and/or techniques that contribute to the software solution of the project.

CO5: Effectively utilize database and database management systems to organize, store and retrieve data for use by application software and websites.

CO6: Present and conduct oral presentations.

CO7: Formulate a real world problem and develop its requirements.

CO8: Apply test cases to the software solution of the project that satisfies the user needs.

Course 406: LAB based on CPP and Advance PHP

After successfully completing this course, students will be able to:

- CO1: Use different searching and sorting methods for basic data structures programs
- CO2: Solve simple mathematical problems using data structure
- CO3: Implement various data structures viz. Stack, Queues and Linked Lists
- CO4: Implement complex data structures like trees and graphs
- CO5: Demonstrate programs by using basic object oriented concepts
- CO6: Apply to overload functions and Operators
- CO7: Illustrate programs by applying the object oriented concepts such as (Inheritance, Virtual Function.)
- CO8: Apply of file handling in C++ program

T.Y.BB.A. (CA) (Sem-V)

Course 501: Cyber Security

After successfully completing this course, students will be able to:

- CO1: Understand the fundamentals of cyber security
- CO2: Explain the Cyber laws and concepts of Cyber forensics
- CO3: understand various categories of Cybercrime, Cyber-attacks on mobile, tools and techniques used in Cybercrime and case studies
- CO4: Identify the different types of Cyber Crimes
- CO5: Develop Cyber forensics awareness
- CO6: Identify attacks, security policies and credit card frauds in mobile and Wireless Computing Era

Course 502: OOSE

After successfully completing this course, students will be able to:

- CO1: Recall fundamental principles underlying Object-Oriented software design like class, Object, Instance Polymorphism and inheritance;
- CO2: Give the original examples of basic and advance structural modelling things like class, objects;
- CO3: Explain basic behavioral things like use case diagram, interaction diagram and state chart diagram;
- CO4: Explain methods of object oriented analysis and object oriented designing;
- CO5: Use architectural modelling like component and deployment diagram;
- CO6: Define object oriented testing strategies.

Course 503: Core Java

After successfully completing this course, students will be able to:

- CO1: Define simple java programs using data types, final variable and arrays;
- CO2: Explain classes using constructor and array of objects;
- CO3: perform java programs using classes and objects;
- CO4: Illustrate the concept of inheritance and interfaces;
- CO5: implements exception handling techniques in java programs;
- CO6: Demonstrate GUI using Swing and AWT (Abstract Window Toolkit) methods;
- CO7: Interpret basic applet using java.

Course 504: Python

After successfully completing this course, students will be able to:

- CO1: Interpret the concept of Python languages;

- CO2: Illustrate the concept of string, list, tuple, set and dictionary in python;
- CO3: discuss the concept of files and directories in python;
- CO4: Explain the concept of object oriented concept in python;
- CO5: Describe concept of functional programming and varieties of functional programming language;
- CO6: Explain semantics of function language using precise formal specification;
- CO7: Describe different reduct

Course505: Project

After successfully completing this course, students will be able to:

- CO1: Interpret technical ideas, strategies and methodologies in written form.
- CO2: Analyse, design and implement a software project using programming languages like Java, Python etc.
- CO3: Apply and validate the conformance of the developed prototype against the original requirements of the problem.
- CO4: Apply new tools, algorithms, and/or techniques that contribute to the software solution of the project.
- CO5: Effectively utilize database and database management systems to organize, store and retrieve data for use by application software and websites.
- CO6: Present and conduct oral presentations.
- CO7: Formulate a real world problem and develop its requirements.
- CO8: Apply test cases to the software solution of the project that satisfies the user needs.
- CO9: Develop a design solution for a set of requirements and Build web-enabled applications.

Course 506: LAB based on Core JAVA and Python

After successfully completing this course, students will be able to:

- CO1: Develop basic skills in analysing the usability of a web site.
- CO2: Develop hands on experience using open source technologies such as JavaScript
- CO3: Solve Examples using Python.
- CO4: Analyse the available open source technologies and select the appropriate one based on need.
- CO5: Perform Simple Java Program using class, Inheritance, loop, Polymorphism
- CO6: Demonstrate Java Program using Applet
- CO7: Develop and perform event driven programming using various windows application.
- CO8: Develop crystal reports, Data connectivity using SQL.

TYBBA(CA)-(Sem-VI)

Course 601: Recent trends in information Technologies

After successfully completing this course, students will be able to:

- CO1: Understand the recent trends in Information technology
- CO2: Explain Eco friendly software development concepts
- CO3: Explain fundamental concepts in Artificial Intelligence
- CO4: Understand basic concepts of AI.
- CO5: Understand Data analytics using Spark Programming

CO6: Apply basic, intermediate and advanced techniques to mine the data

Course 602: Software Testing

After successfully completing this course, students will be able to:

CO1: Define errors, bugs, white box, black box, unit testing, client-server, GUI, validation, verification, performance, acceptance, smoke, load, Agile, test case.

CO2: Explain nature of errors, testing principles, testing fundamentals, debugging, testing methods.

CO3: Explain testing documentation, software testing, testing tools in software testing.

CO4: Explain client server architecture in testing.

CO5: Explain white box, black box, unit testing in testing approaches.

CO6: Describe various Validation Testing, System Testing, verification, Performance Testing, Regression Testing, Agile testing in Software Testing Strategies

CO7: Describe Introduction, Basic Metrics, Complexity Metrics in Software metrics

CO8: Solve case studies using testing tools.

Course 603: Advanced Java

After successfully completing this course, students will be able to:

CO1: Define JDBC, OSI, Servlet, JSP, cookies, session, tags, scripting elements, thread, RMI, Java Bean

CO2: Explain architecture of JDBC, life cycle of servlet using connectivity concepts.

CO3: Explain RMI Architecture, Multithreading concept using diagrams.

CO4: Explain programs using java collection API as well as java Standard Library and GUI Applications with JDBC (Java Database Connectivity)

CO5: Interpret simple Java Server Pages(JSP) Application using Tomcat.

CO6: Describe life cycle of thread, execution process of JSP application multithreading using java

CO7: Demonstrate simple application for client and server communication, RMI method.

CO8: Explain fundamental concepts of JavaBeans.

Course 604: Android Programming

After successfully completing this course, students will be able to:

CO1: Write simple GUI applications

CO2: Understand Android Architecture and Basic Building Block

CO3: Demonstrate their understanding of the fundamentals of Android operating systems

CO4: Understand the issues relating to Wireless applications

CO5: Demonstrate their skills of using Android software development tools

Course 605: Project

After successfully completing this course, students will be able to:

CO1: Interpret technical ideas, strategies and methodologies in written form.

CO2: Analyse, design and implement a software project using programming languages like Java, Python, PHP etc.

CO3: Apply and validate the conformance of the developed prototype against the original requirements of the problem.

CO4: Apply new tools, algorithms, and/or techniques that contribute to the software solution of the project.

CO5: Effectively utilize database and database management systems to organize, store and retrieve data for use by application software and websites.

CO6: Present and conduct oral presentations.

CO7: Formulate a real world problem and develop its requirements.

CO8: Apply test cases to the software solution of the project that satisfies the user needs.

CO9: Develop a design solution for a set of requirements and Build web-enabled applications.

Course 606: LAB based on Advance JAVA and Android Programming

After successfully completing this course, students will be able to:

CO1: Develop basic skills in analysing the usability of a web site.

CO2: Develop hands on experience using open source technologies such as HTML, CSS, JavaScript, PHP and MySQL.