

B.Com COMPUTER APPLICATIONS SYLLABUS
REVISED SYLLABUS OF B.Com(COMPUTER APPLICATIONS)
UNDER CBCS FRAMEWORK WITH EFFECT FROM 2020-21

Sl. No	Code	Sem	Courses	Name of Course (Each Course consists 5 Units with each Unit having 12 hours of class-work)	Hours/Week	Credits	Marks	
							Mid Sem	Sem End
1		I	1A	Fundamentals of Accounting	5	4	25	75
2		I	1B	Business Organization and Management	5	4	25	75
3		I	1C	Information Technology	3T + 2P	3 + 1	25	75
4		II	2A	Financial Accounting	5	4	25	75
5		II	2B	Business Economics	5	4	25	75
6		II	2C	E-commerce and Web Designing	3T + 2P	3 + 1	25	75
7		III	3A	Advanced Accounting	5	4	25	75
8		III	3B	Business Statistics	5	4	25	75
9		III	3C	Programming with C & C++	3T + 2P	3 + 1	25	50+25
10		IV	4A	Corporate Accounting	5	4	25	75
11		IV	4B	Cost and Management Accounting	5	4	25	75
12		IV	4C	Income Tax	5	4	25	75
13		IV	4D	Business Laws	5	4	25	75
14		IV	4E	Auditing	5	4	25	75
15		IV	4F	Data Base Management System	3T + 2P	3 + 1	25	50+25
Total					75	60	375	1125

Domain Subject: Computer Applications for Arts/Commerce
Skill Enhancement Courses (SECs) for Semester V, from 2022-23 (Syllabus/Curriculum)

Univ. Code	Course NO. 6&7	Name of Course	Hrs. / Week	Max MarksIE	Max Marks EE	Credits
	6A	Big data Analytics using R	5	25	75	4
	7A	Data Science using Python	5	25	75	4

OR

	6B	Mobile application development	5	25	75	4
	7B	Cyber security and malware analysis	5	25	75	4

OR

	6C	E- commerce application development	5	25	75	4
	7C	Real time governance system (RTGS)	5	25	75	4

OR

	6D	Multimedia Tools and Applications	5	25	75	4
	7D	Digital imaging	5	25	75	4

SEMESTER VI

INTERNSHIP

Syllabus:

Course 1C :Information Technology

Unit	Details
I	Introduction: Computer Definition - Characteristics and Limitations of Computer— Generations of Computer, Classification of Computers, Applications of Computer, Basic Components of PC, Computer Architecture - Primary and Secondary Memories- Input and Output Devices- Operating System- Function of Operating System- Types of Operating System- Languages and its Types
II	MS word: Word Processing – Features-Advantages and Applications- Parts of Word Window- Toolbar-Creating, Saving, Closing, Opening and Editing of a Document-Moving and Copying a Text-Formatting of Text and Paragraph- Bullets and Numbering-Find and Replace - Insertion of objects-Headers and Footers- Page Formatting- Auto Correct- Spelling and Grammar- Mail Merge- Macros
III	MS Excel: Features – Spread Sheet-Workbook – Cell-Parts of a window-Saving, Closing, Opening of a Work Book – Editing – Advantages – Formulas- Types of Function-Templates – Macros – Sorting- Charts – Filtering.
IV	MS Power point: Introduction – Starting – Parts-Creating of Tables- Create Presentation – Templates- Auto Content Wizard-Slide Show-Editing of Presentation-Inserting Objects and charts
V	MS Access: Orientation to Microsoft Access - Create a Simple Access Database - Working with Table Data - Modify Table Data - Sort and Filter Records - Querying a Database - Create Basic Queries - Sort and Filter Data in a Query - Perform Calculations in a Query - Create Basic Access Forms - Work with Data on Access Forms - Create a Report - Add Controls to a Report - Format Reports

Learning Resources (Course 1C:Information Technology)

Practical Component: @ 2 hours/week/batch

- MS word creation of documents letters invitations etc, tables, mailmerge, animations in word, formatting text
- MS Excel performing different formulas, creating charts, macros
- MS power point slide creation, creation of animation
- MS Access creation of database, forms and reports

