Course Structure
B.Com. (Computer Applications)
SRI KRISHNADEVARAYA UNIVERSITY : ANANTHAPURAMU
Revised Common Framework of CBCS for Colleges in Andhra Pradesh
(A.P. State Council of Higher Education) 2016-17

Semester	Paper	Subject	Hrs.	Credits	IA	ES	Total
FIRST YEAR							
SEMESTER I	I	Fundamentals of Computers **(OR : 2015-2016 batch only)** / Office Automation Tools **(NR : 2016-2017 onwards)**	4	4	25	75	100
SEMESTER II	II	Office Automation Tools **(OR : 2015-2016 batch only)** / Enterprise Resource Planning **(NR : 2016-2017 onwards)**	4	4	25	75	100
SECOND YEAR							
SEMESTER III	III	Computer Fundamentals & Photoshop	4	4	25	75	100
		Ms-Office & Photoshop LAB	2	2	-	50	50
SEMESTER IV	IV	Business Analytics	4	4	25	75	100
		Business Analytics LAB	2	2	-	50	50
THIRD YEAR							
SEMESTER V	V	Programming in C	4	4	25	75	100
		Programming in C LAB	2	2	-	50	50
	VI	Data Base Management System	4	4	25	75	100
		DBMS LAB	2	2	-	50	50
SEMESTER VI	VII	e-Commerce	4	4	25	75	100
		e-Commerce LAB	2	2	-	50	50
	VIII	Web Technology	4	4	25	75	100
		Web Technology LAB	2	2	-	50	50

FIRST YEAR – I SEMESTER

FUNDAMENTALS OF COMPUTERS
(OR : 2015-2016 batch only)

UNIT I

Introduction to Computers

What is Computer, Characteristics of Computers, Generations of Computers, Classification of Computers, Basic Computer Organization, Applications of Computers

Input and Output Devices Input Devices, Output Devices, Soft Copy Devices, Hard Copy Devices

UNIT II

Computer Memory and Processors Introduction, Memory Hierarchy, Processor Registers, Cache Memory, Primary Memory, Secondary Storage Devices, Magnetic Tapes, Floppy Disks, Hard Disks, Optical Disks, USB Flash Devices, Memory Cards, Mass Storage Devices, Basic Processor Architecture

UNIT III

Computer Software Introduction to Computer Software, Classification of Computer Software System Software, Application Software, Firmware, Middleware, Acquiring Computer Software, Design and Implementations of Correct, Efficient and Maintainable Programs

Operating Systems Introduction, Evolution of Operating Systems, Process Management, Memory Management, File Management, Device Management, Security Management, Command Interpreter, Popular Operating Systems

UNIT IV

Introduction to Algorithms and Programming Languages Algorithm, Control Structures Used in Algorithms, Some More Algorithms, Flowcharts, Pseudo code, Programming Languages, Generations of Programming Languages, Categorization of High-Level Languages, Some Popular High-Level Languages, Factors Affecting Selection of Programming Language

UNIT V

The Internet Internet, Internet Services, Types of Internet Connections, Internet Security
Emerging Computer Technologies Distributed Networking, Peer-to-peer computing

TEXT BOOKS :

1. "Fundamentals Of Computers" By Reema Thareja from Oxford University Press

REFERENCE BOOKS :

1. Peter Norton, Introduction to Computers, 6th Edition , Tata McGraw – Hill , 2008 .
2. Jacob Beckerman, How to Build a Computer 2014-15: Learn, Select Parts, Assemble, and Install: A Step by Step Guide to Your First Homebuilt.
3. Leon A and Leon M, Computers for Everyone, Leon Vikas , 2001 .
4. Turban E, Rainer R K , and Potter R E , Introduction to Information Technology , John Wiley & Sons , 2000.

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FIRST YEAR - I SEMESTER

OFFICE AUTOMATION TOOLS
(NR : 2016-2017 onwards)

UNIT-I

MS-Excel: features of Ms-Excel, Parts of MS-Excel window, entering and editing data in worksheet, number formatting in excel, different cell references, how to enter and edit formula in excel, auto fill and custom fill, printing options.

