



Department Of Computer Science

GOVT. V.Y.T. PG AUTONOMOUS COLLEGE, DURG

Vision

To provide skilled resource persons in the field of computer application and information technology to our society, and equip the youth of Chhattisgarh especially the tribes, with latest technological advancement.

Mission

- To produce skilled stakeholders in computer science and information technology
- To generate professionally skilled youth
- To make society at large computer literate

(PSOs and Co)

BCA (UG)

PSO 1 Understand, analyze and develop computer programs in the areas related to algorithm, web design and networking for efficient design of computer based system.

PSO 2 Equip themselves to potentially rich & employable field of computer applications.

PSO 3 Pursue higher studies in the area of Computer Science/Applications.

PSO 4 Take up self-employment in Indian & global software market.

BCA (UG)

Class : BCA

BCA -101 Discrete Mathematics

CO 1 Upon completion of the course, the student will be able to use logical notation

CO 2 Perform logical proofs

CO 3 Apply recursive functions and solve recurrence relations

CO 4 Determine equivalent logic expressions

CO 5 Define sets and sequences and calculate discrete probabilities.

BCA-102 - Computer Fundamentals

CO 1 Understand the history and various generations of computer, characteristics of computer and its types, logic gates, number system

CO 2 Be able to identify computer hardware and peripheral devices

CO 3 Be familiar with various types of software and software applications

CO 4 Understand Memory and file management

CO 5 Understand the DOS commands and Windows features.

BCA-103– Programming in C Language

CO 1 Understand the basic terminology used in computer programming

CO 2 Understand different data types, operators and its types, operator precedence and associativity in C language.

CO 3 Design programs involving decision structures, loops and functions.

CO 4 Explain the difference between call by value and call by reference.

CO 5 Understand the dynamics memory by the use of pointers.

BCA-104 – PC Software and Multimedia

CO 1 Understand creating and formatting basic documents in word processor software with their properties.

CO 2 Understand the creating and using formulas and charts in worksheets

CO 3 Able to create presentations and can apply various animations on it.

CO 4 Understand the creating and using structure query language queries in database

CO 5 Able to understand, create and manage various multimedia and its tools.

BCA-105–Web Technology and E-Commerce

CO 1 Understand the basics of Internet and its protocol.

CO 2 Analyze a web page and identify its elements and attributes.

CO 3 Create web pages using HTML and Cascading Styles sheets

CO 4 Build dynamic web pages using JavaScript (client side programming).

CO 5 Understand and develop a PHP Programs with their environment.

BCA-106 - Communication Skills

CO 1 Students will be able to understand and apply knowledge of human communication and language processes as they occur across various contexts, e.g., interpersonal, intrapersonal, small group, organizational, media, gender, family, intercultural communication, technologically mediated communication, etc. from multiple perspectives.

CO 2 Presentation skills training courses provide strategies to plan, structure and deliver powerful presentations. Learn how to structure presentations in order to deliver effective messages as well as receive the coaching to dramatically improve your personal presentation. This specific program is one of the leading presentation skills training courses developed to help people engage audiences.

CO 3 A group discussion among students is being organized to see and evaluate their thinking skills, listening abilities and how they are communicating their thoughts. One should learn to control the conversation through listening attentively and then having the perseverance to mould it towards his/her own direction.

CO 4 Develop, exhibit and accurate sense of self and nurture a deep understanding of personal motivation. Develop an understanding of and practice personal and professional responsibility.

CO 5 To practice and develop writing processes pertaining to invention, revision, organization, drafting through multiple drafts, editing, and adjusting for rhetorical context (purpose, audience, persona). To discuss and share writing and reading with one another and develop a shared vocabulary for talking about writing.

Lab Course

BCA-107 –PC Software Lab

CO 1 Understand creating and formatting basic documents in word processor software with their properties.

CO 2 Understand the creating and using formulas and charts in worksheets

CO 3 Able to create presentations and can apply various animations on it.

