C. U. Shah University, Wadhwan City
Faculty of Computer Science
Name of Program: Bachelor of Science (Information Technology) (B.Sc.IT)
Semester : IV
W.e.f. June – 2017
Teaching & Evaluation Scheme

Sr. No	Subject Code	Subject Name	Teaching Hours/Week				Credits	Evaluation Scheme/Semester							Total Marks
								Theory				Practical			
			T h	T u	Pr	Total		Sessional Exam		University Exam		Internal		Uni.	
								Marks	Hrs	Marks	Hrs	Pr	T W	Pr	
2	4CS04IDN1	.NET Programming	4	-	-	4	4	30	1.5	70	3	-	-	-	100

Objectives:

The students would be able to:
- Learn the fundamentals of the Microsoft Visual C# .Net programming language
- Become familiar with Visual Studio IDE.
- Be aware of the real functions of desktop application development.

Prerequisites: Basic knowledge of C and C++ Language.

Course outline:

Chapter No	Chapter Name	Course Contents	Lect. Hours
1	Understanding .NET Platform	**1.1.** What is .NET? **1.2.** Introduction to .NET Framework **1.3.** Understanding CLR & CLR Components (CTS, IL, CLS, Managed Code, Garbage Collection, JIT) **1.4.** FCL **1.5.** Benefits of .NET Framework.	5
2	Introduction of C# .NET	**2.1.** About C# **2.2.** Why C#? **2.3.** Evaluation of C# **2.4.** Characteristics & Applications **2.5.** Difference between C# & C++, C# & Java **2.6.** Different Types of C# Application (Console, Windows, Web and Web Services) **2.7.** Creating Simple Console Program **2.8.** Executing the program **2.9.** Program Structure **2.10.** Understanding Main Method **2.11.** Namespace **2.12.** Comments	6
3	C# .NET Programming	**3.1.** Data types (Value type and Reference Type) **3.2.** Variable **3.3.** Declaration and Initialization of variable **3.4.** Constant	6

		3.5. Scope of variable	
		3.6. Operators	
		3.7. Decision Making Statement	
		3.8. Looping Statement	
		3.9. Working with Arrays	
4	Windows Application	**4.1.** Overview of Windows Application **4.2.** Creating and use of Windows Application **4.3.** .NET Events – Mouse, Keyboard **4.4.** Common Properties, Methods and Events of Controls **4.5.** MessageBox Class	5
5	Windows Controls	**5.1.** Creating Windows Form **5.2.** Button **5.3.** Label **5.4.** TextBox **5.5.** RadioButton **5.6.** ComboBox **5.7.** CheckBox **5.8.** ListBox **5.9.** ScrollBar **5.10.** PictureBox **5.11.** Timer **5.12.** Panel and Group **5.13.** TreeView **5.14.** ToolTip **5.15.** ProgressBar.	12
6	Menus, Dialogs and MDI Concepts	**6.1.** Menus: MenuStrip **6.2.** Dialog Boxes: OpenFileDialog, SaveFileDialog, FontDialog, ColorDialog **6.3.** MDI: Introducing MDI Concept, Use of MDI concept of inheriting form.	8
7	ADO .NET	**7.1.** Introduction of ADO .NET **7.2.** Benefits of ADO .NET **7.3.** ADO V/S ADO .NET **7.4.** Connected and Disconnected architecture **7.5.** ADO .NET Classes: Connection, Command, DataReader, DataSet, DataAdapter, DataTable, DataRow, DataColoum **7.6.** DataGridView control **7.7.** Binding standard and GridView control.	10
8	Reports	**8.1.** Introduction of Crystal Reports **8.2.** Types of Crystal Report **8.3.** Report Section, Formula, Special Field and Summary in Report.	3
		TOTAL	**55**

Books Recommended:

1. Programming C# - E Balaguru Swami - Tata McGraw-Hill - ISBN: 9780070702073
2. C# .NET Programming Black Book – Stevan Holzner – DreamTech Press - ISBN: 9788177228328
3. Professional .NET Framework 2.0 – Joe Duffy - John Wiley Publication – ISBN: 9788126507931
4. Microsoft ADO .NET 2.0 Step By Step – Rebecca Riordan – Microsoft Press – ISBN: 9780735648456
5. Advance .NET Technology – Chirag Patel – Dream Tech Press – ISBN: 9789350042083

Suggested List of Practical:

The practical / exercises should be properly designed and implemented with an attempt to develop different types of practical skills so that students are able to acquire the competencies (Programme Outcomes). Following is the list of practical / exercises for guidance.

