

E.M.G. YADAVA WOMEN'S COLLEGE, MADURAI – 625 014.

(An Autonomous Institution – Affiliated to Madurai Kamaraj University)

Re-accredited (**3rd Cycle**) with Grade **A+** & **CGPA 3.51** by NAAC

DEPARTMENT OF COMMERCE



CBCS SYLLABUS

BACHELOR OF COMMERCE (Computer Applications)

PROGRAMME CODE - D

COURSE STRUCTURE

(w.e.f. 2021 – 2022 Batch onwards)



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CRITERION - I

1.2.2 Details of Programmes offered through Choice Based Credit System (CBCS) / Elective Course System

Syllabus copies with highlights of contents focusing on
Elective Course System



To be Noted:

HIGHLIGHTED	COURSE
<div></div>	Elective

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V	III	21C51	Core -Corporate Accounting	6	3	25	75	100	5
	III	21D5P	Core - Oracle Lab	5	3	40	60	100	4
	III	21C53	Core - Income Tax - I	5	3	25	75	100	4
	III		Elective-I	5	3	25	75	100	4
VI	III		Elective – II	5	3	25	75	100	4
	IV	21SEC51	SBE : General Knowledge	2	2	25	75	100	2
	IV	214EV5	Environmental Studies	2	2	25	75	100	2
	III	21C61	Core - Special Accounts	6	3	25	75	100	5
	III	21PRC6	Core – Project	6	3	20	80	100	4
	III	21C63	Core - Income Tax –II	6	3	25	75	100	5
	III		Elective – III	6	3	25	75	100	4
	IV	21SEC61	SBE : Soft Skills for Job Seekers	2	2	25	75	100	2
	IV	21SEC62	SBE: Quantitative Aptitude & Reasoning Skill	2	2	25	75	100	2
	IV	214VE6	Value Education	2	2	25	75	100	2
	V	215NS4/ 215PE4	Extension Activities: NSS/Physical Education	-	2	25	75	100	1
			Total	60					50

Electives:**Semester – V****Electives – I (Choose any two)**

- | | |
|------------------------------|----------|
| 1. Management Accounting | - 21CE5A |
| 2. Human Resource Management | - 21CE5B |

Electives – II (Choose any two)

- | | |
|-------------------------------------|----------|
| 1. Database Management System | - 21DE5C |
| 2. Introduction to Computer Network | - 21DE5D |

Semester – VI**Electives – III (Choose any two)**

- | | |
|-------------------------|----------|
| 1. Programming in JAVA | - 21DE6A |
| 2. Software Engineering | - 21DE6B |

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Title of the Paper	:	Management Accounting	
Semester	:	V	Contact hours: 5
Sub Code	:	21CE5A	Credits: 4
Objectives:			

1. To help the students to know the evolution of management Accounting.
2. To understand the principles and practice of management Accounting.

Unit –I

Management Accounting : Meaning - Definition – Scope – Objectives - Function – Advantages – Limitations – Management Accounting Vs Financial Accounting – Management Accounting Vs. Cost Accounting – Comparative Statements – Common Size Statement – Trend Analysis .

Unit – II

Ratio Analysis : Meaning – Advantages – Limitations – Classifications and Computation of Ratios .

Unit – III

Fund Flow Statement & Cash Flow Statement – Meaning – Importance – Advantages – Limitations – Preparation of Fund Flow Statement & Cash Flow Statement.

Unit – IV

Marginal Costing: Meaning, Objectives, Advantages and Disadvantages. Break –Even Analysis – Application of Marginal Costing for Managerial Decisions.(Make or Buy Decisions – Accepting additional order - Selection of a Suitable Product Mix).

Unit – V

Budgetary Control : Meaning – Definition – Advantages and Limitations – Objectives – Functions - Classifications : Production Budget – Sales Budget – Purchase Budget – Cash Budget – Flexible Budget.

Text Book:

Dr.R.Ramachandran & Dr.R.Srinivasan, Management Accounting, Sriram Publications, Tiruchirappalli, 17th Revised and Enlarged Edition, 2020.