CO 4 Understand the creating and using structure query language queries in database

CO 5 Able to understand, create and manage various multimedia and its tools.

BCA-108 - C Language Lab

CO 1 Design programs using control statements and operators of C- language.

CO 2 Understand and apply the pointers, memory allocation techniques and use of files for dealing with variety of problems.

CO 3 Design graphics programs using C language.

BCA-109 –Web Technology Lab

CO 1 Design web pages.

CO 2 Format and validate web pages.

CO 3 Design web sites and deploy it on web servers.

BCA-201- Calculus and Differential Equations

CO 1 Recognise differential equations that can be solved by each of the three methods – direct integration, separation of variables and integrating factor method – and use the appropriate method to solve them

CO 2 use an initial condition to find a particular solution of a differential equation, given a general solution

CO 3 check a solution of a differential equation in explicit or implicit form, by substituting it into the differential equation

CO 4 understand the terms ‘exponential growth/decay’, ‘proportionate growth rate’ and ‘doubling/halving time’ when applied to population models, and the terms ‘exponential decay’, ‘decay constant’ and ‘half-life’ when applied to radioactivity

CO 5 Solve problems involving exponential growth and decay.

BCA-202 - Database Management System

CO 1 Knowledge & Understanding: Databases and their design & development

CO 2 Intellectual Cognitive/ analytical skills: Normalization of Databases.

CO 3 Practical Skills: Using SQL and PL/SQL.

CO 4 Transferable skills: Usage of DBMS design and administration.

CO 5 Gather data to analyze and specify the requirements of a system.

BCA-203 - Programming in C++

CO 1 Understand object-oriented programming features in C++.

CO 2 Apply these features to program design and implementation.

CO 3 Understand object-oriented concepts and how they are supported by C++.

CO 4 Transferable skills: Usage of DBMS design and administration.

CO 5 Apply the facilities offered by C++ for Object-Oriented Programming.

BCA-204 – Computer Networks

CO 1 State the fundamentals related to network security and basics of IPv6 and IPsec.

CO 2 State the fundamentals related to network security and basics of IPv6 and IPsec.

CO 3 Explain various protocols related to internet key exchange.

CO 4 Study Adhoc network and its protocols.

CO5 Define various examples of wireless communication system, standards related to 2G and 3G wireless networks.

BCA-205 – Operating System with Linux

CO 1 Understand the basics of operating systems like kernel, shell, types and views of operating systems

CO 2 Describe the various CPU scheduling algorithms and remove deadlocks.

CO 3 Explain various memory management techniques and concept of thrashing.

CO 4 Use disk management and disk scheduling algorithms for better utilization of external memory.

CO5 Recognize file system interface, protection and security mechanisms.

BCA-206 – Fundamental Course

CO 1 Students will be able to understand about the Indian history of arts, sculpture archeology, iconography & other social arts.

CO 2 Students will be able to understand about the Indian literature.

CO 3 Students will be able to understand about the Indian Freedom Struggle and contribution of revolutionaries in freedom struggle.

CO 4 Students will be able to understand and understand about the Indian Constitution.

CO 5 Students will be able to understand communication processes and personality development.

BCA-207 - OOPS Lab Using C++

CO 1 Understand key features of the object-oriented programming language such as encapsulation (abstraction), inheritance, and polymorphism.

CO 2 Design and implement object-oriented applications.

CO 3 Analyze problems and implement simple C++ applications using an object-oriented software engineering approach.

Lab Course

BCA-208 – RDBMS Lab

CO 1 Demonstrate an understanding of the relational data model.

CO2 Transform an information model into a relational database schema and to use a data definition language and/or utilities to implement the schema using a DBMS.

CO 3 Formulate, using relational algebra, solutions to a broad range of query problems.

CO 4 Formulate, using SQL, solutions to a broad range of query and data update problems

BCA-209 – Operating System Lab

CO 1 Students will be able to understand key features of the various Operating System.

CO2 Implement various commands of Linux Operating System.