UNIT-II

Formatting options: Different formatting options, change row height, formulae and functions, Functions: Meaning and advantages of functions, different types of functions available in Excel.

UNIT-III

Charts: Different types of charts, Parts of chart, chart creation using wizard, chart operations, data maps, graphs, data sorting, filtering. Excel sub totals, scenarios, what-if analysis

Macro: Meaning and advantages of Macros, creation, editing and deletion of macros - Creating a macro, how to run, how to delete a macro.

UNIT-IV

MS Access: Creating a Simple Database and Tables: Features of Ms-Access, Creating a Database, Parts of Access. Tables: table creation using design view, table wizard, data sheet view, import table, link table. Forms: The Form Wizard, design view, columnar, tabular, data sheet, chart wizard.

UNIT- V

Finding, Sorting and Displaying Data: Queries and Dynasts, Creating and using select queries, Returning to the Query Design, Multi-level sorts, Finding incomplete matches, showing All records after a Query, saving queries - Crosstab Queries. Printing Reports: Form and Database Printing. Relational Databases: Flat Versus Relational, Types of Relationships, Viewing Relationships, Defining and Redefining Relationships, Creating and Deleting Relationships.

Reference Books:

1.Ron Mansfield, Working in Microsoft Office, Tata McGraw Hill(2008)

2.Ed Bott, Woody Leonhard, Using Microsoft Office 2007, Pearson Education(2007)

3. Sanjay Saxsena, Microsoft Office, 4.Microsoft Office, BPB Publications.

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FIRST YEAR – II SEMESTER

OFFICE AUTOMATION TOOLS

(OR : 2015-2016 batch only)

UNIT I

Introduction to Windows, Desktop, File, Folder, My Computer, My documents, Recycle bin, Internet Explorer, Windows Explorer

Office Automation: Organization of an Office, Nature of Office work , The definition and need for office automation. Document Preparation : Word processing , Various office equipment that help in document preparation, Introduction to document storage and retrieval .

UNIT II

Word Basics : Starting word, Creating a new document, Opening preexisting document, The parts of a word window, Typing text, Selecting text, Deleting text, Undo, Redo, Repeat, Inserting text, Replacing text, Formatting text, Cut, Copy, Paste – Printing.
Formatting Your Text and Documents : Auto format, Line spacing, Margins, Borders and Shading.

Working with Headers and Footers: Definition of headers and footers, creating basic headers and footers, creating different headers and footers for odd and even pages.

Tables : Creating a simple table, Creating a table using the table menu, Entering and editing text in a table, selecting in table, adding rows, changing row heights, Deleting rows, Inserting columns, Deleting columns, changing column width .

Graphics : Importing graphics, Clipart, Insert picture, Clip Art Gallery, using word's drawing features, drawing objects, text in drawing.

Templates: Template types, using templates, exploring templates, modifying templates.

Macros: Macro, Recording macros, editing macros, running a macro.

Mail Merge: Mail Merge concept, Main document, data sources, merging data source and main document. Overview of word menu options word basic tool bar.

UNIT III
MS Power Point:
Introduction , Building a presentation , Outlining the presentation , Creating the text and chart slides , Formatting charts, Customizing a presentation, Drawing on slides , Creating slide shows.

Creating Presentations : Using auto content wizard, Using blank presentation option, Using design template option, Adding slides, Deleting a slide, Importing Images from the outside

world, Drawing in power point, Transition and build effects, Deleting a slide, Numbering a slide, Saving presentation, Closing presentation, Printing presentation elements.

UNIT IV

MS Excel

Excel Basics: Overview of Excel features, Getting started, Creating a new worksheet, Selecting cells, Entering and editing text, Entering and editing Numbers, entering and editing Formulas, Referencing cells, moving cells, copying cells, sorting cell data, inserting rows, inserting columns, Inserting cells, Deleting parts of a worksheet, clearing parts of a worksheet.

Formatting: Page setup, changing column widths and Row heights, auto format, changing font sizes and Attributes, centering text across columns, using border buttons and Commands, changing colors and shading, hiding rows and columns.