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Course 2C: E-commerce & Web Designing

Unit	Details
I	<p>Unit I: Introduction:</p> <p>Meaning, Nature, Concepts, Advantages, Disadvantages and reasons for Transacting Online, Types of E-Commerce, e-commerce Business Models (Introduction , Key Elements of a Business Model And Categorizing Major E-Commerce Business Models), Forces Behind e-commerce.</p> <p>Technology used in E-commerce: The dynamics of World Wide Web and Internet (Meaning, Evolution And Features); Designing, Building and Launching e-commerce website (A systematic approach involving decisions regarding selection of hardware, software, outsourcing Vs. in-house development of a website)</p>
II	<p>Unit-II: E-payment System:</p> <p>Models and methods of e-payments (Debit Card, Credit Card, Smart Cards, e-money), Digital Signatures (Procedure, Working And Legal Position), Payment Gateways, Online Banking (Meaning, Concepts, Importance, Electronic Fund Transfer, Automated Clearing House, Automated Ledger Posting), Risks Involved in e-payments.</p>
III	<p>Unit-III: On-line Business Transactions:</p> <p>Meaning, Purpose, Advantages and Disadvantages of Transacting Online, E-Commerce Applications in Various Industries Like {Banking, Insurance, Payment of Utility Bills, Online Marketing, E-Tailing (Popularity, Benefits, Problems and Features), Online Services (Financial, Travel and Career), Auctions, Online Portal, Online Learning, Publishing and Entertainment} Online Shopping (Amazon, Snap Deal, Alibaba, Flipkart, etc.)</p>
IV	<p>Unit-IV: Website designing</p> <p>Designing a home page, HTML document, Anchor tag Hyperlinks, Head and body section, Header Section, Title, Prologue, Links, Colorful Pages, Comment, Body Section, Heading Horizontal Ruler, Paragraph, Tabs, Images And Pictures, Lists and Their Types, Nested Lists, Table Handling.</p> <p>Frames: Frameset Definition, Frame Definition, Nested Framesets, Forms and Form Elements. DHTML and Style Sheets: Defining Styles, elements of Styles, linking a style sheet to a HTML Document, Inline Styles, External Style Sheets, Internal Style Sheets & Multiple Style Sheets.</p>

V Unit V: Security and Encryption:

Need and Concepts, E-Commerce Security Environment: (Dimension, Definition and Scope Of E-Security), Security Threats in The E-Commerce Environment (Security Intrusions And Breaches, Attacking Methods Like Hacking, Sniffing, Cyber-Vandalism Etc.), Technology Solutions (Encryption, Security Channels Of Communication, Protecting Networks And Protecting Servers And Clients)

Practical Component:@ 2 hours/week/batch

1. Creation of simple web page using formatting tags
2. Creation of lists and tables with attributes
3. Creation of hyperlinks and including images
4. Creation of forms
5. Creation of framesets
6. Cascading style sheets – inline, internal and external

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Course 3C: Programming with C & C++

Unit	Details
I	Introduction and Control Structures: History of 'C' - Structure of C program – C character set, Tokens, Constants, Variables, Keywords, Identifiers – C data types - C operators - Standard I/O in C - Applying if and Switch Statements
II	Loops And Arrays: Use of While, Do While and For Loops - Use of Break and Continue Statements - Array Notation and Representation - Manipulating Array Elements - Using Multi Dimensional Arrays.
III	Strings and Functions: Declaration and Initialization of String Variables - String Handling Functions -Defining Functions - Function Call - Call By Value, Call By Reference – Recursion
IV	Classes and Objects Introduction to OOP and its basic features - C++ program structure - Classes and objects - Friend Functions-Constructor – Types of constructors – Destructors.
V	Inheritance: Inheritance - Types of Inheritance -Types of derivation- Public – Private - Protected Hierarchical Inheritance - Multilevel Inheritance – Multiple Inheritance - Hybrid Inheritance

Practical Component: @ 2 hours/week/batch

1. Write C programs for
 - a. Fibonacci Series
 - b. Prime number
 - c. Palindrome number
 - d. Armstrong number.
2. 'C' program for multiplication of two matrices
3. 'C' program to implement string functions
4. 'C' program to swap numbers
5. 'C' program to calculate factorial using recursion
6. 'C++' program to perform addition of two complex numbers using constructor
7. Write a program to find the largest of two given numbers in two different classes using friend function
8. Program to add two matrices using dynamic constructor
9. Implement a class string containing the following functions:
 - a. Overload + operator to carry out the concatenation of strings.
 - b. Overload == operator to carry out the comparison of strings.
10. Program to implement inheritance.

