SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

Year	Semester	Paper Code	Subject	Hrs. per Week	Credits	IA	ES	Total
First Year	I	CS1	Enterprise Resource Planning	4	3	25	75	100
	I	CS 1 -P	Enterprise Resource Planning Lab	2	2		50	50
	II	CS 2	MYSQL – CSS –Word Press	4	3	25	75	100
	II	CS 2-P	MYSQL – CSS –Word Press Lab	2	2		50	50
Second Year	III	CS 3	Advanced accounts with Tally - I	4	3	25	75	100
	III	CS 3-P	Tally – I Lab	2	2		50	50
	IV	CS 4	INTRODUCTION TO DATA SCIENCE AND R PROGRAMMING	4	3	25	75	100
	IV	CS 4-P	R programming lab	2	2		50	50
	IV	CS 5	E-Commerce and Net Banking	4	3	25	75	100
	IV	CS 5-P	E-Commerce Lab	2	2		50	50
Third Year	V	CS 6	C Programming	4	3	25	75	100
	V	CS 6-P	C Programming Lab	2	2		50	50
	V	CS 7	Java Script	4	3	25	75	100
	V	CS 7 - P	Java Script Lab	2	2		50	50

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

Enterprise Resource Planning	
Semester :**I**	**Paper : I**
Category :**THEORY**	

Learning Outcomes:

- To know the basics of ERP
- To understand the key implementation issues of ERP
- To know the business modules of ERP
- To be aware of some popular products in the area of ERP
- To appreciate the current and future trends in ERP

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, Functionalmodules.

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

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

Enterprise Resource Planning	
Semester :**I**	
Category :**PRACTICAL**	

1. Introduction to ERP System and Review on different ERP packages.

2. Study on Odoo ERP package.

3. Identification and brief introduction of different Modules in Odoo ERP package.

4. Detail study of odooerp modules.

5. Identify different process of the odooerp modules.

6. Study on odooerp business functions.

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

My SQl- CSS- Word Press	
Semester :**II**	**Paper :II**
Category :**THEORY**	

Learning Outcomes:

- To provide knowledge on web services, client side and server side and to focus on the development of web-based information systems and web services.
- To provide skills to design interactive and dynamic web sites.

Unit-I

Introduction to MySQL: Learning basic SQL Commands: Learning the MySQL Data types, Learning the Table Creation Syntax, Using Insert Command, Using SELECT Command, Using WHERE in your Queries, Selecting from Multiple Tables, Using the UPDATE command to modify records, Using RELACE Command, Using the DELETE Command, Frequently used string functions in MySQL, Using Date and Time Functions in MySQL.

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

CSS Colours, back ground, borders, margins, padding, height/width, text, fonts, icons, tables, lists, position, over flow, float, CSS combinators, pseudo class, pseudo elements, opacity, tool tips, image gallery, CSS forms, CSS counters, CSS responsive

UNIT – IV

Word press: Introduction to word press, servers like wamp, bitnami e.tc, installing and configuring word press, understanding admin panel, working with posts and pages, using editor, text formatting with shortcuts, working with media-Adding, editing, deleting media elements, working with widgets, menus.

UNIT – V

Working with themes-parent and child themes, using featured images, configuring settings, user and user roles and profiles, adding external links, extending word presswith plug-ins. Customizing the site, changing the appearance of site using css .

Reference Books:

1. Head First HTML and CSS, Elisabeth Robson, Eric Freeman, O'Reilly Media Inc.
2. Word press for Beginners, Dr.Andy Williams.
3. Professional word press , Brad Williams, David damstra, Hanstern.

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

My SQl- CSS- Word Press	
Semester :**II**	**Paper :II**
Category :**Practical**	

1. Create a Table Using SQL

2. Apply all Selection operations in SQL

3. Write SQL commands for Update,Delete& Replace.

4. Create a webpage applying Internal CSS for <a>, <b>, <p>, <img> tags.

5. Create a webpage applying External CSS for <a>, <b>, <p>, <img> tags.

6. Create a webpage applying Inline CSS for <a>, <b>, <p>, <img> tags.

7. Create a webpage applying CSS with Pseudo classes.

8. Create a webpage applying CSS with grouping selectors.

9. Create a webpage applying CSS with class selectors and ID selectors.

10. Installation and configuration of word press.

11. Create a site and add a theme to it.

12. Create a child theme

13. Create five pages on demonetization and link them to the home page. .

14. Create a simple post with featured image.

15. Add an external video link with size 640 X 360.

16. Create a user and assign a role to him.

17. Create a login page to word press using custom links

18. Create a website for your college.

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

Advanced Accounts with TALLY-I	
Semester :**III**	**Paper :III**
Category :**THEORY**	

Learning Outcomes:

- Helps students to work with well-known accounting software i.e. Tally ERP.9
- Student will learn to create company, enter accounting voucher entries including advance voucher entries, do reconcile bank statement, do accrual adjustments, and also print financial statements, etc. in Tally ERP.9 software
- Accounting with Tally course is not just theoretical program, but it also includes continuous practice, to make students ready with required skill for employability in the job market.