Introduction to functions: Parts of a functions, Functions Requiring Add-ins, The Function Wizard. Examples functions by category: Data and time functions, Engineering functions, Math and Trig functions, Statistical functions, Text functions.

Excel Charts: Chart parts and terminology, Instant charts with the chard wizard, creation of different types of charts, printing charts, deleting charts – Linking in Excel

Excel Graphics: Creating and placing graphic objects, Resizing Graphics, Drawing Lines and Shapes

UNIT V

MS Access

Creating a Simple Database and Tables: Creating a contacts Databases with the wiz, The Access Table Wizard, Creating Database Tables without the wizard, Field Names, Data Types and Properties, Adding, deleting fields, renaming the fields in a table.
Forms: The Form Wizard, Saving Forms, Modifying Forms

Entering and Editing Data: Adding Records, Duplicating previous entries without Retyping, Undo, Correcting Entries, Global Replacements, Moving from Record to Record in a table.

Finding, Sorting and Displaying Data: Queries and Dynasets, Creating and using select queries, Returning to the Query Design, Multilevel Sorts, Finding incomplete matches, Showing All Records after a Query, Saving Queries, Crosstab Queries.

Printing Reports : Simple table, Form and Database printing, Defining advanced Reports, Manual Reporting, properties in Reports, Saving Reports.

Relational Databases: Flat Versus Relational, Types of Relationships, Viewing Relationships, Defining and Redefining Relationships, Creating and Deleting Relationships.

MS Outlook : Introduction , Reading and Sending messages, Managing the mail box, Keeping a contacts list, Scheduling tasks and Meetings.

TEXT BOOKS :

1. Baja K   K , Office Automation , MacMillan India Ltd, 1996.

2. Steve Sagman, Microsoft Office XP for Windows , Pearson Education Asia , 2002.

    3. Jennifer Fulton, Microsoft Office 2000 Cheat Sheet, Prentice-Hall of India, 1999.

REFERENCE BOOKS :

    1. Windows XP Home Edition Complete , BPB Publications, 2001.
    2. Raghav Bahl , Exploring Microsoft Office XP , Cyber Tech, 2001 .
Sanjay Saxena , MS Office 2000 for Everyone, Vikas Publishing , 2001.

FIRST YEAR – II SEMESTER

ENTERPRISE RESOURCE PLANNING

(NR : 2016-2017 onwards)

UNIT-I

Introduction: Overview of enterprise systems – Evolution - Risks and benefits - Fundamental technology - Issues to be consider in planning design and implementation of cross functional integrated ERP systems.

UNIT- II

ERP Solutions and Functional Modules: Overview of ERP software solutions- Small, medium and large enterprise vendor solutions, BPR and best business practices - Business process Management, Functional modules.

UNIT-III

ERP Implementation: Planning Evaluation and selection of ERP systems - Implementation life cycle - ERP implementation, Methodology and Frame work- Training – Data Migration - People Organization in implementation-Consultants, Vendors and Employees.

UNIT-IV

Post Implementation: Maintenance of ERP- Organizational and Industrial impact; Success and Failure factors of ERP Implementation.

UNIT-V

Emerging Trends on ERP: Extended ERP systems and ERP add-ons -CRM, SCM, Business analytics - Future trends in ERP systems-web enabled, Wireless technologies, cloud computing.

References:

1. Alexis Leon, ERP demystified, second Edition Tata McGraw-Hill, 2008.
2. Sinha P. Magal and Jeffery Word, Essentials of Business Process and Information System, Wiley India, 2012
3. Jagan Nathan Vaman, ERP in Practice, Tata McGraw-Hill, 2008
4. Alexis Leon, Enterprise Resource Planning, second edition, Tata McGraw-Hill, 2008.
5. Mahadeo Jaiswal and Ganesh Vanapalli, ERP Macmillan India, 2009
6. Vinod Kumar Grag and N.K. Venkitakrishnan, ERP- Concepts and Practice, PHI, 2006.
7. Summer, ERP, Pearson Education, 2008

