COURSE NAME : COMPUTER ENGINEERING GROUP

COURSE CODE : CM/CO/IF/CD

SEMESTER : SIXTH FOR CO/CM/IF AND SEVENTH FOR CD

SUBJECT TITLE : ADVANCED WEB TECHNOLOGIES (ELECTIVE)

SUBJECT CODE : 9167

Teaching and Examination Scheme:

Teaching Scheme			Examination Scheme						
TH	TU	PR	PAPER HRS.	TH	TEST	PR	OR	TW	TOTAL
02	--	04	03	80	20	--	25#	25@	150

Rationale:

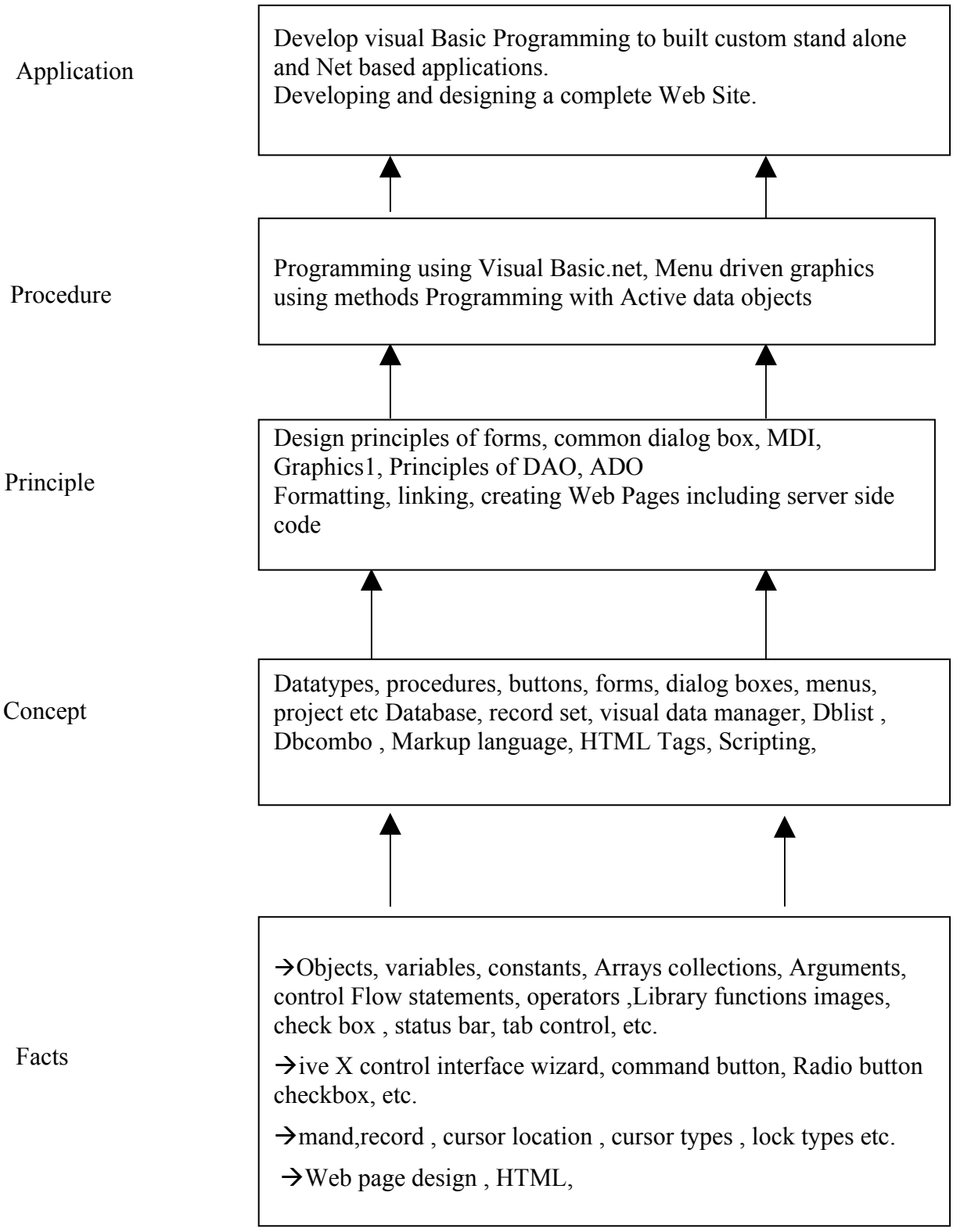
This subject is the technology subject, subject knowledge of Web Page Design and Visual Basic is essential for studying this subject. Advanced Web Technologies is based on dot net technology, which is a frame work, which supports many languages so that application designed in one language(like C++, COBOL, JAVA, etc) can be connected/interfaced with this frame work hence it is more flexible and advanced.

Objectives:

The student will be able to:

1. Use GUI tools of . net framework
2. Use basic and advance . net controls.
3. Interface back-end and front-end.
4. Build applications integrated with .net Framework.
5. Build net based applications.
6. Transfer code form VB to VB.net.
7. Can do Asp Transaction.

