Course Name : Computer Engineering Group **Course Code:** CM/CO/IF/CD

Semester : Third

Subject Title : Visual Basic **Subject Code:**

Teaching and Examination Scheme:

Teaching Scheme			Examination Scheme						
TH	TU	PR	Paper Hrs.	TH	Test	PR	OR	TW	TOTAL
-	--	04*	-	-	-	50@	-	-	-

* 2 sessions of 2 hours per week each.

NOTE: As the world turns to graphical user interfaces, computer programming languages are also changing to accommodate the shift.
Visual Basic is graphical user interface programming language which has excellent tools for understanding programming language concepts.
Multimedia techniques deal with Flash and 3D Max which are basic tools for audio, video presentations.
In this subject with equal weightage to Visual Basic and Multimedia techniques, students will be able to learn graphical user interface programming and multimedia presentations.

Rationale:

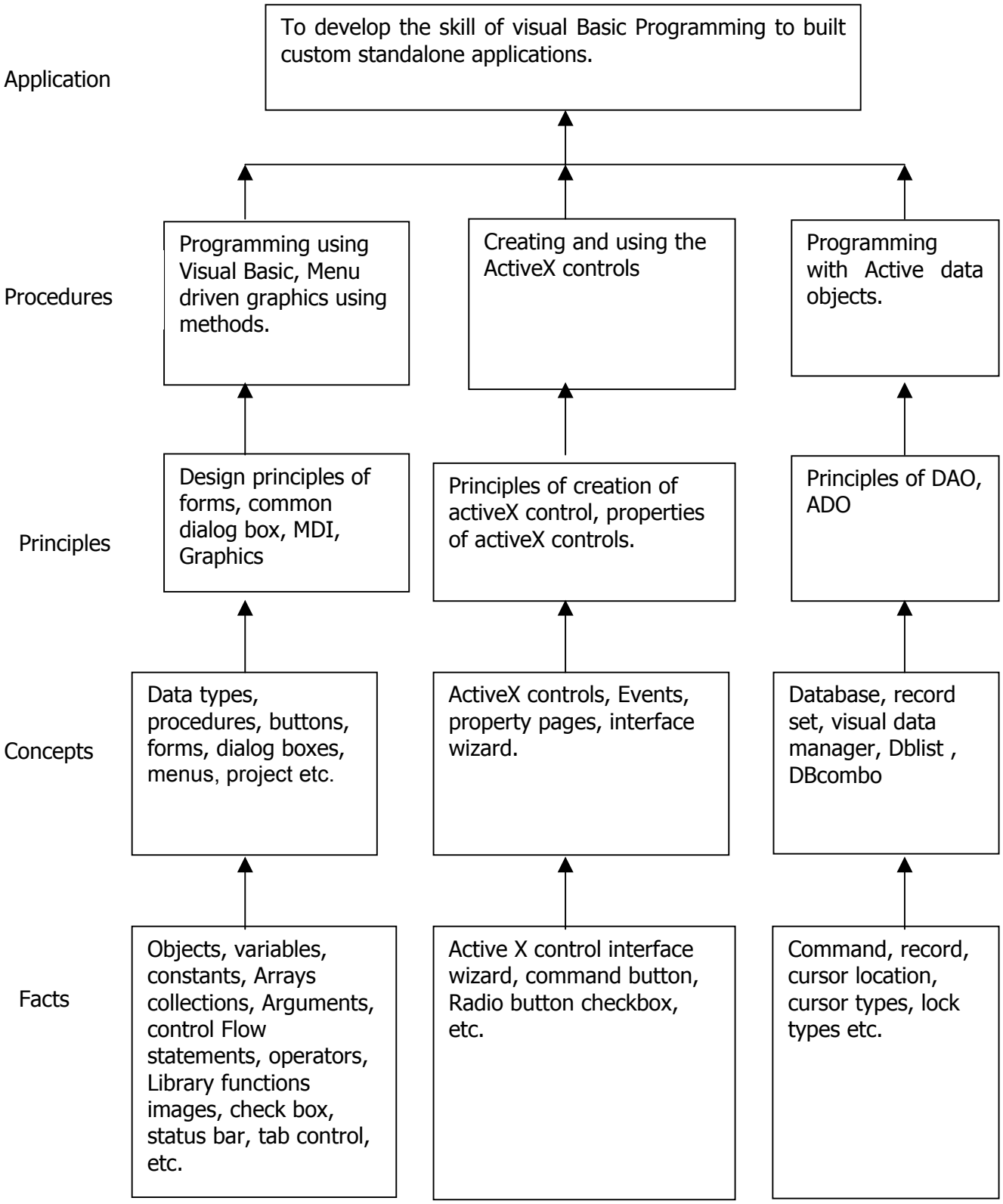
This subject helps to understand the principles and techniques involved in developing applications with Visual Basic. The course content is designed to understand & implement the Event Driven Architecture of Visual Programming. The student would be able to identify and use the different categories of controls, learn working with forms and different data access techniques, establish a data base connection and identify the categories of ActiveX controls and creating them.

