

VEER NARMAD SOUTH GUJARAT UNIVERSITY – SURAT
B. Com. (Computer Application) 3rd Year
Vocational Course
Syllabus
SEMESTER 5
Effective From: June 2013

Paper No.: 7 **Teaching Hours:** 3 Hrs./Week
Paper Title: Computer Application Paper-VII **Credits:** 3
(GUI TOOLS)

Prerequisite: Basic knowledge of computer programming language.

Aim: To make students aware of programming using GUI tools.

Expected Outcome: The students will be able to develop GUI applications.

A. Visual Basic **[50%]**

1. Visual Basic Overview:

- 1.1. Introduction of Visual Basic? VB Specification, Limitation and File Formats.
- 1.2. Introduction to Visual Basic IDE Element
- 1.3. Screen of Visual Basic - Title Bar, Context Menu, Tool Bar, Tool Box, Project Window, Properties Window, Form Designer Window.

2. Customizing a Form and Writing Program:

- 2.1. Creating, Opening, and Saving Project
- 2.2. Working with Multiple Project- Adding, Removing and Saving Files
- 2.3. Setting Project Option – Creating Stand- Alone Executable Windows Programs
- 2.4. Understanding Properties, Methods and Events
- 2.5. Designing A Form, Setting The Startup Form- Steps In Creating Visual Basic Application – Ending A Visual Basic Application.

3. Default Visual Basic Control:

- 3.1. Adding Control to the Form – Resizing, Moving and Looking Control
- 3.2. Setting Properties of the control. Using Text Boxes, Command Button, Labels, Option Buttons, Check Boxes, List Boxes, Combo Boxes, Image Control, Picture Box, Scroll Bars, Drive List Box, Directory List Box, File List Boxes, Frame Controls, Timer Controls. (Commonly Used Properties, Event and Methods of all the control to be taught) Understanding the concept of control array.
- 3.3. Common Form Properties: (Name, Caption, Appearance, Border Style, Control Box, Maxbutton, Minbutton, Font, Height, Width, Left, Top Mouse Pointer, Showintaskbar, Startup Position, Enabled, Visible, Window State, BackColor, ForeColor, ScaleMode)
- 3.4. Common Form Method (Load, Unload, Show, Hide, Move, Cls, Print, Set Focus)
- 3.5. Common Form Event (Activate, Deactivate, Load, Unload, Initialize, KeyDown, KeyPress, KeyUp, Dbclick, Gotfocus, Lostfocus, Mousedown, Mousemove, Mouseup, Resize, Queryunload , Terminate).

4. Programming Fundamental:

- 4.1. Fundamental: Variable: Declaration of variable, types of variable, scope of variable. Variable declarations and Implicit and Explicit variable declaration. Constant: Types of constant, scoping user-defined constant, Operators: Arithmetic, Relational, Logical, Assignment and Comparison operator.
- 4.2. Control Flow Statements

5. Visual Basic Built-In-Function:

- 5.1. String Function, Numeric Function, Date and Time Function, Financial Function, Variable Type Function, Miscellaneous Functions: IIF, SWITCH.

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6. Menus MDI and Dialog Box:

- 6.1. Menu Basics- Introduction To Menu Editor
- 6.2. Creating Submenu, Working With Menu At RunTime- Using Access Key And Shortcut Keys- Creating Popup Menus.
- 6.3. MDI Basics Creating an MDI Application Working With MDI Form and child form, Loading And Unloading Forms.
- 6.4. What is dialog box – Modal and Modless Dialogbox- Inputbox Function- MsgBox Function– Common Dialog Box Control.

7. Visual Basic and Database:

- 7.1. What Is ActiveX Control- Loading ActiveX Control- Ado Data Control
- 7.2. Using Ado Data Control – Setting The Connection String And Recordsource Properties Working With Cursor Type
- 7.3. Working With Properties Like Bof Action, Eof Action, Lock Type, Binding Control (Textbox Control) To The Adodc, Setting Datasource and Data filed Properties
- 7.4. Adding and Deleting Records with the Adodc and finding specific records.
- 7.5. Establish connectivity with Ms-Access and Adding, Editing, Deleting and Searching Records in database – table

B. Practical

[50%]

Practical Based on above subject content

Reference Books:

1. Mastering Visual Basic 6.0 - Delaney
2. Learn To Program With Vb6 - John Smiley (Microsoft Press)
3. Beginning visual basic - Peter Wright's (Shroff Publishers & Distributers Pvt.Ltd)
4. Paul Sheriff Teaches Vb6- (PHI)
5. Visual Basic 6 Programming Black Book – Steven Holzner
6. Mastering Visual Basic: By – Computer World
7. Teach yourself access in 24 hours – (Tech-media) Timothy Buchanan, Craig Eddy, Rob Newman

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Paper No.: 8 **Teaching Hours:** 3 Hrs./Week
Paper Title: Computer Application Paper-VIII **Credits:** 3
(SOFTWARE ENGINEERING)

Prerequisite: Fundamentals of Basic Computer Concepts.

Aim: To make students aware of methodology of system design and analysis and there by introducing the concept of Software Engineering.

Expected Outcome: The students will be able to understand, design and develop projects in a systematic way. Students will also be able to prepare proper documentation of the projects.

