

Department of Computer Science

Course outcomes

Semester - I

B.Com(Computer Application)

Fundamentals of Information Technology (Code : DSC103) Credits : 5

Objective: To understand the basic concepts and terminology of information technology and to identify issues related to information security

Outcomes:

- Basic knowledge of computer peripherals, I/O devices.
- Use and application of IT in day today life.
- Understanding various number system used in modern computer system
- Comprehensive knowledge about the tangible and non-tangible storage devices..
- Application of software's in domestic and corporate world. Understanding the use of various applications in various types report required in office work.
- Basic understanding of Operating system and its uses in PC's, mobiles and server systems
- Overview of the communication system in IT
- Knowing about the working principal of hardware devices required to build a network.

B.Sc. (M.S.Cs): Programming in C

Objective: To understand the fundamental concepts of programming in C.

Outcomes:

- Understanding computer fundamentals
- Overall Knowledge of I/O devices and storage units
- Introductory knowledge of programming.
- Strategy to design program algorithms and flowcharts
- Understanding c Language, I/O functions and Control structure
- Knowledge of Single and multidimensional arrays.
- Functions and its types
- Introduction of pointers and its implementation in C language
- Basics of user defined data types
- Understanding file implementation in C Language

Semester-II

B.Com (Hons)

a)Basic Computer Skills (AECC2) Credit : 2

Objective: to impart a basic level understanding of working of a computer and its usage.

Outcomes:

- Basic knowledge of computer peripherals, I/O devices.
- Basic understanding of Operating system and its uses in PC's, mobiles and server systems

- Comprehensive knowledge about the tangible and non-tangible storage devices.
- Use and application of Word, Excel and Power Point .
- Understanding VPN, basic networking
- Understanding Basics of Email.

B.Com.(General)

a)Basic Computer Skills (AECC2) Credit : 2

Objective: to impart a basic level understanding of working of a computer and its usage.

Outcomes:

- Basic knowledge of computer peripherals, I/O devices.
- Basic understanding of Operating system and its uses in PC's, mobiles and server systems
- Comprehensive knowledge about the tangible and non-tangible storage devices.
- Use and application of Word, Excel and Power Point .
- Understanding VPN, basic networking
- Understanding Basics of Email.

B.Com.(Computer Application)

a)Basic Computer Skills (AECC2) Credit : 2

Objective: to impart a basic level understanding of working of a computer and its usage.

Outcomes:

- Basic knowledge of computer peripherals, I/O devices.
- Basic understanding of Operating system and its uses in PC's, mobiles and server systems
- Comprehensive knowledge about the tangible and non-tangible storage devices.
- Use and application of Word, Excel and Power Point .
- Understanding VPN, basic networking
- Understanding Basics of Email.

Programming with C & C++ (DSC203) Credit : 5

Objective: To understand the fundamental concepts of programming in C and Object Oriented Programming using C++.

Outcomes:

- Introductory knowledge of programming.
- Strategy to design program algorithms and flowcharts
- Understanding c Language, I/O functions and Control structure
- Knowledge of Single and multidimensional arrays.
- Functions and its types
- Introduction of pointers and its implementation in C language
- Basics of user defined data types
- Concepts of Class, objects and OOPS
- Method Overloading concepts in CPP
- Constructor and its application
- Implementing Inheritance and its types using CPP

BBA

Second Semester

a)Basic Computer Skills (AECC2) Credit : 2

Objective: to impart a basic level understanding of working of a computer and its usage.

Outcomes:

- Basic knowledge of computer peripherals, I/O devices.
- Basic understanding of Operating system and its uses in PC's, mobiles and server systems
- Comprehensive knowledge about the tangible and non-tangible storage devices.
- Use and application of Word, Excel and Power Point .
- Understanding VPN, basic networking
- Understanding Basics of Email.

B.Sc. (M.S.Cs)**Second Semester****Programming in C++ (Credit : 5)**

Objective: To understand the fundamental concepts of Object Oriented Programming using C++.

Outcomes:

- Understanding OOPs concepts using CPP
- Understanding DevCPP environment to execute the programs
- Concepts of control structure, keywords and arrays
- Understanding concepts of class and objects
- File Stream Implementation using simple CPP programs
- Exception handling and Implementation in CPP
- Method Overloading concepts in CPP
- Constructor and its application
- Implementing Inheritance and its types using CPP
- Concepts of Streams and file handling
- Various ways to handle errors through exception handling
- The use and implementation of templates

Fundamentals of computers (Credit : 2)

Objective: to impart a basic level understanding of working of a computer and its usage.