Objectives:

The Student will be able to:

1. Use GUI tools of Visual Basic Programming.
2. Use basic and advance VB controls.
3. Interface back-end and front-end.
4. Generate report using Data Report and Crystal Reports.
5. Build Visual Basic applications.

Learning Structure :



Contents: Theory

Chapter	CONTENTS
01	**Introduction to Visual Basic Environment** • Concept of VB program. • Class, object, property, methods, events. • Environment of VB. • Concept of project forms etc. • Managing with menus. • Drag and Drop operation. • Validating and processing user inputs.
02	**Introduction to Visual Basic** • Data types, Variants. • Variables, Constants. • Arrays – REDIM statement, Array related functions. • Collection, procedure, functions. • Argument passing and return values. • Input box and message box. • Control flow statement. • Loop statement. • Nested control structure. • Exit statement. • Operators – arithmetic, logical, relational, string. • Functions – String, Maths, Date and Time. • Date and time formats. • Design form to demonstrate. • Control loops (do, for, while) • Control statements (if-then, if-then-else, Selection option) • - Using text box, Command button, Label, options, combo box, input and message box.
03	**Controls and Events** • Scroll bar. • Slider. • Container – picture box, frame. • Image. • File system controls – drive, file, directory list box. • Timer control. • OLE control. • - Basic controls like – line, shape, circle, Pset, RGB, Paint picture, load picture.
04	**Module, Class Module MDI, Menu Editor And Graphics** Concept of module, class module, MDI, DLL's and how to use them. • Creating own menu using menu editor, popup m • **Advanced controls**: Common dialog box, Tree view, List view, rich text box control, windows common controls, status bar, tab control, image list, MS chart. • Concept of class module, module MDI, DLL and how to use them Using RTF control

05	**Database, Report Generator** • Concept of database, record, record set, connection DSN and DSN less connection • Data bound controls – text box, combo box, list box, DB grid • DB combo, MS flex grid. • Visual Data Manager. • Programming with ADO, DAO, RDO, • Object, connection, record set, parameter, cursor types, • lock types. • Creating report using Data Report. • Creating report using Crystal reports.
06	**INTRODUCTION TO ACTIVE X CONTROLS** • The user control object- initialize Event, Terminate event, Init properties Event, Paint/Resize Event, Observing the Events in the Data controls, • Exploring the Properties of Active X controls- Debugging the Properties, extend Properties, Ambient Properties, creating Designed time only properties, creating a Clock control, Events in Active X control • Using the active X control interface wizard- Adding the wizard to visual basic • Property pages- using the property page wizard, creating property pages without the wizard. • Creating a simple active x control
07	**File Handling in VB** • File commands • file handling functions • Sequential files • Reading information from a file • Adding to an existing file • General sequential files • Sending special characters to sequential files. • Making changes inside a sequential file • The rich text box control & file handling • Random access files • Headers and indexes for random access files. • Binary files • Binary files handling

Practical:

Skills to be developed:

Intellectual skills:

1) Design various types of forms
2) Use image control and scroll bar
3) Selection of windows for different operations

Motor skills:

1. Develop various types of forms

List of Practical:

1. Study of VB environment with following details :
   - form and their types.
   - intrinsic components – text box, label, combo, list, heck box, and option button.
   - Design time properties.
   - Different windows and their uses.
2. Design forms to perform mathematical operations like addition, subtraction, multiplication and division using:
   - text box, labels.
   - Options to be selected using option, check box and combo box.
3. Design forms to use Date, Time, String, Mathematics functions with help of text box, label, radio button, check box, combo box and command button.
4. Using image control and scroll bar, design form to change height, width of image, movement to image. Using picture box and image list, flip the image on click of command button.
5. Design explorer using Directory, drive, file list box and common dialog controls.
6. Design text editor with menu having copy, cut, paste, select, search, replace the text and load and save the file.
7. Design stop watch with faculty of start, stop, reset using timer control, option, label, text box.
8. Practical including Data bound controls like DBgrid, DBcombo, Textbox, Combo, List, MS Flex grid and Database control like ADO, DAO, RDO to perform insertion, deletion, updation, display, Search.
9. Design MDI form including Menu bar, Toolbar, Status bar.
10. Design the interface to perform following operation on the file like create, open , read , write , delete , search.
11. Design the Active X control for login form and transport it to browser
12. Design the Active X control to perform database operation with get and let property
13. Design the experiment using RTF box to create file, load, save search and edit the file.
14. Integrate all above practical to form mini project including login form and splash form.

Learning Resources:

Books:

Sr. No.	Author	Title	Publisher
01	Bradley, Millstaugh	Programming in VB6	Tata McGraw Hill
02	Nel Jerka	The complete reference – VB6	Tata McGraw Hill
03	Evangelos Petront Sos	Mastering VB6	BPB
04	Content Development group	VB6 Programming	Tata McGraw Hill
05		VB6 Black book	