St. Xavier's College – Autonomous
Mumbai

Syllabus
For 1st Semester Courses in
B. Voc (Tourism)
and
B. Voc (Software Development)
General Education Component
From June 2016

Theory Syllabus for Courses:

A.BVT.1.01/S.BVS.1.01 – Business Communication Skills - I
A.BVT.1.02/S.BVS.1.02 – Effective French skills - I
A.BVT.1.03/ S.BVS.1.03 – Environmental Studies (SPC.1.01)
A.BVT.1.04/ S.BVS.1.04 – Office Automation Software

SEMESTER I COURSE : A.BVT.1.01/S.BVS.1.01

BUSINESS COMMUNICATION - I

LEARNING OBJECTIVE:

- To enable students to have firm grounding in English to be able to use it effectively in professional as well as social contexts.
- To work towards strengthening the learning process of English language so that our graduates can find their feet in the fiercely competitive job market.

[Total Lectures 45]

Unit1 Introducing Professional English **Total Lectures: 09**

1. Oral communication in English
2. English phonology
3. Intonation patterns in English

Unit2 Current Usage of English Grammar **Total Lectures: 18**

1. auxiliaries
2. tense and aspect
3. interrogative and negative sentences
4. the positive
5. conditionals
6. Concord

Unit3 Vocabulary **Total Lectures: 09**

1. Phrasal Verbs
2. Idioms
3. Collocations

Unit4 Written Business Communication **Total Lectures: 09**

1. Email Etiquette
2. Professional Presentations
3. Writing a Resume

Continuous Internal Assessment

Assignments / Projects/ Presentations/ Written Test etc.

SEMESTER I COURSE : A.BVT.1.02/S.BVS.1.02

EFFECTIVE FRENCH SKILLS – I

LEARNING OBJECTIVE:

- Sensitize learners to the French language.
- Create interest in another country and culture.
- Identify a few monuments .Locate a few cities on the map. Know the names of a few specialties.
- Learn basic vocabulary to express simple sentences to talk about oneself.
- Acquire basic communication to open a conversation with a francophone person.
- Write a simple greeting card/email for birthday, Christmas, New Year …to someone.

[Total Lectures 45]

Unité 1

Objectifs de communication*: *Thème :se présenter
Saluer et prendre congé
Epeler un mot

Vocabulaire
Salut ça va?/Bonjour comment allez-vous?/Ciao/au revoir
Je m'appelle…Je suis étudiant(e) Je suis indien (nne)
Nombres ordinaux 0 à 20
Les jours de la semaine

Grammaire
Le verbe s'appeler/le verbe :Etre

Phonétique
L'alphabet français

Culture et Civilisation
Paris et ses monuments
Les salutations en France et en Inde

Thèmes tâches et projets
Repérer des mots français.
Préparer une carte d'identité

II **Unité 2**

Objectifs de communication:Thème Identifier les objects/les personnes
Identifier quelquechose-Qu'est-ce que c'est?Qui est-ce?

Vocabulaire

Matériel scolaire /affaires personnelles/vocabulaire générale de la salle de classe.
Porte ,fenêtre, stylo-bille,portable, balladeur, clé USB, crayon, feutre,trousse, livre, taille-crayon
Cahier, CD , sac à dos,
Les noms de quelques nationalités et de pays
Les noms de quelques professions:professeur,étudiant,directeur,directrice, ...
Nombres 20 à 50
Les mois de l'année

Grammaire
Articles indéfinis et articles définis
Voici/Voilà
Verbe "Avoir"
Les adjectifs interrogatifs

Phonétique
L,accent aigu/grave/circonflexe…

Culture et Civilisation
Prénoms français
Identités imaginaires ou
Présenter une personalité célèbre:
Il /elle s'appelle ,il/elle et + nationalité .profession, age…il/elle habite En /Au..

Thèmes tâches et projets
Jeu de role en classe
Préparer une carte de visite ou créer un blog
Remplir un formulaire d'inscription.