Outcomes:

- Basic knowledge of computer peripherals, I/O devices.
- Understanding the various memory units of computer
- Various Number system used in Computer Science
- Logic gates overview and brief understanding of K-MAP and Boolean Algebra

Semester-III**B.Com(Computer Application)****Relational Database Management System (Code : DSC303) Credits : 5**

Objective: to acquire basic conceptual background necessary to design and develop simple database system, Relational database mode, ER model and distributed databases, and to write good queries using a standard query language called SQL

Outcomes:

- Understanding the fundamental elements of relational database management systems

- Basic concepts of relational data model, entity-relationship model, relational database design, relational algebra.
- Introduction to SQL, Practical to understand database for a working environment.
- Design ER-models to represent simple database application scenarios
- Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data.
- Optimizing the database design by normalization.
- Familiar with basic database storage structures and access techniques: file and page
- Organizations, indexing methods including B tree, and hashing.

Data Structures using C++

Objective: To understand the fundamental concepts of Data Structures using object Oriented Programming using C++.

Outcomes:

- Understanding Data Structures and its types
- Stack data Structures, its implementation in C++ and its application
- Queue data Structures, its implementation in C++ and its application
- Linked List its implementation in C++ and its application
- Tree data Structure, various types of trees and its implementation in C++
- Balancing trees to optimize
- Searching and Sorting techniques
- Graph data structures, its types and their implementation in C++ and application
- Application of hash and Heaps

BBA

Information Technology for Business (DSC 302) (Credit : 5)

OBJECTIVE: The Objective of this course is to familiarize management students to basics of IT, its applications and importance to present day management and organization

Outcomes:

- Understanding IT and its application
- Comprehensive knowledge of computer and its peripherals
- Brief Idea about storage units
- Understanding Management Information System in corporate world.
- Basic understanding of database.
- Understanding the Business Applications of Multimedia
- Overall knowledge of internet & security issues
- Understanding VPN, basic networking
- Use and application of Word, Excel and Power Point .

Semester-IV

Web Technologies (DSC403) (Credit 5)

Objective: To gain skills of usage of Web Technologies to design Web pages

Outcomes:

- Knowledge about: - History and development of the World Wide Web and associated technologies.
- The client-server architecture of the World Wide Web and its communication protocol HTTP/HTTPS.
- Designing static pages with HTML
- Embedding CSS in HTML
- Creating Dynamic pages, understand various events and filters in DHTML
- Learning various control structures in JavaScript
- Events and event handlers using Javascript, DOM
- Programming web pages with Javascript/DOM (client) –
- Design and development of web-pages and web-applications
- Creating XML Documents - XML style Sheet and XML DOM

Semester Four**Data Base Management Systems (Credit : 5)**

Objective: to acquire basic conceptual background necessary to design and develop simple database system, Relational database mode, ER model and distributed databases, and to write good queries using a standard query language called SQL and Procedural Language PL/SQL.

Outcomes:

- Understanding the fundamental elements of database management systems
- Basic concepts of relational data model, entity-relationship model, relational database design, relational algebra.
- Introduction to SQL, Practical to understand database for a working environment.
- Design ER-models to represent simple database application scenarios
- Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data.
- Advanced SQL through PL SQL under oracle environment
- Optimizing the database design by normalization.
- Familiar with basic database storage structures and access techniques: file and page
- Concepts on Transaction management and theories related to it.
- Various database recovery techniques
- How to handle database threats and provide security to databases

Fifth Semester**B.Com(Computer Application)****Excel Foundation (Code : BCC506) Credit : 4**

Objective: Students will learn how to start working with M S Excel right from basics to Tables, Templates and Printing of their work.

Outcomes:

- Tabular data formation, and An overview of presenting tabular data in Excel Worksheet
- Working with cells, referencing of cells, data types, Workbooks.
- Understanding The ribbons and groups in excel Environment

- Basic problem solving with tabular data
- Applying various formulas, applying ranges in formula, comparing among sheets
- Formatting the formed tabular data with various tools
- Elementary understanding of Templates and its uses
- Generating reports through print outs
- Creating Custom Views of your Worksheet. Creating PDF files.

Web Technology (Code : BCC508 (a)) Credit : 5

Objective: To gain skills of usage of Web Technologies to design Web pages

Outcomes:

- Knowledge about: - History and development of the World Wide Web and associated technologies.
- The client-server architecture of the World Wide Web and its communication protocol HTTP/HTTPS.
- Designing static pages with HTML
- Embedding CSS in HTML
- Creating Dynamic pages, understand various events and filters in DHTML
- Formats and languages used in modern web-pages: HTML, XHTML, CSS, XML, XSLT, Javascript, DOM
- Programming web pages with Javascript/DOM (client) –
- Design and development of web-pages and web-applications
- Use of development tools General competencies:
- Creating XML Documents - XML style Sheet and XML DOM

Programming in Java (Credit 4)

Objective: To understand the concepts of Object Oriented Programming in Java and create programs in simple and secure way.