Reference Books :

1. Manmohan & Goyal, Management Accounting Himalaya Publishing House, Mumbai, 2021.
2. M.Y. Khan & P.K.Jain, Management Accounting, Himalaya Publishing House, Mumbai, 2021.
3. Gordon P .Jeyaram, N. Sundaram, R. Jeyachandran, Management Accounting ,Sultan Chand & Sons, New Delhi, 2015.
4. T.S Reddy and Y. Hari Prasad Reddy, Management Accounting, Himalaya Publishing House, Mumbai, 2018.

Note: The question paper should cover 80% problems and 20% theory.

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Title of the Paper	:	Human Resource Management	
Semester	:	V	Contact hours: 5
Sub Code	:	21CE5B	Credits: 4

Objectives:

1. To learn the principles and practices of Human Resource Management.
2. To enhance the knowledge of students in the applications of Human Resource functions.

UNIT : I

Human Resource Management – Definition- Concepts-Objectives-Evolution and Growth of HRM in India-Differences between Personnel Function and Human Resource Development-Outcomes of HRD-Attributes of an HRD Manager.

UNIT : II

Recruitment of Personnel-Job Analysis-Job Description-Job Specification-Manpower Planning Process-Recruitment and Selection- Performance Appraisal – Training and Development.

UNIT : III

Wages and Salary Administration-Wage Policy-Incentive and Compensation- Wages in India-Organized and unorganized Sector-Workers Participation in Management.

UNIT : IV

Leadership – Qualities- Types-Motivation-Job Satisfaction and Morale.

UNIT : V

Grievances-Employee Discipline – Trade Union – Collective Bargaining.

Text Book:

Gupta. C.B, *Human Resource Management*, Sultan Chand & sons, New Delhi, 2010.

Reference Books:

1. Badi.R.V , *Human Resource Management*, Vrinda Publications, New Delhi, 2010
2. Chaudri.K.K, *Human Resource Management Principles & Practice* , Himalaya Publication House pvt Ltd-Mumbai, 2010.
3. Jaya Sankar.J, *Human Resource Management*, Margham Publications, 2010.
4. Khanka.S.S, *Human Resource Management(Text & Cases)*, S.Chand, New Delhi, 2013.
5. Shashi K.Gupta & Rosy Joshi, *Human Resource Management*, Kalyani Publishers, Ludhiana, 2012.

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Title of the Paper	:	Database Management System	
Semester	:	V	Contact Hours : 5
Sub Code	:	21DE5C	Credits : 4

Objectives:

1. To understand the basis of databases and database structure
2. To develop data models and relational database management system.

Unit : I

DBMS: Introduction – Why a Database – Characteristics of data in a Database – Database Management System – Types – Software Development Life Cycle(SDLC) - Database Development Life Cycle(DDLC).

Unit : II

RDBMS: Introduction – Terminology – Relational Data Structure – Relational Data Integrity – Relational Data Manipulation – Codd's Rules.

Unit: III

Database Architecture and Data Modeling : Introduction – Database design – Design Constraints – Functional Dependencies. Entity-Relationship Modeling: Introduction – E-R Model- Components of an E-R Model: Entities-Attributes-E-R Diagram Conventions-Relationships- Entity List-E-R Diagrams.

Unit : IV

SQL : Introduction – History – Characteristics – Advantages – SQL in Action-Data types and Literals – Types of SQL Commands – SQL Operators-Operator Precedence.

Unit : V

Queries and Subqueries: Queries - Sub Queries – Aggregate Functions – Insert, Update and Delete Operations- Joins and Unions.

Text Book :

Alexis Leon & Mathews Leon, *Database Management System* , Vikas Publishing House Pvt Ltd, New Delhi, 2018.