SECOND YEAR – III SEMESTER

COMPUTER FUNDAMENTALS & PHOTOSHOP

UNIT I

Introduction to Computers

What is Computer, Characteristics of Computers, Generations of Computers, Classification of Computers, Basic Computer Organization, Applications of Computers

Input and Output Devices Input Devices, Output Devices, Soft Copy Devices, Hard Copy Devices

UNIT II

Computer Memory and Processors Introduction, Memory Hierarchy, Processor Registers, Cache Memory, Primary Memory, Secondary Storage Devices, Magnetic Tapes, Floppy Disks, Hard Disks, Optical Disks, USB Flash Devices, Memory Cards, Mass Storage Devices, Basic Processor Architecture

Computer Software Introduction to Computer Software, Classification of Computer Software System Software, Application Software, Firmware, Middleware, Acquiring Computer Software, Design and Implementations of Correct, Efficient and Maintainable Programs

UNIT III

Operating Systems Introduction, Evolution of Operating Systems, Process Management, Memory Management, File Management, Device Management, Security Management, Command Interpreter, Popular Operating Systems

Introduction to Algorithms and Programming Languages Algorithm, Control Structures Used in Algorithms, Some More Algorithms, Flowcharts, Pseudo code, Programming Languages, Generations of Programming Languages, Categorization of High-Level Languages, Some Popular High-Level Languages, Factors Affecting Selection of Programming Language

UNIT IV

Introduction to Adobe photoshop, Getting started with photoshop, creating and saving a document in photoshop, page layout and back ground, photoshop program window-title bar, menu bar,option bar,image window,image title bar,status bar, ruler, paletts, tool box, screen modes, saving files, reverting files, closing files.

UNIT V

Images: working with images, image size and resolution ,image editing,colour modes and adjustments , Zooming & Panning an Image,, , Rulers, Guides & Grids- Cropping & Straightening an Image,image backgrounds ,making selections.

Working with tool box: working with pen tool, save and load selection-working with erasers-working with text and brushes-Colour manipulations: colour modes- Levels – Curves - Seeing Colour accurately - Patch tool – Cropping-Reading your palettes - Dust and scratches- Advanced Retouching- smoothing skin

TEXT BOOKS :

2. Fundamentals Of Computers By Reema Thareja from Oxford University Press
3. PC SOFTWARE UNDER WINDOWS by Puneet Kumar And Sushil Bhardwaj From Kalyani Publishers
4. Adobe Photoshop Class Room in a Book by Adobe Creative Team.
5. Photoshop: Beginner's Guide for Photoshop - Digital Photography, Photo Editing, Color Grading & Graphic...19 February 2016 by David Maxwell

REFERENCE BOOKS :

5. Peter Norton, Introduction to Computers, 6th Edition , Tata McGraw – Hill , 2008 .
6. Jacob Beckerman, How to Build a Computer 2014-15: Learn, Select Parts, Assemble, and Install: A Step by Step Guide to Your First Homebuilt.
7. Leon A and Leon M, Computers for Everyone, Leon Vikas , 2001 .
8. Turban E, Rainer R K , and Potter R E , Introduction to Information Technology , John Wiley & Sons , 2000.

SECOND YEAR – IV SEMESTER

BUSINESS ANALYTICS

UNIT-I: Introduction - Business Analytics Life Cycle - Business Analytics Process - Data concepts - Data exploration & visualization - Business Analytics as Solution for Business Challenges -

UNIT-II: Automated Data Analysis: Tabulation and Cross Tabulation of Data: Univariate, Bivariate and Multivariate Data Analysis – ANOVA.

UNIT-III: Hypothesis Testing: Type 1 & 2 errors - T-test, ANOVA, Chi-Square and correlation - Linear Regression Analysis - Logistic Regression - Cluster Analysis - Market Basket Analysis.

UNIT-IV: Business Data Management: Master Data Management: Data Warehousing and kinds of Architecture – Data Extraction – Transformation and Up-loading of Data – Data Mining – Meta Data – Data Marts – Creating Data Marts – Data Integration – OLTP and OLAP.

UNIT-V: SPSS Packages – Applications and Case Studies.