III **Unité 3**

Objectifs de communication: Thème :Mes passe-temps
Parler de ses goûts

Vocabulaire
Exprimer ses goûts.J'aime/j'adore/je déteste…
Passe-temps et sports-dessiner/écouter/faire /jouer/lire/regarder/travailler/surfer sur internet/
Sports préférés -badminton/foot/basket/ping pong/jogging/tennis/vélo/natation/
Quelques couleurs
Numéros 50 à 80

Grammaire
Le verbe "ER"-aime, habiter,jouer,adorer,détester
La forme négative
Le verbe "Faire"

Quelques adjectifs qualificatifs

Phonétique
La voix montante-interrogation

Culture et Civilisation
Les stades ou les équipes ou les sports français
Ou La France et ses symboles

Thèmes tâches et projets
Loisirs et passetemps en Inde et en France
Identifier quelques marques ou quelques monuments /perosonalités françaises.

IV **Unité 4**

Objectifs de communication:Thème: Ma famille
Parler de sa famille

Vocabulaire
Les relations:mon père,grand-père mère.grand mère.frère, soeur,oncle, tante ,cousins
Nombres 80 à 100
Révision des professions et ajouter d'autres comme : pilote /étudiant en gestion,étudiant en tourisme/danseur/chanteur/écrivain..

Grammaire
Adjectifs possessifs :mon ma mes.
Verbes –aller/révision du verbe faire
Verbes IR
Encore des verbes ER-chanter, manger, danser, regarder,donner,écouter

Phonétique
Sons sh je/s z/ou u/

Culture et Civilisation
La vie de famille en France

Thèmes tâches et projets
Construire un arbre généalogique
Parler de sa famille avec une photo de famille
Continuous Internal Assessment:

Evaluation will be based on oral and written continuous tests in class.

References:
Select Bibliography:

Publication
Hachette:
1 Bien Joué1
2 Alter Ego 1
3 Le kiosque
Clé International
1 Amis et Compagnies 1
2 Grammaire Progressive du Français
Hatier
1 Premiers Exercices de Grammaire

Magazine Langers publication
On y va

Video Methods:
1 Taxi
2 Connexions

SEMESTER I COURSE : A.BVT.1.03/S.BVS.1.03

ENVIRONMENTAL STUDIES

Learning Objectives:

1. To familiarize students to the basic concepts of Environmental studies.
2. To help students develop their own perspectives around environmental issues.
3. To enable students to take practical steps to conserve the environment.

Number of lectures: 45

UNIT 1

Environment **[12 lectures]**

a. Definition and Composition – Lithosphere, Hydrosphere, Atmosphere, Biosphere, Hydrological Cycle
b. Historical Development and Approaches
c. Man and Nature relation and interaction with respect to Food, Clothing, Shelter and Occupation : Concept of Ecology and Ecosystem.

UNIT 2

Resources and Wealth **[12 lectures]**

a. Meaning, Types of Resources, Exploitation of Resources, use of Technology and its Impact on Natural Environment
b. Wealth – meaning, Distinction between wealth and resources, Optimum Conversion of Resources into wealth
c. Anthropogenic Waste – its effects, Man made Industrial waste.

UNIT 3

Environmental Degradation [12 lectures]

a. Meaning, causes : Degradation of Urban Land, Forest and Agricultural Land due to natural causes and human interference.
b. Global Warming : Problems of non-degradable Waste – Electronic Devices, Plastic and Man- made fibres.
c. Environmental Assessment – Environmental Impact Assessment (EIA), Environmental Auditing, Environmental Legislation in India, Carbon Bank.

UNIT 4

Environmental Management [9 lectures]

a. Meaning, development and environmental linkages.
b. Environmental concerns in India. The need for sustainable development.
c. Actions for environmental Protection: national and international initiatives, emerging environment management strategies, Indian initiatives.
d. Environmental Protection Movements and NGOs in India.