Sr. No	Ch. No	Practical / Exercises
1	2	Write a Console Application to print "Hello World" on Screen
2	3	Write Console Application to accept 2 numbers and print total of them.
3	3	Write Console Application to enter p, r, n and calculate simple interest.
4	3	Write Console Application to accept two numbers from user and swap it.
5	3	Write Console Application to calculate & print Area & Circumference of circle. (Area = pi * r * r) (Circumference = 2 * pi * r)
6	3	Write Console Application to find out the Net Salary of an Employee. Get the basic salary from user. Applicable T.A 5%, D.A. 64% and HRA 12% on basic salary. Applicable 3% I.T., 12% PF on gross salary. (Gross Salary = basic + DA + HRA + TA) (Net salary = Gross salary – I.T. – PF)
7	3	Write a program to input two numbers and check whether number is odd or even
8	3	Write a program to input three numbers and print the smallest number among them using logical AND operator.
9	3	Write a program to get a character from user and print that is vowel or consonant
10	3	Write a program to enter a value and check it is Less, Equal or Greater than Zero.
11	3	Write a program to accept marks of four subjects for student & calculate total and percentage. Also find class according to following rules: **Percentage / Class** >= 70 — Distinction >= 60 & <70 — First Class >= 50 & <60 — Second Class >= 40 & <50 — Pass Class <40 — Fail
12	3	Write a program to print series 1 to 10 using while loop.
13	3	Write a program to print series 2 4 8 16 32 64 using do…while loop
14	3	Write a program to print series 1 99 2 98 3 97….. 20 steps using for loop.
15	3	Write a program to sort an array's elements
16	3	Write a program to find minimum and maximum values from an array
17	5	Create a form with one textbox, one label and one button. Enter your name in textbox. On clicking of button, your name must display into the label.
18	5	Create a form with three buttons Red, Green and Blue. On the click of Red button back color of form will be changed to Red and so on.

19	5	Design interface of simple calculator.
20	5	Write a program to create a color pallet. Take three ScrollBar for Red, Green, and Blue color and one label. And according to ScrollBar values the color of Label should be changed.
21	5	Create an application with one textbox and three buttons (left, right, center) on clicking left button, alignment of textbox should be changed to left and respectively.
22	5	Design a form that has three textboxes and radio button that calculate simple interest and compound interest.
23	5	Design an application which will have 2 radio buttons. One will convert the Celsius to Fahrenheit and another will convert Fahrenheit to Celsius. Show the appropriate output depends on the user's selection. (Use radio button to take user choice and use textbox to enter value).
24	5	Write a program to convert rupees value to dollar value
25	5	Enter 5 numbers find out highest and second highest. For highest number check it is prime or not and for second highest calculate Fibonacci series
26	5	Design a form which has Annual Salary with Income Tax Facilities. If Monthly Salary entered then calculate annual Salary. According to this income tax as per below conditions. Rs. 0 – Rs. 50000 – No Tax Rs. 50001 – Rs. 60000 – 10% of Annual Income Rs. 60001 – Rs. 150000 – 20% of Annual Income More than Rs. 150001 – 30% of Annual Income Also pring net annual salary after the deduction from tax in label.
27	5	Create a form with two drop down lists (Combo boxes) one for country name and another for President / Head of the Country. When user selects a country name from combo box corresponding President / Head name should be displayed in another combo box.
28	5	Write a program to transfer an item from First ListBox to Second ListBox and from Second ListBox to First ListBox.
29	5	Take two picture boxes on form which overlap each other. It we click on first picture it will hide itself and shows second one and if we click second one it will do the same.
30	5	Create a stop watch using Timer Control.
31	6	Create MDI form. It must have File menu with option Open, Close and Exit and one Picture box. Allow users to open any picture using open dialog box, that picture should be displayed in the picture box.
32	7	Write a program to develop a database application with ADO .NET with Record Navigation and Add, Delete and Update facility for books table(bid, bname, qty, priceperunit, totalprice).

33	7	Write a program to create a table emp with the following fields

Write a program to create a table emp with the following fields

Field Name	Data type
eno	Number
ename	Varchar(20)
salary	Number
birthdate	Date
designation	Varchar(20)

Design a form which perform select, insert, update and delete operation on the table emp.

34	8	Create below mentioned Crystal Reports for the above application

Create below mentioned Crystal Reports for the above application

- List all the Employees having salary more than 25000
- List all the Employees who are above the age 35
- List all the Employees designation wise.