A. Software Engineering **[50%]**

1. Introduction

- 1.1. Software, Software Characteristics, Applications, Myths.
- 1.2. Software Engineering General View
- 1.3. Software Process Models, Waterfall, Prototyping
- 1.4. 4GL Techniques
- 1.5. Efforts Distribution

2. Requirement Analysis

- 2.1. Introduction
- 2.2. Requirement gathering techniques
- 2.3. DFD, Data Dictionary and Process Specification
- 2.4. Importance of Requirement Analysis
- 2.5. Software Requirement Specification Document

3. System Design

- 3.1. Design Model
- 3.2. Principles and Concepts
- 3.3. Functional Independence
- 3.4. Mapping Requirements into Design
- 3.5. Design Documentation

4. Software Testing

- 4.1. Testing Fundamentals
- 4.2. Functional and Structural Testing
- 4.3. Testing Process
- 4.4. Case Studies carried out in the following Topics with DFD - GUI Applications e.g. Payroll System, Sales Management System

B. PROJECT WORK **[50%]**

Project Work to be based on the guidelines of Software Engineering.
Prepare and submit Project Report for the selected project (Excluding Coding)

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Reference Books:

1. Pankaj Jalote: An Integrated Approach to Software Engineering – Narosa Richard
2. Fairley, Software Engineering concepts – McGraw Hill
3. Ian Sommesille : Software engineering – Addition Wesley
4. R.S. Pressman : Software Engineering – A Practitioner’s approach – McGraw Hill
5. Prof. Parthasarathy & B.W. Khalkar - System Analysis Design and Introduction to Software Engineering
6. Software Engineering Theory & Practice, Shari Lawrence Pfleeger, Pearson Ed.

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Paper No.: 9 **Teaching Hours:** 3 Hrs./Week
Paper Title: **Computer Application: Paper IX** **Credits:** 3
(BUSINESS INFORMATION SYSTEM)

Prerequisite: **Basic Computer operating skills.**

Aim: **To make students aware of the available Business Information Systems. Also motivate the students towards the operation of Information system with several security aspects.**

Expected Outcome: **The students will be able to work under the environment of different Business Information systems and have ability to trace malfunctioning of the computer system and take appropriate action against it.**

A. Business Information System **[100%]**

1. Introduction

- 1.1. Information System Concepts
- 1.2. Data, Information, Knowledge, Wisdom
- 1.3. Characteristics of valuable information
- 1.4. Value of Information
- 1.5. Information system in an organization

2. E-Commerce and M-Commerce

- 2.1. Introduction- B2B, B2C, C2C, e-Government
- 2.2. E-Commerce Challenges
- 2.3. E-Commerce and M-Commerce Applications
- 2.4. M-Commerce Hardware and Software
- 2.5. Electronic Payment System

3. Transaction Processing System (TPS)

- 3.1. Overview of Traditional Transaction Processing System
- 3.2. Transaction Processing Activities
 - 3.2.1. Data Collection
 - 3.2.2. Data Editing
 - 3.2.3. Data Corrective
 - 3.2.4. Data Manipulation
 - 3.2.5. Data Storage
 - 3.2.6. Document Production and Reports

4. Management Information System (MIS)

- 4.1. Concepts of MIS
- 4.2. Characteristics of MIS, Need of MIS
- 4.3. Role of MIS in an organization
- 4.4. Role of MIS as decision support system, as decision making system

5. Enterprise Resource Planning (ERP)

- 5.1. Introduction to ERP
- 5.2. Advantage and Disadvantage of ERP
- 5.3. Leading ERP Systems

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5.4. ERP for SME's.

6. Security & Privacy Issues

- 6.1. Computer Waste, Mistakes and Its Prevention
- 6.2. Computer Threats: Hacker, Cracker, Insiders, Virus, Worms, Trojan horse, Logic Bomb
- 6.3. Proper use of Antivirus software
- 6.4. Security issues related to online transactions.
- 6.5. Privacy at work
- 6.6. E-Mail Privacy
- 6.7. Internet Privacy
- 6.8. Efforts to protect privacy

Reference Books:

1. Ralph Stair and Gerge Raynolds – Information System – Cengage Learning.
2. Ralph Stair and Gerge Raynolds – Principle of Information System, A Managerial Approach – Cengage Learning.
3. Kenneth Laudon and Jane-Management Information System: Managing the Digital Firm, Laudon, Prentice Hall of India
4. Management Information System, W.S. Jawadekar, Tata McGraw Hill.
5. Thomas F. Wallace, Michale H. Kremzar, ERP: Making It Happen, Wiley Publication
6. C.S. V. Murthy, Management Information System: Text & Applications-Himalaya Publication

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Paper No.: 10 **Teaching Hours:** 3 Hrs./Week
Paper Title: Computer Application: Paper X **Credits:** 3
(PROJECT)

Prerequisite: Knowledge of Operating System, Project System design and analysis skills, Database Management System, and GUI Tools.

Aim: To let students develop business application development skills.

Expected Outcome: The students will be able to develop business application using GUI tools.

- Project **[100%]**

Guidelines for the project:

Duration of the Project Work should be THREE months parallel to the sixth semester's other subject study. All the students will have to submit following reports to their respective examination centres.

1. The Joining Report (Once).
2. Project Title Report (Once).
3. Progress Reports (Fortnightly) signed by the guide & submitted to the internal guide in person.
4. Project Completion Certificate issued from the Organization where the project was done (in case the project is not done in the college/institute).

The student shall not be allowed to appear for the Final Examination if the student fails to submit the above mentioned documents.

Project Viva-voce will be conducted at the end of the semester.

Internal Evaluation: Minimum two faculties (preferably senior most) should be nominated by the Head of the Department or the senior most faculties in absence of the Head to evaluate the performance of the students' presentation.

External Evaluation:

The evaluation should be as per the following break up:

1. Analysis: 25% weightage
2. Design: 25% weightage
3. Understanding of the Problem & Technology Used: 25% weightage
4. Presentation & Viva: 15% weightage
5. Project Report: 10% weightage