CO 3 Students will be able to understand the directory structure of Operating System..

BCA-301 (Part-A) – Calculus & Geometry

CO 1 Gain Knowledge of fundamental concepts of real numbers and Verify the value of the limit of a function at a point using the definition of the limit

CO 2 Introduction to sequence and series.

CO 3 Learn to check function is continuous understands the consequences of the intermediate value theorem for continuous functions.

CO 4 Introduction to analytical geometry of 2 dimensional.

CO 5 Study of lines in 2 and 3 dimension and Finding equation in various form of line, circle, ellipse, sphere, cones etc.

BCA-301 (Part-B) - Differential Equations & Fourier Series

CO 1 check a solution of a differential equation in explicit or implicit form, by substituting it into the differential equation

CO 2. understand the terms ‘exponential growth/decay’, ‘proportionate growth rate’ and ‘doubling/halving time’ when applied to population models, and the terms ‘exponential decay’, ‘decay constant’ and ‘half-life’ when applied to radioactivity.

CO 3 Solve problems involving exponential growth and decay.

CO 4 TO represent periodic functions using Fourier series

CO 5 Get an idea of power series method to solve differential equations Familiar with Legendre equation and Legendre polynomial

BCA-301 (Part-C) –Computer System Architecture

CO 1 Describe the fundamental organization of a computer system and number systems

CO 2. Explain the Boolean algebra with simplification methods and various types of logic circuits

CO 3 Explain fundamental functions of CPU Organization.

CO 4 Describe basic concept of Input-output organization

CO 5 Distinguish the organization of various parts of a system memory hierarchy and memory management system.

BCA-302 – Programming inJava

CO 1 The students will understand about the basic concept Java language.

CO 2. Understand the concept of multiple inheritances and using and importing package in Java

CO 3 Students will have the knowledge of Exception handling and multithreading concept in Java.

CO 4 Students will have the knowledge of basic IO Streams and basics of network programming with concept of database connectivity in Java.

CO 5 Design and implement a java application using GUI packages as well as Applet programming

BCA-303 – Operating System

CO 1 Understand the basics of operating systems like kernel, shell, types and views of operating systems

CO 2. Describe the various CPU scheduling algorithms and remove deadlocks.

CO 3 Explain various memory management techniques and concept of thrashing.

CO 4 Use disk management and disk scheduling algorithms for better utilization of external memory.

CO 5 Recognize file system interface, protection and security mechanisms.

BCA-304 - Software Engineering

CO 1 Understand the importance of the stages in the software life cycle.

CO 2. Understand the various process models.

CO 3 Understand the concept of software requirement specification.

CO 4 Be able to design software by applying the software engineering principles.

CO 5 Understand the concept of software requirement specification.

BCA-305(Part-A) – Multimedia tools and application

CO 1 Understand the concept and Needs and areas of use, Development platforms for multimedia.

CO 2. Understand the concept of sound and formats and basic concept of animations.

CO 3 Understand the various formats of video formats and video editing and movie making tools.

CO 4 Understand the various Authoring tools for CD Based Multimedia.

CO 5 Understand the Multimedia on the Web.

. BCA-305 (Part-B) – Multimedia tools and application Lab

CO 1 Create a well-designed, interactive Web site with respect to current standards and practices.

CO 2. Demonstrate in-depth knowledge in an industry-standard multimedia development tool and its associated scripting language.

CO 3 Determine the appropriate use of interactive verses standalone Web applications.

CO 4 Create time-based and interactive multimedia components O 5 Identify issues and obstacles encountered by Web authors in deploying Web-based applications.

BCA-306 Financial Accountancy

CO 1 Understand the basic concepts of Financial Accounting

CO 2. Prepare final accounts of sole trader

CO 3 Calculate Profits or losses from incomplete records

CO 4 Understand concepts of cost accounting.

CO 5 Understand concepts of Budgetary and Budgetary control

Lab Course

BCA-307 – Programming in Java Lab

CO 1 Understand and implement the Basic language fundamentals of Java.

