ACHARYA INSTITUTE OF GRADUATE STUDIES

(NAAC Re-Accredited 'A' Grade & Affiliated to Bengaluru City University)

Soladevanahalli, Bengaluru-560107

DEPARTMENT OF COMPUTER APPLICATION

NAME OF THE PROGRAM: BACHELOR OF COMPUTER APPLICATION

COURSE OUTCOMES (CO'S)

BCA – I SEM

BCA 103:Problem Solving Techniques Using C

- Able to understand basic computer literacy.
- Able to solve the problems (mathematical, logical, conditional,etc.) using C programs.
- Gain primary knowledge on writing programs and executing methods

BCA 104:Computer Organization and Architecture

- Understand the basic logic gates and necessities of flip-flops
- Analyse the importance of number systems
- Importance of Computer Organization.
- Understand how the CPU organization work

BCA 105:Discrete Mathematics

- Student will be able to Master the basic set theory.
- Familiar with propositional calculus
- Reason mathematically about basic discrete structure such as numbers, sets used in computer science
- Familiar with Determinants and Matrices
- Demonstrate the working knowledge about logarithms, Probability

BCA II SEM

BCA 203: Data Structures using C

- Impart the basic concepts of data structures and algorithms
- Write algorithms and step by step approach in solving problems with the help of fundamental data structures
- Understand concepts about searching and sorting techniques.
- Understand basic concepts about stacks, queues, lists, trees and graphs.

BCA 204: Data Base Management Systems

- Describe the fundamental elements of relational database management systems design.
- Design ER-diagram to represent simple database application
- Convert the ER-diagram to relational tables and formulate SQL queries on data.

BCA 203: Numerical and Statistical Methods

- Able to understand the Errors and Approximations
- Understand Numerical methods for solving equations.
- Exposed to statistical Methods

BCA III SEM

BCA 303: OOPs Using C++

- Identify the features Object oriented programming.
- Describe the C++ features such as Classes, objects, constructors, destructors, nheritance, operator overloading, polymorphism, template and exception handling in program dsign.
- Illustrate the use of C++programming to demonstrate object-oriented solutions

BCA 304: Financial Accounting and Management

- Describe basics of accounting, identify events that need to be recorded in the accounting records.
- Develop the skill of recording financial transactions and preparation of reports in accordance with Golden rules of accounting and principle, Describe the role of accounting information and its limitations
- Identify and analyze the reasons for the difference between cash book and pass book balances and demonstrate the knowledge of accounting process and preparation of final accounts of sole trader and partnership.
- In the laboratory course students will get an opportunity to create company, enter accounting voucher entries including advance voucher entries, do reconcile bank statement, do accrual adjustments, and also print financial statements, etc. in Tally ERP.9 software

BCA 305: Operating Systems

- Evaluate the performance of Process Management
- Analyze the concept of Process Synchronization and dead lock
- Illustrate the Memory management techniques.
- Compare File system and Secondary storage system

BCA IV SEM

BCA 403: Visual Programming

- Understand an overview of Event Driven Programming Language
- Understand and experience the advanced controls available in Visual Programming
- Understand Visual Basic Applications
- Understand how interact with Backend and its Stored Results

BCA 404: Unix Shell Programming

- Illustrate the usage of different shell commands and variables on small
- Explain the UNIX environment, File system and hierarchy
- Classify the commands to extract, interpret data for further
- Processing on various applications

BCA 405: Operation Research

- Formulate a real –world problem as a mathematical programming model
- Understand the theoretical workings of the simplex method for linear programming and perform iterations of it by hand
- Understand the relationship between a linear program and its dual, including strong duality and complementary slackness
- Solve specialized linear programming problems like the transportation and assignment problems
- Solving the Two person zero sum games, CPM & PERT network analysis

BCA V SEM

BCA 501: Data Communications and Networks

- Understand the rudiments of how computers communicate.
- Understand the principles of protocol layering.
- Be familiar with the architecture of a number of different networks
- Familiarization with modern telecommunications

BCA 502: Software Engineering

- Understand the design Procedure of Software.
- Focused on Software Development methodology.
- Will be able understand Testing Techniques
- Understand costing methods

BCA 503: Computer Architecture

- Exposed to different Architectures.
- Able to gain addressing Techniques.
- Able to design CPU
- Understand the techniques of Data transmission

BCA 404: Java Programming

- Under the Concepts of OOPS.
- Exposed to the structure of JVM.
- Understand the Design methods of Applets.
- Study the techniques of Exception Handling.

BCA 405: Microprocessor and Assembly Language

- Gain knowledge about 8085 Architecture.
- Understand the concepts of Instruction formats in 8085.
- Able to understand Assembly language programming.
- Exposed to various interfaces.

BCA VI SEM

BCA 601: Theory of Computations

- Prove properties of languages, grammars and automata with rigorously formal mathematical methods;
- Design automata, regular expressions and context-free grammars accepting or generating a certain language;
- Describe the language accepted by an automata or generated by a regular expression or a context-free grammar;
- Transform between equivalent deterministic and non-deterministic finite automata, and regular expressions;

BCA 602: Systems Programming

- Define components of system programming and discuss the machine structure IBM 360
- Describe the design procedure of an assembler
- Identify the features of macro and describe the implementation of macro processor
- Summarize different types of loading schemes
- Discuss the various phases and structure of a compiler

BCA 603: Cryptography and Network Security

- Analyse the concept of Traditional Symmetric-Key Ciphers
- Evaluate the Modern Symmetric-Key Ciphers
- Analyse solutions for effective key management and distribution
- Explore the attacks and controls associated with IP, transport-level, web and E-mail security

BCA 604: Web Programming

- Understand, analyze and apply the role of languages like HTML, DHTML,CSS, XML, JavaScript.
- Understand, analyze and create web pages using HTML, DHTML and Cascading Styles Sheets
- Understand, analyze and build dynamic web pages
- Understand, analyze and create XML documents and XML Schema