

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA IN INFORMATION TECHNOLOGY**  
**SEMESTER: V**

Subject Name: **Windows Programming with VB.NET**

<b>Sr. No.</b>	<b>Course content</b>
1.	<b>Introduction to .NET and VB.NET:</b> What is Microsoft .NET .NET Framework Overview Common Language Runtime Overview of Visual Studio.NET Creating Console Applications Debugging Applications Writing First VB.NET Program
2.	<b>Fundamentals of VB.NET:</b> Program Structure Namespaces Data Types Variables Conversions Operators and Expressions Console I/O
3.	<b>Control Structures:</b> If Statement Select Case Statement Loop Statements For/Next Statement
4.	<b>Procedures:</b> Subroutines Functions Pass-by-value Versus Pass-by-reference Access modifiers Overloading Optional Parameters
5.	<b>Advanced Data Types and Exception Handling:</b> Arrays Enumerations Structures Error Detection Exception Handling
6.	<b>Object-Oriented Programming:</b> Object Oriented Concepts Defining Classes

	Methods and Properties Shared Data and Methods Constructors
7.	<b>Inheritance:</b> Inheritance Controlling Base Class Construction Access Control Polymorphism Abstract and Not Inheritable Classes
8.	<b>Interfaces:</b> Interface Fundamentals Programming with Interfaces Using Interfaces at Runtime Resolving Ambiguities
9.	<b>Windows Forms:</b> Building a Windows Application□□□ Common Controls Dialog Boxes Menus Status Bars Toolbars
10.	<b>Interacting with Databases Using Windows Forms:</b> ADO.NET Building Commands and Adapters with Wizards Dataset Binding a Control to a Dataset

### List of Practicals /Tutorials:

1. To study .NET framework and comparison with others.
2. Study of .NET architecture with CLR,CTS, Garbage collection.
3. Introduction to Visual studio IDE and its features.
4. Program to implement Arithmetic calculator using console.
5. Program to implement overloading,overriding,constructor,with methods and properties.
6. Form based application using menus,dialog box,tool tip.
7. Implementation of Interface, and inheritance.
8. Study of ADO.NET.
9. Implement database using Dataset,DataReader,Data Sources with Windows application.
10. Program to Implement Data list,Grid view,Detail view,Repeater.

### Reference Books:

1. Beginning.Visual.Basic.2005 - Thearon Willis,Bryan Newsome-Wrox Publications.
2. Visual Basic 2005 Programmer's Reference (2005) - Rod Stephens- Wrox Publications.
3. Windows Programming with VB.NET, VB.NET in nutshell, Steven Roman , Paul Lomax, O-REILLY