Unit-I

Introduction to Tally: Introduction, Features and advantages of Tally,Software versions of Tally, Terminology related toAccounts Credit & Debit, Meaning of Journal, Difference between Manual Accounting and Accounting Packages.

Unit-II

Introduction of Tally Software: Company Creation, Gateway of Tally, AccountsInformation, Groups, pre defined Groups, Creation of New Groups, Creation of sub Group.

Ledgers: Ledger Creation, Single and multiple Ledgers, Displaying & altering Ledgers,configure Ledger, Getting more options in Ledgers through Configuration, Ledgers and their Group Allocation.

Unit-III

Vouchers: Types of vouchers, recording of vouchers, entry of payment voucher, Receiptvoucher, Sales voucher, Purchase voucher, Journal Voucher, Contra Voucher, Debit & Credit Note. Creating New Voucher types, Alternation of Voucher, Deletion of Voucher.

Unit-IV

Final Accounts: Customizing the final accounts – Profit and Loss Account, Balance Sheet.Key board shortcuts in Tally. Generating the Reports from Tally, Trial Balance, Account Books, Sales, Purchase, Journal Registers, Statement of Accounts, Day Book, List of Accounts.

UNIT –V

GST: Enabling tally for GST- Features & classification of GST- Exemption from GST- Exports and Imports- Inter state purchases & sales (IGST)- Lab Exercises.
TDS: Creation of ledgers and vouchers- Advances & balance payments of Tax- Generation of TDS reports- Enabling service tax - creation of ledgers & recording of Vouchers- Lab Exercises.

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

Reference Books:

1. K. Kiran Kumar, Tally ERP9.
2. Tally 9 In Simple Steps, Kogent solutions Inc., John Wiley & Sons, 2008.
3. Narmata Agarwal, Financial Accounting on Computers Using Tally, Dreamtech Press, 2000.
4. Tally 9.0, Google eBook, Computer World.
5. Vikas Gupta, Comdex Computer and Financial Accounting with Tally 9.0, 2007.
6. Tally ERP 9 Made Simple Basic Financial Accounting, BPB Publisher.
7. Avichi Krishnan, Tally ERP 9 for Real Time Accounting, Book Ganga.

Advanced Accounts with TALLY-I	
Semester :**III**	**Paper :III**
Category :**Practical**	

1. Create a company in Tally with name ABC
2. Create Single and Multiple Ledgers for the following items under their concerned Group in Tally.
   1. Cash sales
   2. Sales to 'X' on credit
   3. Cash purchases
   4. Purchases from 'y' on credit
   5. Depreciation on Machine
3. Change the name of existing ledger to the name as given below
   Existing ledgerName to be changed
   1. Profit and Loss A/c   Income and Expenditure A/c
   2. Cash A/c   Cash in hand
4. Enter the following Transactions in tally
   1. Cash sales Rs. 40,000
   2. Credit sales to 'y' Rs.20,000
   3. Cash Purchases Rs.10,000
   4. Credit Purchases to 'D' rs.15,000
   5. Salaries paid Rs.5,000
   6. Deposited cash into SBI Rs. 1,000
5. Prepare final Accounts in Tally when No Credit sales or Purchases are given
   1. 'X' started business with Rs.1,00,000
   2. He purchased raw material Rs.40,000
   3. He sold goods on cash basis Rs.80,000
   4. He paid salaries Rs. 30,000
   5. He paid carriage on purchases rs. 1,000

   6. Prepare final Accounts in Tally when Credit sales and Purchases are given
   1. 'ABC' started business with Rs.1,00,000 y way of bank cheque
   2. He purchased raw material Rs.20,000 in cash
   3. He brought goods for business Rs.10,000 on credit from 'x'
   4. He sold goods to 'y' on credit Rs. 50,000
   5. He sold goods for cash Rs 60,000
   6. He paid salaries Rs. 20,000 by way of bank cheque
   7. Received cash from 'y' Rs. 49,000 and discount allowed Rs.1,000

INTRODUCTION TO DATA SCIENCE AND R PROGRAMMING	
Semester : IV	**Paper :IV**
Category :**THEORY**	

INTRODUCTION TO DATA SCIENCE AND R PROGRAMMING

Objective

Data Science is a fast-growing interdisciplinary field, focusing on the analysis of data to extract knowledge and insight. This course will introduce students to the collection. Preparation, analysis, modelling and visualization of data, covering both conceptual and practical issues. Examples and case studies from diverse fields will be presented, and hands-on use of statistical and data manipulation software will be included.