Continuous Internal Assessment: Projects / Presentations / Tests

List of Recommended Reference Books:

R. Rajagopalan, R. (2005) ***Environmental Studies – From Crisis to Cure.*** Delhi: OUP

Additional reading:

Guha Ramachandra Environmentalism: A global history (OUP) (2000)

Movies:
An Inconvenient Truth, Al Gore
The 11th Hour, Leonardo DiCaprio
The Age of Stupid. Franny Armstrong.
Baraka, Ron Fricke.
Climate change: An Untold Story [Climate's First Orphans; The Weeping Apple Tree; A Degree of Concern; A Green Agony], Discovery Channel.
Liquid city--Mathew Gandy.
Story of Stuff --Free Range Studios Tides Foundation.
Story of bottled water---Free Range Studios Tides Foundation

SEMESTER I COURSE : A.BVT.1.04/S.BVS.1.04

OFFICE AUTOMATION SOFTWARE

Learning Objective:
To equip with advanced features of office automation software Microsoft Excel, so that they can apply this skill for office jobs in banking and finance domain and also across different industries.

Number of lectures: 45

UNIT 1 Introduction to MS-Excel, Creating & Editing Worksheet, Formatting and Essential Operations Use of Formulas and Functions like 1. VLOOKUP, HLOOKUP 2. SUMIF, SUMIFS, SUMPRODUCT, DSUM 3. COUNTIF, COUNTIFS, IF 4. IFERROR, ISERROR, ISNA, ISNUMBER, ISNONTEXT, ISBLANK, ISTEXT 5. GETPIVOTDATA 6. DCOUNT, DCOUNTA, OR, AND, SEARCH, INDEX, MATCH ETC Using conditional formatting with Formulas and Function, Array Formulas, Charts, Advance features of MS-Excel-Pivot table & Pivot Chart, Linking and Consolidation Database Management using Excel-Sorting, Table, Data Validation, Creating drop down lists using different data sources ,Goal Seek, Various Methods of Filter and Advance Filter options, Creating and Updating Subtotals	**15 lectures**
UNIT 2 **WhatIf Analysis** --Goal Seek --Data Tables --Scenario Manager --Understanding Solver --Configuring Solver **Charts** --Using Charts --Formatting Charts --Using 3D Graphs --Using Bar and Line Chart together --Using Secondary Axis in Graphs --Sharing Charts with PowerPoint / MS Word, Dynamically	**15 lectures**

--(Data Modified in Excel, Chart would automatically get updated) **New Features Of Excel** --Sparklines, Inline Charts, Data Charts **Understanding Financial Functions** PMT , FV, PV, Compound Interest, Calculating Loan EMI SLN , SYD, DB , DDB, VDB	
UNIT 3 **Macros** Recording a Macro, Playing Macro, Placing Macro on Quick Access Toolbar, Attaching Macro to a Button inside worksheet. Use Relative References, MacroSecurity **Introduction to VBA** Creating Developer Tab, Purpose of VBA , Add command button to spreadsheet, Simple programs to read from and write to an excel sheet some data **Variables in VBA** Option Explicit, Variable Scope, Life of Variables. MsgBox Function, InputBox Function to accept variable values and display output. **If Then Statement using VBA** Logical Operators, Select Case, Tax Rates, Find Second Highest Value, Sum by Color, Delete Blank Cells. **Loop in VBA** Loop through Defined Range, Loop through Entire Column, Do Until Loop, Step Keyword, Sort Numbers, Randomly Sort Data, Remove Duplicates, **Userform , Controls in VBA** Userform and Ranges, Currency Converter, Progress Indicator, Multiple List Box Selections,Multicolumn Combo Box, Dependent Combo Boxes, Loop through Controls, Controls Collection, Userform with Multiple Pages, Interactive Userform,Adding Calendar control. **Function and Sub in VBA** User Defined Function, Custom Average Function, Volatile Functions, ByRef and ByVal.	**15 lectures**

TEXT BOOKS

1. Advanced Excel Essentials – Jordan Goldmeier
2. Excel VBA Programming For Dummies – John Walkenbach
3. Learn Microsoft Office – Russell A. Stultz – BPB Publication