Outcomes:

- Understanding java Essentials and JVM
- Concepts of Class, objects and OOPS
- Method Overloading concepts in java
- Constructor and its application
- Implementing Inheritance and its types using java
- Introduction to Interfaces and the way to implement in java
- Exception handling and Implementation in Java
- File Stream Implementation using simple java programs
- Applet and its life cycle
- Introduction to AWT and SWING

Operating Systems (Credit: 4)

Objective: To understand the concept of how to manage the computer's resources.

Outcomes:

- Overview of Computer-System Architecture
- Various types of Operating-System Structures
- How process management and synchronization is done in OS
- Various CPU Scheduling Algorithms
- Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock.
- Main Memory and virtual memory management overview
- Mass storage structures specially RAID
- File System Implementation in OS

Python 1 (SEC 2) Credit: 2

Objective: To understand the basic concepts of Python and develop simple applications.

Outcomes:

- Basic understanding for python Environment and how it is different from other languages
- Complete Intallatio0n process of python in windows environment
- Understanding the datatypes, variables and how to use them in simple programs
- Operators used in python and how to use them in a program
- Understand and implementing various control structures used in python

Semester-VI

E-Commerce (BCC607) (Credit 5)

Objective: to acquire conceptual and application knowledge of ecommerce.

Outcomes:

- Analyze the impact of E-commerce on business models and strategy.
- Describe the major types of E-commerce.
- Explain the process that should be followed in building an E-commerce presence.
- Identify the key security threats in the E-commerce environment.
- Describe how procurement and supply chains relate to B2B E-commerce.
- Overall understanding of framework of E-commerce
- Complete Understanding of Electronic payment System
- EDI and its Application in Business
- E-MARKETING techniques and its implementation
- On-Line Marketing Process overview
- Learners will be able to recognize features and roles of businessmen, entrepreneur, managers, consultant, which will help learners to possess knowledge and other soft skills and to react aptly when confronted with critical decision making.

Management Information System (BCC608) Credit : 5

Objective: To equip the students with finer nuances of MIS.

Outcomes:

- An overview of management information systems
- Various Levels and roles of management

- Introduction to Information System in Business
- Framework of Information System
- Computational planning support for an organization
- Understanding Managerial Decision making Systems
- Concepts on ERP, SCM, CRM and how information systems make it easier
- Overview of System development Life Cycle to build an information system.

Computer Networks (Credit: 4)

Objective: To understand Network models OSI and TCP/IP and create simple programs using C in Linux environment.

Outcomes:

- Basic knowledge of Computer Networks
- Various transmission Media to form a Computer Network
- LAN Standards and its types
- Various Network Algorithm and its implementation
- Understanding the Layers of OSI and TCP/IP models in computer Network
- Implementation of simple network program using C language in linux environment

Web Technology (Credit: 4)

Objective: To gain skills of usage of Web Technologies to design Web pages using HTML, CSS, JavaScript and XML.

Outcomes:

- Knowledge about: - History and development of the World Wide Web and associated technologies.
- The client-server architecture of the World Wide Web and its communication protocol HTTP/HTTPS.
- Designing static pages with HTML, learning various tags used in HTML5
- Embedding CSS in HTML
- Creating Dynamic pages, understand various events and filters in DHTML
- Formats and languages used in modern web-pages: HTML, XHTML, CSS, Javascript, DOM
- Design and development of web-pages and web-applications

Python 2 (SEC 4) Credit: 2

Objective: To understand the basic concepts of Python and develop simple applications.

Outcomes:

- Understand Arrays in python and implementing them in simple programs
- String and its uses, implementing strings in Python program. Understating the functions used in python for strings
- Functions and ways to implement in python
- Basic understanding of Lists and Tuples in pythons

Program Outcomes

- Ability to design and develop software applications to address real time problems using Programming languages, Databases, Operating Systems, and Computer Network Concept
- Students develop problem solving skills and learn various concepts which help in developing logical tools and Software models that is used to solve various real life problems.
- To develop experimenting skills in Computer laboratory that enhances critical thinking skills, logical application of the same in problem solving.
- To provide the desired level of knowledge and practical exposure of changing IT that is used in modern global business environment.

Program specific outcomes

- To select modern computing tools and techniques to meet the desired needs of the society such as safety, security and applicability.
- Recognize the need for and have the ability to engage in independent, lifelong learning and adapt to technological changes to be globally competent.
- Using Statistical software leading and applying logical and analytical skills to solve real life problems in related areas.
- Gain knowledge on theorems in Algebra, Analysis, Differential Equations and Linear Algebra and enhance themselves in mathematical skills for better employability



Head, Department of Computer Science



K . RAGHUVVEER
PRINCIPAL

Principal