Outcomes

i.   Recognize the various discipline that contribute to a successful data science effort.

ii.   Understand the processes of data science identifying the problem to be solved, data collection, preparation, modelling, evaluation and visualization.

iii. Be aware of the challenges that arise in data sciences.

iv.   Be able to identify the application of the type of algorithm based on the type of the problem.

UNIT – I

Introduction: Overview of R, R data types and objects, reading and writing data, sub setting R Objects, Essentials of the R Language, Installing R, Running R, Packages in R, Calculations, Complex numbers in R, Rounding, Arithmetic, Modulo and integer quotients, Variable names and assignment, Operators, Integers, Factors, Logical operations

UNIT – II

Control structures, functions, scoping rules, dates and times, Introduction to Functions, preview of Some Important R Data Structures, Vectors, Character Strings, Matrices, Lists, Data Frames, Classes Vectors: Generating sequences, Vectors and subscripts, Extracting elements of a vector using subscripts, Working with logical subscripts, Scalars, Vectors, Arrays, and Matrices, Adding and Deleting Vector Elements, Obtaining the Length of a Vector, Matrices and Arrays as Vectors Vector Arithmetic and Logical Operations, Vector Indexing, Common Vector Operations

UNIT – III

Lists: Creating Lists, General List Operations, List Indexing Adding and Deleting List Elements, Getting the Size of a List, Extended Example: Text Concordance Accessing List Components and Values Applying

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

Functions to Lists, DATA FRAMES, Creating Data Frames, Accessing Data Frames, Other Matrix-Like Operations

UNIT - IV

FACTORS AND TABLES, Factors and Levels, Common Functions Used with Factors, Working with Tables, Matrix/Array-Like Operations on Tables , Extracting a Subtable, Finding the Largest Cells in a Table, Math Functions, Calculating a Probability, Cumulative Sums and Products, Minima and Maxima, Calculus, Functions for Statistical Distributions

UNIT - V

OBJECT-ORIENTED PROGRAMMING: S Classes, S Generic Functions, Writing S Classes, Using Inheritance, S Classes, Writing S Classes, Implementing a Generic Function on an S Class, visualization, Simulation, code profiling, Statistical Analysis with R, data manipulation

TEXT BOOKS:

1. R Programming for Data Science by Roger D. Peng

2. The Art of R Programming by Prashanth singh, Vivek Mourya, Cengage Learning India

R LAB

I.   Installing R and R studio
II.   Basic Operations in r
    1. Arthematic Operations
    2. Comments and spacing
    3. Logical Operators - <=, >, >=, = , !=, &&, 1
III.
    1. Getting data into R, Basic data manipulation
    2. Vectors, Materials, operation on vectors and matrices.
IV.
    1. Basic Plotting
    2. Quantitative data
    3. Frequency plots
    4. Box plots
    5. Scatter plot
     6.Categorial data
     7. Bar charts
     8. Pie charts
V.   Loops and functions
    1. if, if else, while, for break, next, repeat.
2. Basic functions- Print(), exp( ), Log( ), sqrt( ), abs( ), sin( ), Cos( ), tan( ), factorial( ), rand ()

E-Commerce and NetBanking	
Semester : **IV**	**Paper :V**
Category :**THEORY**	

Learning Outcomes:

- To make the students aware of the latest e-commerce methodologies involved and to make them have a profound knowledge on the various policies involved in e-commerce
- After completion of the course, the students will be able to assist various e-commerce online sites.
- They could get the jobs in e-commerce platforms.

Unit-I

Introduction to E-Commerce: Definition, main activities of E-Commerce, goals of E-Commerce, technical components of E-Commerce, functions of E-Commerce. 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.

Unit-II

Business-to-Business Electronic Commerce: Types of E-commerce, Characteristics of B2B EC, Models of B2BEC, Auctions and Services from traditional to Internet Based EDI;
Electronic Data Interchange (EDI): Concepts of EDI and Limitations, applications of EDI, advantages and disadvantages of EDI, EDI Model.

Unit-III

Internet and Extranet : Architectureof the Internet, Intranet and Extranet, Intranet software, Applications of Intranets, Extranets, Structures of Extranets, Extranet products and services, Applications of Extranets, Business Models of Extranet Applications,;
Electronic Payment Systems: Types of Electronic payment types, value exchange system, electronic fund transfer, Issues and Challenges.

Unit-IV

Public Policy: From Legal Issues to Privacy : Legal Incidents, Ethical and Other PublicPolicy Issues, Protecting Privacy, Protecting Intellectual Property, Encryption and Decryption, secret key cryptography, DES and RSA algorithms.

Unit-V

Infrastructure For EC : Network of Networks, Internet Protocols, Web- Basedclient/Server, Internet Security, Selling on the Web, Chatting on the Web, Multimedia delivery, Analyzing Web Visits, Managerial

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

Issues.

