CS - 1107 - SEC - Data Visualization & Representation Using Excel

Credits: Theory – (1)　　　　　　　　　　　　　　　　**Total Lectures:** 15 Hrs.
Contact Hrs. (L):2
SEE: 15Marks　　　　　　　　　　　　　　　　**CI:** 10 Marks

Learning Objectives:

1. To Learn Edit worksheets using advanced enhancements and worksheet features.
2. To Learn Use 3D referencing to merge data from multiple worksheets.
3. To Learn Import and export data from the Internet and merge the data in to Excel worksheets and publish Excel worksheets on the web.
4. To Learn Create templates after writing complex worksheets and workbooks
5. To Learn Work with named ranges and create lists.
6. To Learn Import and Export data to and from Excel and other Office applications
7. To Learn Enhance lists using pivot tables and pivot table charts
8. To Learn Audit and check worksheets and workbooks for errors
9. To Learn Summarize data in worksheets and workbooks

Learning Outcomes :- Students Will Be Able to:

1. Edit worksheets using advanced enhancements and worksheet features.
2. Use 3D referencing to merge data from multiple worksheets.
3. Import and export data from the Internet and merge the data in to Excel worksheets and publish Excel worksheets on the web.
4. Create templates after writing complex worksheets and workbooks
5. Work with named ranges and create lists
6. Import and Export data to and from Excel and other Office applications
7. Enhance lists using pivot tables and pivot table charts
8. Audit and check worksheets and workbooks for errors
9. Summarize data in worksheets and workbooks

Unit - I　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　[15]

Excel Introduction
An overview of the screen: navigation and basic spreadsheet concepts .Various selection techniques ,Shortcut Keys.
Customizing Excel: Customizing the Ribbon,Using and CustomizingAutoCorrect,Changing Excel's Default Options.
Basic Functions– Sum,Average, Max,Min, Count, Counta, Absolute, Mixed and Relative,Format Painter,Formatting Dates, Cells with Number formats, Font formats, Alignment, Borders, etc ,
Basic conditional formatting., IF, AND, OR, NOT.
Protecting Excel,File-Level Protection ,Workbook, Worksheet Protection.
Text Functions -Upper, Lower, Proper ,Left, Mid, Right ,Trim, Len..

Date and Time Functions -Today, Now,Day, Month, Year,Date, Date if, DateAdd,EOMonth,Weekday. Advanced Paste Special Techniques-Paste Formulas, Paste Formats,Paste Validations,Transpose Tables.

Data Validation - Number, Date & Time Validation ,Text and List Validation ,Custom validations based on formula for a cell, Dynamic Dropdown List Creation using,Creating Simple Pivot Tables,

Charts and slicers-Various Charts i.e. Bar Charts / Pie Charts / Line Charts ,Using SLICERS, Filter data with Slicers

Reference BookS : -
1. Excel 2019 Bible - Michael Alexander - 1th edition - Wiley
2. Excel 2019 All-in-One for Dummies   Greg Harvey   1st edition For Dummies
3. Excel for Beginners   M.L. Humphrey   1st edition Independently Published

CS - 1108 -SEC - Lab based on Data Visualization & Representation Using Excel

Credits: 1   **Practical – (1)**

Total Lectures: 15Hrs.   **Contact Hrs. (L): 2**
SEE: 15Marks   **CI:** 10 Marks

Learning Objectives:
6. To Learn Edit worksheets using advanced enhancements and worksheet features.
7. To Learn Use 3D referencing to merge data from multiple worksheets.
8. To Learn Import and export data from the Internet and merge the data in to Excel worksheets and publish Excel worksheets on the web.
9. To Learn Create templates after writing complex worksheets and workbooks
10.   To Learn Work with named ranges and create lists.

Learning Outcomes :- Students Will Be Able to:
6. Edit worksheets using advanced enhancements and worksheet features.
7. Use 3D referencing to merge data from multiple worksheets.
8. Import and export data from the Internet and merge the data in to Excel worksheets and publish Excel worksheets on the web.
9. Create templates after writing complex worksheets and workbooks
10.   Work with named ranges and create lists

Assignment

Problem 01 Separate First, Middle, and Last Name: You need to split the first, middle, and last name from the full name using a formula.
   Firstly, you will need to use the LEFT, SEARCH, MID, RIGHT, LEN, SUBSTITUTE, and FIND functions to solve this problem.

Problem 02 Generate Random Number from Range:
   Secondly, you will type a VBA code to return random numbers that have the lowest value 50, highest value 90.

Problem 03 Find Distance Between Two Addresses:
   The coordinates between two addresses are known. You will use the Haversine formula to find the distance.

Problem 04 Insert Picture from URL:
   Fourthly, you will insert an image as a shape in a cell from a URL using VBA.

Problem 05 Create Dependent Dropdown List:
   Then, your task is to create a dependent data validation list using the INDIRECT function and Named Range.

Problem 06 Find Duplicate Rows:
   Afterward, you will highlight the duplicate rows in a range using VBA.

Problem 07 Combine Duplicate Rows without Losing Data:
   Then, your task is to combine duplicate rows using the UNIQUE, and TEXTJOIN You will need Microsoft 365 to solve this.