REFERENCES BOOKS

1. Microsoft Office – Complete Reference – BPB Publication
2. Microsoft Excel 2013 VBA and Macros byBillJelen –Pearson Publication
3. Excel 2010 Bible – John Walkenbach

Websites

1) http://www.mrexcel.com
2) http://www.theofficeexperts.com
3) http://www.excel-vba.com/
4) **http://www.excel-easy.com**

Note: students can use version of office from office 2007 onwards to office2013

St. Xavier's College – Autonomous
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Syllabus
For 1st Semester Courses in B. Voc
(Software Development)
(June 2016 onwards)

Contents:

Theory Syllabus for Courses:

B. Voc. (Software Development) Semester I **COURSE: S.BVS.1.05**

BASICS OF COMPUTER ORGANIZATION AND NETWORKING.

Unit 1: Basics of Computer Organization **15 Lectures**

Evolution of Computers, Von Neumann model, Numbering and Coding Systems, Data Representation, Inside the Computer: Important computer terminology, Basic organization of computer and block level description of the functional units, Primary Memory, Registers, Memory Organization, Cache Memory, Virtual memory, Processors, Input / Output devices.

Unit2: Networking Concepts **15 Lectures**

Data Communications: Components, Data Representation, Direction and Flow, Networks: Physical Structures and Categories of Network, Protocols and Standard, Standard Organization, Network Model: Internet Model and OSI Model, Transmission modes, Transmission Media, Internetworking Devices Network Models.

Unit3: Internet and Recent Advancements in IT **15 Lectures**

The Internet: a World-Wide Resource. What's on the Internet, All about Domain Name System (DNS), Making an Internet Connection, Dial-Up Connections, mail services and search engines, Brief Introduction to Advanced computing technologies and applications: Distributed Computing, Mobile Computing, Grid and Cluster Computing, Parallel Computing and Cloud Computing, Big Data Analysis, Fuzzy and Neural Computing.

References :

1. Carl Hamacher, Zvonko Vranesic and Safwat Zaky, "Computer Organization", Fifth Edition, Tata McGraw-Hill.
2. John P. Hayes, "Computer Architecture and Organization", Third Edition.
3. William Stallings, "Computer Organization and Architecture: Designing for Performance", Eighth Edition, Pearson.
4. B. Govindarajulu, "Computer Architecture and Organization: Design Principles and Applications", Second Edition, Tata McGraw-Hill.
5. A. S. Tanenbaum,"Computer Networks", 4th edition, Prentice Hall
6. B. F. Ferouzan,"Data and Computer Communication", Tata McGraw Hill.
7. Andrew S. Tanenbaum,"Structured Computer Organization",5th Edition,TataMcGraw Hill.
8. The 8051 Microcontroller and Embedded Systems.

B VOC (Software Development) SEMESTER I COURSE :S.BVS.1.06

STRUCTURED PROGRAMMING USING C++

LEARNING OBJECTIVE:

To master the basic concepts of a programming language and how to apply it in order to generate solutions for various problems.

[Total Lectures 45]

Unit 1. 'C++' Programming Language Fundamentals [15]

Need for a programming language? Origin of C++,
How to write an algorithm for a given problem, Converting an algorithm to a flowchart.
Elementary C++ programming basics: Characters and Literals, Tokens, Keywords, Identifiers, Variables, Constants, Data types, Comments.
Operators: Types of Operators, Operator Precedence and Associativity, Expression, types of statements: Input and Output, cin, cout, escape sequences, include directives and Namespaces, Need for Indentation and Comments,
Dry runs, testing and debugging tips

Unit 2. Flow control and Functions [15]

Compound statements
Loops:
while, for, do while , nested loops.
Decision making:
if – else, nested if else, switch, break and continue.
Manipulators:
endl ,setw,sizeof.
Increment and decrement operators.
Type Cast Operators, Overflow and Underflow problem,
Scope resolution operators, Logical Operators, Comparison Operators
Function Prototypes , built in functions and user defined functions,
Lifespan of a variable, return statement, ternary operator,
Function overloading, Call by reference, Call by value, const member functions.
Inline Functions and recursive functions, Math Library Functions

Unit 3.Derived Data types [15]

Introduction to arrays, arrays in functions, 2-D arrays, Multidimensional arrays.