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.

E-Commerce and NetBanking	
Semester : **IV**	**Paper: V**
Category :**Practical**	

1. Case study of E-commerce

2. Homepage design of website

3. Catalog design

4. Case study on business models of PayPal.com

5. Search Engine

6. Shopping Cart

7. Online Shopping

8. E-Payment System (Online Banking)

9. Online Reservation

10. Online Education

C Programming	
Semester :**V**	**Paper :VI**
Category :**THEORY**	

Learning Objectives:
- Learn how to solve common types of computing problems.
- Learn data types and control structures of C
- Learn to map problems to programming features of C.
- Learn to write good portable C programs.
- Design, develop and test programs written in C.

Unit- I

Introduction to Algorithms and Programming Languages: Generation of Programming languages, Algorithm, Key features of Algorithms, Some more Algorithms, Flow Charts.

Introduction to C: Structure of 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 Statement, Switch case, Iterative Statements, Nested Loops, Break and Continue Statement.

Unit- III

Functions: Introduction, Uses of functions, Function declaration/ prototype, Function
Definition of function call, return statement, passing parameters, Scope of variables, Storage
Classes,Recursion.

Unit- IV

Arrays: Introduction, Advantages of Arrays, 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.

Unit-V

Strings:-Introduction, String and character functions, Declaration of Strings, Reading Strings.

Reference Books:

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

C Programming	
Semester :**V**	**Paper :VI**
Category :**Practical**	

1. Find out the given number is perfect number or not using c program.
2. Write a C program to check whether the given number is Armstrong or not.
3. Write a C program to find the sum of individual digits of a positive integer.
4. A Fibonacci sequence is defined as follows: the first and second terms in the sequence are 0 and 1.
5. Subsequent terms are found by adding the preceding two terms in the sequence. Write a C
6. program to print the Fibonacci series
7. Write a C program to generate the first n terms of the Fibonacci sequence.
8. Write a C program to generate all the prime numbers between 1 and n, where n is a value
9. supplied by the user.
10. Write a C program to find both the largest and smallest number in a list of integers.
11. Write a program to perform various string operations

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

JAVA Script	
Semester :**V**	**Paper :VII**
Category :**THEORY**	

Learning Objectives:
- Understand the JavaScript language & the Document ObjectModel.
- Alter, show, hide and move objects on a webpage.
- Check information inputted into a form.
- Javascript allows programming to be performed without serverinteraction.
- Javascript can respond to events, such as buttonclicks.
- Javascript can validate data before sending out arequest.
- Javascript can adjust an HTML document for specialeffects.
- Javascriptcancreatecookies!Cookiescanbeusedtostoreandretrieveinformationfromtheuser's computer.

Unit-I

Introduction to JavaScript: What is DHTML, JavaScript, basics, variables, stringmanipulations, mathematical functions, operators, arrays, functions.

Unit-II

Objects in JavaScript: Data and objects in JavaScript, regular expressions, exceptionhandling, built-in objects, events.

Unit-III

Java Script – Cookies: What are Cookies, How it works, storing cookies, reading cookies,setting cookies Expiry Date, Deleting a Cookie.
 HTML DOM: HTML Document objectModel, Working with HTML form and itselements, Other Document ObjectModel.

Unit-IV

DHTML with JavaScript: Data validation, opening a new window, messages andconfirmations, the status bar, rollover buttons, moving images, multiple pages in single download, text only menu system.

UNIT-V

AJAX :Ajax Fundamentals ,JavaScript Libraries, The Prototype Library ,The Fade Anything Technique Library ,Form Completion. Realtime Validation,Propagating Client-Side View State Direct Web Remoting,AjaxComponents,HybridComponents,Keeping JavaScript Out of Renderers

SUBJECT: ERP 3 YEARS COMPLETE SYLLABUS

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.

JAVA Script	
Semester :**V**	**Paper :VII**
Category :**Practical**	

1. Display a simple message "Welcome!!!" on your demo webpage and when the user hovers over the message, a popup should be displayed with a message "Welcome to my WebPage!!!".
2. Create a webpage using javascript to display data and time.
3. Create a student admission form for a college.
4. Create a simple multiplication table with given number of rows and columns.
5. Write a javascript program applying different types of conditional statements
6. Write a javascript program to create functions with and without arguments.
7. Create a webpage with frames dividing the page as you need, each frame referring to a different webpage.
8. Create a cookie with a domain to the current page and path to the entire domain.
9. Write a java script program to delete a Cookie
10. Create a sample form program that collects the first name, last name, email, user id, password and confirms password from the user. All the inputs are mandatory and email address entered should be in correct format. Also, the values entered in the password and confirm password textboxes should be the same. After validating using JavaScript, In output display proper error messages in red color just next to the textbox where there is an error.