Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous)
Affiliated to Saurashtra University, Rajkot

Department of Computer Science & Information Technology

DSE-ID Courses for 5 years Integrated B.Sc.-M.Sc. Mathematics
For Students Admitted From A.Y. 2016-2017 & Onwards

SEMESTER - VII

16IMTDA09	DSE-ID 5: Basic Computer Application	3 hrs/wk	3 Credits

Objectives:

To enable the students to
1. Understand the process of data analysis using different formulas & Charts in Ms. Excel
2. Prepare effective presentation using Ms. PowerPoint

Unit - 1 Introduction to Data Analysis and Database Concepts   (5 hrs)
- Data Analytics, Classification of Data, Types of Data
- Structured, Semi Structured and Unstructured Data
- Characteristics of data
- Normalization of table.

Unit - 2 Data Analysis using Ms. Excel   (10 hrs)
- Introduction to EXCEL worksheet
- Calculations in EXCEL using cell referencing
- Preparation of templates for application in any Domain area related with student main stream. Special attention must be given to arithmetic expressions, Formula and Formula Auditing. Library functions of all types, such as logarithm, square root, sum, average, standard deviation, t-test, F-test, Chi-square test, ANOVA etc.

Unit - 3 Sorting and Sub Totalling using Ms. Excel   (8 hrs)
- Sorting and Sub Totalling, Data Tools, Filter, Get External Data
- Protect Sheets, Page Setup and printing Options, Header Footer
- Getting Mathematical Equations and Symbols.
- Workbook views, Arrange all, Freeze Pans and Macros

Unit – 4 Pivot Chart and Pivot Report using Ms. Excel   (8 hrs)
- Pivot reports with suitable data
- Drawing graphs in EXCEL- line graph, histogram, pie, column, stock, radar, scatter charts.
- Editing chart features such as annotation, labelling of axis, changing legends etc.

Unit - 5 Presentation Using MS Power Point   **(9 hrs)**

- Inserting new slide, Different layout of slide
- Inserting date, slide number, movie, sound, object, header and footer,
- Designing slide, Theme and background
- Custom animation, Slide transition, Rehearse timings
- Slide show, Setup slide show
- Hide slide, Different views of slide
- Use of slide master

Reference Books:

1. *R.K. Taxali*, 2010, **Computer Course**, *Tata* McGraw-Hill Education Pvt. Ltd
   ISBN 10: 0070700370 / ISBN 13: 9780070700376

16IMTDA10	**DSE-ID Practical 5:** **Basic Computer Application** **Practical**	**02 hrs/wk**	**01 Credits**

- Practical based on Ms. Excel & Ms. PowerPoint

16IMTDA11	DSE-ID 6: Web Development	3 hrs/wk	3 Credits

Objectives:

To enable the students to

1. Understand the principles of designing effective, dynamic and interactive web pages.
2. Become familiar with graphic design principles that relate to web design and learn how to implement these theories into practice.
3. Develop skills in analyzing the usability of a web site.
4. Learn the language of the web: HTML and CSS.
5. Understand and use JavaScript to enhance HTML documents

Unit - 1 Introduction (08 hrs)
- Introduction to Internet
- What is HTML**,** Block Structure of HTML
- Basic tags : Texts formatting, Line breaks, Link, Color, Image, List creation, Table

Unit - 2 Introduction of Frame & Form (08 hrs)
- Use of Frame Tags
- HTML multimedia: HTML Plug-in, HTML Audio, HTML Video
- HTML FORM: Controls of Forms
- Introduction to HTML 5.

Unit - 3 Introduction of CSS (08 hrs)
- Use of CSS, Types of CSS, Creating class and id.
- CSS Properties: Background, Text, Font, Table, Border, Margin, Padding, Align, Image property.
- Page layouts: Use of DIV and SPAN tag. Introduction to DHTML

Unit - 4 Introduction to Javascript (08 hrs)
- Use of scripting language, difference between client side script and server side script,
- Javascript syntax, variables, Operators
- Control structures: Control statements, Looping statements, Sequential statements, Use of Dialog boxes, User defined functions, Built-in objects and properties: Number, Date, Math, String, Array. Browser Objects: History, Navigator, Window, Location, Built-in functions

Unit - 5 Use of Events (08 hrs)
- Mouse events, Keyboard events, Timer events, other events
- Javascript DOM: Methods and Properties. Cookies
- Error handling: throw and try catch block

Text Books
1. *Ivan Bayross*, 2009, **Web Enabled Commercial Application Development Using HTML, JavaScript, DHTML and PHP (English)** [Fourth Edition], Published by BPB Publications, New Delhi. (UNIT 1 to 5)

Reference Books
1. *Kogent Learning Solutions*, 2015, **Web Technologies HTML, Javascript, PHP, Java, JSP, ASP.NET, XML and AJAX Black Book**, Dreamtech Press, New Delhi
2. *Danny Goodman, Michael Morrison, Paul Novitski, Tia Gustaff Rayl*, 2010, **JavaScript Bible**, [Seventh Edition] Wiley Inc. IN

16IMTDA12	**DSE-ID Practical 6:** **Web Development Practical**	**02 hrs/wk**	**01 Credits**

- Practical based on HTML, CSS & JavaScript