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Course 4F: Database Management System

Unit	Details
I	Overview of Database Management System Introduction, Data and Information, Database, Database Management System, Objectives of DBMS, Evolution of Database Management System, Classification of Database Management System.
II	File-Based System File Based System. Drawbacks of File-Based System, DBMS Approach, Advantage of DBMS, Data Models, Components of Database System, Database Architecture, DBMS Vendors and their products.
III	Entity-Relationship Model: Introduction, The Building Blocks of an Entity-Relationship, Classification of Entity Set, Attribute Classification, Relationship Degree, Relationship Classification, Generalization and Specialization, Aggregation and Composition, CODD's Rules, Relational Data Model, Concept of Relational Integrity.
IV	Structured Query Language Introduction, History of SQL Standards, Commands in SQL, Data types in SQL, Data Definition Language (DDL), Selection Operation Projection Operation, Aggregate Functions, Data Manipulation Language, Table Modification, Table Truncation, Imposition of Constraints, Set Operations.
V	PL/SQL: Introduction, Structure of PL/SQL, PL/SQL Language Elements, Data Types, Control Structure, Steps to Create a PL/SQL Program, Iterative Control Cursors, Steps to Create a Cursor, Procedure, Functions, Packages, Exceptions Handling, Database Triggers, Types of triggers.

Practical Component: @ 2 hours/week/batch

1. Create tables department and employee with required constraints.
2. Initially only the few columns (essential) are to be added. Add the remaining columns separately by using appropriate SQL command.
3. Basic column should not be null
4. Add constraint that basic should not be less than 5000.
5. Calculate hra, da, gross and net by using PL/SQL program.
6. The percentage of hra and da are to be stored separately.
7. When the da becomes more than 100%, a message has to be generated and with user permission da has to be merged with basic.
8. Emp no should be unique and has to be generated automatically.

Course-6C: E- COMMERCE APPLICATION DEVELOPMENT

(Skill Enhancement Course (Elective), 4 credits)

Syllabus: (Total hours: 75 including Theory, Practical, Training, Unit tests etc.)

Unit-1: **(10h)**

Introduction to E- commerce:

Meaning and concept – E- commerce

E- commerce v/s Traditional Commerce

E- Business & E- Commerce – History of E- Commerce

EDI – Importance, features & benefits of E- Commerce

Impacts, Challenges & Limitations of E- Commerce

Unit-2: **(12h)**

Business models of E – Commerce: Business to Business

2.1.2 Business to customers

2.1.3 Customers to Customers

Business to Government

Business to Employee

Influencing factors of successful E- Commerce

Architectural framework of Electronic Commerce

Web based E Commerce Architecture.

Internet Commerce

Unit-3: **(12h)**

Electronic data Interchange

EDI Technology

EDI- Communications

EDI Agreements

E- Commerce payment system.

Digital Economy

Unit -4: **(13h)**

A Page on the web - HTML Basics

Client Side scripting -JAVA SCRIPT basics

Server side Scripting- PHP basics.

Unit-5: **(13h)**

Logging in to Your Word press Site

word press dash board

creating your first post

adding photos and images

creating hyper link

adding categories and tags

Textbooks:

1. Turban, Rainer, and Potter, Introduction to E-Commerce, second edition, 2003
2. H. M. Deitel, P. J. Deitel and T. R. Nieto, E-Business and E-Commerce: How to Programe, Prentice hall, 2001
3. WordPress All-in-One For Dummies -written by Lisa Sabin Wilson with contributions by Michael Torbert, Andrea Rennick, Cory Miller, and Kevin Palmer

Reference Books:

1. Elias. M. Awad, "Electronic Commerce", Prentice-Hall of India Pvt Ltd.
2. Ravi Kalakota, Andrew B. Whinston, "Electronic Commerce-A Manager's guide", Addison-Wesley
3. <https://w3schools.com>
4. David Whiteley, E-Commerce: Strategy, Technologies and Applications, Tata McGrawHill.

