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Computer Visions Course Outline

Get What You Want

We offer highly customizable group training courses: desktop applications, web development, networking & operating systems, technical certification, professional development & skills, help desk.

Get It When & Where You Want It

All Computer Visions courses are available for presentation on-site or off-site for your convenience. We can roll out any combination of courses at one or more locations anywhere in the United States, according to your requirements and time table. Just let us know and we'll work with you!

Corporate Training Solutions

Corporations look to us to train their employees. Why? Because our proven training methods have increased employee proficiency and productivity. We assign one person to each of our corporate clients to ensure quality service, and we also offer extranet Web registration, management, reporting and billing for all clients. Simplicity, quality and outstanding service are our hallmarks.

Consulting Solutions

2559: Introduction to Visual Basic .NET Programming with Microsoft .NET

This five-day instructor-led course provides students with the knowledge and skills needed to develop applications in Microsoft Visual Basic .NET for the Microsoft .NET platform. The course focuses on user interfaces, program structure, language syntax, and implementation details.

This is the first course in the Visual Basic .NET curriculum and will serve as the entry point for other .NET courses.

Outline:

Module 1: Getting Started

This module introduces Visual Basic .NET and explains how it fits into the .NET platform. It explains how to use the programming tools in Microsoft Visual Studio .NET and provides enough practice so that students can create their first application in Visual Basic .NET.

Lessons

- Basic .NET Concepts
- Exploring the Development Environment
- Creating a Visual Basic .NET Project

Lab : Creating Your First Application

- Exercise 1: Creating Your First Application in Visual Basic .NET

Module 2: Working with Forms and Controls

This module explains fundamental programming concepts, including event-driven programming, classes, objects, properties, methods, and events. This module also explains how to use forms and controls to create a user interface. This includes the following: how to create a form, set properties, call methods, and write code for events; how to add controls to a form; how to manage multiple forms; how to use message boxes; how to use naming conventions; and how to format and document code.

Lessons

- Understanding Programming Concepts

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Classroom and Computer Rentals

Need space and equipment to conduct specialized presentations or classes? We can help. With our world class classrooms and state of the art projection and presentation equipment, we take care of the details so you can have a successful presentation.

- Working with Windows Forms
 - Working with Controls
 - Styling Your Code
- Lab : Creating the User Interface
- Exercise 1: Creating the Main Form

Module 3: Using Variables and Arrays

This module explains how to name, declare, assign values to, and use variables and constants. It explains how to declare variables with different levels of scope, how to create your own data structures, and how to convert variable values from one data type to another. It also describes how to store data in an array.

Lessons

- Introduction to Data Types
- Using Variables
- Variable Scope
- Converting Data Types
- Creating and Using Structures
- Storing Data in Arrays

Lab : Creating and Using Variables

- Exercise 1: Using Static Variables
- Exercise 2: Creating, Using, and Converting Variables

Lab : Using Structures and Arrays

- Exercise 1: Creating a Structure
- Exercise 2: Creating and Using Arrays

Module 4: Working with Procedures

This module describes how to create and use Sub and Function procedures, including predefined functions, and how to structure code for increased reusability.

Lessons

- Creating Procedures
- Using Procedures
- Using Predefined Functions

Lab : Creating and Using Procedures

- Exercise 1: Creating Functions in a Module
- Exercise 2: Working with the Main Form

Module 5: Decision Structures and Loops

This module explains how to implement decision structures and loop structures to control program output and execution.

Lessons

- Using Conditional Expressions
- Using Decision Structures
- Using Conditional Loop Structures

Lab : Using Decision Structures

- Exercise 1: Checking User Input
- Exercise 2: Confirming Application Close

Module 6: Validating User Input

This module explains how to validate user input at both the field level and the form level. It describes how to handle invalid input by providing error messages and guiding users through the process of finding and fixing errors. It describes how to use control properties and methods to restrict and validate data entry.

Lessons

- Restricting User Input
- Validating Field Data
- Validating Form Data

Lab : Validating User Input

- Exercise 1: Validating User Input

Module 7: Object-Oriented Programming in Visual Basic .NET

This module explains how to create and use classes. The module explains the concepts of abstraction, encapsulation, instantiation, initialization, constructors, and destructors. This module also describes inheritance, polymorphism, and namespaces.

Lessons

- Understanding Classes
- Working with Classes
- Using Shared Members
- Inheritance, Polymorphism, and Namespaces

Lab : Creating a Derived Class

- Exercise 1: Creating a Derived Form Class

Module 8: Handling Errors and Exceptions

This module explains types of errors that can occur in a program and explains how to use the debugging tools provided with Visual Basic .NET to help diagnose and correct the errors. These tools include the Visual Studio .NET debugger, debugging windows, and structured exception handling.

Lessons

- Types of Errors
- Using the Debugger
- Handling Exceptions

Lab : Implementing Structured Exception Handling

- Exercise 1: Using Try...Catch Blocks
- Exercise 2: Using Try...Catch...Finally Blocks

Module 9: Enhancing the User Interface

This module explains how to create menus, status bars, and toolbars to enhance the usability of an application.

Lessons

- Creating Menus

<ul style="list-style-type: none">• Creating Status Bars• Creating Toolbars <p>Module 10: Web Forms and XML Web Services This module explains how to create a Web Forms application and how to invoke a simple XML Web service.</p> <p>Lessons</p> <ul style="list-style-type: none">• Working with Web Forms• Using XML Web Services <p>Lab : Creating a Web Application</p> <ul style="list-style-type: none">• Exercise 1: Creating the User Interface• Exercise 2: Using XML Web Services <p>Module 11: Using ADO.NET This module explains how to use ADO.NET with a Windows Forms application to create, read, update, and delete records in Access and SQL Server databases.</p> <p>Lessons</p> <ul style="list-style-type: none">• Database Concepts• Overview of ADO.NET• Working with Data <p>Lab : Accessing Data with ADO.NET</p> <ul style="list-style-type: none">• Exercise 1: Using the Data Form Wizard <p>Module 12: Deploying Applications This module explains how to deploy applications by using Visual Studio .NET. The module also describes deployment options available in Visual Basic .NET, and how to create and configure a setup project for a Windows-based application.</p> <p>Lessons</p> <ul style="list-style-type: none">• Introduction to Deployment• Deploying a Windows-based Application <p>Lab : Deploying an Application</p> <ul style="list-style-type: none">• Exercise 1: Using the Setup Wizard• Exercise 2: Installing the Loan Application