Suggested Books:

1. Gupta S.P. "Statistical Methods", Sultan Chand, New Delhi, 2010.
2. K.V. Rao, "Research Methodology in Commerce and Management", Sterling Publishers, New Delhi, 2012.
3. T.S. Wilkinson & P.L. Bhandarkar, "Methodology and Techniques of Social Research", 2010.
4. Richard A.Johnson & Dean W.Wichern, "Applied Multivariate Statistical Analysis", Prentice Hall International Inc., 2007.
5. R.N Prasad and Seema Acharya, "Fundaments of Business Analytics", Wiley India Publication.
6. Pang-Ning Tan, Michael Steinbach & Vipin Kumar, "Introduction to Data Mining", Pearson, 2009.
7. Alex Berson, Stephen Smith & Kurt Thearling, "Building Data Mining Application for CRM", Tata McGraw Hill, New Delhi, 2000.

THIRD YEAR – V SEMESTER

Programming in C

Unit- I: Introduction to Algorithms and Programming Languages: Algorithm – Key features of Algorithms – Some more Algorithms – Flow Charts. **Introduction to C:** Structure of C Program – Writing the first C Program – File used in C Program – Compiling and Executing C Programs – Using Comments – Keywords – Identifiers – Basic Data Types in C – Variables – Constants – I/O Statements in C- Operators in C- Programming Examples – Type Conversion and Type Casting

Unit-II: Decision Control and Looping Statements: Introduction to Decision Control Statements – Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Go to Statement

Unit- III: Functions: Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables – Storage Classes – Recursive function

Unit- IV: Arrays: Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array – Calculating the length of the Array – Operations on Array – one dimensional array for inter-function communication – Two dimensional Arrays –Operations on Two Dimensional Arrays, **Strings:** Introduction String and Character functions

Unit-V: Pointers: Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – - Passing Arguments to Functions using Pointer – Pointer and Arrays – Passing Array to Function. **Structure, Union, and Enumerated Data Types:** Introduction – Nested Structures – Arrays of Structures – Structures and Functions - Unions – Enumerated Data Types.

Reference Books:
1. "Programming in C", By N.Uday Bhaskar, Winger Publications, Hyderabad.
2. Reema Thareja, Introduction to C programming, Oxford University Press.
3. E Balagurusamy, Computing Fundamentals & C Programming – Tata McGraw-Hill, 2008.
4. Ashok N Kamthane, Programming with ANSI and Turbo C, Pearson Publisher, 2002.
5. Henry Mulish & Hubert L.Coo Reema Thareja: The Spirit of C: An Introduction to Modern Programming, Jaico Publishing House,1996.

THIRD YEAR – V SEMESTER

Database Management System

UNIT-I: Overview of Database Management System: Introduction, Data and Information, Database, Database Management System, Objectives of DBMS, Evolution of Database Management Systems, Classification of Database Management System.

UNIT-II: File-Based System, Drawbacks of File-Based System , DBMS Approach, Advantages of DBMS, Data Models , Components of Database System, Database Architecture, DBMS Vendors and their Products.

UNIT-III: Entity–Relationship Model: Introduction, The Building Blocks of an Entity–Relationship, Classification of Entity Sets , Attribute Classification, Relationship Degree, Relationship Classification, Generalization and Specialization, aggregation and composition, CODD'S Rules, Relational Data Model , Concept of ,Relational Integrity.

UNIT-IV: Structured Query Language: Introduction, History of SQL Standard, 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.

UNIT -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, Function ,Packages ,Exceptions Handling, Database Triggers, Types of Triggers.