Introduction to pointers, void pointers, pointers in function, pointer to constant and constant pointer, generic pointer.
String functions: strcmp, strcat, strlen, strcpy .
Structures: Structures concept, Application.
Union: Union Concept, Application

Continuous Internal Assessment
Assignments / Project
Mid Term test.

BOOKS:
1. Problem Solving with C++ , Walter Savitch, Sixth Edition, Pearson Education.
2. J. R. Hubbard, Schaum's outlines "Programming with C++", Second Edition , Tata McGrawHill
3. Y.P.Kanetkar, "Let us C++" , seventh edition, BPB publication

REFERENCES:
1. Object Oriented programming with C++ ,E Balagurusamy , Third Edition , Tata McGraw Hill.
2. Object oriented programming with C++ Poonamchandra Sarang, PHI Second Edition.
3. Pure C++ programming , Amir Afzal, Pearson Education.
4. Computer Science – A structured Approach using C++ bu B. Forouzan, R. F. Gilberg, Cengage Publication

BVoc (Software Development) Semester I **Course: S.BVS.1.07**

QUANTITATIVE TECHNIQUES – I

Learning Objective: To equip students with mathematical and statistical techniques and to develop an analytical approach for developing algorithms. This study is required in study of advanced software such as Data Warehousing and Mining , Software Testing, Enterprise Resource Planning etc.

[Total Lectures: 45]

UNIT I [12]

SETS: Sets, Subsets, Equal Sets, Universal Sets, Finite and Infinite Sets, Operation of Sets, Union, Intersection and Complement of sets, Cartesian Product, Cardinality of Sets, Simple Applications.

RELATION: Properties of Relation, Equivalence Relation, Partial Order Relation.

FUNCTIONS: Domain and Range, Onto , Into and One-to One- Functions, Composite and Inverse functions, Hashing functions and Recursive Functions.

UNIT II [11]

MATHEMATICAL LOGIC : Introduction, Statements, Logical Connectives and Compound Statements: Negation, Conjunction, Disjunction, Implication, Converse and Inverse, logical Equivalence, Tautologies: Contradiction, Contingency, Algebra of Propositions, Argument, Predicate and Quantifiers.

UNIT III [11]]

DETERMINANTS : Definition, Minors, Cofactors, Properties of Determinants

MATRICES: Definition, Types of matrices, Multiplication of matrices, Adjoint, Inverse, Cramer's Rule, Rank of matrix, Dependence of vectors, Eigen vectors of a matrix, Cayley-Hamilton Theorem

UNIT IV [11]

MEASURES OF CENTRAL TENDENCIES: Definition of Average, Types of Average, Mean, Median, Mode for grouped as well as ungrouped data, Quartiles, Deciles, Percentiles

MEASURES OF DISPERSION: Concept and Idea, Various measures, Range, Quartile deviation, Mean deviation, Standard deviation, Variance.

References:

1) Discrete Mathematical structures by Kolman ,Busby, Ross
2) Statistical Methods, Medhi J. : An Introductory Text, Second Edition,
New Age International Ltd.
3) Basic Statistics, Agarwal B.L. : New Age International Ltd.

CIA:

Written Tests will be conducted.