Problem 08 Unhide Rows Within Range:

After that, you will reveal the hidden rows with a specified range using VBA.

Problem 09 Transpose Rows to Columns Using Power Query:

Then, your objective is to transpose rows to columns by applying the **Power Query**.

Problem 10 Create Meter Chart:

Finally, the exercise 10 is to prepare a meter chart in Excel using the known data points.

CS - 1109 -VSC : Computer Organization & Design

Credits: Theory – (1)
Contact Hrs. (L): 2
SEE: 15 Marks

Total Lectures: 15 Hrs.

CI: 10 Marks

Learning Objectives:
1. Understand the meaning and basic components of a computer system.
2. To learn generation, classification and application of computers.
3. Knowledge of computer equipment, including both hardware and software.
4. To learn input devices and output devices in detail.
5. To learn memory and its types in detail.

Course Outcomes:
At the end of this course, the student should be able to
1. Understand model, components of computer and how it works.
2. Understand the concept of input and output devices of Computers in detail.
3. Understand RAM, ROM and their types in detail.
4. Understand the concepts, structure, types and design of operating Systems.

Unit - I
[15]

Introduction to computer - Definition of computer, History, characteristics, limitations,concepts of H/W and S/W, classification of computer based on size and purpose, applications of computers in various fields. Block diagram – ALU, Memory Unit, Control Unit, Introduction to the motherboard, SMPS, Expansion Slots, Serial and Parallel ports.

Number System: Introduction of number systems, complements, fixed and floating point representation, character representation, addition, subtraction, conversion Binary, Octal, Decimal, Hexadecimal.

I/O Devices

I/O Devices and Concept of Memory: Input Devices- Input Devices- Keyboard, Mouse, Light pen, Joystick, Trackball,Scanner, Touch screen, MICR (QR code design and reading), OMR, Bar Code reader, Microphone. Output devices- Monitor-(CRT, LCD, LED). Printers-(Dot Matrix , Ink Jet , Laser, Chain and Drum), Plotters. Concept of Memory: Primary Memory (RAM and its types,ROM and its types) and Secondary Storage devices, types of memory based on materials (electronic, optical and magnetic) RAID and its levels.

Reference Books :-
1. Computer Fundaments - P.K. Sinha, BPB Publications, Edition-4th, 2004.
2. Fundamental of computers - V. Raja Raman, PHI Learning; 6th edition, 2014.
3. Computer Fundaments --P. K. Sinha.
4. IBM PC and clones by Govinda Rajulu

CS - 1110 -VSC : Computer Organization & Design Practical

Credits: Practical – (1)
Contact Hrs. (L): 2
SEE: 15 Marks

Total Lectures: 15 Hrs.

CI: 10 Marks

1. DOS – external and internal commands, batch files.
2. MS – WORD – Creating new documents, typing, deleting, selecting text, undo, Redo, formatting text Paragraphs, line spacing, margins, page setup, headers and footers.
3. Writer's tools – spelling checker, format painter, creating mail merge document.
4. MS-Powerpoint-Creating presentation, slideshow, adding slides, inserting clip arts, smart art, images, sound files linking etc.
7. Internet – creating e – mail accounts, browsing.

CS - 1120 - SEC: Web Designing Using HTML

Credits: Theory – (1)   **Total Lectures:** 15 Hrs.
Contact Hrs. (L): 2
SEE: 15 Marks   **CI:** 10 Marks

Learning Objective:

1. Give the distinguishing characteristic of scripting language.
2. Discuss the reasons for and effectsof nonstandard client-side scripting language characteristics, such as limited data types, dynamic variable types and properties, and extensive use of automatic type conversion.
3. Develop event-driven programs that use HTML intrinsic event attributes, DOM events, listeners, and DOM-generated events.
4. Use the DOM to modify a document's attributes and style properties as well as to modify its parse-tree representation.

Learning Outcomes: student will be able to

1. Explain the history of the internet and related internet concepts that are vital in understanding web development.
2. Discuss the insights of internet programming and implement complete applications Over the web.
3. Demonstrate the important HTML tags for designing static pages and separate design from content using Cascading Style sheet.

Unit - 1 |15|

Introduction to Web Design: Introduction to Networking. Introduction to Internet, Applications of the Internet. Introduction to HTML, Structure of HTML, Creating and opening HTML file, Singular and paired tags, Text formatting tag, Anchor tag, Lists, Image, Image Map, Table, Frames and Frameset, form.

Introduction to CSS : Types of CSS, Use of CSS, Selectors, Properties, Values.
CSS Properties: Background, Text, Fonts, Link, List, Table, Box Model, Border, Margin, Padding, Display, Positioning, Floating,

Reference Books :

1. HTML5 Black Book Kogent Learning Solutions Inc Dream-tech.
2. Beginning JavaScript and CSS Development with jQuery Richard York.
3. Beginning HTML and CSS Rob Larsen
4. Programming TypeScript: Making Your JavaScript Applications Scale.
5. Effective TypeScript – Dan Vanderkam.

