Vikram University, Ujjain

Board of studies in Computer science (Faculty of Engineering Science)

SYLLABUS of

Certificate Course in ASP.NET Technology

Exclusively for University Teaching Department (ICS,VUU)

(Effective from Academic Session 2020-21)

PROGRAMME OBJECTIVES:

The .NET has become a platform of choice for the development of web based data driven pages among webpage developer community due to its potential and strong features available to develop virtually all kind of dynamic web sites. It is a popular platform for development of robust desktop and web based applications. In this course Certificate in *Web Programming Using ASP.NET* students will be able to use ASP.NET platform for developing web based application with database support. Aim of this course is to enable students to develop dynamic and data driven web applications utilizing the power of .NET Technology.

The course content should be taught and implemented with an aim to develop required skills in students to enable them to acquire following competency:

Design, develop and deploy Web based applications using ASP.NET.

COURSE STRUCTURE

Certificate Course in ASP.NET Technology

Time Duration: 6 Months

SN	Course code	Title	End term sem Exam	Internal	Max Marks
1	CASP-101	Programming Skill Development using 'C' and 'C++'	75	25	100
2	CASP-102	ASP.NET Technology using C#	75	25	100
3	CASP-103	Project Work	150	50	200
		Total			400

CASP–101 Programming Skill Development using 'C' and 'C++'

UNIT 1

Character Set, Identifiers, Keywords, Variables, Character Strings, Typecasting, Constants, Operator and Expression, Operator Precedence and Associativity.

Control Statements: If, If-Else, Multi-way decision, Compound Statements, loops: for, while do-while, break, switch, continue statement, Arrays, Strings.

UNIT 2

Functions: Introduction, Parameter Passing: call by value, call by reference, return values, recursion vs iteration, scope extent, passing arrays and function to functions.

Pointers: Introduction, address operator, pointer variables, pointer arithmetic, pointer to pointer, array of pointers. Structures: Operations, self referential structure, array of structure.

UNIT 3

Introduction to traditional programming with C, Object Oriented Programming, Objectives of OOP, Procedural VS OOP, Concepts of Objects, Classes, Data Abstraction, Encapsulation, Inheritance, Polymorphism, Dynamic Binding and Message passing.

Classes and Objects: Classes, Structure & Classes, Friend Function, Friend Classes, Inline Function, Static Data Member, Static Member Function, Passing object to function, Returning objects, Array of object.

UNIT 4

Constructor and Destructor: Introduction, Default constructor, Parameterized constructor, Multiple constructor in a class, Constructor with default argument, Copy constructor, Destructor.

Function and Operator Overloading: Function overloading, Creating a member operator function, Operator overloading using friend function.

UNIT 5

Inheritance and Polymorphism: Introduction, Base and Derived Classes, Base class access control, Protected members, Single Inheritance, Multiple Inheritance, Multilevel inheritance, Hierarchical Inheritance, Hybrid inheritance. Virtual function, Virtual base classes.

Template: Class templates, Class templates with multiple parameters, Function templates, Function templates with multiple parameters, Overloading of template functions.

Reference Books:

1. Kanetkar y: Let us C.
2. Cooper, Mullish : The spirit of C. An introduction to modern programming, Jaico Publ. House, New Delhi, 1987.
3. Kenneth, A. : C problem solving and programming, Prentice Hall international.
4. Object-Oriented Programming with C++: E. Balagurusamy, TMH, 2005
5. Object Oriented Programming in C++, Robert Lafore, Galgotia Publication.
6. Object Oriented Programming, Tomothy Budd, Pearson education.

CASP-102 ASP.NET TECHNOLOGY USING C#

UNIT -1

Overview of ASP.NETframework, Understanding ASP.NET Controls, Applications, Web servers, installation of IIS. Web forms, web form controls-server controls, client controls, web forms & HTML, Adding controls to a webform, Buttons, TextBox, Labels, Checkbox, Radio Buttons, List Box, etc. Running a web Application, creating a multiform web project.

UNIT -2

Form Validation: Client side validation, server Side validation, Validation Controls: Required Field Comparison Range. Calendar control, Ad rotator Control, Internet Explorer Control. State management-Viewstate, Session state, Application state

UNIT -3

Architecture of ADO.NET, Connected and Disconnected Database, Create Connection using ADO.NET Object Model, Connection Class, Command Class, Data Adapter Class, Dataset Class. Display data on data bound Controls and DataGrid. Database Accessing on web applications: Data Binding concept with web, creating data grid, Binding standard web server controls. Display data on web form using Data bound controls.

UNIT -4

Writing datasets to XML, Reading datasets with XML. Web services: Introduction, Remote method call using XML, SOAP, web services, description language, building & consuming a web service, Web Application deployment.

UNIT -5

Overview of C#, C# and .NET, similarities & differences from JAVA, Structure of C# program Language features: Type system, boxing and unboxing, flow controls, classes, interfaces, Serialization, Delegates, Reflection.

Reference Books:

1. Pressman R.S. Sofware Engineering: A Practitioner's Approach, MGH

2. Pankaj Jalote. An Intergrated Approach to Software Engineering, Narosa

3. VB.NET Black Book by steven holzner –dreamtech

4. ASP.NET Unleashed

5. C# programming–wrox publication

6. C# programming Black Book by Matt telles.