GUJARAT TECHNOGICAL UNIVERSITY
DIPLOMA IN COMPUTER ENGINEERING

SEMESTER- VI

Subject Name: DATABASE PROGRAMMING WITH VB.NET

Sr. No	Subject Content	Hrs.
1.	**1.0 Developing Windows Forms Using Bound Controls** 1.1. Create a Bound List Box 1.2. Limit the Data Displayed in a Bound List Box 1.3. Bind and View Individual Text Boxes Based Off a Selected List Box Item 1.4. Edit and Update Data Using Bound Controls. Add and Delete Records Using Bound Controls 1.5. Take Care of Error Handling with Bound Controls. Put the Finishing Touches on a Data Bound Form 1.6. Bind Data to ComboBox and DataGrid Controls	3
2.	**2.0 Creating SQL Server Database Objects from Visual Studio .NET** 2.1. Create a New SQL Server Database from Within Visual Studio .NET 2.2. Define Tables and Fields 2.3. Define a Primary Key and Other Indexes 2.4. Define Relations Between Tables 2.5. Define Defaults and Constraints 2.6. Create Views 2.7. Create Stored Procedures	3
3.	**3.0 Viewing Data with ADO.NET** 3.1. Retrieve Data by Using the DataReader Object 3.2. Results from SQL Server by Using the DataTable Object 3.3. Locate Records with the DataTable Object 3.4. Filter and Sort Records Using the DataView Object	5
4.	**4.0 Manipulating Data with ADO.NET** 4.1. Edit Data and Update Changes That Are Made to an ADO.NET DataSet Object 4.2. Add and Delete Rows in a Dataset with ADO.NET 4.3. Execute Parameterized Stored Procedures in ADO.NET 4.4. Create and Execute On-the-Fly Batch Updates by UsingADO.NET	4

5.	**5.0 Working with Data in Web Forms** 5.1. Use Bound Controls with Web Form 5.2. Validate Data Using Validation Controls 5.3. Populate DropDown and ListBox Controls 5.4. Display Data Using the Table Control 5.5. Display Data Using the Repeater Control 5.6. Display, Sort, and Page Data in the DataGrid Control. 5.7. Add, Edit, and Delete Data Using the DataGrid Control 5.8. Hyperlink from a Row in the Data Grid to a Detail	**5**
6.	**6.0 Creating Transact-SQL Commands** 6.1. Retrieve Unique Records Using Only a Select Query 6.2. Use Variables and Functions in T-SQL 6.3. Use Wildcards and Ranges of Values in a SQL Query 6.4. Find Records in a Table Without Corresponding Entries in a Related Table 6.5. Take Advantage of Using Subqueries. 6.6. Create, Modify, and Delete Tables 6.7. Create a New Table with Data from Existing Tables 6.8. Create and Call SQL Server 2000 User-Defined	**5**
7.	**7.0 Using Classes with Databases to Make Life Easier** 7.1. Define a Class in Visual Basic .NET 7.2. Create a Class That Implements the Interface You Defined 7.3. Use Visual Studio .NET Tools to Speed Up Writing ADO.NET Code 7.4. Control the Creation and Behavior of Classes 7.5. Implement the Methods That Update the Database 7.6 Validate Data Passed to Properties and Communicate Errors to Developers 7.7. Write Data Validation Code That Can Be Reused in Other Classes	**4**
8.	**8.0 Creating Reports Using Crystal Reports** 8.1 Create a Report Using Crystal Reports Report Expert 8.2. Display a Report That Was Created 8.3. Add Calculated Fields to the Crystal Reports Report 8.4. Select Whether the Report Will Be Displayed, Printed, or Exported Using Visual Basic .NET Code. 8.5. Determine Which Records Will Be Printed at Runtime 8.5. Print Labels and Control the Order in Which Records Will Be Printed 8.6. Create an Onscreen Report That Contains Hyperlinks.	**5**

9.	**9.0 Utilizing XML Data in Your Visual Basic.NET Applications** 9.1. Use XMLWriter to Create an XML Document 9.2. Use XMLReader to Read an XML Document 9.3. Work with the XML Document Object Model 9.4. Retrieve XML from SQL Server2000 9.5. Work with Datasets and XML	**4**
10.	**Creating XML Web Services** 10.1. Get Started with XML Web Services 10.2. Create a Simple XML Web Service Using Parameters 10.3. Consume XML Web Services 10.4 Pass a Dataset Back from an XML Web Service	**4**
	TOTAL	**42**

NOTE:- Following are the minimum experiences required, but the college can do more experiences if possible.

LABORATORY EXPERIENCES :- **Hrs**

1. Develop windows application using Bound Controls 4
2.. Create an application that retrieves data using DataReader object 4
3. Insert, Update, Edit and Delete data using an ADO.NET DataSet object 6
4. Create an application that shows the use of Stored Procedures 6
5. Create simple web application and validate data using validation controls
6. Create an application which populate data using Repeater Control 6
7. Manipulate data in Data Grid Control also sort and page data in it. 6
8. Create a Report using Crystal Reports Export 6
9. Create and read XML Document. 6
10. Create a simple XML Web Service Using Parameters 6

Total 56

Reference Books:

1. Database Programming With Visual Basic .Net And Ado.Net: Tips, Tutorials, And Code, 1/E –Barker

2. Database Access with Visual Basic. .Net, 3/E - McManus & Goldstein
3. Murach's VB.Net Programming with ADO.Net , Training & References
4. Mastering Databse programming with visual basic .net