CO 2. Create a full set of UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings.

CO 3 Apply event handling on AWT and Swing components.

CO 4 Learn to access database through Java programs, using Java Data Base Connectivity (JDBC).

BCA-308- Project

CO 1 Understand the requirement and analyse the client for the software development process.

CO 2. Create a well-designed, interactive software with respect to current standards and practices

CO 3 Demonstrate in-depth knowledge in an industry-standard software development tool.

CO 4 Determine the appropriate use of Language tools to develop and deploy software

B.SC(CS) (UG)

PSO 1 A graduate with a B.Sc. in Computer Science will have the ability TO:

Demonstrate mastery of Computer Science in the following core knowledge areas of:

- Data Structures and Programming Languages
- Databases, Software Engineering and
- Development of Computer Hardware and Architecture

PSO 2 Apply problem-solving skills and the knowledge of computer science to solve real world problems.

PSO 3 Develop technical project reports and present them orally among the users

B.Sc(CS)(UG)

Class : B.SC

Paper –I B.Sc-101 – Computer Fundamentals

CO 1 Understand the history and various generations of computer, characteristics of computer and its types, logic gates, number system

CO 2 Be able to identify computer hardware and peripheral devices

CO 3 Be familiar with various types of software and software applications

CO 4 Understand Memory and file management

CO 5 Understand the DOS commands and Windows features.

Paper –II B.Sc-102– Programming in C Language

CO 1 Understand the basic terminology used in computer

CO 2 Understand different data types, operators and its types, operator precedence and associativity in C language.

CO 3 Design programs involving decision structures, loops and functions.

CO 4 Explain the difference between call by value and call by reference.

CO 5 Understand the dynamics memory by the use of pointers.

Lab Course

B.Sc-103– Programming in C Language

CO 1 Design programs using control statements and operators of C- language.

CO 2 Understand and apply the pointers, memory allocation techniques and use of files for dealing with variety of problems.

CO 3 Design graphics programs using C language.

Paper –I B.Sc-201 – Computer Hardware

CO 1 Understand the classification and organization on computer.

CO 2 Understand the CPU organization and various addressing modes and instruction formats

CO 3 Understand the Understand Memory hierarchy and working process of memory devices

CO 4 Understand the working of Input output devices

CO 5 Understand the system software and programming techniques.

Paper –II B.Sc-202 – Computer Software

CO 1 Analyze a web page and identify its elements and attributes.

CO 2 Create web pages using HTML and Cascading Styles

CO 3 Gain some practical experience of C++.

CO 4 Apply the facilities offered by C++ for Object-Oriented Programming.

CO 5 Design program using multiple inheritance and pointers in C++.

Lab Course

B.Sc-203– Computer Software Lab

CO 1 Understand the difference between object oriented programming and procedural oriented language and data types in C++.

CO 2 Program using C++ features such as composition of objects, Operator overloading, inheritance, Polymorphism etc.

Paper –I B.Sc-301 – Computer Hardware

CO 1 Understand the Organization of Micro-computers.

CO 2 Explain about system hardware and organizations of personal computers

CO 3 Explain about organization of operating system with system hardware

CO 4 Understand the working process of DOS and their memory management techniques.

CO 5 Understand the organization of hardware by operating system.

Paper –II B.Sc-302 – Computer Software

CO 1 Understand The Visual Basic Integrated Development Environment (IDE) and its wealth of development tools.

CO 2 Build effective user interfaces with Visual Basic controls, forms, and other GUI components.

CO 3 Learn the use of the debugging and testing tools available in Visual Studio.

CO 4 Use Database access using Visual Basic's ADO Control and data-aware components like the Data Grid and Data Environment Designer.

CO 5 Use the Packaging and Deployment tool to deliver completed applications to end users.

Lab Course

B.Sc-303– Computer Software Lab

CO 1 Understand the difference between Console programs and GUI programming.