Reference Books:

1. Paneerselvam: Database Management Systems, PHI.
3. David Kruglinski, Osborne, Data Management System McGraw Hill Publication.
4. Shgirley Neal and Kenneth LC Trunik Database Management Systems in Business – PHI.
5. Godeon C. EVEREST, Database Management – McGraw Hill Book Company.
6. MARTIN, Database Management – Prentice Hall of India, New Delhi.
7. Bipin C. Desai, "An Introduction to Database Systems", Galgotia Publications.
8. Korth, Database Management systems.
9. Navathe, Database Management systems.
10. S. Sumathi, S. Esakkirajan, Fundamentals of Relational Database Management Systems

THIRD YEAR - VI SEMESTER

e-Commerce

UNIT-I: Introduction to E-Commerce: Scope, Definition, e-Commerce and the Trade Cycle, Electronic Markets, Electronic Data Interchange, Internet Commerce. Business Strategy in an Electronic Age: Supply Chains, Porter's Value Chain Model, Inter Organizational Value Chains, Competitive Strategy, First Mover Advantage - Sustainable Competitive Advantage, Competitive Advantage using E-Commerce - Business Strategy.

UNIT-II: Business-to-Business Electronic Commerce: Characteristics of B2B EC, Models of B2B EC, Procurement Management by using the Buyer's Internal Market place, Just in Time Delivery, Other B2B Models, Auctions and Services from traditional to Internet Based EDI, Integration with Back-end Information System, Role of Software Agents for B2B EC, Electronic marketing in B2B, Solutions of B2B EC, Managerial Issues, Electronic Data Interchange (EDI), EDI: Nuts and Bolts, EDI and Business.

UNIT-III: Internet and Extranet : Automotive Network Exchange, Largest Extranet, Architecture of the Internet, Intranet and Extranet, Intranet software, Applications of Intranets, Intranet Application Case Studies, Considerations in Intranet Deployment, Extranets, Structures of Extranets, Extranet products and services, Applications of Extranets, Business Models of Extranet Applications, Managerial Issues. Electronic Payment Systems: Issues and Challenges.

UNIT-IV: Public Policy: From Legal Issues to Privacy : Legal Incidents, Ethical and Other Public Policy Issues, Protecting Privacy, Protecting Intellectual Property, Free speech, Internet Indecency and Censorship, Taxation and Encryption Policies, Other Legal Issues: Contracts, Gambling and More, Consumer and Seller Protection in EC.

UNIT-V: Infrastructure For EC : Network of Networks, Internet Protocols, Web- Based client/Server, Internet Security, Selling on the Web, Chatting on the Web, Multimedia delivery, Analyzing Web Visits, Managerial Issues, Equipment required for establishing EC Sites – Problems in Operation – Future of EC.

Reference Books
1. David Whiteley, "E-Commerce", Tata McGraw Hill, 2000.
2. E Business by Parag Kulakarni and Sunitha Jahirabadkar from Oxford University Press.
3. E Business by Jonathan Reynolds from Oxford University Press.

4. Eframi Turban, Jae Lee, David King, K. Michael Chung, "Electronic Commerce", Pearson Education, 2000.
5. R. Kalakota and A. B. Whinston, Frontiers of Electronic Commerce, Addison Wesley.
6. David Kosiur, Understanding Electronic Commerce, Microsoft Press.
7. Soka, From EDI to Electronic Commerce, McGraw Hill.

THIRD YEAR – VI SEMESTER

Web Technology

UNIT-I: Introduction: HTML, XML, and WWW, Topologies, Bus, Star, Ring, Hybrid, Tree, Lan,Wan,Man. **HTML**: Basic HTML, Document body, Text, Hyper links, Adding more formatting, Lists, Tables using colors and images. **More HTML**: Multimedia objects, Frames, Forms towards interactive, HTML document heading.

UNIT-II: Cascading Style Sheets: Introduction, using Styles, simple examples, your own styles, properties and values in styles, style sheet, formatting blocks of information, layers.

UNIT-III: Introduction to JavaScript: What is DHTML, JavaScript, basics, variables, string manipulations, mathematical functions, statements, operators, arrays, functions.

UNIT-IV: Objects in JavaScript: Data and objects in JavaScript, regular expressions, exception handling, built-in objects, events.

Unit-V: DHTML with JavaScript: Data validation, opening a new window, messages and confirmations, the status bar, different frames, rollover buttons, moving images, multiple pages in single download, text only menu system.

References:

1. Uttam Kumar Roy, Web Technologies, Oxford University Press.
2. Black Book HTML 5.0
3. Complete reference HTML 5.0
4. Web Technology, PHI Publications.