Learning structure:



Contents: Theory

Chapter	Name of the Topic	Hours	Marks
01	**Introduction** 1.1 Why dot Net - Introduction to Microsoft .Net Framework. - Building blocks in .Net - Drawback of previous languages. - Understand what is .Net 1.2 VB.Net - VB.Net overview. - Difference between VB and VB.Net 1.3 Introduction to .Net - Types of application architecture. - .Net initiative. - .Net framework: components of .Net framework, Advantages, requirement of .Net.	**04**	**04**
02	**Introduction and implementation** 2.1 Introduction to VB.Net - Features. - VB.Net IDE. - Data Types, Loops, Control structures, Cases, Operators. - Creating forms. - Procedures and functions. - Form controls. 2.2 Implementation of OOP - Creation of class and objects. - Inheritance. - Constructors. - Exception handling. 2.3 Component based programming - Working with Private assembly, shared assembly. - Using COM components developed in VB or other language.	**04**	**12**
03	**Introduction to ADO.Net and data manipulation** 3.1 Introduction to ADO.Net - What is database? - Writing XML file. - ADO.Net architecture. - Creating connection. - Dataset and Data reader. - Types of Data adapter and ADO controls. - Reading data into dataset and data adapter. - Binding data to controls. - Data table and Data row. 3.2 Accessing and manipulating data - Selecting data. - Insertion, deletion, updation, sorting. - How to fill dataset with multiple tables. 3.3 Multi-threading - Working with multithreading.	**08**	**20**

	- Synchronization of Threads. 3.4 Migrating from VB 6.0 to VB.Net - Updating the applications developed in VB to VB.net		
04	**Introduction to ASP.Net** - Difference between ASP and ASP.Net - Introduction to IIS. - What is web application? Why it is used? - ASP.Net IDE. - Creation of web forms. - Using web form controls.	**02**	**04**
05	**ASP.Net objects and components** - Response. - Server. - Application. - Session. - ASP.Net scope, state, view state, post back and configuration. - Object creation: Scripting, Drive, folder, file. - How to use objects? - Server components : Ad rotator, Content linker, Browser capabilities. - Use and creation of global .asa file. - How to use Application object. - Events - Methods and collection. - Example. - How to use session object : enabling and disabling of session, Event, properties, methods, collection. - Example.	**08**	**20**
06	**ADO.Net** 6.1 ADO.Net in ASP.Net - Connection. - Dataset and data reader. - Data table and Data row. - Web.config introduction. - Binding data with data grid. - Accessing and manipulating data. 6.2 ADO.Net : Server control templates and Data binding techniques - Understand data access in .Net using ADO.Net - Understand various Server Control Templates available for Data Binding like Repeater. - Data List and Data Grid Controls.	**04**	**16**
07	**ASP transactions and e-mail** - Transactions. - Transaction db design. - CDONTS object. - Email sending web page creation.	**02**	**04**
	Total	**32**	**80**

Practical:

Skills to be developed:

Intellectual skills:

Use of programming language constructs in program implementation.

- To be able to apply different logics to solve given problem.
- To be able to write program using different implementations for the same problem
- Study different types of errors as syntax semantic, fatal, linker & logical
- Debugging of programs
- Understanding different steps to develop program such as
    - Problem definition
    - Analysis
    - Design of logic
    - Coding
    - Testing
    - Maintenance (Modifications, error corrections, making changes etc.)

Motor skills:

- Proper handling of Computer System**.**

List of Practical:

1. Introduction to .Net framework.
2. a) Design Login form with validation.
   b) Design Registration form with validation of email address, date of birth, blank field, telephones and mobile numbers etc.
3. Design form, make it a class, create its object and access it from another form.
4. Design student class, marks class, inherits it in result class and access it using form.
5. Create instance of class using new operator of above example.
6. Design mark sheet of student using XML file and dataset.
7. Design employee details with help of database (back-end) using data adapter, data reader and datasets. Use data grid to display result.
8. Generation of database (data table) of employee or student with help of data tables of .Net.
9. To use multiple table design example of employee and department.
10. Design registration form of college using text box, text area, radio list, check list, button etc. using Autopostback property.

11. Simple application for following function: (1) Login (2) Surfing (3) Logout taking into considerations (Application, Session, Server object, global .asa file and their events, methods and collection) also demonstrates enabling and disabling of session.)
12. Creation of file, entry, reading data from a file.
13. Using components create:
    (1) Advertisement (using Ad rotator)
    (2) Book example (using Next function)
    (3) Find capabilities of browser (Browser object capabilities)
14. Online application (student, employee, product, shopping mall)
    (a) Using dataset, data reader.
    (b) Same application using data table and data row. (use data grid to display data)
    (c) Bind the data to data grid using properties / templates.
    (d) Display details (student, employee, product, etc.) using data list. (4 cols per line)
15. Application which sends email.

Mini Project :

Design the mini project by integrating all the experiment performed as mentioned in the curriculam

Learning Resources:
Books:

Sr. No.	Author	Title	Publisher
01	Anita & Bradely	Prog. In VB.Net	TATA Mc Grow Hill
02	Dave Mercer	ASP.net	TATA Mc Grow Hill
03	Anthony Jones	.net Framework	TATA Mc Grow Hill
04	Robert LandLizer	Designing Application with Microsoft VB.net	TATA Mc Grow Hill
05	-	Operating .net Framework	TATA Mc Grow Hill
06	Grun grundgier	Prog. In VB.net	Oerilly
07	Thwan ThAI , Hoang Lan	.Net Frame Work Essential	Oreilly