Course-6C: E- Commerce Application Development; Lab (Practical) Syllabus (15 Hrs)

Case study of e –commerce

1. Home page design of web site
2. Validation using PHP
3. Implement Catalogue design
4. Implement Access control mechanism(eg: username and password)
5. Case study on business model of online E-Commerce store

Course-7C: REAL TIME GOVERNANCE SYSTEM (RTGS)

(Skill Enhancement Course (Elective), 4 credits)

Syllabus: (Total hours: 75 including Theory, Practical, Training, Unit tests etc.)

UNIT 1: Introduction to E-Governance

12hrs

- Government, Governance and Good Governance
- What is E-Governance or Electronic Governance?
- E-Government and E-Governance: A conceptual Analysis
 - ❖ Objectives
 - ❖ Components
 - ❖ application domains
 - ❖ four phase model
 - ❖ implementing E-Governance
 - ❖ issues while implementing E-Governance
 - ❖ Opportunities and challenges
- Types of E-Governance
- What is Real-Time Governance (RTG)
- Real Time Governance Society (RTGS)

UNIT 2: E-Governance Infrastructure

14hrs

- Data Systems infrastructure
 - ❖ Executive Information Systems
 - ❖ Management Information Systems
 - ❖ Knowledge Management Systems
 - ❖ Transaction Processing Systems
- Legal Infrastructural preparedness
 - ❖ IT Act 2000
 - ❖ Challenges to Indian law and cybercrime scenario in India
 - ❖ Amendments of the Indian IT Act
- Institutional Infrastructural preparedness
 - ❖ Internet
 - ❖ intranet
 - ❖ extranet
- Human Infrastructural preparedness
 - ❖ Top-level management
 - ❖ Middle-level management
 - ❖ Low-level management
- Technological Infrastructural preparedness
 - ❖ Information and communications technology
 - ❖ Data Warehousing
 - ❖ Cloud Computing

UNIT 3: E-Governance: Country Experience**12hrs**

- INDIA
- US
- UK
- AUSTRALIA
- DUBAI

UNIT 4: E-Governance in India**12hrs**

- Andhra Pradesh
- Karnataka
- Kerala
- Uttar Pradesh
- Madhya Pradesh
- West Bengal
- Gujarat

UNIT 5: Latest Applications in Real Time Governance**10hrs**

- Agriculture
- Rural Development
- Health care
- Education
- Tourism
- Commerce and Trade

Textbooks:

1. E-Governance: concepts and case studies| CSR Prabhu| Prentice-Hall|
2. E-Governance| Niranjani, Sanhari Mishra | Himalaya Publishing House

Course-7C: Real Time Governance System (RTGS); Lab (Practical) Syllabus **(15 Hrs)**

Note: Here the students have to gather the details in computer lab by surfing several websites & Google Search Engines and submit the report to the class/lab instructor before leaving the lab.

Week 1: Write a Report on the role of Nationwide Networking in E-Governance

Week 2: Write a Report on SETU: A Citizen Facilitation Centre in India, regarding it's successful or failure journey.

Week 3: Write a Report on National Cyber Security Policy, how it is useful to Indian citizens.

Week 4: Write a Report on mee-seva/Village Secretariat/Ward secretariat, a new paradigm in citizen services.

Week 5: Write a Report on how Andhra Pradesh is implementing RTGS in Agriculture.

Week 6: Write a Report on how Andhra Pradesh is implementing RTGS in social welfare schemes

Week 7: Write a Report on how Andhra Pradesh is implementing RTGS in waste lands, agricultural lands and house properties.

Week 8: Write a Report on Electronic Birth Registration in any one state of our country.

Note: The list of experiments need not be restricted to the above list. *Detailed list of Programming/software tool based exercises* can be prepared by the concerned faculty members.