CO 2 Able to design GUI Application using The Visual Basic Integrated Development Environment (IDE) and its wealth of development tools.

CO 3 Able to design software with database.

B.Com(CA) (UG)

PSO 1 To make the students efficient in office automation with computers and computer software applications

PSO 2 To facilitate the students to join professional courses

PSO 3 To develop subject skill within various discipline of commerce, business, accounting, economics, finance, auditing and marketing with soft skills in Tally and ERP, E-commerce PSO4 Helps to acquire entrepreneurship.

B.Com (CA) (UG)

Class : B.Com(CA)

BCOCA -101-Computer Fundamental

CO 1 Understand the history and various generations of computer, characteristics of computer and its types, logic gates, number system

CO 2 Be able to identify computer hardware and peripheral devices.

CO 3 Be familiar with various types of software and software applications

CO 4 Understand Memory and file management

CO 5 Understand the DOS commands and Windows features.

BCOCA -102-PC Software and Multimedia

CO 1 Understand creating and formatting basic documents in word processor software with their properties.

CO 2 Understand the creating and using formulas and charts in worksheets

CO 3 Able to create presentations and can apply various animations on it.

CO 4 Understand the creating and using structure query language queries in database

CO 5 Able to understand, create and manage various multimedia and its tools.

Lab Course

BCOCA-103– Computer Practical

CO 1 Understand creating and formatting basic documents in word processor software with their properties.

CO 2 Understand the creating and using formulas and charts in worksheets

CO 3 Able to create presentations and can apply various animations on it.

CO 4 Understand the creating and using structure query language queries in database

CO 5 Able to understand, create and manage various multimedia and its tools.

BCOCA-201 Internet Application and E-commerce

CO 1 Understand the basics of Internet and its protocol.

CO 2 Analyze a web page and identify its elements and attributes.

CO 3 Create web pages using HTML and Cascading Styles sheets

CO 4 Build dynamic web pages using JavaScript (client side programming).

CO 5 Understand the basics of E-Commerce.

BCOCA-202 RDMS

CO 1 Knowledge & Understanding: Databases and their design & development

CO 2 Intellectual Cognitive/ analytical skills: Normalization of Databases.

CO 3 Practical Skills: Using SQL and PL/SQL.

CO 4 Transferable skills: Usage of DBMS design and administration.

CO 5 Gather data to analyze and specify the requirements of a system.

Lab Course

BCOCA-203– Computer Practical

CO 1 Analyze a web page and identify its elements and attributes

CO 2 Create web pages using HTML and Cascading Styles sheets.

CO 3 Demonstrate an understanding of the relational data model.

CO 4 Transform an information model into a relational database schema and to use a data definition language and/or utilities to implement the schema using a DBMS.

BCOCA-301-Programming In Visual Basic

CO 1 Understand the Visual Basic Integrated Development Environment (IDE) and its wealth of development tools.

CO 2 Build effective user interfaces with Visual Basic controls, forms, and other GUI components.

CO 3 Learn the use of the debugging and testing tools available in Visual Studio.

CO 4 Use Database access using Visual Basic's ADO Control and data-aware components like the Data Grid and Data Environment Designer.

CO 5 Use the Packaging and Deployment tool to deliver completed applications to end users.

BCOCA-302- MIS & SAD

CO 1 Relate the basic concepts and technologies used in the field of management information systems;

CO 2 Compare the processes of developing and implementing information systems.

CO 3 Outline the role of the ethical, social, and security issues of information systems.

CO 4 Translate the role of information systems in organizations, the strategic management processes, with the implications for the management.

CO 5 Apply the understanding of how various information systems like DBMS work together to accomplish the information objectives of an organization.

Lab Course

BCOCA-303– Computer Practical

CO 1 Understand the difference between Consoles programming and GUI programming.

CO 2 Able to design GUI Application using The Visual Basic Integrated Development Environment (IDE) and its wealth of development tools.

CO 3 Able to design software with database.

