

**I Year B Com (CA),
Semester- I Discipline:
COMPUTER
APPLICATIONS**

Course 1A:Information Technology

Outcomes:

At the end of the course, the students is expected to DEMONSTRATE the followingcognitive abilities (thinking skill) and psychomotor skills.

- A. *Remembers and states in a systematic way (Knowledge)*
 - 1. Describe the fundamental hardware components that make up a computer's hardware and the role of each of these components
 - 2. understand the difference between an operating system and an application program, and what each is used for in a computer
 - 3. Use technology ethically, safely, securely, and legally
 - 4. Use systems development, word-processing, spreadsheet, and presentation software to solve basic information systems problems
- B. *Explains (Understanding)*
 - 5. Apply standard statistical inference procedures to draw conclusions from data
 - 6. Retrieve information and create reports from databases
 - 7. Interpret, produce, and present work-related documents and information effectively and accurately
- C. *Critically examines, using data and figures (Analysis and Evaluation**)*
 - 8. Analyse compression techniques and file formats to determine effective ways of securing, managing, and transferring data
 - 9. Identify and analyse user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing based systems.
 - 10. Analyse a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
 - 11. Identify and analyse computer hardware, software
- D. Working in 'Outside Syllabus Area' under a Co-curricular Activity (Creativity) Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- E. Efficiently learn and use Microsoft Office applications.

Course 2C: E- Commerce & Web Designing

(Five units with each unit having 12 hours of class work)

Outcomes:

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

Remembers and states in a systematic way (Knowledge)

1. Understand the foundations and importance of E-commerce
2. Define Internet trading relationships including Business to Consumer, Business-to-Business, Intra-organizational
3. Describe the infrastructure for E-commerce
4. Discuss legal issues and privacy in E-Commerce
5. Understand the principles of creating an effective web page, including an in-depth consideration of information architecture

Explains (Understanding)

6. Recognize and discuss global E-commerce issues
7. Learn the language of the web: HTML and CSS.

Critically examines, using data and figures (Analysis and Evaluation)

8. Analyze the impact of E-commerce on business models and strategy
9. Assess electronic payment systems
10. Exploring a web development framework as an implementation example and create dynamically generated web site complete with user accounts, page level security, modular design using css

Working in 'Outside Syllabus Area' under a Co-curricular Activity(Creativity)

Use the Systems Design Approach to implement websites with the following steps:

- Define purpose of the site and subsections
- Identify the audience
- Design and/or collect site content
- Design the website theme and navigational structure
- Design & develop web pages including: CSS Style Rules, Typography, Hyperlinks, Lists, Tables, Frames, Forms, Images, Behaviours, CSS Layouts

Build a site based on the design decisions and progressively incorporate tools and techniques covered

II Year B Com (CA), Semester –

III Discipline: COMPUTER

APPLICATIONS

Course 3C: Programming with C & C++

(Five units with each unit having 12 hours of class work)

Outcomes:

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

Remembers and states in a systematic way (Knowledge)

1. Develop programming skills
2. Declaration of variables and constants use of operators and expressions
3. learn the syntax and semantics of programming language
4. Be familiar with programming environment of C and C++
5. Ability to work with textual information (characters and strings) & arrays

Explains (Understanding)

6. Understanding a functional hierarchical code organization
7. Understanding a concept of object thinking within the framework of functional model
8. Write program on a computer, edit, compile, debug, correct, recompile and run it

Critically examines, using data and figures (Analysis and Evaluation)

9. Choose the right data representation formats based on the requirements of the problem
10. Analyze how C++ improves C with object-oriented features
11. Evaluate comparisons and limitations of the various programming constructs and choose correct one for the task in hand.

Working in 'Outside Syllabus Area' under a Co-curricular Activity (Creativity)

Planning of structure and content, writing, updating and modifying computer programs for user solutions

Exploring C programming and Design C++ classes for code reuse (Practical skills***)

II Year B Com (CA), Semester – IV
Discipline: COMPUTER APPLICATIONS
Course 3F: Database Management System
(Five units with each unit having 12 hours of class work)

Outcomes for Database Management System

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

Remembers and states in a systematic way (Knowledge)

1. Understand the role of a database management system in an organization.
2. Understand basic database concepts, including the structure and operation of the relational data model.
3. Understand and successfully apply logical database design principles, including E-R diagrams and database normalization
4. Understand Functional Dependency and Functional Decomposition

Explains (Understanding)

5. To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS.
6. Perform PL/SQL programming using concept of Cursor Management, Error Handling, Packages

Critically examines, using data and figures (Analysis and Evaluation)

7. Apply various Normalization techniques
8. Model an application's data requirements using conceptual modeling tools like ER diagrams and design database schemas based on the conceptual model

Working in 'Outside Syllabus Area' under a Co-curricular Activity (Creativity)
Design and implement a small database project

Construct simple and moderately advanced database queries using
Structured Query Language (SQL) (Practical skills)

II Year B Com (CA)– Semester – IV

Course 4E: Object Oriented Programming with Java

Learning Outcomes:

At the end of the course, the student will be able to;

- Understanding the meaning and necessity of audit in modern era
- Comprehend the role of auditor in avoiding the corporate frauds
 - Identify the steps involved in performing audit process
- Determine the appropriate audit report for a given audit situation
 - Apply auditing practices to different types of business entities
- Plan an audit by considering concepts of evidence, risk and materiality

Course-6A: BIGDATA ANALYTICS USING R

(Skill Enhancement Course (Elective), 5 credits)

Learning Outcomes:

Upon successful completion of the course, a student will be able to:

1. Understand data and classification of digital data.
2. Understand Big Data Analytics.
3. Load data in to R.
4. Organize data in the form of R objects and manipulate them as needed.
5. Perform analytics using R programming.

Course-7A: DATA SCIENCE USING PYTHON

(Skill Enhancement Course (Elective), 5 credits)

Learning Outcomes:

Upon successful completion of the course, a student will be able to:

1. Understand basic concepts of data science
2. Understand why python is a useful scripting language for developers.
3. Use standard programming constructs like selection and repetition.
4. Use aggregated data (list, tuple, and dictionary).
5. Implement functions and modules.