Books for study :

1. Abraham Silberschtz, Henry F.Korth, Sudershan. S, *Data Base System Concepts*, Tata McGraw Hills Pvt Ltd, New Delhi ,2018.
2. David M.Kroenke, *Database Processing*, Galgotia Publications, New Delhi,2016.
3. Kevin Loney & George Koch, *Oracle 8i The Complete Reference*, Tata McGraw Hills Pvt Ltd, New Delhi , 2018.
4. Ramakrishnan & Gehrke, *Database Management System*, McGraw- Hill, New Delhi, 2020.

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Title of the Paper	:	Introduction to Computer Network	
Semester	:	V	Contact Hours : 5
Sub Code	:	21DE5D	Credits : 4

Objectives :

1. To learn the general principles of data communication.
2. Understand the architectural principles of computer networking and compare different approaches to organizing networks.

Unit : I

INTRODUCTION: Network applications, network hardware, network software, reference models: OSI, TCP/IP, Internet, and Connection oriented network. THE PHYSICAL LAYER: Theoretical basis for communication, guided transmission media, wireless transmission, the public switched telephone networks, mobile telephone system.

Unit : II

THE DATA LINK LAYER: Design issues, error detection and correction, elementary data link protocols, sliding window protocols - HDLC, the data link layer in the internet. THE MEDIUM ACCESS SUBLAYER: Channel allocations problem, multiple access protocols, Ethernet, Data Link Layer switching, Wireless LAN, Broadband Wireless, Bluetooth

Unit: III

THE NETWORK LAYER: Network layer design issues, routing algorithms, Congestion control algorithms, Internetworking, the network layer in the internet (IPv4 and IPv6), Quality of Service.

Unit : IV

THE TRANSPORT LAYER: Transport service, elements of transport protocol, Simple Transport Protocol, Internet transport layer protocols: UDP and TCP.

Unit : V

THE APPLICATION LAYER: Domain name system, electronic mail, World Wide Web: architectural overview, dynamic web document and http. APPLICATION LAYER PROTOCOLS: Simple Network Management Protocol, File Transfer Protocol, Simple Mail Transfer Protocol, Telnet.

Text Book :

Andrew. S. Tanenbaum, *Computer Networks*, 4th Edition, Pearson Education/ PHI, New Delhi, India.2018.

Books for study :

1. Behrouz A. Forouzan, *Data communication and Networking*, 4th Edition, McGraw-Hill, India. 2016.
2. Kurose, Ross, *Computer Networking: A top down approach*, Pearson Education, India.2018.
- 3.Brijendra Singh, *Data communications and Computer Networks*, PHI Learning Private Limited, New Delhi, 2 nd Edition, 2012.
4. Barry Dumas.M, Morris Schwartz, *Principles of Computer Networks and Communications*, Pearson Education, New Delhi, 2016.
5. Fred Halsall, *Data Communications, Computer Networks and Open Systems*, Pearson Education, New Delhi, IV edition, 2013.

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Title of the Paper	:	Programming in Java	
Semester	:	VI	Contact hours : 6
Sub Code	:	21DE6A	Credits : 4

Objectives:

1. To have wide knowledge on concepts packages applets for designing a web page.
2. To enable the students to understand core technologies.

Unit:I

Fundamentals of OOP: Basic Concepts of OOP – Benefits & Applications of OOP.

Overview of Java language: Simple Java Program – More on Java - Java Program structure – Java Tokens – Java Statements – Implementing a Java Program – Java Virtual Machine – Command Line Arguments.

Unit:II

Constants, Variables and Data types: Constants – Variables – Data Types – Declaration of Variables – Giving Values to Variables – Scope of Variables –Symbolic Constants- Type Casting – Getting Values to Variables-Arithmetic, Related, Logical, Assignment, Increment & Decrement Operator.

Decision Making and Branching: Simple If statement - If...Else statement - Nesting of If... Else statement – Else If Ladder – Switch Statement.

Unit:III

Decision Making and Looping: While Statement – Do Statement – For Statement - Jumps in Loop - Labeled Loops.