CS -1121– SEC- Practical: Web Designing Using HTML

Credits: Practical – (1)   **Total Lectures:** 15Hrs.

Contact Hrs. (L): 2

SEE: 15 Marks   **CI:** 10 Marks

Learning Objective:

5. Give the distinguishing characteristic of scripting language.
6. Discuss the reasons for and effectsof nonstandard client-side scripting language characteristics, such as limited data types, dynamic variable types and properties, and extensive use of automatic type conversion.
7. Develop event-driven programs that use HTML intrinsic event attributes, DOM events, listeners, and DOM-generated events.
8. Use the DOM to modify a document's attributes and style properties as well as to modify its parse-tree representation.

Learning Outcomes: student will be able to

5. Explain the history of the internet and related internet concepts that are vital in understanding web development.
6. Discuss the insights of internet programming and implement complete applications Over the web.
7. Demonstrate the important HTML tags for designing static pages and separate design from content using Cascading Style sheet.

Assignment :

10. Design HTML page to display student Information.
11. Design HTML page for all lists.
12. Design HTML page for display Table .
13. Design HTML page for Image map, frameset tags.
14. Create a web page using the Internal/ Linked/ External style sheet.
15. Create web page using Text formatting properties, CSS Borders, Margin Properties, Colorproperties.

CS - 1122 - VSC : Web Designing Using JavaScript

Credits: Theory – (1)   **Total Lectures:** 15 Hrs.
Contact Hrs. (L): 2
SEE: 15 Marks   **CI: 10 Marks**

Learning Objective:
1. Develop familiarity with the JavaScript language.
2. Learn to use best-practice idioms and patterns.
3. Understand concepts commonly used in dynamic language programming, such as introspection, higher-order functions, and closures.
4. Understand advanced language features such as prototypical interhitance.
5. Become familiar with common libraries and tools that are used in web application development.

Learning Outcomes : student will be able to:
1. Describe and utilize Javascript programming concepts such as variables, arrays, conditionals, and loops.
2. Write and deploy Javascript code to solve practical web design problems.
3. Describe what Javascript frameworks are and how they can be utilized to save time when writing custom Javascript code.
4. Describe the general landscape of current web technologies and how they can be utilized to solve real-life web development problems.

Unit – I   [15]

What is JavaScript

- General overview of JavaScript -What is Javascript,JavaScript history,Relation between JavaScript and ECMAScript,Versions of JavaScript.
- **JavaScript Core** -Syntax, Variables, 'Values, Data Types,Syntax review,Keywords and reserwed words,Variable declaration,Variable scope,Block scope.

Data Types - Primitive values,Reference values,Types,Type convertion.

Expressions and Operators - Expressions (arithmetic, relational, logical, assigment and others),Operators overview.

Control structures - Flow control and conditionals,Loops and iteration.Jumps

Strings - String literals,String object,String methods,Working with Strings.

Arrays - Creating and populating Arrays,Array methods,Working with Arrays.

DOM : methods & properties, windows object method ,Math's function.

Functions - Defining functions,Calling functions,Functions as values,Arguments and parameters,Function scope,Closures,Arrow functions.

Reference Books :
1. A Smarter Way to Learn JavaScript-Mark Myers   1st edition-Lightning Source Inc
2. JavaScript: The Definitive Guide-David Flanagan-1st edition-O'Reilly Media
3. Head First JavaScript Programming-Eric T Morrison-1st edition-O'Reilly
4. The Principles of Object-Oriented JavaScript-Nicholas C. Zakas-1st edition-No Starch Press

CS -1123– VSC- Practical: Web Designing Using JavaScript

Credits: 1

Total Lectures: 15 Hrs.

SEE: 15 Marks

Practical – (1)

Contact Hrs. (L): 2

CI: 10 Marks

Assignment-1 .

1. WAP using Javascript Number is prime or not
2. WAP using Javascript Number is armstrong or not
3. WAP using Javascript Number is even or odd
4. WAP using Javascript swapt two number values
5. WAP using Javascript faectorial number.
6. WAP using Javascript String validation .
7. WAP using Javascript Number validation.
8. WAP using Javascript DOM with element id ="Demo"
9. WAP using Javascript DOM finding elemnets by id.
10. WAP using Javascript DOM finding elemnets by name.
11. WAP using Javascript DOM finding elemnets by classname.
12. WAP using Javascript finding elemnets by object collection.
13. WAP using Javascript event Math.PI().

Assignment-2 .

1. WAP using Javascript creating Array.
2. WAP using Javascript creating Array with new keyword.
3. WAP using Javascript accessing elemnts with array.
4. WAP using Javascript use array as a object.
5. WAP using Javascript creating looping Array elements.
6. WAP using Javascript display window history.
7. WAP using Javascript display window forward history.
8. WAP using Javascript display window backword history.
9. WAP using Javascript Substring methods.
10. WAP using Javascript Slicemethods.
11. WAP using Javascript replaceing String contents.
12. WAP using Javascript conveting upercase to lowercase.
13. WAP using Javascript String methods concate method.
14. WAP using Javascript Function &its 4 types.
15. WAP using Javascript Form validation.
16. WAP using Javascript Event Onload &unload