PGDCA (PG)

PSO 1 To expose the students to open Source technologies so that they become familiar with it and can seek appropriate opportunity in trade and industry.

PSO 2 Able to provide socially acceptable technical solutions to real world problems with the application of modern and appropriate programming techniques.

PSO 3 Design applications for any desired needs with appropriate considerations for any specific need on societal and industrial aspects.

PGDCA-101 Introduction of software Organization

CO 1 Understand the history and various generations of computer, characteristics of computer and its types, logic gates, number system

CO 2 Understand computer organization and memory devices.

CO 3 Familiar with various types of software and software applications

CO 4 Familiar with various types of Programming language and language translators.

CO 5 Familiar with various Internet and Computer network basics.

PGDCA-102 Programming in C language

CO 1 Understand the basic terminology used in computer programming

CO 2 Understand different data types, operators and its types, operator precedence and associativity in C language.

CO 3 Design programs involving decision structures, loops and functions.

CO 4 Explain the difference between call by value and call by reference.

CO 5 Understand the dynamics memory by the use of pointers, structure and union.

PGDCA-103 Office Automation & Tally

CO 1 Understand creating and formatting basic documents in word processor software with their properties.

CO 2 Understand the creating and using formulas and charts in worksheets

CO 3 Able to create presentations and can apply various animations on it.

CO 4 Understand the creating and using structure query language queries in database

CO 5 Able to create and manage transactions of various accounts in tally software.

Lab Course

PGDCA-104 – Practical based on PGDCA 103

CO 1 Understand creating and formatting basic documents in word processor software with their properties.

CO 2 Understand the creating and using formulas and charts in worksheets

CO 3 Able to create presentations and can apply various animations on it.

CO 4 Understand the creating and using structure query language queries in database

CO 5 Able to understand, create and manage accounts in tally.

PGDCA-105 – Practical based on PGDCA 102

CO 1 Design programs using control statements and operators of C- language.

CO 2 Understand and apply the pointers, memory allocation techniques and use of files for dealing with variety of problems.

CO 3 Design graphics programs using C language.

PGDCA-106 Programming in Visual Basic

CO 1 Understand The Visual Basic Integrated Development Environment (IDE) and its wealth of development tools.

CO 2 Build effective user interfaces with Visual Basic controls, forms, and other GUI components.

CO 3 Learn the use of the debugging and testing tools available in Visual Studio.

CO 4 Use Database access using Visual Basic's ADO Control and data-aware components like the Data Grid and Data Environment Designer.

CO 5 Use the Packaging and Deployment tool to deliver completed applications to end users.

PGDCA-107 DBMS

CO 1 Knowledge & Understanding: Databases and their design & development

CO 2 Intellectual Cognitive/ analytical skills: Normalization of Databases.

CO 3 Practical Skills: Using SQL and PL/SQL.

CO 4 Transferable skills: Usage of DBMS design and administration.

CO 5 Gather data to analyse and specify the requirements of a system.

PGDCA-108 –Essentials of E-Commerce & HTML

CO 1 Understand the basics of Internet and its protocol.

CO 2 Analyze a web page and identify its elements and attributes.

CO 3 Create web pages using HTML and Cascading Styles sheets

CO 4 Build dynamic web pages using JavaScript (client side programming).

CO 5 Understand the basics of E-Commerce.

PGDCA-109 –Practical Based on PGDCA-106,107,108

CO 1 Understand the difference between Console programming and GUI programming.

CO 2 Able to design GUI Application using The Visual Basic Integrated Development Environment (IDE) and its wealth of development tools

CO 3 Able to design software with database.

PGDCA-110 –Project

CO 1 Understand the requirement and analyze the client for the software development process.

CO 2 Create well-designed, interactive software with respect to current standards and practices

CO 3 Demonstrate in-depth knowledge in an industry-standard software development tool.




Principal
Govt. V.Y.T. P.G. Autonomous
College, Durg (C.G.)