Classes, Objects and Methods: Defining a Class- Fields Declaration – Methods Declaration – Creating Objects – Accessing Class Members – Constructors – Method Overloading – Static

Members – Nesting of Methods – Inheritance Extending a Class – Overriding Methods – Final Variables and Methods – Final Classes – Finalizer Methods.

Unit:IV

Array, Strings and Vectors: One Dimensional – Creating an Array - Two Dimensional Arrays – Strings – Vectors- Enumerated Types.

Interfaces: Defining Interfaces – Extending Interfaces – Implementing Interfaces – Accessing Interface Variables.

Unit:V

Packages : Java API Packages – Using System Packages – Naming Conventions - Creating Packages – Accessing a Package – Using a Package – Adding a Class to a Package.

Applet Programming: How Applets differ from Applications – Preparing to write Applets - Building Applet Code – Applet Life Cycle – Creating an Executable Applet - Designing a Web Page – Applet Tag - Adding Applet to Html File - Running the Applet – Passing Parameters to Applet - Aligning the Display.

Text Book:

Balagurusamy. E , *Programming with Java* - A Primer, McGraw Hill Education Pvt Ltd, Chennai, 2019.

Reference Books:

1. Deitel H.M, Deitel P.J ,*Java How to Program* , Addison Wesley Longman Pvt. Ltd., New Delhi , 2018.
2. Jana ,*Java & Object Oriented Programming* , Prentise Hall ,India,2016.
3. Patrick Naughton and Herbert Schildt, *The Complete Reference – Java 2*, Tata McGraw Hill,New Delhi ,2020
4. Patrick Naughton, *The Java hand book* , Tata McGraw Hill,New Delhi, 2018.
5. K.Somasundaram, *Introduction to Java Programming*, Jaico Publishing House, Mumbai, 2018.

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DEPARTMENT OF COMMERCE (C.A)

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Title of the Paper	:	Software Engineering	
Semester	:	VI	Contact hours : 6
Sub Code	:	21DE6B	Credits : 4

Objectives:

1. To establish and evolving methodologies for the analysis, design and development of a Software.
2. To Estimate the cost factors for the development of a software product.
3. To Comprehend the Managerial Aspects of Software Maintenance.

Unit-I: Introduction to Software Engineering: Some Definitions - Some Size factors - Quality and productivity factors - Managerial Issues. Planning a software project: Defining the problem - Developing a Solution Strategy - Planning the Development Process - Planning an Organizational structure - Other planning Activities.

Unit-II: Software Cost Estimation: Software Cost Factors - Software Cost Estimation Techniques - Staffing Level Estimation – Estimating software Maintenance costs.

Unit-III: Software Requirements Definition: The software Requirements Specification - Formal Specification Techniques - Languages and Processors for Requirements Specifications.

Unit-IV: Software Design: Fundamental Design Concepts - Modules and Modularization Criteria - Design Notations - Design techniques - Detailed Design Considerations - Real time and distributed system Design - Test plans - Milestones, Walkthroughs and Inspection - Design Guidelines.

Unit-V: Verification and Validation Techniques: Quality Assurance - Static analysis - Symbolic Execution - Unit testing and Debugging - System Testing - Formal Verification. Software Maintenance: Enhancing Maintainability during Development - Managerial Aspects of Software Maintenance - Configuration Management - Source Code Metrics.

Text Book: Richard E. Fairly, Software Engineering Concepts, McGraw Hill Book company, New Delhi, 38th Reprint, 2018.

Reference Books:

1. Jones & Bartlett, Essentials of Software Engineering, Jones & Bartlett Publishers, New Delhi, First Edition, 2010
2. Pankaj Jalote, Integrated approach to Software Engineering, Tata McGraw-Hill, New Delhi, Third Edition, 2018.
3. Roger S. Pressman, Software Engineering, Tata McGraw Hill Edition, New Delhi, Fifth reprint, 2018.
4. Robert-Facts & Fallacies, Software Engineering, Beverly Publications, USA, Second Edition, 2020.
5. Sommerville, Software Engineering, Pearson Education, New York, 7th Edition, 2015.