B.Voc (Software Development) Semester I **Course: S.BVS.1.08**

INTRODUCTION TO WEB DESIGNING

LEARNING OBJECTIVE:

To learn Web page designing and programming using HTML,CSS,Jquery and Javascript

[Total Lectures: 45]

UNIT 1 : HTML [15]

HTML Tag Reference, Global Attributes,
Document Structure Tags, Formatting Tags, Text Level formatting,
Understanding the difference between a tag, element and attributes in HTML
Organizing Text in HTML
Preformatted Text, DIV Element, SPAN Element
Creating Lists (Definition, Unordered and Ordered)

Imagemaps
What are Imagemaps?
Client-side Imagemaps,
Server-side Imagemaps,
Using Serverside and Client-side Imagemaps together,
Alternative text for Imagemaps,

Hyperlink tags
Exploring the Hyperlinks, href attribute,
target attribute (_blank, _parent, _self, _top) and id attribute,
Images and text as hyperlinks,

Tables
Understanding Tables, Describing the TABLE Element,
CAPTION, COLGROUP, COL, TBODY, THEAD, TFOOT, TR, TD, TH,
Spanning Rows and Columns,
Placing images and text in a table, Nested Tables

Introduction to Frames, Applications,
The <FRAMESET> tag, Placing content in frames with the <FRAME>tag,
Targeting named frames,
iframes

Forms
Creating Forms using <FORM> tag and its attributes,
The <input> tag and its attributes, Single and Multiple lines text fields,
Password Field, Radio Button, Checkboxes, Submit button,
Select element, Hidden Text, Text Area, Button, Label, fieldset, legend,
Option, Optgroup, Disabled and read-only fields,
Form field event handlers,
Passing form data

UNIT 2 : Style Sheets using CSS3 **[15]**

Evolution of CSS, Understanding the CSS Syntax, Exploring CSS Selectors (universal, type, class, id, child, descendant, adjacent sibling),
Inserting CSS in an HTML document:
The Internal Style Sheet
The External Style Sheet
The Inline Style Sheet
Effects of a stylesheet : hover effect, Drop shadow effect,Blur, rotating an image(rotate, rotateX,rotateY,skew
Defining Inheritance in CSS
Backgrounds and Color Gradients, Fonts and Text Styles, Creating Boxes and Columns, Displaying, Positioning, Floating an Element, List Styles, Table Layouts
Pseudo-classes and Pseudo-elements

UNIT 3 Java Script & jQuery **[15]**
Introduction Client-Side JavaScript, Server-Side JavaScript,
Operators Assignment Operators, Comparison Operators, Arithmetic Operators, % (Modulus), ++ (Increment), -- (Decrement), - (Unary Negation), Logical Operators, Short-Circuit Evaluation, String Operators, Special Operators, ?: (Conditional operator), , (Comma operator), delete, new, this, void
Statements Break, comment, continue, delete, function, return, switch, var
Core JavaScript (Properties and Methods of Each)
Array, Boolean, Date, Function, Math, Number, Object, String, regExp
Events and Event Handlers
General Information about Events, Defining Event Handlers, Event, onAbort, onBlur, onChange, onClick, onDblClick, onDragDrop, onError, onFocus, onKeyDown, onKeyPress, onKeyUp, onLoad, onMouseDown, onMouseMove, onMouseOut, onMouseOver, onMouseUp, onMove, onReset, onResize, onSelect, onSubmit, onUnload
jQuery
Fundamentals of jQuery, Loading and using jQuery, jQuery Syntax, jQuery Selectors, Element properties and attributes, Methods to access HTML Attributes, Methods for Traversing, jQuery Events, CSS using jQuery

Continuous Internal Assessment
Assignments / Project
Mid Term test.

Text Books

1. **Web Design The Complete Reference by Thomas Powell, Tata McGraw Hill**

2. **HTML black book, Steven Holzner**
3. **HTML and XHTML The Complete Reference by Thomas Powell, Tata McGraw Hill**

http://www.w3schools.com

B. VOC (Software Development) **Course: S.BVS.1.PR**

PRACTICALS

BASICS OF COMPUTER ARCHITECTURE AND NETWORKING

1. Knowledge of hardware that goes in the making of a computer: Assembling of PC.
2. Installation of OS, setting up of dual boot, installation of hardware and software.
3. Hands on experience on the basic utilities in computers.
4. Execution of File handling commands in DOS Prompt.
5. Learning the methodology of accessing websites and Online resources through the Internet.
6. Gaining knowledge on how to set up a LAN network and to learn the functioning of the various connecting devices in use in the Computer Lab.
7. Working on securing your system by studying various security controls available in the system. E.g setting up of accounts, password protecting file etc.
8. Setting up an internet connection. Dial-Up/Wifi

C++ PROGRAMMING

LEARNING OBJECTIVE:
To help students learn to write an algorithm, convert it to program logic, perform a dry run by hand first and then execute the same on a computer, thus instilling the foundations of basic programming principles in them.

