VISUAL PROGRAMMING

COURSE OVERVIEW

This course aims at imparting expertise in developing desktop applications using Visual Basic 6.0. During the course, you will appreciate that Visual Basic is a Rapid Application Development tool that enables you to create applications quickly. You will learn to program and access databases managed by RDMBSs using the database technology called ADO. ActiveX DLLs, ActiveX EXEs, ActiveX controls and ActiveX documents, which are implementations of COM, are an integral part of the course. You will learn to handle errors and use debugging tools for debugging code. Managing components and source code using the Visual Component Manager and Visual SourceSafe utilities are covered in detail.

Welcome to the first step, the process of learning Visual Basic Programming. VisualBasic is a Windows programming language that has been developed at Microsoft Corporation. This course fills the gap between the beginners Visual Basic programmer and the professional one. In this you will learn about the basic concept of designing and the creation that you can apply to any Windows applications you might create in future.

In the beginning you will learn about the basic Visual Basic Interface and Programming language. In the learning processing you will become familiar and comfortable with the aspects of developing a Windows Application. You should also understand the concept of Visual Basic Project, which includes forms, Modules and New Controls that have been added in this courses pack. There are even more functions, features, and tools that you will use while creating an application.

By far the largest changes have been made in the area of database access. VisualBasic applications are very popular as front-end to many Client/Server database systems like SQL/Server, Oracle etc. There are several new data bound control, as well as new ActiveX Data Control that combines the functionality of the standard Data Control and the remote Data Control.

A form Layout windows has been added to the environment allowing you to position you Application's forms by visual positioning a small representation of it in a screen display at design time. If you are working with several projects that will include in a single application, such as custom controls and programs, you can now have them all included in a single project group. This will allow you to work with multiple projects within a single instance of Visual Basic.

SYLLABUS
VISUAL PROGRAMMING

Description of unit

Students will increasingly use visually based operating systems such as Windows 95 and will need to develop code, which uses similar features and techniques.

The aim of this unit is to enable students to develop visual applications, become familiar with a visual development environment and use its facilities to build the applications.

Summary of outcomes

To achieve this unit a student must:

1. Use **visual objects**
2. Design a **visual application**
3. Use advanced features of a **visual development environment** to implement an application.

Content
VISUAL OBJECTS

Object types: introduction to visual basic, controls, coding for controls, variables, constants, decisions, conditions, menus, sub procedures, sub functions, multiple forms, lists, loops, printing, arrays, collections and data files, Dialog Box, Error handling

Object structure: attributes, methods etc

Creating objects: placing objects on a screen and customizing attributes

Linking objects: enabling objects to interact using programming or scripting

VISUAL APPLICATION

Design strategies: state transition diagrams, storyboarding, event modeling, and prototyping

Design: using design strategies

VISUAL DEVELOPMENT ENVIRONMENT

Identification of features: investigation of current advanced tools and development methods

Employment of features: use of advanced features to satisfy the requirements of an application features available will vary greatly between different development environments, but typical examples might be the use of drag and drop, simple animation, linking to databases, Internet development) OLE, ActiveX , Graphics

Outcomes and Assessment Criteria

Outcomes	Assessment criteria
	To achieve each outcome a student must demonstrate the ability to:
1 Use **visual objects**	• use and customize visual objects
	• develop simple forms using interacting objects.
2 Design a **visual application**	• select an appropriate design technique for a given visual application
	• use appropriate design techniques to produce a maintainable application.
3 Use advanced features of a **visual development environment** to implement an application	• report on advanced visual programming features
	• build a maintainable visual application using advanced features.