

Subject Code: 1ET4040404	Subject Title: .Net Programming
Pre-Requisite	---

RATIONALE:

The .NET platform has evolved quickly to become a robust technology platform for enterprise application development and systems integration. It is a very popular platform these days being used to develop web sites/ web based applications. The students of Diploma in Computer Engineering should have skills in .NET Programming techniques using VB.NET. This course aims that student should learn creating simple applications as well as Applications that are database driven using .NET technology.

COURSE OBJECTIVE:

Following are the objectives of this course:

- The course is designed to guide the beginning programmer in developing applications using Visual Basic.Net (VB.NET) programming languages.
- To design user interface, code, test and debug vb.net applications
- Students will be introduced to object-oriented programming concepts along with the ADO.NET and VB.NET syntax to implement them.
- Upon the completion of this course, students will know how to create and modify simple ADO.NET and VB.NET language applications, and will have the tools to create more complex examples..

TEACHING AND EVALUATION SCHEME:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)			
Lecture	Tutorial	Practical	Credit	Theory		Practical	
				University Assessment	Continuous Assessment	University Assessment	Continuous assessment
3	-	4	7	60	40	20	30

DETAILS OF COURSE CONTENTS:

Sr. NO.	TOPIC	Total Hrs.	WEIGHTAGE
1	Introduction to Microsoft .NET framework and VB.Net 1.1 Overview of Microsoft .NET Framework 1.2 The .NET Framework components 1.3 The Common Language Runtime (CLR) Environment. 1.4 The .NET Framework class Library. 1.5 Visual basic language concept :variables, Constants, Data Types, Operators, Control Structures and loops, Arrays : single and multidimensional array, declaring, dynamic array	06	14%
2	Introduction to Windows Common Controls	08	20%

	2.1 Working with Form :Properties : appearance, behaviour, layout, windows style etc, methods and events 2.2 Differentiate procedure oriented, object oriented and event driven programming 2.3 Inputbox, Messagebox 2.4 Working with Common Tool Box Controls: Label & button (Properties: flatstyle, image, imagealign etc.), Textbox (Properties: autosize, maxlength, multiline, readonly, wordwrap etc.), Numeric Up Down (textalign, updownalign, value, interceptarrowkeys, decimalplaces, increment, maximum, minimum etc.) Check Box (autocheck, checked, checkaligned, checkstate, threestate etc.), Radio Button (check aligned, check, autocheck etc.), Group Box (gridsize: width, height etc.) control and all important methods and events.		
3	Additional controls and Menus of Windows 3.1 Working with other controls of toolbox : Date Time Picker, List Box, Combo box, Picture Box, Rich Text Box, Progress bar, Masked Text box, Link Label, Checked List box, Scroll Bars, timer. 3.2 Working with Menus: creating menu, inserting, deleting, assigning short cut keys, pop up menu.	12	28%
4	Advanced Features of VB.Net 4.1 Dialog Boxes: OpenFileDialog, SaveFileDialog, FontDialog, ColorDialog, PrintDialog 4.2 Sub Procedures and functions : declaring, passing and returning arguments, exiting from it, pass by value and pass by ref. 4.3 Exception Handling : Structured Error Handling (Try Catch finally), Unstructured Error Handling (On error go to line, goto 0, goto -1, resume next) 4.4 Multiple document interface (MDI) : MDI Parent form and child form.	06	14%
5	Inbuilt Functions and Database access using ADO.NET 5.1 Inbuilt Functions : Mathematical Functions(The Abs function, The Exp function ,The Fix Function , The Int Function, The Log Function , The Rnd() Function, The Round Function, The Sqrt Function) 5.2 String manipulation(The Mid Function , The Right Function, The Left Function , The Trim Function, The Ltrim Function, The Rtrim Function, The InStr function , The Ucase and the Lcase Functions , The Chr and the Asc functions, Formatting Functions), Format Functions (Formatting Using ToString Method, Formatting Date and Time) 5.3 ADO .NET Object Model: Dataprovider(connection, command, data reader, data adapter, data readers) Dataset(datatablecollection(datatable,datarows, datacolumns, data constraints), datarelationcollection) 5.4 ADO .NET Programming :Creating a Database Application, Creating Connection to a Database using ADO.NET, Populating Data in ADO.NET, Browsing	10	24%

	Records, Datagrid view, Editing, Saving, Adding and Deleting Records using bounded and unbounded.		
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COURSE OUTCOME:

After completing this course, student will be able to:

1. Explain the architecture of .Net Technology.
2. Develop single form based simple .Net applications using basic and advanced control
3. Develop multiple form and menu based .Net applications.
4. Develop small ADO.net based database driven .Net application.
5. Implement and trouble shoot simple .Net Applications

LIST OF PRACTICAL:

SR. No.	Experiment
1	Recognize various parts of visual basic .net IDE.
2	Observe and draw visual .net IDE layout and hands on practice to create, save and open the project
3	Write, test and debug at least 5 loop, array and operator based vb.net programs
4	Design forms and write, test and debug programs to test its various properties , methods, events
5	Write, test and debug program to test input box and message box
6	Write, test and debug applications to use textbox, label, button
7	Write, test and debug applications to use radio button, checkbox, numeric updown and group box controls
8	Write, test and debug application using date time picker, list box, combo box, picture box
9	Write, test and debug application using rich text box, progress bar, masked text box, link label
10	Write, test and debug application using checked list box, scroll bars, timer
11	Write, test and debug applications using menu
12	Write, test and debug applications using dialog boxes
13	Write, test and debug applications using sub procedures and functions

14	Write, test and debug applications using MDI
15	Write, test and debug applications using math and string manipulation functions
16	Draw ado.net object model
17	Create and test connection using ado.net to view SQL express server/Microsoft Access data in textbox etc controls
18	Create and test connection using ado.net Oracle/other database data in textbox etc controls
19	Create connection view controls like data-grid view controls
20	Write, test and debug small application to add, edit, search, delete record in database in bounded mode
21	Write, test and debug small application to add, edit, search, delete record in database in unbounded mode i.e. through coding

LIST OF REFERENCES:

Sr.no.	Title	Author
1	Visual Basic .net Comprehensive Concepts and Techniques	Shelly, cashman, Quasney
2	Visual Basic .net	Steven Holzner
3	Murach's Beginning Visual Basic .NET	Anne Prince
4	Programming in Visual Basic. NET	Julia Case Bradley, Anita C. Millspaugh