I. Write a C++ program for displaying the menu for a popular coffee shop using the following :endl, '\t', '\n', other special/escape characters as required.
II. First construct a flowchart and then convert it to source code/program in order to perform the following using C++:
    a. Addition and multiplication of integers.
    b. Write a C++ program to Calculate simple and compound interest.
III. Write an algorithm and then develop C++ programs to perform the following using functions via the top-down approach:
    a. Determining if a number is +ve / -ve / even / odd

b. Calculate sum of the digits of a number
c. Maximum of 2 numbers, 3 numbers
d. Find the reverse of a number, entered by the user.

IV. Write functions to perform the following tasks using a C++ program via the bottom-up approach.
a. Sum of first n numbers, given n numbers
b. solving the quadratic equation.
c. printing all the prime numbers in a given range (ask user input for lower bound and upper bound of the range)

V. Write a C++ program for displaying the Fibonacci series.

VI. Write a C++ program for converting a number to words. (switch) example: the number '765' should be written as 'seven six five'. Further now modify it to get the output as "seven hundred sixty five".

VII. Write a C++ program having two functions:
a. Swapping two numbers with the use of a third variable
b. Swapping two numbers without using third variable.

VIII. Write a recursive C++ function for calculating the factorial of a given number

IX. Write an inline function to calculate the following:

X. Write a C++ program for (1D arrays):
a. sorting an array of numbers in ascending and descending order
b. Finding the max in a user input integer array

XI. Write a C++ program for the following(2D arrays):
a. Matrix Transpose
b. Matrix Addition.
c. Matrix Multiplication.
d. Inverse of a matrix.

XII. Write a program for implementing the concept of structures and unions

XIII. Write a C++ program for finding the greatest and smallest number using vector

XIV. Write a C++ program for:
a. Implementing the concept of call by value and call by reference.
b. Programs on use of pointers

B. VOC (Software Development) **Course: S.BVS.1.PR**

PRACTICAL COMPONENT

For Quantitative Techniques - I

TUTORIALS will be conducted on the topics included in the theory syllabus of 1.07, Quantitative Techniques.

PRACTICAL LIST FOR WEB DESIGNING

1. Use of document structure tags and text formatting tags

   <html>,<head<,<title>,<body>,<b>,<i>, <u>,
   <strike>,,,<big>,<small>,<sub>,<sup>,<H1> to <H6>
2. Use of List tags

   Ordered and unordered list<ol>,
,<dl>,<dt>,<dd>
3. Images and Imagemaps

<img>,<map>,<area> tags
4. Use of Table tag

   CAPTION, TBODY, THEAD, TFOOT, TR, TD, TH, Spanning Rows and Columns
5. Use of Frame tags

<frame> and <frameset> tags
6. CSS(hover effect, text shadow effect, rounded borders of the table, image as the list item etc.)

7. Use of Form tags(Designing a registration form)

<form>,<option>,<input>, Single and Multiple lines text fields, Password Field, Radio Button, Checkboxes, Submit button, Select element, Text Area
8. Create an HTML form that accepts an integer value from the user and then using JavaScript, prints its factorial.
9. Design an HTML form for the billing of items. Using JavaScript calculate the total bill of the items purchased by the user. (make use of check box/radio button/text box etc) use the events like (onchange, onclick, onfocus etc.)
10. Design a form and validate all the controls placed on the Registration form using JavaScript and regular expressions.

Note: Complete minimum 8 from the above list.